

A90/A96 HAUDAGAIN IMPROVEMENT

DMRB Stage 3

Environmental Statement

Volume 2: Technical Appendices

June 2015



**TRANSPORT
SCOTLAND**
CÒMHDHAIL ALBA

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A4.1: Construction Information

1 Introduction

- 1.1.1 This appendix provides an overview of a potential construction scenario for the construction of the proposed scheme. This information was prepared based on the Design Manual for Roads and Bridges (DMRB) Stage 3 design to provide a set of assumptions for the purposes of assessing potential construction impacts as reported in the Environmental Statement (ES).
- 1.1.2 It should be noted that the detailed design of the proposed scheme, and the construction programme and methodology, will be determined by the appointed design & build (D&B) Contractor, within the constraints of the contract and the requirements of the ES (i.e. to achieve the stated residual impacts).
- 1.1.3 Information is set out under the following headings:
- General Site Operations.
 - Construction Programme and Phasing.
 - Typical Construction Methods.
 - Land Requirements.
 - Public Access, Site Access, and Traffic Management.
- 1.1.4 Plant likely to be involved in the construction of the proposed scheme are typical for infrastructure projects of this type, and are likely to include:
- excavators;
 - piling rigs;
 - tracked vehicles, bulldozers and dump trucks;
 - Heavy Goods Vehicles (HGVs) and concrete wagons;
 - hand-operated machinery including compacting plant;
 - portable generators for temporary lighting, pumps and similar;
 - cranes and other lifting equipment; and
 - motorised graders and pavement (road surface) rollers;

2 General Site Operations

2.1 Site Layout

- 2.1.1 For construction purposes, it has been assumed that the site would be broken down into three main areas:
- New dual carriageway link road
 - Reconfiguration of local road network
 - Tie-ins to existing trunk road network at Auchmill Road and Great Northern Road

2.2 Safety and Security

- 2.2.1 Throughout the course of the works the Contractor will manage the Health and Safety of the site in accordance with the requirements and principles of all current applicable Health and Safety legislation, including the Construction (Design and Management) Regulations 2015, the Health and

Safety at Work etc. Act 1974, the Management of Health and Safety at Work Regulations 1999, and the Workplace (Health, Safety and Welfare) Regulations 1992, and will ensure the safety of the public, site personnel, site operators, and visitors.

2.3 Working Hours

2.3.1 Anticipated 'typical' working hours of the Contractor will be agreed with Transport Scotland (TS) and the Aberdeen City Council (ACC) Environmental Health Officer, but for the purposes of assessment are assumed to be as set out below:

- 07:00 to 19:00 on weekdays (Monday to Friday);
- 07:00 to 13:00 on Saturdays; and
- no Sunday working.

2.3.2 The above range applies to summer hours, when it is likely to be necessary to maximise the available good weather conditions for carrying out earthworks activities, as poor weather can adversely affect the condition of the material being used and the condition of haul routes. Winter hours will generally be shorter, due to the seasonal restrictions on activities that can be carried out efficiently and the length of daylight available.

2.3.3 It is anticipated that some work will be required outside the normal working hours for exceptional activities, such as those that can only take place when traffic flows are low, subject to agreement with TS and ACC. These include:

- weekend/overnight work to complete critical phases of road construction and surfacing; and
- implementing changes to temporary traffic management layouts.

2.4 Site Lighting

2.4.1 Temporary site lighting during construction will generally be required as follows:

- at Contractor's compounds for security and safe movement of staff during winter mornings and evenings;
- along temporary access roads;
- at locations where there is currently no lighting, but lighting is required as a safety measure under temporary traffic management (e.g. at carriageway crossovers, contraflows etc); and
- for night time activities or winter afternoon activities.

2.4.2 Maintenance of road lighting at locations where the layout is to be changed will be provided by mobile lighting towers or by use of columns in temporary locations.

3 Construction Programme and Phasing

3.1 Construction Programme

3.1.1 Construction of the proposed scheme is anticipated to commence in winter 2017, with the works expected to take approximately two years.

3.1.2 The indicative construction programme is broken down into six phases (the advance works and the five main contracts works) to reduce the impact on road users and neighbouring communities. The indicative phasing of the construction works is as follows:

- Advance Works – Establish work area and set-up traffic management which may include temporary road closures and diversion of traffic to facilitate the demolition process. Undertake site clearance, demolition works and service diversions.

- Main Contracts Works Phase 1 – Reconfiguration of traffic management. Undertake service diversions. Construction of detention basin, outfall to Scatter Burn Culvert and section of the existing Manor Avenue. Commence construction of sections of the dual carriageway link road including construction of tie-ins to A90(T) North Anderson Drive.
- Main Contracts Works Phase 2 – Reconfiguration of traffic management. Undertake service diversions. Continue construction of new link road, Logie Avenue (East and West) including bus turning area
- Main Contracts Works Phase 3 – Reconfiguration of traffic management. Undertake service diversions. Continue construction of new link road.
- Main Contracts Works Phase 4 – Reconfiguration of traffic management. Undertake service diversions. Complete construction of new link road including construction of tie-ins to A96(T) Auchmill Road. Construct Realigned Manor Avenue and Access to Manor Avenue.
- Main Contracts Works Phase 5 – Reconfiguration of traffic management. Undertake pavement works on A96(T) Auchmill Road and A90(T) North Anderson Drive.

4 Typical Construction Methods

4.1 Establishment of Construction Compounds

- 4.1.1 Preliminary activities include the setting up of the site compounds and offices. This also includes cabins, stores, welfare facilities and car parking. The Contractor will determine the location of the site compound and seek all necessary approvals for its design and construction.
- 4.1.2 Preparatory works for the temporary site establishments will involve some site clearance work, earthworks operations to level the site, drainage and pavement works for the car park and services installation (e.g. electrical, communications, water and sewerage). The site compound will be erected, maintained and subsequently removed in a manner that will aim to avoid or reduce impacts on the locality.
- 4.1.3 The initial actions will involve the construction of site access and egress points. Wherever practicable, haul routes will also be established to ensure that construction traffic is contained within the confines of the site, as far as possible. However, since the route intersects main roads, local roads and other obstructions, the limited use of other public roads is likely to be required and approval for this will be sought by the Contractor with the relevant authorities.

4.2 Temporary and Permanent Fencing

- 4.2.1 The land area to be occupied by the construction works will be identified accurately on the ground, by surveying and installing appropriate pegs and posts, prior to the works commencing. The area defined will be the land acquired for the permanent works and any other areas that the Contractor has acquired by agreement to facilitate construction of the works.
- 4.2.2 Due to the urban nature of the proposed scheme is likely that the majority of permanent fencing required will be accommodation works fencing at residential and community properties. Permanent fencing at features such as detention basins may also be required for safety reasons. Additionally, acoustic fencing will be required to mitigate the effects of noise from the proposed scheme, further information of this can be found in Chapter 14: Noise and Vibration.
- 4.2.3 Other specific fencing that may be required temporarily will include higher security fences at compounds or where additional security of the works is required.

4.3 Site Clearance and Demolition

- 4.3.1 Site clearance and demolition works (which may be the subject of an advance work contract) typically include the following:
- general clearance;
 - demolition of buildings;
 - removal of pipelines, public and privately owned services or supplies; and
 - tree felling and removal of stumps, removal of fencing, walls, hedges, bushes and undergrowth.
- 4.3.2 Any material to be reused in the permanent works will be stockpiled or taken to store. Surplus and unsuitable materials arising from the site clearance operations will be recycled, or, if they cannot be recycled, disposed of at an appropriate, approved disposal facility in the area. Burning of materials on site will not be permitted, except when specifically required for which approvals will be required.
- 4.3.3 Materials for off-site recycling or disposal will be transported in appropriate wagons along prescribed main road routes, which are likely to include the A90 and A96. Prescribed routes will be included in the contract documents. The Contractor will be required to seek approval from the relevant authority should they wish to use any other routes.
- 4.3.4 The Contractor will be responsible for the timing of demolition and site clearance activities and will be required to take account of seasonal restrictions, such as bird breeding seasons and relocation of any species in the works programme. The detailed timetable for ecological constraints will comply with any requirements of the ES.

4.4 Contaminated Materials

- 4.4.1 The treatment of any hazardous materials encountered in site clearance will comply with specific contract requirements and will require an assessment in accordance with current health and safety regulations including the Control of Substances Hazardous to Health Regulations (COSHH) Regulations. Contaminated materials may have to be disposed of at licensed sites.

4.5 Temporary and Permanent Surface Water Outfalls

- 4.5.1 Temporary arrangements will be made to control surface water run-off during construction, where surface water could affect the works or the environmental performance of mitigation measures. Measures implemented may include temporary settlement ponds which will allow sediment to settle before clean water is discharged via a temporary outfall pipe or ditch to receiving watercourses.
- 4.5.2 During the construction period, and particularly the earthworks construction phase, water will be directed to settlement ponds using temporary cut off ditches. Construction of the ponds will involve earthworks operations including excavation, placement of fill and compaction. Temporary ponds will require to be maintained to remove sediment and silt for example, and ensure that the ponds operate as intended. Measures will also be undertaken to prevent the ingress of groundwater.
- 4.5.3 Other options for disposal of water include discharging to sewers if they have sufficient capacity, or taking water off site in bowsers or tankers for disposal. It is likely that the permanent drainage basins and ponds will be constructed and used during construction. These will be cleaned and maintained following the main construction works for incorporation into the final drainage network.

4.6 Service Diversions

- 4.6.1 In advance of property demolition private service supplies will require to be stopped up. It is possible that some additional service diversions will be undertaken in advance of the main

construction works. However, other diversions are only likely to be possible once construction has reached a certain stage.

- 4.6.2 Existing services may require temporary diversions as a result of disruption to apparatus during the construction of the works. These temporary diversions will be in place to minimise any disruption to the services being affected by the proposed scheme.

4.7 Topsoil Stripping and Storage

- 4.7.1 Where appropriate, topsoil will be stripped off over the full area to be occupied by the roads, cuttings, embankments and associated structures to depths defined for each particular location. The topsoil will be removed if surplus to requirements or stockpiled outwith working areas, until such time as it is required for reuse. Measures such as cut-off ditches may be required around stockpiles to transfer any contaminated run-off to temporary settlement ponds.

- 4.7.2 The plant potentially used for topsoil stripping includes rubber-tired motorised scrapers, excavators etc, though more controlled procedures may be required in environmentally sensitive zones using smaller plant. Limits will be imposed on the maximum distance from the zone of excavation to the point of deposition of the topsoil to control invasive plant species and ensure that topsoil is reused close to the location it was stripped.

4.8 Pre-Earthworks Drainage

- 4.8.1 Pre-earthworks drainage generally comprises excavation of filter drains constructed at the top of cutting slopes or toe of embankments where required by the design to prevent surface or ground water entering the works. When placed at the top of cuttings, surface water carried by the pre-earthworks drainage is clean and can be transferred directly to watercourses unless the rate of discharge has to be controlled. When placed at the toe of embankments, surface water carried by the pre-earthworks drainage may contain sediment from run-off from the embankments being constructed and will be required to discharge water to temporary settlement ponds prior to it being discharged to a watercourse.

- 4.8.2 The material arising from the excavation of the pre-earthwork drainage will be transported for reuse within the works or off-site, or ultimately disposal off-site.

4.9 Earthworks

- 4.9.1 The principal earthworks process involves layered excavations of soils in cuttings and transportation of the excavated soil to neighbouring zones where embankments are required. Deposition in the fill areas will be built up by depositing the material and using bulldozers to place it in layers which are then compacted by rollers. This process is repeated until embankments are built to the road formation level.

- 4.9.2 Generally, it is preferred to achieve a cut/fill balance and have short haul distances to minimise transport of earthworks materials along the site between cuttings where they are excavated and embankments where they are placed. Indicative lorry loads are shown in Table 4.1.

Table 4.1: Indicative Lorry Loads – Earthworks

Lorry Loads for Earthworks	Volume/Number/Timescales
Potential import (m ³)	18,200
Potential disposal (m ³)	31,700
Potential Total Lorry Loads	4,990
Potential duration of main earthworks activities (months)	5
Estimated weekly average lorry loads during main earthworks activities	250

- 4.9.3 The study area sits on the north facing slopes of the River Don valley. To the south of the river the areas of Northfield, Cummings Park and Rosehill sit at the top of an evenly rising hill. The gradient briefly plateaus along the A96 corridor, before dropping steeply towards the flat valley floor. The topography rises again to the north of the flood plain across the generally gentle slopes of the Hill of Danestone. The topography of the site and alignment standards to be provided complicate achievement of an earthworks quantities balance and long hauls of material may be required.
- 4.9.4 Excavations in cutting will include the removal of the top layers of material which are likely to be unacceptable for use in the main road embankments and transport of this material to stock piles to be reused as landscaping earthworks mitigation at a later date. The lower layers of the cuttings are likely to comprise material that is more acceptable for use in the main road embankments and this will be transported and compacted as described above.
- 4.9.5 The likelihood of intercepting bedrock during excavations is predicated to be low (see Chapter 8: Geology, Soils, Contaminated Land and Groundwater). If encountered, rock may be ripped using a bulldozer with a blade attached to the rear. Another option where ripping of rock material is not feasible includes using a hydraulic breaker (also known as a rock hammer or pecker). Blasting is not expected for the removal of rock.

4.10 Drainage, Service Ducts and Chambers

- 4.10.1 Construction of carriageway drainage will involve laying filter drains, carrier drains and outfalls to transport surface water run-off from side slopes, carriageways and other paved areas. Drainage products will include pipes, gully pots, cover gratings, graded gravel for pipe bedding, gravel filter material, and other stone pieces for balancing ponds and open channels. Manholes and chambers will be built with in-situ concrete bases, precast concrete ring or brickwork walls and iron cover on precast concrete caps.
- 4.10.2 Construction of carriageway drainage will involve excavation of the drain, with material being deposited adjacent to the drain in the road verge or transported for reuse or disposal. Gravel bedding and filter material (crushed rock) is delivered to the works from either a local quarry or a source on site if extracted rock quality is suitable. The bedding material is placed at the bottom of the excavated trench and the drainage pipes are placed on top before being covered with the filter material. Some filter drains may also have a geotextile surround to prevent sediment ingress into the filter material, and if the drainage pipe crosses the road carriageway, it may have a concrete surround which will be transported to the site and placed around the pipe in the trench.
- 4.10.3 A detention basin will be constructed to provide a permanent treatment and attenuation facility as part of the Sustainable Drainage Systems (SUDS) strategy, although a temporary pond could be re-used if it was designed and built for the permanent situation. An outflow pipe will transfer runoff from the carriageway drainage network to the detention basin, and to the receiving watercourse following treatment/attenuation. It is envisaged that the connection to the receiving watercourse will be made at a depth of approximately 6.5m. Due to the proximity of property and Manor Drive at the tie in point a detailed construction methodology will require to be developed by the Contractor. It is envisaged that the temporary works will include the use of sheet piling and a localised diversion of the watercourse.
- 4.10.4 Service ducts and chambers are constructed in a similar manner as carriageway drainage and catchpits/manholes. However, service chambers may be brick built involving transport of materials and on site manufacture and use of mortar.

4.11 Topsoiling and Seeding

- 4.11.1 Topsoiling and seeding will be undertaken as soon as possible after earthworks construction is completed. This will enable the subsoil to be sealed preventing sediment run-off. As described previously, topsoil will have been stripped and stored adjacent to the works. The topsoil will be transported from the topsoil storage locations to the works and will be placed by an excavator.

Grass seeding may be by hand or by machine spreading, undertaken in the relevant areas specified in the landscape design.

4.12 Pavement Construction

4.12.1 Pavement construction involves building the pavement up in layers.

4.12.2 The bottom layer (sub-base) is a crushed rock aggregate which will be delivered to the site from local quarries or crushed and graded on site from excavated rock, as described previously. Indicative lorry loads required for pavement construction are shown in Table 4.2. The material is deposited and then pushed into place and compacted.

4.12.3 The upper pavement layers will be specified in accordance with the requirements of the contract and will involve transport of material to the site either from local sources or from a batching plant on site.

Table 4.2: Pavement Construction

Parameter	Estimate
Estimated total lorry loads	2,900
Potential length of pavement construction activities (months)	12
Estimated weekly average lorry loads during pavement construction	56

4.13 Roadworks Finishes

4.13.1 Following pavement construction, safety barriers will be installed. Posts and barriers are delivered to the site and safety barrier installation then involves driving steel posts into the ground or excavating small footings and placing concrete into which the posts are set. The barriers are bolted to the posts and fixed to small concrete anchorages.

4.13.2 Sign installation will involve excavation for the concrete foundations, and setting the posts. The sign faces are then fixed to the sign posts. Some signs may be lit and will require cabling to be passed through the service ducts installed as described previously.

4.13.3 Road markings will be applied to the road surface using specialist lorry-mounted equipment.

4.14 Accommodation Works

4.14.1 Accommodation works may include, access roads, fences and walls or other ancillary items agreed with landowners. Construction methods will be similar to those described for these items in this outline methodology.

4.15 Structures

4.15.1 Typical construction methods for retaining walls are described below and apply to most retaining walls to be constructed as part of the proposed scheme.

Retaining Walls

4.15.2 The Stage 3 design incorporates a number of retaining walls. These retaining walls are required to support soil where differences in ground levels are expected to exist.

Retaining walls may be constructed by excavating to the required level whilst temporarily supporting the material to be retained. The retaining walls may be pre-cast or cast in-situ.

Alternatively, contiguous piles may be installed to form the retaining wall before excavation to the required level.

5 Land Requirements

5.1 Land Required During Construction

5.1.1 Land required during construction may be in addition to that required for the footprint of the permanent works. The main requirements are described below.

Site Compounds for the Contractor and Others

5.1.2 Where possible these would be located close to the proposed works where there is suitable access. They would be used to accommodate offices for the Contractor as well as workshops, stores, welfare facilities, etc. and parking for cars and plant.

Additional Works Areas

5.1.3 Land may be required to allow the Contractor to gain safe access to the permanent works. This is usually where access is very restricted or where the works are adjacent to a live carriageway, such as when carrying out online widening works.

Temporary Diversions

5.1.4 In order to maintain traffic flows when undertaking works on the existing highway, such as carriageway tie-ins, it may be necessary to provide a temporary diversion or temporary road closure should a temporary diversion not be practicable

Clearance of Site on Completion

5.1.5 Clearance of the site on completion of the works will normally involve small dumpers, excavator/loaders and lorries to gather up and dispose of surplus material and generally tidy up.

5.2 Permanent Land

5.2.1 The main requirements for permanent land are as follows:

- land associated with the footprint of the proposed scheme, including earthworks (i.e. land required to build embankments or excavate cuttings);
- land to allow adequate drainage of the road and the area through which it passes. This includes land required for diversion of watercourses, drainage outfalls and SuDS features and arrangements for maintenance access;
- land required for other environmental mitigation, such as landscape planting.

5.2.2 Other land not required for the permanent works may also be permanently acquired by the highway authority due to it becoming unusable or impractical to use as a direct result of the works.

6 Public Access, Site Access and Traffic Management

6.1 Access Routes for Construction Traffic

6.1.1 The proposed works are generally located on the existing local road network. Therefore, the Contractor may be restricted as to the extent and purpose that he can use lengths of local road not directly affected by the proposed works for construction purposes. While it is desirable that all construction related access should be via the A90 and A96 Trunk Roads it will be necessary to

provide some access from the side road network. Routes not available to the Contractor will be as agreed with the relevant authority and stipulated in the contract.

6.2 Traffic Management Requirements

Introduction

- 6.2.1 During construction, temporary traffic management will be required to undertake the works, whilst minimising disruption to users of the active road network.
- 6.2.2 Temporary traffic management will be put in place during construction at works close to or on existing roads, and at site access and egress points. Examples of measures include traffic cones, temporary signs and lighting, temporary speed restrictions, temporary diversions and contraflows.

Lane Requirements

- 6.2.3 In general, construction phasing and temporary traffic management proposals have been prepared on the basis of keeping the existing Haudagain Roundabout and associated approach roads fully functioning at peak times except for specific short term restrictions. Where considered appropriate, the Contractor will be required to provide a vehicle recovery service to promptly remove any broken down vehicles within the temporary traffic management areas.
- 6.2.1 For the A90 and A96 Trunk Roads, it is envisaged that short lengths of the central reserve will require to be reconfigured as temporary running lanes or crossover locations and used in conjunction with narrow lanes to facilitate construction.
- 6.2.2 The proposals in this appendix have been prepared on the basis of keeping all routes and accesses open throughout the works wherever feasible. In some cases it may be necessary to effect temporary road closures, during which time diversionary routes will be signposted.

Works Restrictions

- 6.2.3 It is generally proposed that the network connection works be constructed within the typical working hours as set out in Section 2.3 (Working Hours). Likely exceptions to this would be for activities such as utility diversions and critical works on the A90 and A96 Trunk Roads. Traffic management or alternative diversion routes will be set up during such night time works, together with advance warning and publicity to help drivers to avoid these locations/dates if possible.
- 6.2.4 Road closures and diversions are likely to require a Temporary Traffic Order and be subject to approval by TS, ACC, Police Scotland, and the Maintaining Authority.
- 6.2.5 As the proposed scheme is located in a residential area, methods of construction should be adopted that keep noise levels to a practicable minimum.

Temporary or Permanent Road Closures or Diversions

- 6.2.6 Temporary road closures and diversions will be arranged through the Overseeing Organisation following discussions with TS, ACC, Police Scotland and the Maintaining Agents. A Temporary Traffic Order giving the requisite notice will be prepared and a statutory notice placed in local newspapers.
- 6.2.7 Permanent road closures that occur as a consequence of the phasing for the construction of new alignments, supported by the appropriate legal Orders, will be implemented following discussions with relevant parties and agreement of any temporary traffic arrangements.

Temporary Carriageway

- 6.2.8 Under the traffic management proposals in this appendix, there may be a requirement to construct some sections of temporary carriageway. The need for these will be dependent on the Contractor's detailed design and his construction and traffic management methodology. Appropriate geometric and pavement construction standards for the design of temporary diversions will be set out in the contract.

Approvals

- 6.2.9 The Contractor's detailed proposals for traffic management will only be confirmed after discussions with TS, ACC, Police Scotland and the Maintaining Agents.
- 6.2.10 The Contractor will be required to appoint a Traffic Safety Officer who be responsible for submitting traffic management layout drawings, method statements, etc. within the requisite notice period for discussion at regular traffic management meetings. The Traffic Safety Officer will be responsible for ensuring that temporary traffic management operations are monitored and maintained.

7 References

Department of Transport (2009). Traffic Signs Manual. Chapter 8, Roadworks and Temporary Situations.

A6.1: List of Consultees

This appendix contains a summary of the information provided through the DMRB Stage 2 and Stage 3 environmental consultations (as described in Chapter 6: Consultation and Scoping).

Consultee	Information Provided
Statutory Consultees	
Aberdeen City Council	Meetings, correspondence and response to Stage 2 and Stage 3 consultation letters – received information and feedback on: Sites and Monument Records (SMR); water environment; contaminated land; fuel tanks; pollution prevention; local paths and cycle routes; ecology and nature conservation; air quality and noise and vibration assessment methodology; Candidate Noise Management Areas (CNMAs); and recommended photomontage viewpoints.
Historic Scotland	Response to Stage 2 and Stage 3 consultation letter – baseline information.
Scottish Environment Protection Agency (SEPA)	Meetings, correspondence and response to Stage 2 and Stage 3 consultation letter – received information and feedback on: flood risk; surface water drainage; water quality; contaminated land; pollution prevention and environmental management; CAR licencing; and Water Framework Directive (WFD) classifications and designations.
Scottish Natural Heritage (SNH)	Response to Stage 2 and Stage 3 consultation letters – provided information on suggested organisations to contact for baseline data.
Non-Statutory Consultees	
Aberdeen and Grampian Chamber of Commerce	Responded to Stage 3 consultation letter – commented on economic benefits of proposed scheme, but noted appropriate consideration of environmental impacts is required.
Aberdeen Cycle Forum	Meeting - provided information on design specifications in relation to cyclists and potential locations where upgrades would be desirable.
Aberdeen Friends of the Earth	Responded to Stage 3 consultation letter – commented on the following: cycling; buses; air quality; road traffic reduction; built and natural environment; noise; and community severance.
Aberdeen Taxis	Sent a Stage 2 consultation letter – no response received.
Aberdeen Wheelers	Sent a Stage 3 consultation letter – no response received.
Archaeology Scotland	Sent a Stage 2 consultation letter – no response received.
British Horse Society	Responded to Stage 3 consultation letter – commented on equestrian usage in the area and path requirements.
Centre for Ecology and Hydrology	Sent a Stage 2 consultation letter – no response received.
Confederation of Passenger Transport	Sent a Stage 2 consultation letter – no response received.
Cycle Touring Club (Scotland) (CTC)	Meeting - provided information on design specifications in relation to cyclists and potential locations where upgrades would be desirable.
First Group	Sent a Stage 2 consultation letter - no response received. Meeting – provided input into proposed public transport proposals (16/07/14).
Freight Transport Association	Sent a Stage 2 consultation letter - no response received.
Grampian Red Squirrel Group	Sent a Stage 2 consultation letter - no response received.
Middlefield Area Regeneration and Action Group (MARAG)	Meeting – provided feedback on landscape and noise mitigation proposals.
Nestrans	Sent a Stage 2 consultation letter - no response received.
Network Rail	Sent a Stage 2 consultation letter - no response received. Meeting held with Network Rail on 20 th August 2014 to discuss drainage design and modelling, flood risk assessment and existing culverts.
North East Scotland Bat Group (formerly the Aberdeen Bat Group)	Sent a Stage 2 and Stage 3 consultation letter – no response received for either.
North East Scotland Biological Records Centre (NESBReC)	Responded to both the Stage 2 and Stage 3 consultation letter – provided information on species of conservation interest, ancient woodlands and sites of conservation interest.
Northfield Community Council	Sent a Stage 2 consultation letter – no response received.
Police Scotland	Meeting – provided input to landscape proposals and creating a safer and more secure environment through design.
River Don Trust	Sent a Stage 2 and Stage 3 consultation letter – no response received for either.
Road Haulage Association	Sent a Stage 2 consultation letter – no response received.

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Appendix A6.1: List of Consultees

Consultee	Information Provided
Scottish Badgers	Responded to both the Stage 2 and Stage 3 consultation letter – provided information on badger presence and road kills.
Scotways	Responded to Stage 3 consultation letter – highlighted that there are no rights of way in the study area.
Scottish Wildlife Trust	Sent a Stage 2 and Stage 3 consultation letter – responded to Stage 3 consultation noting that a formal response could not be provided due to lack of capacity.
Stagecoach	Meeting – provided input into proposed public transport proposals (16/07/14).
Sustrans	Sent a Stage 2 and Stage 3 consultation letter – responded to Stage 3 consultation providing information on cycle routes and non-motorised user counts.
The Garden History Society in Scotland	Sent a Stage 2 and Stage 3 consultation letter – no response received for either.

**Please note that the above table relates to consultation concerned with environmental issues. Additional consultation may have taken place with the above mentioned organisations and Jacobs' design team.*

A90/A96 Haudagain Improvement

DMRB Stage 3 Environmental Statement

Appendix A6.2: Summary of Consultation Responses

A6.2: Summary of Consultation Responses

This appendix contains a summary of the key environmental input provided by consultees through the consultation process described in Chapter 6 (Consultation and Scoping). A full list of consultees is provided in Appendix A6.1 with a summary of the information provided.

Consultee	Summary of Consultee Feedback	Response
Statutory Consultees		
Aberdeen City Council	<p>Baseline Information</p> <ul style="list-style-type: none"> Information on planning applications within 500m of the proposed scheme provided, along with Development Land Allocations outlined in the Aberdeen Local Development Plan (Aberdeen City Council, 2012). Information received on potentially contaminated land sites and petroleum register localities. Provided information on locality and use of one potentially contaminated land site. Supplied sewerage and watercourse mapping to support the drainage assessment. Confirmed no Tree Preservation Orders (TPOs) within 500m of the proposed scheme. The Aberdeen City Council Historic Environment Record (HER) provided information on undesignated heritage assets and GIS shapefiles for the Sites and Monument Record (SMR). Provided information on 2 Candidate Noise Management Areas (cNMAs) immediately adjacent to the proposed scheme on the A90 (T) North Anderson Drive and A96 Great Northern Road. Provided information on adopted and proposed Core Paths, local paths and cycle routes. 	<p>Baseline Information</p> <ul style="list-style-type: none"> Baseline information used to inform assessments reported in the following chapters: <ul style="list-style-type: none"> Chapter 7 (Community and Private Assets); Chapter 8 (Geology, Contaminated Land and Groundwater); Chapter 9 (Road Drainage and the Water Environment); Chapter 11 (Landscape and Visual); Chapter 12 (Cultural Heritage); Chapter 14 (Noise and Vibration); and Chapter 15 (Effects on All Travellers).
	<p>Landscape and Visual</p> <ul style="list-style-type: none"> Suggested viewpoints for the preparation of photomontages provided to inform the Landscape and Visual assessment. Viewpoints provided are as follows: <ul style="list-style-type: none"> Auchmill Road Junction looking south east (a few vantage points in this area); North Anderson Drive (as above with Hilton Drive, Clifton Road and opposite new junction); Manor Avenue (both directions); Logie Place (both directions); Manor Drive (both directions); and Logie Avenue/Logie Gardens. Urban Design Objectives, detailed in Appendix 11.3, have been developed in consultation with Aberdeen City Council (ACC) to help meet the overall scheme objectives and mitigate the potential environmental impacts of the scheme. 	<p>Landscape and Visual</p> <ul style="list-style-type: none"> Suggested viewpoints accepted and included within Landscape and Visual assessment (refer to Chapter 11: Landscape and Visual).
	<p>Air Quality</p> <ul style="list-style-type: none"> Agreement on Air Quality assessment methodology with the Council's Environmental Health Officer (EHO). Requested that consideration be given to guidance prepared by Environmental Protection UK, 'Development Control: Planning for Air Quality' (2010 update) to describe the magnitude and significance of air quality impact for the operational phase. 	<p>Air Quality</p> <ul style="list-style-type: none"> Methodology adopted and reported in Chapter 13 (Air Quality). Consideration has been given to the Environmental Protection UK guidance; however it was established through further discussions with the EHO that DMRB

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		Interim Advice Note 174/13 (Highways Agency et al., 2013) was more appropriate for describing the magnitude of change and significance of impact. Aberdeen City Council EHO agreed to this approach.
Aberdeen City Council <i>continued</i>	<p>Noise and Vibration</p> <ul style="list-style-type: none"> • Agreement on Noise and Vibration assessment methodology and baseline noise monitoring locations with the Council's EHO. 	<p>Noise and Vibration</p> <ul style="list-style-type: none"> • Methodology adopted and reported in Chapter 14 (Noise and Vibration). Results of baseline noise surveys provided in Section 14.3 (Baseline Information).
	<p>Effects on all Travellers</p> <ul style="list-style-type: none"> • Advised contacting Scotways for information on rights of way (RoW) within the study area. • Confirmed proposed re-routing of National Cycle Route (NCR) 1 to the north of the River Don, noting that it is likely to come into effect post-2018. • Agreement on labelling / naming of undesignated local paths for the purpose of the Effects on all Travellers assessment. <p><i>Meeting on 5 August 2014 regarding cycling provisions</i></p> <ul style="list-style-type: none"> • Advised that the horizontal radii on the shared cycleway/footway in the vicinity of the proposed signalised crossroads appeared to be too tight and queried whether they could be increased. 	<p>Effects on all Travellers</p> <ul style="list-style-type: none"> • Scotways were contacted as part of the consultation process noting that no RoWs are present within 500m of the proposed scheme. <i>Refer to note on Scotways below.</i> • Proposed re-routing of NCR1 acknowledged and reported in Chapter 15 (Effects on all Travellers). • Undesignated local paths labelled as agreed and provided in Section 15.3 (Baseline Information). <p><i>Meeting on 05 August 2014 regarding cycling provisions</i></p> <ul style="list-style-type: none"> • Advised they would review against Cycling by Design and also investigate positioning to the back of the verge in order to achieve a smoother alignment (subject to other constraints and location of street furniture etc.).
	<p>General</p> <ul style="list-style-type: none"> • Discussions held regarding bat surveys. <p><i>Meeting on 02 October 2013 regarding the compensation process.</i></p> <ul style="list-style-type: none"> • ACC highlighted the precedent set by the AWPR project with regard to advance purchase by agreement and requested that discussions commence given the requirement for a CPO • Meeting to discuss compensation in advance of Compensation Paper being prepared. <p><i>Meeting on 04 March 2014, 3rd Stakeholder and Community Engagement Working Group</i></p> <ul style="list-style-type: none"> • Update on DMRB stage 2 process. • Preparation for public exhibition on 24 and 25 April 2014 	<p>General</p> <ul style="list-style-type: none"> • Bat survey results included in Chapter 10 (Ecology and Nature Conservation). <p><i>Meeting on 02 October 2013 regarding the compensation process.</i></p> <ul style="list-style-type: none"> • TS explained that advance purchase agreements on AWPR were only entered into following the publishing of the Draft Road Orders, which on this project is likely to be summer 2015 • TS noted that the paper will be issued in the next few weeks. <p><i>Meeting on 04 March 2014, 3rd Stakeholder and Community Engagement Working Group</i></p> <ul style="list-style-type: none"> • DMRB Stage 2 was in the process of completion, information of which would be presented at public

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	<p><i>Meeting on 19 June 2014, 4th Stakeholder and Community Engagement Working Group</i></p> <ul style="list-style-type: none"> • Update on DMRB stage 2 process. • Confirmation that works were currently being undertaken to establish a redevelopment masterplan for the Haudagain triangle. • It was noted that asbestos survey is still underway. <p><i>Meeting on 26 August 2014, 5th Stakeholder and Community Engagement Working Group</i></p> <ul style="list-style-type: none"> • Discussions regarding design fix • Update on Land Ownership details, primarily regarding details of borehole positioning. <p><i>Meeting on 20 November 2014, 6th Stakeholder and Community Engagement Working Group</i></p> <ul style="list-style-type: none"> • Process of rehousing tenants has begun with the intention to move out all tenants under the line of the road. • Feedback was requested on properties that were identified as potentially requiring demolition due to various impacts. <p><i>Meeting on 28 January 2015, 6th Stakeholder and Community Engagement Working Group</i></p> <ul style="list-style-type: none"> • Information was provided to ACC relating to the latest design fix and most recent updated, including the bus turning circle on the realigned Logie avenue and car parking provision. • it was advised that ACC were offering short term lets for vacant properties within the area but these could be 	<p>exhibition.</p> <ul style="list-style-type: none"> • JUK to provide approximately 15 exhibition boards <p><i>Meeting on 19 June 2014, 4th Stakeholder and Community Engagement Working Group</i></p> <ul style="list-style-type: none"> • DMRB Stage 2 Assessment Report had now been completed and moving on to DMRB Stage 3 Assessment. • Updates were requested, when available, as to the progress of the masterplan. • Further surveys may be considered if the information received is not sufficiently wide ranging. It was also noted that Noise and Ground studies were due for commencement. <p><i>Meeting on 26 August 2014, 5th Stakeholder and Community Engagement Working Group</i></p> <ul style="list-style-type: none"> • Stated that the initial design fix has now been completed. It was also noted that the final design fix would be December with the final report due June/July 2015. <p><i>Meeting on 20 November 2014, 6th Stakeholder and Community Engagement Working Group</i></p> <ul style="list-style-type: none"> • It was noted that a close liaison with ACC was necessary in advance of publishing the Draft Compulsory Purchase Order. • An update was also provided as to the progress of the GI works and Section 140 Notices, which had been issued to residents. • In regards to demolitions, it was agreed postpone discussions until the Environmental and Planning Working group meeting on 02 December 2014. <p><i>Meeting on 28 January 2015, 6th Stakeholder and Community Engagement Working Group</i></p> <ul style="list-style-type: none"> • Confirmation that, since the completion of ground investigation works, no public complaints were received

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	<p>cancelled at short notice.</p> <p>Planning and Environmental Working Group</p> <p><i>Meeting on 30 May 2014, introductory meeting of Planning and Environmental Working Group</i></p> <ul style="list-style-type: none"> • Initial meeting set out the purpose of group, which included “<i>Consideration of Aberdeen City Council’s planning objectives for development of the Middlefield area.</i>” • Clarity was requested regarding the accuracy of the 131 residential /community premises currently proposed for demolition. • In line with the Local Development Plan’s Spatial Strategy, it was noted that Hypostyle had been commissioned to take forward design options for the ‘triangle’ Opportunity Site (OP19), one of the seven designated priority areas for regeneration in the Local Development Plan. ACC added that they were currently reviewing the value of the land and properties and whether to replace the houses remaining in the triangle with new houses, retail or a mix of both. <p><i>Meeting on 28 August 2014 regarding environmental mitigation and landscape/urban design strategy</i></p> <ul style="list-style-type: none"> • Provided insight into landscaping and planting proposals. • Discussions relating to the sustainable objectives of the proposed scheme / Middlefield regeneration. <p><i>Meeting on 2 December 2014 regarding landscape/urban design strategy and preliminary EIA findings</i></p> <ul style="list-style-type: none"> • Requested, in light of the JUK presentation of most recent design changes, that cross sections through the detention basin along with a breakdown of the amount of time each year the pond is wet and dry. This is needed to feed into their review of the scheme from an aesthetic/landscape perspective. • A request was also made for drawings of the changes in each property and showing the car parking spaces along with a note explaining the parking to property ratios pre and post construction. It was also added that refuse collection should be considered for each property and agreed through Engineering and Transportation Working Group. • Discussion on car parking provision and access. • ACC confirmed that they were content, in principle, with the proposed planting. Hypostyle queried if the visibility splays at the link road junction could be planted with trees. • 	<p>during the period that the works were commencing.</p> <p>Planning and Environmental Working Group</p> <p><i>Meeting on 30 May 2014</i></p> <ul style="list-style-type: none"> • It was explained that the 131 figure is the number currently working on based on the Stage 2 design, this would be subject to change. <p><i>Meeting on 28 August 2014</i></p> <ul style="list-style-type: none"> • Information provided taken into consideration during the design process. • The current draft of the Urban Design Strategy would be issued for ACC’s review and feedback. • Develop design work and design strategies in advance of next meeting. <p><i>Meeting on 2 December 2014</i></p> <ul style="list-style-type: none"> • This was agreed and details of the planting at the detention basin will be provided. • It was confirmed that the road design standards require these areas to be clear of visual obstructions for safety reasons.

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Historic Scotland	<ul style="list-style-type: none"> Noted that there are no historic environment assets of national importance within the study area, and therefore the proposed scheme falls outwith their remit for EIA consultations. Advised contacting Aberdeen City Council Archaeology service to determine the potential impact on undesignated archaeology or sites of regional and local importance in the area. 	<ul style="list-style-type: none"> Acknowledged that no historic assets of national importance are located within the study area, as reported in Chapter 12 (Cultural Heritage). Aberdeen City Council Archaeological service were contacted as part of the consultation phase and provided information on undesignated assets in the area.
Scottish Environment Protection Agency (SEPA)	<p>Baseline Information</p> <ul style="list-style-type: none"> Provided information on surface water abstraction/ discharges from and to watercourses in the study area, including details on Controlled Activities Regulations (CAR) licensed sites in the study area. Licensed sites in the study area under the Pollution Prevention Control (PPC) Regulations. Information on classification of surface waterbodies within the study area, and pressures acting upon those waterbodies relating to the Water Framework Directive (WFD). Noted the proposed scheme is located in the Inverurie groundwater body which currently (2013) has an overall classification of Good. 	<p>Baseline Information</p> <ul style="list-style-type: none"> Baseline information used to inform assessments reported in Chapter 8 (Geology, Soils, Contaminated Land and Groundwater) and Chapter 9 (Road Drainage and the Water Environment).
Scottish Environment Protection Agency (SEPA) <i>continued</i>	<p>Drainage Design and Water Quality Assessment <i>Meeting on 02 October 2013</i></p> <ul style="list-style-type: none"> Advised road improvements incorporating new lengths of road, such as the proposed scheme, would usually require two levels of Sustainable Drainage Systems (SUDS) treatment. However, explained that this may be reduced to one level if appropriate justification for doing so can be provided, for example due to overriding spatial and engineering constraints or by quantitative water quality calculations. Confirmed that the Highways Agency Water Risk Assessment Tool (HAWRAT) may help to demonstrate that provision of one level of SUDS would be adequate to protect the receiving watercourse (River Don) from a water quality/ecological perspective. <p><i>Meeting on 19 August 2014</i></p> <ul style="list-style-type: none"> Queried whether the proposed detention basin accepted runoff from new and existing catchment areas. Advised to ensure adequate mitigation of water quality impacts and it is preferable to have an additional SuDS measure, not just a detention basin. Suggested 250m – 300m of culverted watercourse will have insufficient impact on water quality impacted by sediment. 	<p>Drainage Design and Water Quality Assessment <i>Meeting on 02 October 2013</i></p> <ul style="list-style-type: none"> Noted that the provision of two levels of treatment may not be feasible for the following reasons: <ul style="list-style-type: none"> Given the urban setting, the provision of SUDS features with large surface areas were likely to result in the demolition of additional residential and/or commercial properties. Filter drains were unlikely to be practical for maintenance and safety reasons, given the requirement for kerbs and gullies associated with the presence of pedestrian footways. HAWRAT assessment undertaken and reported in Appendix 9.2 (Water Quality). <p><i>Meeting on 19 August 2014</i></p> <ul style="list-style-type: none"> Noted that the detention basin would accept runoff from the sections of new carriageway only. Existing surface water run-off is mostly incorporated within combined surface/foul drainage system would have to be diverted around the proposed road layout. Advised that there may be the potential for putting a swale in at the very end of the drainage system, just before the basin, in addition to the detention basin. Following the meeting, investigation by Jacobs determined that it was not feasible to provide an end

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	<p><i>Options Report , 12 September 2014</i></p> <ul style="list-style-type: none"> • Subsequent to meeting on 19/08 an 'Options Report' for three SUDS treatment options was requested by SEPA. • The three options for discussion were a filter drain below detention basin (option 1), swale prior to detention basin (option 2) and a vortex separator prior to detention basin (option 3). <p><i>Correspondence, 30 October 2014</i></p> <ul style="list-style-type: none"> • SEPA accept in principle the SUDS design proposed for this site, including the proprietary vortex separator. Noted that it must be understood that the proposed scheme is not considered to set precedent for any other site and accept design to help preserve existing buildings, with considerable site constraints including the levels, and on the basis that the vortex separator will provide the required water quality treatment as claimed by the manufacturer as well as the Local Authority agreeing to its suitability in terms of ongoing maintenance. 	<p>treatment swale at this location due to spatial constraints.</p> <p><i>Options Report , 12 September 2014</i></p> <ul style="list-style-type: none"> • Based on the HAWRAT assessment, all three options would ensure that the quality of discharge to the Scatter Burn was within the required pollutant and spillage thresholds and therefore are considered to have no adverse effects on the Scatter burn or downstream River Don. • Given the various spatial constraints and urban nature of the site, Jacobs are proposing a vortex separator and detention basin (option 3) in series to achieve the required flow detention and water quality treatment prior to outfall. The combined treatment efficiencies of these SUDS is considered to be approximately 70%, which would meet the required sediment reduction based on the HAWRAT assessment results. • Response submitted to SEPA 15 September 2014.
<p>Scottish Environment Protection Agency (SEPA) <i>continued</i></p>	<p>Flood Risk</p> <ul style="list-style-type: none"> • Noted that the hydraulic modelling will also be used to assess existing capacities of the culverts. • Requested analysis of flood risk at the site must be undertaken using up to date methods from the Flood Estimation Handbook (FEH) to derive design flows. Recommended more than one method used for comparison. • Stated Flood Risk Assessment (FRA) should take into account flooding from all sources. Noted flood maps be generated including for the 1 in 200 (0.5% AEP) event for both pre- and post- development conditions. Recommend that the 1 in 1000 year (0.1% annual probability) flood event is also considered depending on the vulnerability of the existing development i.e. educational establishments; residential care homes. • Noted FRA methods proposed are likely to be acceptable however should take a precautionary approach and undertake more detailed analysis in vulnerable areas if required. • With regards to sensitivity analysis, appropriate analysis should be carried out to determine the sensitivity of design water levels to key model parameters, e.g. design flow, roughness, downstream boundary. Where culverts/ bridges exist, the risk of potential blockage also needs to be considered (i.e. the model should be run with full and/or partial blockage to better understand the impact of such processes). • Reference should be given to the document "Technical Flood Risk Guidance for Stakeholders" version 8 (SEPA, 2014) as it provides generic requirements for undertaking Flood Risk. • Requested SEPA FRA checklist should be completed and attached within the front cover of any FRAs issued in support of a development proposal which may be at risk of flooding. 	<p>Flood Risk</p> <ul style="list-style-type: none"> • Requests and requirements have been incorporated into the FRA and reported in Chapter 9 (Road Drainage and the Water Environment).
<p>Scottish Natural Heritage (SNH)</p>	<ul style="list-style-type: none"> • Noted that they do not hold any specific records of protected species in this area. Recommended contacting North East Scotland Biological Records Centre (NESBReC) for protected species and invasive non-native species. • Advised contacting the River Don Trust for aquatic survey information, who have undertaken habitat and electrofishing surveys. 	<ul style="list-style-type: none"> • NESBReC were contacted during the consultation phase providing information on designated species. • River Don Trust was contacted during the consultation phase; no response received.

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Non-Statutory Consultees		
Aberdeen and Grampian Chamber of Commerce	<ul style="list-style-type: none"> The Chamber recognises that the economic benefits of a transport proposal must be balanced by consideration for the environmental impact of the plans. Chamber members fully support the proposed scheme as it will ease congestion in this part of the city and make journey times more reliable. Noted that by limiting the level of queuing which currently happens around the existing Haudagain roundabout, there will be a reduction in emissions around this area. 	<ul style="list-style-type: none"> The environmental impact of the proposed scheme has been fully assessed following DMRB and other relevant guidance as reported within this Environmental Statement. Comments regarding traffic congestion easing and reliable journey times acknowledged. NOx, PM10, carbon dioxide (CO2) and Hydrocarbons (HC) emissions for opening year (2018) and design year (2033) of the proposed scheme assessed and reported in Chapter 13 (Air Quality).
Aberdeen Cycle Forum	<p><i>Meeting on 05 August 2014</i></p> <ul style="list-style-type: none"> Suggested that additional priority be provided by incorporating the following measures into the design: <ul style="list-style-type: none"> Provide cyclists with priority over general traffic at the signalised crossing point on the realigned Logie Avenue, i.e. a green light for cyclists at the crossing point until a car approaches. Provision of a raised table at the crossing point on the realigned Logie Avenue. Confirmed that they were content that the detail of the proposed scheme was being designed in accordance with Cycling by Design 2010 (Transport Scotland, 2011). 	<p><i>Meeting on 05 August 2014</i></p> <ul style="list-style-type: none"> Points raised by the Aberdeen Cycle Forum have been taken into consideration throughout the design process and proposed mitigation measures reported in Chapter 16 (Effects on all Travellers).
Aberdeen Friends of the Earth	<p>Community and Private Assets</p> <ul style="list-style-type: none"> Raised concern about potential community severance, especially for residents located in properties along Logie Avenue. 	<p>Community and Private Assets</p> <ul style="list-style-type: none"> Measures to minimise community severance such as adequate routes and crossing points for pedestrians, cyclist and other vulnerable users have been considered as part of the proposed scheme design.
	<p>Water Environment</p> <ul style="list-style-type: none"> Noted they were not clear as to what type SUDS are to be used and how attractive and safe they would be for wildlife and residents. Queried whether the design of the proposed SUDS is adequate to both reduce the water run-off based pollution entering the River Don and reduce ponding risks on the road? Stated that wider SUDS plans could reduce a considerable amount more polluted water reaching river/streams in the area. 	<p>Water Environment</p> <ul style="list-style-type: none"> A detention basin has been proposed in order to both attenuate and treat road run-off from the proposed scheme. Consultation with SEPA has been ongoing to ensure that the proposed scheme meets the relevant water quality standards. Detention basins do not have a permanent pool volume and as such are considered to present less of a health and safety risk than retention ponds.
	<p>Air Quality</p> <ul style="list-style-type: none"> Recommended that a baseline study of air quality take place along the new and existing stretches of roadway and well into the surrounding housing areas. Concern that the proposed scheme will result in an increase in air pollution and CO₂ emissions. 	<p>Air Quality</p> <ul style="list-style-type: none"> A detailed modelling study of the existing (baseline) air quality and future years, with and without the proposed scheme is reported in Chapter 13 (Air Quality). This includes all roads and receptors which could potentially

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		<p>experience significant local air quality impacts.</p> <ul style="list-style-type: none"> The proposed scheme has been designed to improve traffic movement and reduce congestion through the Haudagain roundabout junction in anticipation of planned growth from local committed development. The traffic data used in the assessment included committed developments for the opening year of the scheme, and therefore potential growth in traffic flows have been incorporated as part of the assessment.
<p>Aberdeen Friends of the Earth <i>continued</i></p>	<p>Noise</p> <ul style="list-style-type: none"> Concern regarding noise impacts resulting from the proposed scheme. Stated that road noise is known to affect the educational attainment of children and cause stress in the adult population. Queried whether appropriate glazing will be a planning requirement, and will existing homes benefit from such enhancements? <p>Effects on all Travellers</p> <ul style="list-style-type: none"> Stated the current Haudagain roundabout has been the site of many accidents involving cyclists over the years and could not see any improvements proposed at that area itself. Noted that expected increased throughput as a result of the changes in increased traffic speed with no toucan crossing or lanes would seem to put cyclists at risk. Queried whether the new pavements are wide and shared use in design? Further noting that it is not clear if the signalised crossings are toucan style. Noted there are opportunities to make the proposed scheme safer for cyclists and encourage modal shift. Highlighted that signalising the existing roundabout with toucans or placing some clear cycle lanes through the junction may be helpful. Stated that redesigning and signalising the existing Haudagain roundabout is still desirable with the addition of the new dual carriageway section. Commented that priority should be given to bus transportation to ensure easy access to the city centre/airport, especially through the existing Haudagain roundabout. 	<p>Noise</p> <ul style="list-style-type: none"> The noise assessment, as reported in Chapter 14 (Noise and Vibration), has taken into consideration the noise impacts associated with the proposed scheme. Where significant adverse noise impacts have been predicted, noise mitigation measures will be considered and assessed where feasible/practical as detailed in Section 14.5 (Mitigation). As well as residential housing, consideration has been given to noise impacts at other sensitive properties, including schools and other educational establishments. Where significant adverse noise impacts have been predicted for other sensitive receptors, noise mitigation measures will again be considered. Noise Insulation is available for existing residential properties that satisfy the eligibility criteria detailed in the Noise Insulation (Scotland) Regulations, 1975. <p>Effects on all Travellers</p> <ul style="list-style-type: none"> Provision for cyclists has been considered in accordance with Transport Scotland's Cycling by Design guidance document. A new off-carriageway shared footway/cycleway has been proposed adjacent to the southbound carriageway of the proposed dual-carriageway link road. Signalised crossings are proposed where shared footway/cycleways cross existing and proposed roads ensuring connectivity between the existing and proposed routes. No works are proposed at the existing Haudagain roundabout as part of the proposed scheme.

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Aberdeen Taxis	<ul style="list-style-type: none"> No response. 	<ul style="list-style-type: none"> n/a
Aberdeen Wheelers	<ul style="list-style-type: none"> No response. 	<ul style="list-style-type: none"> n/a
Archaeology Scotland	<ul style="list-style-type: none"> No response. 	<ul style="list-style-type: none"> n/a
British Horse Society	<ul style="list-style-type: none"> Noted that no equestrian interests would be affected as a result of the proposed scheme. However, requested that path surfaces be non-slip and wide enough for equestrian usage. 	<ul style="list-style-type: none"> The paths proposed have been designed for pedestrian and where required, cyclist use. The path surfaces are compliant with the Disability Discrimination Act (DDA) requirements which include non-slip specifications.
Centre for Ecology and Hydrology	<ul style="list-style-type: none"> No response. 	<ul style="list-style-type: none"> n/a
Confederation of Passenger Transport	<ul style="list-style-type: none"> No response. 	<ul style="list-style-type: none"> n/a
Cycle Touring Club (Scotland) (CTC)	<p><i>Meeting on 05 August 2014</i></p> <ul style="list-style-type: none"> Queried if a grade separated option (for vehicular traffic) had been considered incorporating a 'flyover' from North Anderson Drive to Mugiemoss Road. Asked if grade separation had been considered as an alternative to at-grade signalised crossing points (for cyclists), suggesting that grade separated crossing points for cyclists may reduce the amount of delay experienced by cyclists crossing the roads within the proposed scheme. CTC advised that their preference would be for on-carriageway facilities and that this would consist of a cycle lane along the entire length of the northbound and southbound carriageways of the proposed dual carriageway link road. 	<p><i>Meeting on 05 August 2014</i></p> <ul style="list-style-type: none"> Advised that grade separated options were considered during the DMRB Stage 2 sifting process and that these were generally discounted on cost, environmental impact and engineering complexity. Advised that based on understanding of desire lines there is no requirement for grade separated routes for NMUs. Highlighted that the current proposals were based on the link specification guide within Cycling by Design and that given the very high traffic flows this pointed to an off-carriageway facility being most appropriate on safety grounds.
First Group (FG)	<p><i>Meeting on 16 July 2014</i></p> <ul style="list-style-type: none"> FG raised concerns that buses travelling eastbound and westbound along Auchmill Road would be delayed by the proposed signalised junction and queried whether bus priority could be provided on Auchmill Road to mitigate this. FG advised that they were content with the location of the bus laybys and advised that a bus stop may be beneficial on the realigned section of Manor Avenue (northbound) to replace the bus stop lost from the existing section of Manor Avenue that is to be removed from the route. 	<p><i>Meeting on 16 July 2014</i></p> <ul style="list-style-type: none"> Advised that additional bus priority measures would be considered in the development of the scheme design. Advised that replacement bus stops at this would be considered in the development of the scheme design.
Freight Transport Association	<ul style="list-style-type: none"> No response. 	<ul style="list-style-type: none"> n/a
Grampian Red Squirrel Group	<ul style="list-style-type: none"> No response. 	<ul style="list-style-type: none"> n/a
Middlefield Area Regeneration Action Group (MARAG)	<p><i>Meeting on 02 February 2015</i></p> <ul style="list-style-type: none"> MARAG raised queries regarding change in vehicular access as a result of the proposed scheme. 	<p><i>Meeting on 02 February 2015</i></p> <ul style="list-style-type: none"> Comments provided by MARAG considered within the

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	<ul style="list-style-type: none"> MARAG provided comments on landscape planting. 	design of the proposed scheme.
Nestrans	<ul style="list-style-type: none"> No response. 	• n/a
Network Rail	<p>Drainage and Culvert Survey <i>Meeting on 20 August 2014</i></p> <ul style="list-style-type: none"> Advised that their preference would be for the discharge rate to be attenuated to the pre-development rate, however they also advised that an increase above the pre-development rate may also be acceptable subject to the findings of the modelling work and FRA. Noted that a routine inspection of the culverts was to be undertaken and would inform Jacobs when cleaning/maintenance of the culverts is completed. 	<p>Drainage and Culvert Survey <i>Meeting on 20 August 2014</i></p> <ul style="list-style-type: none"> Comments acknowledged and considered following the completion of the FRA (refer to Chapter 9: Road Drainage and the Water Environment).
North East Scotland Bat Group	<ul style="list-style-type: none"> No response. 	• n/a
North East Scotland Biological Records Centre (NESBReC)	<ul style="list-style-type: none"> Provided the following ecological information within 500m of the proposed scheme: <ul style="list-style-type: none"> Bat records; Designated Species; Ancient Woodland Inventory; Forestry Commission National Forest Inventory Interpretation Forest Types 2012; Local Nature Conservation Sites; and Integrated Habitat System (2004-2007). 	<ul style="list-style-type: none"> Information provided has been used to inform the baseline considered in the assessment. Refer to Chapter 10 (Ecology and Nature Conservation).
Northfield Community Council	<ul style="list-style-type: none"> No response. 	• n/a
Police Scotland (National Architectural Liaison Officer Stuart Ward)	<p>Landscape and Visual <i>Meeting on 4 December 2014</i></p> <ul style="list-style-type: none"> The 'Secure By Design' police initiative was highlighted. This is an initiative to encourage the building industry to adopt crime prevention measures in the design of developments to assist in reducing the opportunity for crime and the fear of crime, creating a safer and more secure environment. Generally content with the conceptual landscape proposals. Agreed that the concept of formal hedgerows, clear stem trees with only grass seeding and no shrub planting, would facilitate good visibility throughout. Confirmed good visibility would help to deter criminal activity. Advised planting trees with a minimum clear stem of 2.2m and include requirements for crown lifting to ensure clearance is maintained in the long term. Advised to consider the availability of local community surveillance opportunities when developing landscape proposals. Example ensuring views of open space from surrounding tenements remain uninterrupted by proposed mitigation planting. Agreed in principal to the proposed position of the playground off Logie Avenue. However advised to reconsider the need for the playground. Highlighted that playgrounds can become areas of anti-social behaviour at night and responding to problems at numerous playgrounds within a town or city can become problematic for the local police 	<p>Landscape and Visual <i>Meeting on 4 December 2014</i></p> <ul style="list-style-type: none"> 'Secure By Design' initiative guidelines have been considered during the development of the design proposals. All the points raised during the meeting have been taken into consideration when developing the landscape proposals in line with the landscape and visual mitigation requirements (refer to Chapter 11 (Landscape and Visual)).

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Appendix A6.2: Summary of Consultation Responses

Consultee	Summary of Consultee Feedback	Response
	<p>forces. Are there existing playgrounds in close proximity?</p> <ul style="list-style-type: none"> • Carefully consider existing and anticipated patterns of movement. Ensure key movement routes are appropriately illuminated with a uniform, even distribution of light. Note that it is not always appropriate to provide lighting in parks and open spaces as this can encourage anti-social behaviour. • Consider limiting the number of access points to parks and parks to discourage use for criminal behaviour due to lack of escape routes. Consider proposing overlapping hedgerows to prevent the creation of desire lines. • Consider proposing dense prickly species or hedgerow planting and creating uneven rough ground conditions, to act as deterrents to people accessing potentially unsafe areas example the SUDs and its surroundings. . • Reconsider position of proposed paths in close proximity to properties example at Logie Avenue. Paths in these locations could be seen a good surveillance opportunities for prospective criminals to go unnoticed. 	
River Don Trust	<ul style="list-style-type: none"> • No response. 	<ul style="list-style-type: none"> • n/a
Road Haulage Association	<ul style="list-style-type: none"> • No response. 	<ul style="list-style-type: none"> • n/a
Scottish Badgers	<ul style="list-style-type: none"> • Indicated that there is a badger presence within the study area, although a location and record type was not provided. Furthermore, provided a badger road traffic accident was recorded west of Haudagain roundabout in August 2007. • Recommended that a survey appropriate in scope and size to the site is carried out to inform as to whether or not there are badgers within the project footprint and whether if present they would be impacted by the proposed scheme. 	<ul style="list-style-type: none"> • Information provided has been used to inform the baseline considered in the assessment, as reported in Chapter 10 (Ecology and Nature Conservation). • A badger survey was undertaken on 14 August 2014 and results are provided in Section 10.3 (Baseline Information).
Scotways	<ul style="list-style-type: none"> • Confirmed that the National Catalogue of Rights of Way (ROW) does not record any ROWs that would be affected by the proposed scheme, other than those that may be formed by public roads. • Noted that because there are no definitive records of ROWs in Scotland, there may be routes that meet the criteria to be ROWs but have not yet been recorded. 	<ul style="list-style-type: none"> • Information used to inform the baseline considered in the assessment; refer to Chapter 15 (Effects on all Travellers).
Scottish Wildlife Trust	<ul style="list-style-type: none"> • No comments. 	<ul style="list-style-type: none"> • n/a
Stagecoach (SC)	<p><i>Meeting on 16 July 2015</i></p> <p>Major concerns in relation to the lack of bus priority measures proposed on Auchmill Road and North Anderson Drive. SC suggested that the following measures would reduce the amount of delay incurred by buses as a result of Scheme:</p> <ul style="list-style-type: none"> • Provision of a bus gate on Auchmill Road (lane 1 - eastbound) at the proposed junction with new link road to allow the existing bus lane to be continued through to its existing termination point at Haudagain Roundabout. • Provision of a bus lane on Auchmill Road (lane 1 – westbound) from Haudagain Roundabout to the new link road. SC suggested that the existing eastbound bus lane could be truncated to facilitate provision of a new westbound bus lane. • Provision of a bus lane on North Anderson Drive (lane 1 – northbound) from the new link road to Haudagain Roundabout. 	<p><i>Meeting on 16 July 2015</i></p> <ul style="list-style-type: none"> • Advised that SC's concerns and suggestions would be considered in the development of the scheme design.
SUSTRANS	<ul style="list-style-type: none"> • Provided GIS shapefiles relating to the cycle routes in and around the Haudagain roundabout. • Manual count information for National Cycle Network Route (NCN) 1 north of the proposed scheme provided. 	<ul style="list-style-type: none"> • Information provided has been used to inform the baseline considered in the assessment, as reported in Chapter 15 (Effects on all Travellers).

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Appendix A6.2: Summary of Consultation Responses

Consultee	Summary of Consultee Feedback	Response
The Garden History Society in Scotland	<ul style="list-style-type: none">• No response	<ul style="list-style-type: none">• n/a
Transport Scotland Trunk Road and Bus Operations	<ul style="list-style-type: none">• No response	<ul style="list-style-type: none">• n/a
Transport Scotland's Standards Branch	<ul style="list-style-type: none">• No response	<ul style="list-style-type: none">• n/a
Transport Scotland's Technical Analysis Branch	<ul style="list-style-type: none">• No response	<ul style="list-style-type: none">• n/a
Trunk Road Operating Company	<ul style="list-style-type: none">• No response	<ul style="list-style-type: none">• n/a

A6.3: Record of Determination (RoD)

EC DIRECTIVE 97/11
ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) REGULATIONS 1999 (as amended)
Roads (Scotland) Act 1984

RECORD OF DETERMINATION

Name of Project: A90/A96 Haudagain Improvement	Location: North-west of Aberdeen city centre. Haudagain roundabout is the main junction between the A90 and A96 trunk roads.
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Description of Project:

The project involves the development of an improvement at Haudagain roundabout, the junction between the A90 and A96 trunk roads in Aberdeen. The roundabout is currently operating over its capacity leading to congestion and unreliable journey times. Previous work which led to the identification of a preferred option was undertaken by Aberdeen City Council (ACC) as part of a study commissioned by a steering group comprising Transport Scotland (TS), Nestrans and ACC. The study was undertaken using STAG methodology and a report published on Nestrans' website in July 2008. Option 5 which proposes the construction of a new dual carriageway link road through the Middlefield area of Aberdeen was identified as the preferred option based on the STAG work. ACC and Nestrans have expressed their support for Option 5.

The STAG report was revisited by TS in 2013/2014 to ensure that Option 5 worked most effectively with the new development proposals for the area, as put forward by ACC. The 41 route options, originally identified within the STAG report, along with a further 8 route options, were assessed in accordance with the Design Manual for Roads and Bridges (DMRB), Volume 5, Section 1, Part 2, TD 37 'Scheme Assessment Reporting' (TD37/93). In accordance with the DMRB guidance an Options Sifting Report (Jacobs, 2014a) was produced with the results identifying three options that were considered most likely to meet the objectives of the scheme. The three options were taken forward to DMRB Stage 2 and subject to engineering/economic, traffic and environmental assessments, reported in the Stage 2 Report (Jacobs, 2014b). The assessments concluded that Option 5 would remain the preferred option for the scheme. Option 5 will be developed and taken forward to DMRB Stage 3 assessment as the proposed scheme. The location and current design of Option 5 is shown in Figure 1 of Appendix 1.

Description of Local Environment

The sections below provide brief descriptions of the local environment within a study area of 500m from the preferred option (Option 5). The baseline information is based on review of currently available information; primarily the findings of the A90/A96 Haudagain Improvement DMRB Stage 2 Scheme Assessment Report - Part 2: Environmental Assessment (Jacobs, 2014b) hereafter referred to as the Stage 2 assessment. Identified environmental constraints are shown in Figure 2 of Appendix 1; community facilities and land are shown in Figure 3 of Appendix 1.

Community and Private Assets

There are multiple community facilities located in the proximity of Haudagain roundabout, including schools, a nursery, health clinic, community centre, post office and sports facilities as shown in Figure 3. The land use within the study area predominantly comprises residential properties and retail units. No farming interests or businesses were identified within 500m of the proposed scheme.

Geology, Soils, Contaminated Land and Groundwater

No designated Geological Receptors or Geological Conservation Review sites are located within the Stage 2 assessment study area for geology.

Solid geology at the site is composed of the Aberdeen Pluton Granite and superficial geology in the study area is composed of made ground, alluvium, river terrace deposits, Devensian aged glacial till and sands and gravels.

27 potential contamination sources were identified within the study area. Significant contamination sources were identified at Stage 2, including various petrol stations and the gas holder locations associated with the former Denhead gas works.

SEPA's River Basin Management Plans (RBMP) show that the study area falls within a Drinking Water Protected Area.

Groundwater in both bedrock and superficial deposit aquifers was found to be highly vulnerable to pollution from surface activities. The area is also designated as a Nitrate Vulnerable Zone. However, SEPA's RBMP 2008 classification for groundwater, classifies both bedrock and superficial deposit aquifers as Good.

Road Drainage and the Water Environment

Three surface water features have been identified within the study area: River Don, Scatter Burn and Woodside Burn as shown in Figure 2. The Scatter Burn and Woodside Burn are located to the north-west and north-east of the proposed scheme. Both of these watercourses discharge into the River Don.

The fluvial flood extent at the River Don does not extend up to the proposed scheme. The River Don is classified as salmonid waters. The reach of the River Don was classified by SEPA as of overall 'Moderate' status in 2008 with overall ecological status of Moderate and overall chemical status of Fail.

Some surface water flooding extent (low and medium likelihood) is shown along both culverted and open sections of Scatter Burn as well as in the vicinity of the existing Haudagain roundabout and along the A96. Previous studies undertaken by Halcrow in 2008 and 2009, on behalf of Aberdeen City Council, indicated that water quality is poor within the Scatter Burn.

Some surface water (pluvial) flooding extent (low and medium likelihood) is shown along the downstream reaches of Woodside Burn and the A96, which naturally drains to the watercourse.

Ecology and Nature Conservation

There are a number of species of conservation interest confirmed in the area comprising the following. Their presence within the study area is variable:

- badgers;
- otters;
- bats (various species);
- red squirrel;
- a number of bird species (including breeding birds, kingfisher and peregrine);
- Atlantic salmon;
- trout;
- European eel; and
- lamprey (all species).

No statutory designated sites are present within 500m of the proposed scheme. Local designated sites within the study area include:

- Aberdeen – Inverness Railway Line District Wildlife Site (DWS);
- River Don Corridor (DWS); and
- Manor Park Community Gardens.

These designated sites are shown in Figure 2.

Habitats of significance to conservation in the study area include:

- grassland, amenity;
- grassland, poor semi-improved;

- woodland, semi-natural (excluding Woodside);
- woodland, plantation; and
- scattered trees.

Invasive plants are extensive in the River Don corridor, especially adjacent to the river itself. The species are of national importance and include invasive non-native species/genera (INNS) such as Giant hogweed, Himalayan balsam and Japanese knotweed.

Landscape and Visual

The study area is set within an urban environment and the landform is predominantly dictated by the River Don valley.

Within the high density urban areas around the A90(T) North Anderson Drive and the Haudagain roundabout vegetation comprises well maintained mass ornamental shrub and tree planting. Planting within public and communal space comprise a variety of densely planted well established shrubs and occasional small trees.

Eight distinct Urban Character Areas (UCAs) were identified within the study area in the Stage 2 assessment as shown in Figure 2.

The areas surrounding Haudagain roundabout are mixed in character and use including; residential areas, industrial and commercial units, a cemetery and a memorial garden, a small modern housing estate, sport facilities and a retirement home.

The Stage 2 visual assessment identified five outdoor receptors and 27 built receptors to Option 5. The outdoor receptors include Heathryfold Allotment Gardens and Manor Park, Manor Terrace Park, the A96, A90(T) North Anderson Drive, and A90(T) Mugiemoos Road. Built receptors include Manor Park caravan park, Middlefield Church, commercial units, and various housing.

Cultural Heritage

No archaeological remains assessed to be of High or Medium sensitivity were identified within the study area.

Due to the urban nature of the study area and its widespread and continuing development, the potential for unknown archaeological remains was assessed to be Low.

The Stage 2 assessment identified a total of 22 Historic Buildings were located within the study area for Option 5. No historic buildings were assessed to be of High sensitivity and 15 historic buildings were assessed to be of Low Value within the study area.

No archaeological remains assessed to be of High or Medium sensitivity were identified within the study area for Option 5. A total of 36 archaeological remains of Low or Negligible sensitivity and one asset of Unknown Sensitivity were identified within the study area.

Four historic buildings of Medium sensitivity were identified within the study area for Option 5, all of which are Category B Listed as shown in Figure 2. The Medium sensitivity assets are: Persley Castle (Asset 9), Boundary Marker 49 (Asset 17), Persley Bridge (Asset 18) and Boundary Marker 48 (Asset 53).

Based on the Historic Landscape Type (HLT) data provided by RCAHMS and supplemented by map regression and walkover survey, a total of 13 HLTs were identified.

One HLT; Designed Landscape, 17th-19th Century Policies and Parkland, assessed to be of Medium sensitivity was identified within the study area. Two HLTs assessed to be of Low sensitivity were identified within the study area. The remaining HLTs were assessed to be of negligible sensitivity.

Air Quality

Anderson Drive Air Quality Management Area (AQMA) is located within the study area and shown in Figure 2. This AQMA as declared by ACC, extends from the Bridge of Dee, including Haudagain roundabout, part of the A96 Great Northern Road (GNR) to A96(T) Auchmill Road and part of A96(T) Auchmill Road from GNR to the junction with Howes Road.

ACC operates six automatic monitoring stations and maintains a network of diffusion tubes across the city. There are no continuous analysers within the study area, but eight diffusion tubes were identified and selected for use in the model verification process.

The Stage 2 assessment identifies no designated sites of ecological importance, such as Ramsar, SAC, SSSI or SPA, within 200m of 'affected' roads as defined by the study area. An ecological assessment of NO_x concentrations is therefore not required.

The Stage 2 assessment identified 27 sensitive receptors. These receptors have been selected on the basis that they are likely to experience the largest changes in pollutant concentrations.

Noise and Vibration

The Stage 2 assessment states that the scheme is situated within a heavily populated urban area on the outskirts of Aberdeen and the existing noise environment is likely to be largely dominated by road traffic noise at many locations.

A review of the Draft Transportation Action Plan (Scottish Government, 2013) was undertaken during the Stage 2 assessment and no Candidate Noise Management Areas (CNMAs) were identified within the study area.

Effects on All Travellers

The Stage 2 assessment identifies a number of core paths and one aspirational core path within the study area.

Two key off road local footpaths (LP) were identified within the study area:

- LP1 which leads from Logie Avenue to the local shop on the A96(T) Auchmill Road, providing a shortcut though the estate for Non-Motorised Users (NMUs); and
- LP2 which leads from the Middlefield estate to the A90(T) North Anderson Drive in the east.

The National Cycle Route 1 (NCR1) is located to the north of the proposed scheme as shown in Figure 2. This route provides access to the banks of the River Don in the west of the study area.

With regard to driver stress, for roads intersecting at the existing Haudagain roundabout the Stage 2 assessment noted that:

- in the AM peak period all driver stress values were assessed as High with the exception of the A96 Great Northern Road which was assessed as Moderate; and
- in the PM peak period all driver stress values were assessed as Moderate with the exception of the A90(T) Mugiemoor Road coming out as High.

Description of the main environmental impacts of the project and proposed mitigation

This section provides an overview of the main anticipated environmental impacts, based on the Stage 2 assessment. General mitigation measures are outlined in the Stage 2 assessment. Additional mitigation measures will be developed in conjunction with the Stage 3 design and as part of the Stage 3 EIA process.

Community and Private Assets

Based on the Stage 2 assessment the proposed scheme would result in temporary disruption to travel and access arrangements during construction. The proposed scheme would also result in the demolition of a number of community and private assets in addition to access alteration and community severance in Middlefield. Mitigation to reduce disruptions and maintain accesses are proposed. The loss of all or part of residential and commercial properties or land, land owners would be entitled to claim for compensation.

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Significant residual impacts identified for Option 5 remaining following the implementation of mitigation measures comprise:

- demolition of 125 residential properties, and four community facilities spanning six main doors (Middlefield Community Project Office, Middlefield Community Nursery, Logie Neighbourhood Services and Logie Health Clinic);
- land-take in development land;
- severance and access issues to community facilities/land; and
- travel disruption and access issues to residential/commercial properties and community facilities/ and during the construction period.

Geology, Soils, Contaminated Land and Groundwater

Based on the Stage 2 assessment superficial deposits within the study area are likely to be impacted by the proposed construction and associated earthworks of the proposed scheme. Given the moderately vulnerable nature of all aquifers to surface pollution, the potential magnitude of impact from accidental spillages is considered to be medium on drift groundwater and low on bedrock. Two road cuttings and the Sustainable Drainage System (SuDS) detention basin have the potential to intercept groundwater within the superficial deposits for the proposed scheme. The construction of embankments may result in localised compaction of superficial deposits. Impaired groundwater quality as a result of cuttings has the potential to indirectly impact on the quality of surface water for the River Don and Scatter Burn. Potential pollution sources, migration pathways and potential receptors may also be at risk as a result of the proposed scheme.

At the DMRB Stage 2 assessment stage, the detailed design had not been developed and therefore the mitigation detail could not be accurately defined. Through appropriate mitigation measures (e.g. ground investigation to support detailed design and management of contaminated sources) impacts on the areas of soil and geology would be minimised. No significant residual impacts are expected following the implementation of mitigation.

Road Drainage and the Water Environment

Based on the Stage 2 assessment surface water from the construction footprint could result in an increase in runoff to the surface water drainage system and potential increase in flow in the Scatter Burn and/or Woodside Burn. An increase in flows could increase the risk of flooding in the Scatter Burn. The scheme is unlikely to result in significant changes to water quality.

Mitigation measures will be considered at Stage 3, including input to the design to inform aspects such as provision of SuDS. A range of best practice measures will also be required during construction to avoid or reduce potential for impacts on the water environment. No significant residual impacts are expected following the implementation of mitigation.

Ecology and Nature Conservation

Based on the Stage 2 assessment the main impacts on ecology and nature conservation are anticipated to be habitat loss (particularly with regard to bats), and potential pollution to the River Don which could alter water quality and result in direct mortality to a number of species including kingfishers and otters.

Mitigation measures will be considered at Stage 3, and are likely to include habitat replacement, due consideration for seasonal constraints and adherence to standard best practice and guidelines to mitigate potential pollution incidents. After the implementation of mitigation, no residual impacts from the proposed scheme are anticipated.

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Landscape and Visual

Due to the scale of demolition and construction works associated with the proposed scheme, potential impacts on landscape character and visual amenity are likely. Impacts include, but are not limited to:

- damage to vegetation and private garden ground;
- vehicles moving machinery and materials to and from the site;
- traffic management measures;
- machinery, potentially including heavy excavators and earth moving plant;
- exposed bare earth over the extent of the proposed works;
- structures, earthworks, road surfacing and ancillary works during construction;
- temporary site compound areas including site accommodation and parking;
- temporary soil storage heaps and stockpiles of construction materials;
- lighting associated with night-time working and site accommodation; and
- traffic congestion during work.

Based on the Stage 2 assessment during operation, it is anticipated that Option 5 would have a direct impact on three Urban Character Areas (UCA) and would have an effect upon a total of 27 built and five outdoor visual receptor groups.

Mitigation measures will be considered at Stage 3, and are likely to include:

- retention of existing trees and vegetation wherever possible and incorporation with new planting proposals in order to enhance the experience of travelling along the road;
- enhancement of biodiversity through use of native species which are adapted to local conditions;
- planting to replace trees lost during the construction of the proposed route options;
- planting to provide screening to reduce visual impacts of the road, structures and lighting;
- high quality hard landscaping and street furniture and environmental barrier design to enhance townscape; and
- reinstatement/replacement of open space areas lost or severed by the route.

An urban design strategy will be developed in consultation with Aberdeen City Council to supplement the Stage 3 assessment and help integrate the proposals with the planned regeneration of the Middlefield area.

Based on the Stage 2 assessment significant residual impacts remaining following the implementation of mitigation measures comprise:

- Substantial landscape impact on North Middlefield UCA;
- Moderate landscape impact for South Middlefield UCA;
- Substantial visual impact on 11 built receptors;
- Moderate/Substantial impact on four built receptors; and
- Moderate impact on four built receptors and one outdoor receptor.

Cultural Heritage

Based on the Stage 2 assessment the proposed scheme will result in land-take and, as a result, a number of impacts on potential archeological remains, historic landscape elements and on the footprint and setting of cultural heritage assets.

Mitigation measures will be considered at Stage 3 in consultation with Aberdeen City Council.

No significant residual impacts are expected following the implementation of mitigation.

Air Quality

Based on the Stage 2 assessment the construction phase of this development has the potential to lead to dust nuisance associated with construction activities and haul routes. Based on guidance within IAN 174/13 no significant local air or global air quality impacts are predicted as a result of the proposed scheme. During construction, mitigation measures are likely to be required, following best practice for aspects such as dust control.

Noise and Vibration

There is the potential for temporary noise and vibration impacts to occur during the construction phase of the scheme, both at residential properties and other sensitive receptors alongside each of the alignments considered.

During operation, the proposed scheme would have short and long-term adverse impacts on a number of noise and vibration receptors.

During construction, mitigation measures are likely to be required, such as use of 'best practicable means', the use of temporary noise screens around particularly noisy activities and switching off plant and equipment when it is not in use for longer periods of time.

Consideration will also be given to incorporating noise mitigation measures into the proposed scheme design to reduce predicted adverse noise impacts during operation.

Based on the Stage 2 assessment significant residual impacts remaining for Option 5 following the implementation of mitigation measures comprise:

- potential for significant short-term temporary adverse noise and vibration impacts during the construction period;
- short-term Daytime Impacts (on Scheme opening): 80 receptors experiencing Large/Very Large or Moderate/Large adverse impacts, and 46 receptors experiencing Large/Very Large or Moderate/Large beneficial impacts;
- long-term Daytime Impacts: 683 receptors experiencing Large/Very Large or Moderate/Large adverse impacts; and
- long-term Night-time Impacts: 67 receptors experiencing Large/Very Large or Moderate/Large adverse impacts.

Effects on All Travellers

Based on the Stage 2 assessment for Option 5 here would likely be disruption to NMU provisions during both construction and operation.

Views from the road would be altered by the proposed scheme and the severing or realignment of Logie Avenue, Logie Place, Manor Avenue, Manor Drive, Manor Terrace and Manor Place. Other views from the road are not considered likely to be significantly affected.

With regard to driver stress both increases and decreases were recorded in the 2033 AM peak period in comparison to the Do-Minimum scenario, whilst in the PM scenario driver stress levels are considered comparable.

Mitigation measures will be considered at Stage 3, and will include; consideration for the timing of construction works; maintaining and improving access for NMUs through various provisions; high quality hard landscaping, street furniture and environmental barrier design; and traffic management.

No significant residual impacts are expected following the implementation of mitigation.

Materials

Based on the Stage 2 assessment potential impacts on materials may include:

- site remediation / preparation impacts (e.g. depletion of finite natural resources);
- demolition impacts resulting in the generation of waste; and
- site construction impacts including disturbance of contaminated soils, potential flooding impacts, creation of nuisance, and the poor management of materials.

No significant residual impacts are expected following the implementation of mitigation.

Policies and Plans

Compliance with individual policies and plans will be considered at Stage 3. Due to potential significant impacts noted above there is potential for non-compliance with elements of the Aberdeen Local Development Plan (2012) policy in regard to demolitions, localised noise, townscape and visual impacts.

Extent of EIA work undertaken and details of consultation

To date, the preferred option; Option 5, has been identified following a DMRB Stage 2 assessment, including consideration of potential environmental impacts. DMRB Stage 3 design and full EIA is due to commence. Environmental screening and scoping has been undertaken in accordance with the framework set out in the Environmental Impact Assessment (Scotland) Regulations 2011 under amendments to the Roads (Scotland) Act 1984 and is reported in the Environmental Screening and Scoping Report (Jacobs, 2014c).

Public and statutory consultations have been previously undertaken during the DMRB Stage 2 assessment, as reported in the A90/A96 Haudagain Improvement DMRB Stage 2 Scheme Assessment Report - Part 2: Environmental Assessment (Jacobs, 2014b). Consultation is due to get underway as part of the DMRB Stage 3 process. Consultation letters to inform the Stage 3 assessment are due to be issued to a range of consultees.

Statement of case in support of a Determination that a formal EIA and Environmental Statement is required:

Screening Determination:

The proposed scheme is considered to constitute a relevant project falling within Annex II of the EIA (Scotland) Regulations 2011 since the works require an area of land greater than 1ha (approximately 6.7ha), and that the nature of the proposed works are considered likely to have one or more significant environmental effects.

Therefore, the conclusion of the screening exercise is that the proposed scheme will require an EIA.

Key elements of the works:

- New dual carriageway link road approximately 500m in length.
- Three new signal-controlled junctions would connect the new link road to the existing road network.
- Manor Avenue would be realigned to tie-in to the new link road.

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- Logie Avenue would be realigned to tie-in to the new link road.
- Logie Place would be closed and stopped up at its eastern extent.
- Logie Terrace would be closed and stopped up at its southern extent.
- Manor Terrace would be closed and stopped up.
- A new junction would connect Wilkie Avenue to Fowler Avenue to maintain access to Manor Avenue.

Location of the scheme: The Haudagain roundabout is located to the north-west of Aberdeen city centre and is the main junction between the A90 and A96 trunk roads in the city.

References of supporting documentation:

Aberdeen City Council (2012). Aberdeen Local Development Plan.

Halcrow (2008). Aberdeen City Council Middlefield Hydrogeological Study: Supporting Studies.

Halcrow (2009). Aberdeen City Hydrogeological Study: Integrated Summary Report.

Jacobs (2014a). A90/A96 Haudagain Improvement Option Sifting Report.

Jacobs (2014b). A90/A96 Haudagain Improvement DMRB Stage 2 Scheme Assessment Report.

Jacobs (2014c). A90/A96 Haudagain Improvement Environmental Screening and Scoping Report.

Scottish Government (2013). Draft Transportation Noise Action Plan.

I have determined, following discussions with the MTRIPS Project Manager that an EIA/ ES is required for this project.

SIGNATURE Transport Scotland Environmental Advisor.....

Date

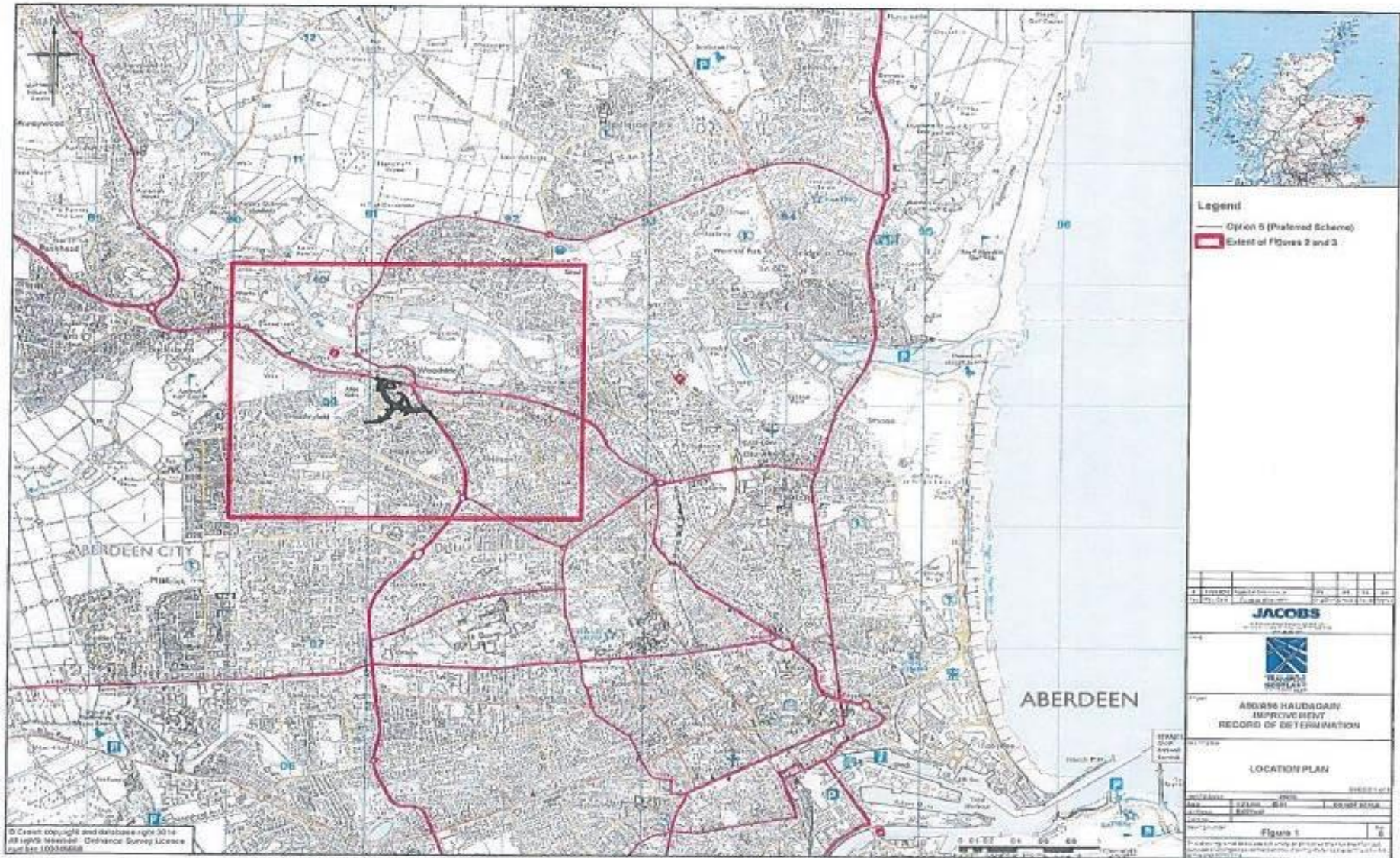
Authorisation to publish Notice of Determination

SIGNATURE Director, MTRIPs.....

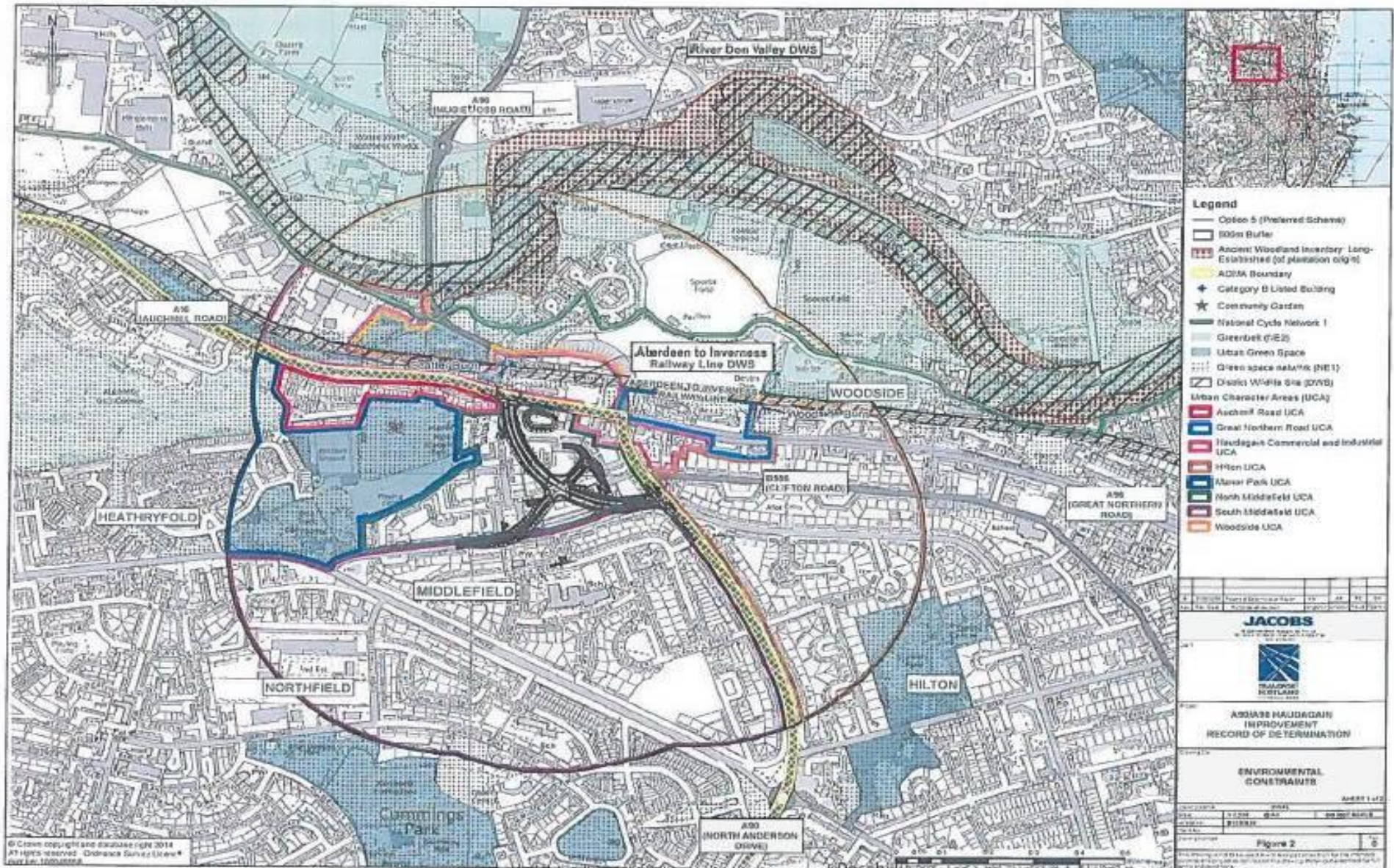
Date

Appendix 1: Figures

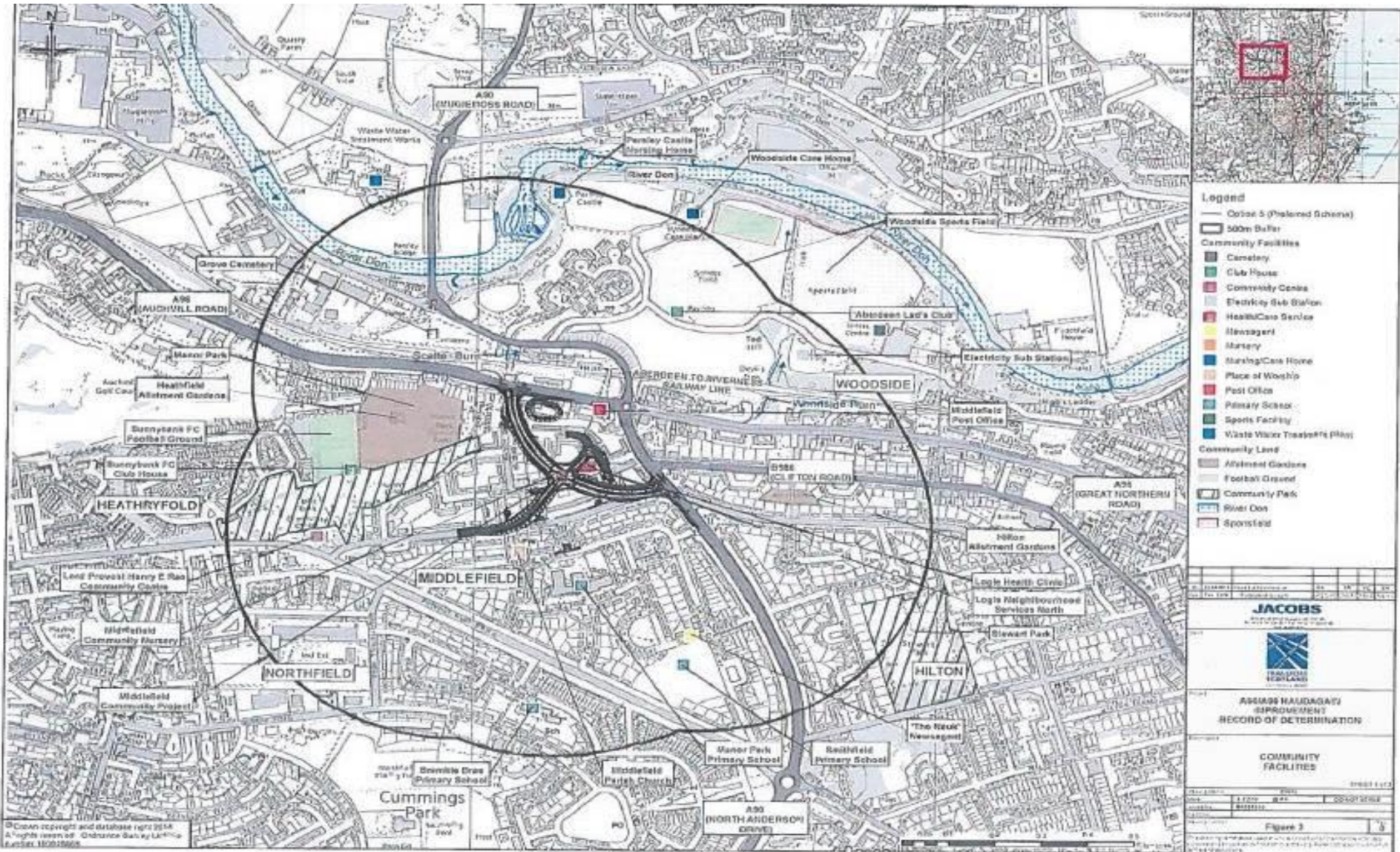
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Appendix A7.1: Residential Land-take for the Proposed Scheme

A7.1: Residential Land-take for the Proposed Scheme

This appendix highlights permanent land-take and demolitions required from residential land interests as a result of the proposed scheme. Land-take information is provided in Table 1 displayed below.

Table 1: Land-take from Residential land-interests

Land Interest	Loss of Land		Sensitivity	Magnitude	Significance
	Area lost (ha)	% Area lost			
549 North Anderson	n/a - demolition	100	High	High	Substantial
2 Manor Avenue	n/a - demolition	100	High	High	Substantial
4 Manor Avenue	n/a - demolition	100	High	High	Substantial
6 Manor Avenue	n/a - demolition	100	High	High	Substantial
8 Manor Avenue	n/a - demolition	100	High	High	Substantial
10 Manor Avenue	n/a - demolition	100	High	High	Substantial
12 Manor Avenue	n/a - demolition	100	High	High	Substantial
14 Manor Avenue	n/a - demolition	100	High	High	Substantial
18 Manor Avenue	n/a - demolition	100	High	High	Substantial
20 Manor Avenue	n/a - demolition	100	High	High	Substantial
22A Manor Avenue	n/a - demolition	100	High	High	Substantial
22B Manor Avenue	n/a - demolition	100	High	High	Substantial
22C Manor Avenue	n/a - demolition	100	High	High	Substantial
22D Manor Avenue	n/a - demolition	100	High	High	Substantial
24A Manor Avenue	n/a – acquisition	100	High	High	Substantial
24B Manor Avenue	n/a – acquisition	100	High	High	Substantial
24C Manor Avenue	n/a – acquisition	100	High	High	Substantial
24D Manor Avenue	n/a – acquisition	100	High	High	Substantial
24E Manor Avenue	n/a – acquisition	100	High	High	Substantial
24F Manor Avenue	n/a – acquisition	100	High	High	Substantial
30A Manor Avenue	n/a – acquisition	100	High	High	Substantial
30B Manor Avenue	n/a – acquisition	100	High	High	Substantial
30C Manor Avenue	n/a – acquisition	100	High	High	Substantial
30D Manor Avenue	n/a – acquisition	100	High	High	Substantial
1 Logie Avenue	n/a - demolition	100	High	High	Substantial
3 Logie Avenue	n/a - demolition	100	High	High	Substantial
5 Logie Avenue	n/a - demolition	100	High	High	Substantial
7 Logie Avenue	n/a - demolition	100	High	High	Substantial
4 Logie Avenue	n/a - demolition	100	High	High	Substantial
4a Logie Avenue	n/a - demolition	100	High	High	Substantial
6 Logie Avenue	n/a - demolition	100	High	High	Substantial
8 Logie Avenue	n/a - demolition	100	High	High	Substantial
1 Logie Place	n/a - demolition	100	High	High	Substantial
3 Logie Place	n/a - demolition	100	High	High	Substantial
5 Logie Place	n/a - demolition	100	High	High	Substantial
7 Logie Place	n/a - demolition	100	High	High	Substantial
9 Logie Place	n/a - demolition	100	High	High	Substantial
11 Logie Place	n/a - demolition	100	High	High	Substantial
13 Logie Place	n/a - demolition	100	High	High	Substantial
15 Logie Place	n/a - demolition	100	High	High	Substantial
17 Logie Place	n/a - demolition	100	High	High	Substantial

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Appendix A7.1: Residential Land-take for the Proposed Scheme

Land Interest	Loss of Land		Sensitivity	Magnitude	Significance
	Area lost (ha)	% Area lost			
19 Logie Place	n/a - demolition	100	High	High	Substantial
21 Logie Place	n/a - demolition	100	High	High	Substantial
23 Logie Place	n/a - demolition	100	High	High	Substantial
25 Logie Place	n/a - demolition	100	High	High	Substantial
27 Logie Place	n/a - demolition	100	High	High	Substantial
2C Logie Place	n/a - demolition	100	High	High	Substantial
4B Logie Place	n/a - demolition	100	High	High	Substantial
4C Logie Place	n/a - demolition	100	High	High	Substantial
4D Logie Place	n/a - demolition	100	High	High	Substantial
4E Logie Place	n/a - demolition	100	High	High	Substantial
4F Logie Place	n/a - demolition	100	High	High	Substantial
6A Logie Place	n/a - demolition	100	High	High	Substantial
6B Logie Place	n/a - demolition	100	High	High	Substantial
6C Logie Place	n/a - demolition	100	High	High	Substantial
6D Logie Place	n/a - demolition	100	High	High	Substantial
6E Logie Place	n/a - demolition	100	High	High	Substantial
6F Logie Place	n/a - demolition	100	High	High	Substantial
10 Logie Place	n/a - demolition	100	High	High	Substantial
12 Logie Place	n/a - demolition	100	High	High	Substantial
14 Logie Place	n/a - demolition	100	High	High	Substantial
16 Logie Place	n/a - demolition	100	High	High	Substantial
9 Logie Avenue	n/a - demolition	100	High	High	Substantial
11 Logie Avenue	n/a - demolition	100	High	High	Substantial
13 Logie Avenue	n/a - demolition	100	High	High	Substantial
15 Logie Avenue	n/a - demolition	100	High	High	Substantial
17 Logie Avenue	n/a - demolition	100	High	High	Substantial
19 Logie Avenue	n/a - demolition	100	High	High	Substantial
5A Logie Gardens	n/a - demolition	100	High	High	Substantial
5B Logie Gardens	n/a - demolition	100	High	High	Substantial
5C Logie Gardens	n/a - demolition	100	High	High	Substantial
5D Logie Gardens	n/a - demolition	100	High	High	Substantial
5E Logie Gardens	n/a - demolition	100	High	High	Substantial
5F Logie Gardens	n/a - demolition	100	High	High	Substantial
27A Logie Avenue	n/a - demolition	100	High	High	Substantial
27B Logie Avenue	n/a - demolition	100	High	High	Substantial
27C Logie Avenue	n/a - demolition	100	High	High	Substantial
27D Logie Avenue	n/a - demolition	100	High	High	Substantial
27E Logie Avenue	n/a - demolition	100	High	High	Substantial
27F Logie Avenue	n/a - demolition	100	High	High	Substantial
29A Logie Avenue	n/a - demolition	100	High	High	Substantial
29B Logie Avenue	n/a - demolition	100	High	High	Substantial
29C Logie Avenue	n/a - demolition	100	High	High	Substantial
29D Logie Avenue	n/a - demolition	100	High	High	Substantial
29E Logie Avenue	n/a - demolition	100	High	High	Substantial
29F Logie Avenue	n/a - demolition	100	High	High	Substantial
31A Logie Avenue	n/a - demolition	100	High	High	Substantial
31B Logie Avenue	n/a - demolition	100	High	High	Substantial

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Appendix A7.1: Residential Land-take for the Proposed Scheme

Land Interest	Loss of Land		Sensitivity	Magnitude	Significance
	Area lost (ha)	% Area lost			
31C Logie Avenue	n/a - demolition	100	High	High	Substantial
31D Logie Avenue	n/a - demolition	100	High	High	Substantial
31E Logie Avenue	n/a - demolition	100	High	High	Substantial
31F Logie Avenue	n/a - demolition	100	High	High	Substantial
34A Logie Avenue	n/a - demolition	100	High	High	Substantial
34B Logie Avenue	n/a - demolition	100	High	High	Substantial
34C Logie Avenue	n/a - demolition	100	High	High	Substantial
34D Logie Avenue	n/a - demolition	100	High	High	Substantial
34E Logie Avenue	n/a - demolition	100	High	High	Substantial
34F Logie Avenue	n/a - demolition	100	High	High	Substantial
36A Logie Avenue	n/a - demolition	100	High	High	Substantial
36B Logie Avenue	n/a - demolition	100	High	High	Substantial
36C Logie Avenue	n/a - demolition	100	High	High	Substantial
36D Logie Avenue	n/a - demolition	100	High	High	Substantial
36E Logie Avenue	n/a - demolition	100	High	High	Substantial
36F Logie Avenue	n/a - demolition	100	High	High	Substantial
20 Manor Drive	n/a - demolition	100	High	High	Substantial
22 Manor Drive	n/a - demolition	100	High	High	Substantial
24 Manor Drive	n/a - demolition	100	High	High	Substantial
26 Manor Drive	n/a - demolition	100	High	High	Substantial
28 Manor Drive	n/a - demolition	100	High	High	Substantial
30 Manor Drive	n/a - demolition	100	High	High	Substantial
873 Great Northern Road	n/a - demolition	100	High	High	Substantial
875 Great Northern Road	n/a - demolition	100	High	High	Substantial
877 Great Northern Road	n/a - demolition	100	High	High	Substantial
879 Great Northern Road	n/a - demolition	100	High	High	Substantial
881 Great Northern Road	n/a - demolition	100	High	High	Substantial
883 Great Northern Road	n/a - demolition	100	High	High	Substantial
885 Great Northern Road	n/a - demolition	100	High	High	Substantial
887 Great Northern Road	n/a - demolition	100	High	High	Substantial
889 Great Northern Road	n/a - demolition	100	High	High	Substantial
891 Great Northern Road	n/a - demolition	100	High	High	Substantial
893 Great Northern Road	n/a - demolition	100	High	High	Substantial
895 Great Northern Road	n/a - demolition	100	High	High	Substantial
897 Great Northern Road	n/a - demolition	100	High	High	Substantial
899 Great Northern Road	n/a - demolition	100	High	High	Substantial
901 Great Northern Road	n/a - demolition	100	High	High	Substantial
903 Great Northern Road	n/a - demolition	100	High	High	Substantial
905 Great Northern Road	n/a - demolition	100	High	High	Substantial
907 Great Northern Road	n/a - demolition	100	High	High	Substantial
909 Great Northern Road	n/a - demolition	100	High	High	Substantial
911 Great Northern Road	n/a - demolition	100	High	High	Substantial
913 Great Northern Road	n/a - demolition	100	High	High	Substantial
915 Great Northern Road	n/a - demolition	100	High	High	Substantial
917 Great Northern Road	n/a - demolition	100	High	High	Substantial
919 Great Northern Road	n/a - demolition	100	High	High	Substantial
24 – 32 (even) Logie Avenue	0.2502	56	Medium	High	Moderate /Substantial

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Appendix A7.1: Residential Land-take for the Proposed Scheme

Land Interest	Loss of Land		Sensitivity	Magnitude	Significance
	Area lost (ha)	% Area lost			
(land-take of communal garden)					
1 Logie Gardens and 21 – 25 Logie Avenue (land-take of communal garden)	0.0823	100	Medium	High	Moderate /Substantial
10 Logie Avenue Flat A to F (land-take of communal front garden)	0.0218	80	Medium	High	Moderate /Substantial
26 – 28 (even) Manor Avenue (including two community facilities: Pathways Services Limited and Middlefield Community Project Youth Flat) (land-take of communal garden)	0.1604	70	Medium	High	Moderate /Substantial
539 & 541 North Anderson Drive (land-take of communal garden)	0.0221	46	Medium	Medium	Moderate
535 & 537 North Anderson Drive (land-take of communal garden)	0.0122	32	Medium	Medium	Moderate
531 & 533 North Anderson Drive (land-take of communal garden)	0.0107	33	Medium	Medium	Moderate
14 – 22 (even) Logie Avenue (land-take of communal garden)	0.0640	19	Medium	Medium	Moderate
543 & 545 North Anderson Drive (land-take of communal garden)	0.0099	21	Medium	Medium	Moderate
12 Logie Avenue Flat A to F (land-take of communal garden)	0.0021	24	Medium	Medium	Moderate
17 & 19 Manor Avenue (land-take of communal garden)	0.0068	18	Medium	Medium	Moderate
9-15 (odd) Manor Avenue (land-take of communal garden)	0.0098	17	Medium	Medium	Moderate
1-7 (odd) Manor Avenue (land-take of communal garden)	0.0087	15	Medium	Medium	Moderate
10 – 12 (even) Logie Avenue and 551-559 North Anderson Drive (land-take of communal back garden)	0.0087	40	Medium	Medium	Moderate

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Appendix A7.1: Residential Land-take for the Proposed Scheme

Land Interest	Loss of Land		Sensitivity	Magnitude	Significance
	Area lost (ha)	% Area lost			
551 & 553 North Anderson Drive (land-take of communal front garden)	0.0019	12	Medium	Low	Slight

A9.1: Flood Risk

1 Introduction

1.1 Background

- 1.1.1 This appendix provides additional information relating to the Flood Risk Assessment (FRA) associated with the proposed scheme, as reported in Chapter 9 (Road Drainage and the Water Environment).
- 1.1.2 Three watercourses exist local to the development site; the River Don to the north, Scatter Burn to the west and Woodside Burn to the east. Both the Scatter Burn and Woodside Burn are considered to be minor watercourses and both drain into the River Don. Both catchments are predominantly urban in nature and are significantly culverted along their urbanised route, including the reach local to the development site. The proposed scheme does not involve any direct construction/modification work on the Scatter Burn or Woodside Burn; however, a drainage outfall is proposed via a connection to the Scatter Burn culverted reach in the vicinity of the A96 crossing, to discharge the controlled outflow from the proposed surface water drainage system.
- 1.1.3 A layout plan of the proposed scheme together with the development area and alignment of the River Don, Scatter Burn and Woodside Burn is shown on Figure A.1 (Annex A) of this appendix. The site is bounded by the A96 to the north, A90 to the east, Manor Avenue to the south and Manor Drive to the west and covers an area of approximately 3.3ha. The topography of the site is generally falling towards the River Don to the north. The topography requires both excavations and embankments to accommodate the proposed scheme.

1.2 Methodology

- 1.2.1 The FRA has been undertaken with reference to Scottish Planning Policy (SPP) (Scottish Government, 2014) and adopts the methodology presented in the Scottish Environment Protection Agency (SEPA) report titled 'Technical Flood Risk Guidance for Stakeholders', Version 8, February 2014 (SEPA, 2014a). The FRA also follows Methods E and F (Assessing Flood Impacts) in DMRB Volume 11, Section 3, Part 10 HD 45/09 'Road Drainage and the Water Environment' (Highways Agency et al., 2009).
- 1.2.2 SPP sets out the Scottish Government's planning policy on new development and flooding. For fluvial (river) flooding it uses a risk-based framework that characterises areas for planning purposes by their annual probability of flooding. Based on the probability of flood risk, a site is classified into the following three categories:
- **'Little or No Risk Area'** i.e. the site is at less than 0.1% Annual Exceedance Probability (AEP) (1 in 1000-year) chance of flooding. The typical planning response to such sites is *"There are no general constraints to development of such sites with respect to flood risk"*.
 - **'Low to Medium Risk Area'** i.e. the site is at risk of flooding for events between the 0.5% AEP and 0.1% AEP events (1 in 200-year and 1 in 1000-year). The typical planning response for such areas is *"They are suitable for most development but generally not suitable for civil infrastructure. Where civil infrastructure must be located in these areas or is being substantially extended, it should be designed to be capable of remaining operational and accessible during extreme flood events"*.
 - **'Medium to High Risk Area'** i.e. the site is at risk of flooding for events more frequent than the 0.5% AEP event (1 in 200-year). The typical planning response for such areas is *'If the area is local to a built up area with existing flood prevention measures, most brownfield development should be acceptable except essential civil infrastructure. Undeveloped and sparsely developed areas are generally not suitable for most development'*.

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Appendix A9.1: Flood Risk

- 1.2.3 SPP (2014) sets out the following with respect to surface water (pluvial) flooding:
- Infrastructure and buildings should generally be designed to be free from surface water flooding in rainfall events where the AEP of occurrence is greater than 0.5% (1 in 200).
 - Surface water drainage measures should have a neutral or better effect on the risk of flooding both on and off the site, taking account of rain falling on the site and run-off from adjacent areas.
- 1.2.4 The FRA is based on a review of SEPA Flood Maps (SEPA, 2014b), review of the previous flood studies and flood records in the area (Halcrow, 2008 and 2009) and a review of the proposed drainage strategy for the scheme.
- 1.2.5 In addition, an assessment of discharge capacity was undertaken for the A90 and railway culverts on the Scatter Burn and the railway culvert on the Woodside Burn, through the modelling of open channel reach of the two watercourses from downstream of the A96 to their confluence with the River Don. The approach to flood risk modelling has been informed by guidance from SEPA (SEPA response to flood risk scope, letter reference PCS/135310, dated 28 August 2014) (Annex B).

2 Flood Risk Assessment

2.1 Fluvial (River) Flood Risk

- 2.1.1 Following a review of SEPA Flood Maps (SEPA, 2014b), the proposed development site is considered outwith the 0.1% AEP (1 in 1000-year) fluvial flood extent of the River Don.
- 2.1.2 The two minor watercourses (Scatter Burn and Woodside Burn) local to the development site are culverted for almost their entire reach and drain an upstream piped surface water drainage system. Some intermittent open channel sections exist downstream of the A96 crossing and at their confluence with the River Don (refer to Figure A.1 in Annex A). The open channel reach of Scatter Burn incorporates two culverts; the Aberdeen to Inverness railway culvert [1.9m W x 2.4m H] and the downstream A90 culvert [3.2m arch section reduced to 1.25m section] followed by a 1.25m diameter pipe up to its outfall to the River Don. Similarly, the open channel reach of the Woodside Burn incorporates the railway culvert [0.9m W x 1.6m H] followed by a 900mm diameter pipe to the River Don. The SEPA Flood Maps (SEPA, 2014b) do not show any fluvial flood risk associated with these two watercourses local to the development site.
- 2.1.3 The Scatter Burn is culverted at the A96 crossing by a 1050mm diameter pipe and has a sufficient flow capacity to convey the design 0.5% AEP event plus 20% allowance for climate change. The 1050mm pipe culvert continues further upstream, extending beyond the proposed development site. Similarly, the Woodside Burn is also culverted adjacent to the proposed development site and the culverted reach extends further upstream (refer to hatched lines partially delineating the culvert extents on Figure A.1 in Annex A).
- 2.1.4 In the event of an extreme flood event occurring within these two catchments, it is considered likely that the upstream culvert system would be surcharged. It is considered unlikely that any surface water flooding upstream would impact the proposed development site.
- 2.1.5 Therefore, in accordance with the SPP Risk Framework, as described in Section 1.2, the proposed development site is categorised to be at 'Little or No Risk' of fluvial flooding.
- 2.1.6 The hydraulic capacity of the channel reach downstream of the development site, and associated bridge crossings, has been evaluated for both watercourses using a one dimensional (1-D) hydraulic model. The model has been constructed to represent the open channel reach of both watercourses downstream of the A96 to their confluence with the River Don. The models have been constructed using ISIS v3.7 river modelling software and surveyed channel cross-sections.
- 2.1.7 The modelling results show that for the pre-development condition, the railway culvert on the Scatter Burn passes the design 0.5% AEP (1 in 200-year) event plus 20% allowance for climate

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Appendix A9.1: Flood Risk

change flow in a 'free flowing' condition with an estimated freeboard of 1.25m, below the soffit level of the 2.4m high railway culvert.

- 2.1.8 The Woodside Burn railway culvert is predicted to be surcharged at its entrance during the 0.5% AEP (1 in 200-year) design event plus 20% allowance for climate change, although upstream water level is not predicted to be 'out-of-bank'.
- 2.1.9 The 1250mm diameter pipe culvert beneath the A90 road (Scatter Burn) and 900mm diameter pipe culvert downstream of the railway embankment (Woodside Burn) are both surcharged during the 0.5% AEP (1 in 200-year) design event plus 20% allowance for climate change. However, the upstream water level in both watercourses is not predicted to be 'out of bank' during this design event, therefore not impacting the railway or the A90 road (refer to Figure A.2 in Annex A).
- 2.1.10 Any increase in peak flow in the Scatter Burn or Woodside Burn due to increased surface water runoff from the development site would further exacerbate this surcharging and may result in an increased flood risk. As a consequence, the design approach has been that surface water runoff from the development site is attenuated, such that the peak pre-development flow within the Scatter Burn and Woodside Burn is not increased for the design event.
- 2.1.11 Following consultation with SEPA (drainage design consultation meetings held on 2 October 2013 and 19 August 2014), it is proposed to incorporate a new sustainable drainage system (SUDS) as part of the proposed development. Surface water runoff from the new road network would drain via a vortex separator into a detention basin prior to draining into the Scatter Burn. The detention basin is designed to attenuate the post-development peak flow to a pre-development peak flow associated with the 50% AEP (1 in 2-year) rainfall event. Adopting this approach is considered to result in a negligible impact on the existing fluvial flood regime.
- 2.1.12 The total development area is approximately 3.3ha, of which approximately 2.3ha is located in the Woodside Burn catchment and 1.0ha in the Scatter Burn catchment. The proposed development site would have approximately 2.3ha of impervious road area and 1.0ha of pervious area. Of the total 2.3ha of impervious area, 1.5ha is already impervious. Thus the proposed development results in an additional impervious area of 0.8ha; of which 0.2ha is located in the Scatter Burn catchment and 0.6ha is located in the Woodside Burn catchment. The detention basin is designed to receive all surface runoff from the development area prior to discharge into the Scatter Burn.
- 2.1.13 The pre- and post-development 50% AEP (1 in 2-year) and 0.5% AEP (1 in 200-year) peak flows in the Scatter Burn and Woodside Burn at their outfalls to the River Don are presented in Table 2.1 below.

Table 2.1: Pre- and post-development flows in the Scatter Burn and Woodside Burn at their outfalls to the River Don

Watercourse	Pre-development		Post-development with mitigation	
	Flow (m ³ /s) (50%AEP)	Flow (m ³ /s) (0.5%AEP)	Flow (m ³ /s) (50%AEP)	Flow (m ³ /s) (0.5%AEP)
Scatter Burn	1.22	4.31	1.23	4.29
Woodside Burn	1.02	3.61	1.00	3.53

- 2.1.14 It is observed from Table 2.1 that there is a slight increase (less than 1%) in the 50% AEP (1 in 2-year) peak flow in the Scatter Burn for the post-development scenario. This is due to the fact that part of the proposed development site is currently located in the Woodside Burn catchment and would be discharged into the Scatter Burn during the post-development scenario. However, as a result of the surface water runoff attenuation provided by the detention basin, the predicted peak 0.5% AEP post-development flow in the Scatter Burn is slightly less than the pre-development condition. Conversely, the post-development flow in the Woodside Burn is slightly decreased for both the 50% AEP (1 in 2-year) and 0.5% AEP (1 in 200-year) events, due to the small reduction of catchment area (2.3ha) which is proposed to drain into the Scatter Burn detention basin.

2.2 Pluvial (Surface Water) Flood Risk

2.2.1 The SEPA Flood Maps (SEPA, 2014b) indicate that some areas within Middlefield are at risk of surface water flooding. A previous hydrogeological study of this area also supports this view (Halcrow, 2008 and 2009). The area of Middlefield is known to experience widespread groundwater and surface water flooding as a result of poor drainage during the autumn and winter months. The previous Middlefield hydrogeological study also identified 15 areas known to be at risk of surface water flooding (refer to Figure A.3, Annex A). In particular, three of these areas are within the development site:

- Location 1: Logie Place/Logie Avenue Junction.
- Location 5: Manor Avenue, Opposite Logie Terrace.
- Location 7: Logie Place, Opposite House No. 14.

2.2.2 According to the Middlefield hydrogeological study (Halcrow, 2008 and 2009), flooding at Logie Place (Locations 1 and 7) was attributed to surface water runoff from adjacent higher land flooding property basements. Similarly, the flooding at Manor Avenue (Location 5) was attributed to surface water runoff from adjacent grassed areas flooding the road adjacent to the properties. The localised surface water flooding was considered predominantly to be a result of insufficient coverage/capacity of the existing surface water drainage network in the area.

2.2.3 It is considered likely that the proposed incorporation of SUDS would not exacerbate surface water flooding within the development area and hence the impact of the proposed scheme on surface water flooding is considered to be negligible.

2.3 Mitigation Measures / Flood Management

As the proposed scheme, including the provision of SUDS, does not impact upon existing flood risk, no further mitigation or flood management measures are proposed.

3 Summary and Conclusion

3.1.1 The proposed development site is categorised in accordance with the SPP Risk Framework to be at 'Little or No Risk' of fluvial flooding, i.e. the development site lies outwith the predicted 0.1% AEP (1 in 1000-year) fluvial flood extent of the River Don. The two adjacent small watercourses are culverted adjacent to the proposed development site, and the culverted reach extends further upstream of the site. It is considered unlikely that any potential flooding in the upstream culvert system would impact the proposed development site.

3.1.2 The proposed development would incorporate a SUDS system, including a detention basin. This would capture surface water runoff from the development site and attenuate flow into the receiving watercourse (Scatter Burn). Adopting this approach results in no impact on the flood risk for the 0.5% AEP (1 in 200-year) design event, plus 20% allowance for climate change.

4 References

Halcrow (2008). Aberdeen City Council Middlefield Hydrogeological Study: Supporting Studies. May 2008.

Halcrow (2009). Aberdeen City Hydrogeological Study: Integrated Summary Report. January 2009.

Highways Agency et al. (2009). HD 45/09: Design Manual for Roads and Bridges (DMRB), Volume 11, Section 3, Part 10, Road Drainage and the Water Environment, 2009. The Highways Agency, Scottish Executive Developmental Department, The National Assembly for Wales and The Department of Regional Development Northern Ireland.

Scottish Government (2014). Scottish Planning Policy.

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Appendix A9.1: Flood Risk

SEPA (2014a). Technical Flood Risk Guidance for Stakeholders, Version 8, February 2014.

SEPA (2014b). Flood Maps (Scotland). Available at:

http://www.sepa.org.uk/flooding/flood_extent_maps/view_the_map.aspx.

Annex A: Figures

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Appendix A9.1: Flood Risk

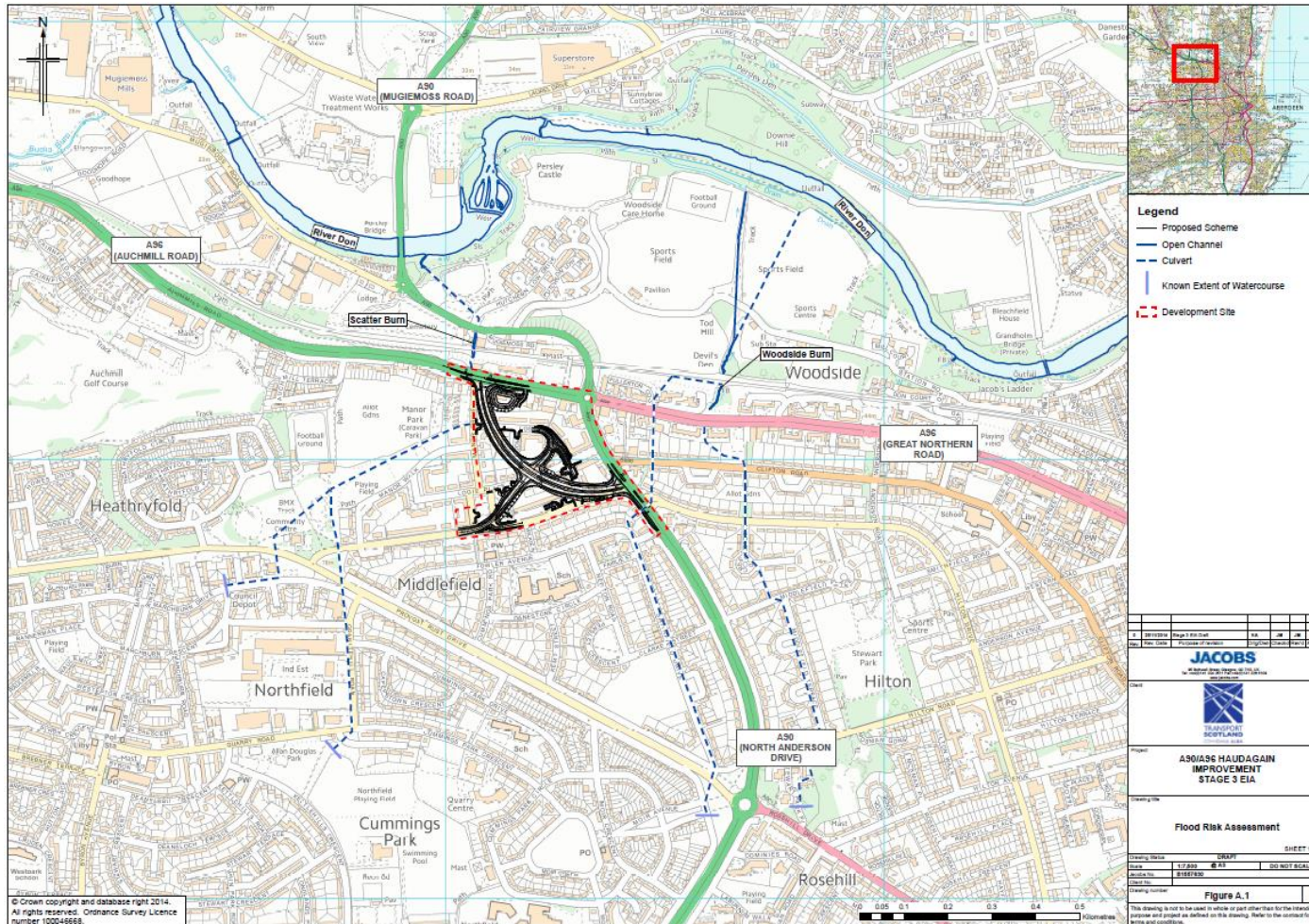


Figure A.1: Layout of the proposed A90/A96 Haudagain Improvements Scheme

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 Appendix A9.1: Flood Risk

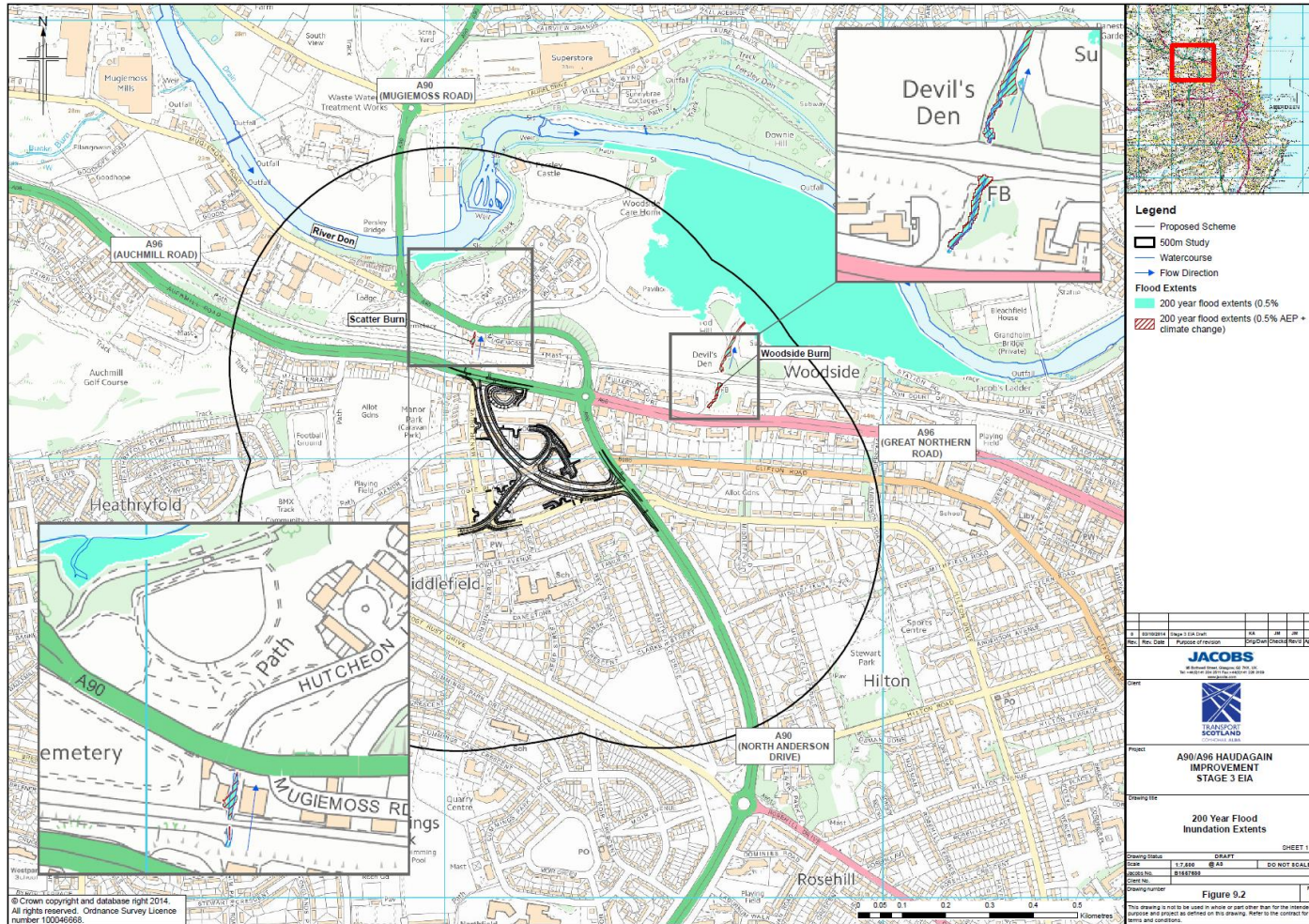


Figure A.2: The 200 year flood inundation extents at the open channel reach of the two watercourses

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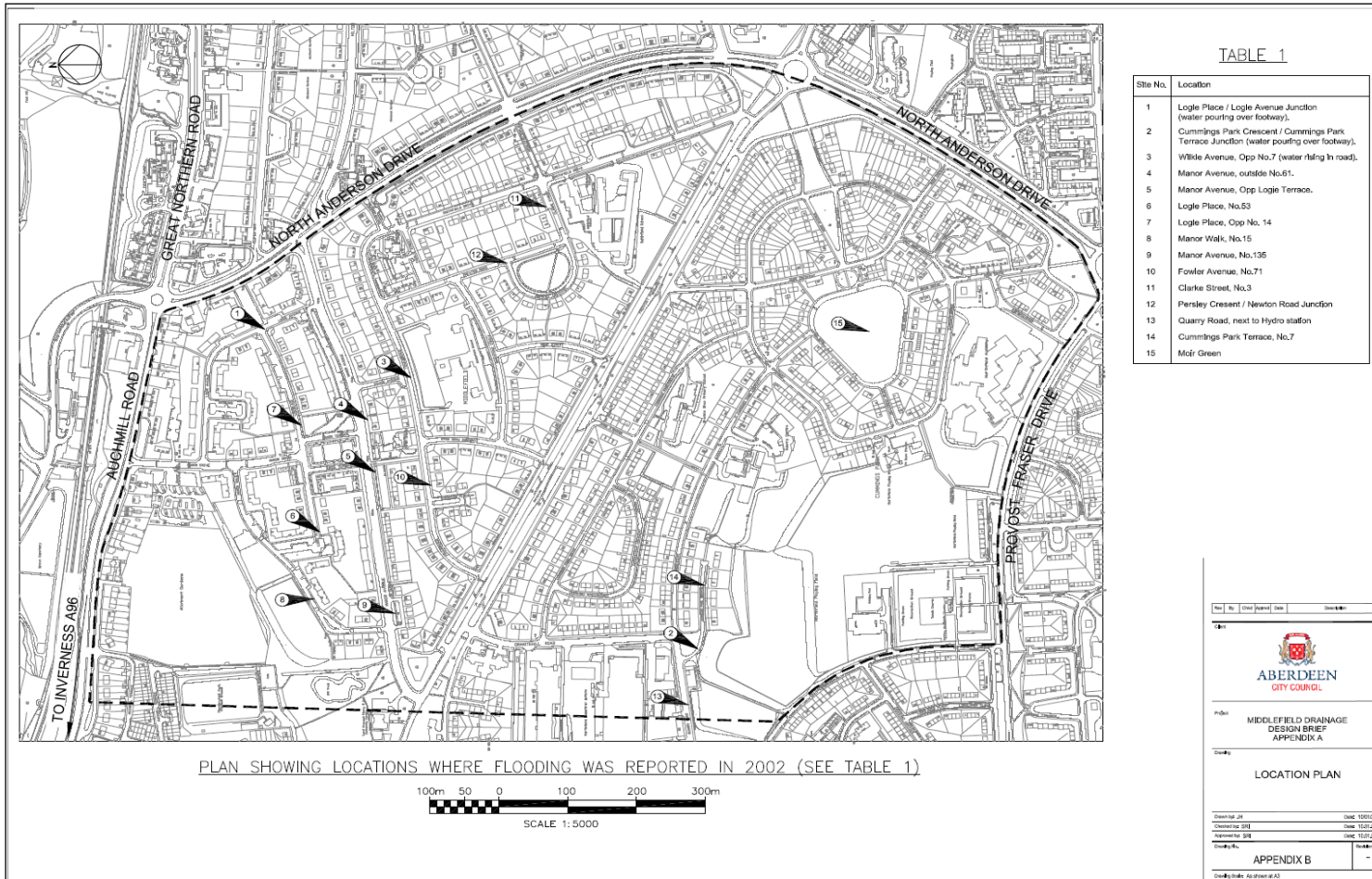


Figure A.3: Surface water flooding locations in the vicinity of the proposed development site (Halcrow, 2008)

Annex B: SEPA Response to Flood Risk Modelling Scope

Our ref: PCS/135310
Your ref:

If telephoning ask for:
Clare Pritchett

28 August 2014

By email only to: Jonathan.Moore@jacobs.com

Dear Mr Moore

A90/A96 Haudagain Improvement Scheme - Flood Risk Modelling Scope

Thank you for your email of 5 August 2014 with flood risk modelling scope attached. Please note the advice provided below. Apologies for the delay in responding to you, our flood risk hydrologists are still dealing with a backlog following the recent flood events in Scotland.

Advice for the applicant

1. Flood risk

- 1.1 Thank you for providing a Flood Risk Modelling Scope for comment. We note that it is intended to model the flood risk from the Scatter and Woodside Burns, both of which are culverted at several locations.
- 1.2 It is stated that channel survey data and LiDAR data will be used to create a 1-dimensional hydraulic model for each burn using ISIS software. We note that the hydraulic modelling will also be used to assess existing capacities of the culverts.
- 1.3 The applicant should provide their own analysis of flood risk at the site using up to date methods from the Flood Estimation Handbook (FEH) to derive design flows. It's generally best to use more than one method for comparison.
- 1.4 Any FRA should take into account flooding from all sources. We note that it proposed to generate flood maps including for the 1 in 200 (0.5% AEP) event for both pre- and post-development conditions. We would recommend that the 1 in 1000 year (0.1% annual probability) flood event is also considered depending on the vulnerability of the existing development i.e. educational establishments; residential care homes.
- 1.5 The methods proposed are likely to be acceptable however the applicant should take a precautionary approach and undertake more detailed analysis in vulnerable areas at their own discretion if required.
- 1.6 With regards to sensitivity analysis, appropriate analysis should be carried out to determine the sensitivity of design water levels to key model parameters, e.g. design flow, roughness, downstream boundary. Where culverts/ bridges exist, the risk of potential blockage also needs to be considered (i.e. the model should be run with full and/or partial blockage to better understand the impact of such processes).



Chairman
David Sigsworth
Chief Executive
James Curran

Aberdeen Office
Inverdee House, Baxter Street
Torry, Aberdeen AB11 9QA
tel 01224 266600 fax 01224 896657
www.sepa.org.uk

- 1.7 We refer the applicant to the document entitled: “*Technical Flood Risk Guidance for Stakeholders*”. This document provides generic requirements for undertaking Flood Risk Assessments and can be downloaded from www.sepa.org.uk/flooding/planning_flooding.aspx. Please note that this document should be read in conjunction with Policy 41 (Part 2).
- 1.8 Our Flood Risk Assessment checklist should be completed and attached within the front cover of any flood risk assessments issued in support of a development proposal which may be at risk of flooding. The document will take only a few minutes to complete and will assist our review process. It can be downloaded from www.sepa.org.uk/flooding/planning_flooding/fra_checklist.aspx

If you have any queries relating to this letter, please contact me by telephone on 01224 266609 or e-mail at planning.aberdeen@sepa.org.uk

Yours sincerely

Clare Pritchett
Senior Planning Officer
Planning Service

Disclaimer

This advice is given without prejudice to any decision made on elements of the proposal regulated by us, as such a decision may take into account factors not considered at the planning stage. We prefer all the technical information required for any SEPA consents to be submitted at the same time as the planning application. However, we consider it to be at the applicant's commercial risk if any significant changes required during the regulatory stage necessitate a further planning application and/or neighbour notification or advertising. We have relied on the accuracy and completeness of the information supplied to us in providing the above advice and can take no responsibility for incorrect data or interpretation, or omissions, in such information. If we have not referred to a particular issue in our response, it should not be assumed that there is no impact associated with that issue. If you did not specifically request advice on flood risk, then advice will not have been provided on this issue. Further information on our consultation arrangements generally can be found in [How and when to consult SEPA](#), and on flood risk specifically in the [SEPA-Planning Authority Protocol](#).

Caveats

The advice contained in this letter is supplied to you by SEPA in terms of Section 72 (1) of the Flood Risk Management (Scotland) Act 2009 on the basis of information held by SEPA as at the date hereof. It is intended as advice solely to Aberdeen City Council as Planning Authority in terms of the said Section 72 (1). Our briefing note entitled: “Flood Risk Management (Scotland) Act 2009: Flood risk advice to planning authorities” outlines the transitional changes to the basis of our advice inline with the phases of this legislation and can be downloaded from www.sepa.org.uk/planning/flood_risk.aspx.

A9.2: Water Quality Calculations

1 Introduction

- 1.1.1 This appendix provides additional information on the calculations used to inform the water quality and drainage assessment of the proposed scheme, as reported in ES Chapter 9 (Road Drainage and Water Environment).
- 1.1.2 As part of the water quality assessment, routine runoff and accidental spillage risk to the watercourses proposed to receive road drainage were assessed using the Highways Agency's Water Risk Assessment Tool (HAWRAT), in line with Design Manual for Roads and Bridges (DMRB) HD 45/09 guidance (Highways Agency et al. 2009a). The approach and methods used in these assessments are described in Section 2 and the HAWRAT inputs/outputs are provided in Section 3.

2 Methodology

Routine Runoff Calculations

- 2.1.1 HAWRAT was developed primarily for use on non-urban trunk roads and motorways in England and has been adapted to reflect conditions within Wales, Scotland and Northern Ireland. HAWRAT has been developed to assess the magnitude of potential short-term impacts of routine runoff of surface waters. Runoff Specific Thresholds (RSTs) have been devised by the Highways Agency and the Environment Agency (EA); two thresholds have been developed to protect aquatic ecology in watercourses, which relate to the intermittent nature of road runoff (i.e. contaminants washed off the road surface in a rainfall event), including over a typical exposure period of six hours (RST 6 hour) and for a worst-case scenario of 24 hours (RST 24 hour). Dissolved copper and dissolved zinc are used as indicators of the level of impact as they can result in particularly acute toxic effects to aquatic life in certain concentrations. Table 1 summarises the RSTs for dissolved copper and dissolved zinc used within HAWRAT.

Table 1: RSTs for short-term exposure (WRc, 2007 cited within Highways Agency et al., 2009a)

Threshold	Copper (µg/l)	Zinc (µg/l) Hardness		
		Low (<50mg CaCO3/l)	Medium (50mg to 200mg CaCO3/l)	High (>200mg CaCO3/l)
RST 24 hour	21	60	92	385
RST 6 hour	42	120	184	770

- 2.1.2 HAWRAT also assesses chronic impacts associated with sediment-bound pollutants on aquatic ecology within watercourses. Two standards have been devised for metal and polycyclic aromatic hydrocarbon (PAH) concentrations within sediment; namely Threshold Effects Levels (TELs) (i.e. the concentration below which toxic effects are extremely rare) and Probable Effects Levels (PELs) (i.e. the concentration above which toxic effects are observed on most occasions). Table 2 summarises some of the key sediment-bound pollutant thresholds used within HAWRAT.

Table 2: Sediment Concentrations TELs and PELs (Gaskell et al., 2008 cited within Highways Agency et al., 2009a)

Parameter	TEL (units are in mg/kg unless stated otherwise)	PEL (units are in mg/kg unless stated otherwise)
Copper	35.7	197
Zinc	123	315
Cadmium	0.6	3.5

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Total PAH	1,684 µg/kg	16,770 µg/kg
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2.1.3 As well as short-term impacts, HAWRAT also estimates in-river annual average concentrations for soluble pollutants (dissolved copper and dissolved zinc), which includes the contribution from road runoff. These concentrations can be compared with published Environmental Quality Standards (EQS) values to assess whether there is likely to be a long-term impact on ecology, as shown in Table 3. These figures have been taken from the DMRB HD 45/09 guidance (Highways Agency et al., 2009a), where it is noted that the figures for dissolved zinc are only provisional.

Table 3: EQS for the Protection of all Freshwater Life

Parameter	Hardness Range (mg/l CaCO ₃)	Freshwater EQS (µg/l) (annual average)
Dissolved Copper	0 – 50	1
	>50 – 100	6
	>100 – 250	10
	>250	28
Dissolved Zinc	0 – 50	7.8
	>50 – 100	
	>100 – 250	
	>250	

2.1.4 HAWRAT uses a three-stage tiered approach to assessing the impacts of both soluble pollutants and sediment-bound pollutants. Each pollutant type is given a status of ‘Pass’ or ‘Fail’ depending on whether the risk is within or exceeds the published thresholds. The impact of routine runoff to each receiving watercourse is summarised by a ‘traffic light’ reporting, whereby:

- Red = unacceptable impact (i.e. one or more pollutant concentrations exceed thresholds and therefore incur a Fail result) or a need to carry out further stages of assessment.
- Green = no significant impact (i.e. pollutant concentrations are within thresholds and therefore incur a Pass result) with no need for further assessment.
- Amber = for assessment of sediment-bound pollutants, where the assessment would otherwise indicate a Pass result, the tool produces an ‘Alert’ result indicating that the presence of protected nature sites and/or a downstream structure impacting on flow velocity may require further site-specific consideration.

2.1.5 Where a given scenario produces a ‘Fail’ result for one or more of the pollutant types, the next step is required based on increasing levels of input parameters and assessment. The three step approach is summarised below:

- Step 1: Runoff Quality (predicts the concentrations of pollutants in untreated and undiluted highway runoff prior to any treatment and dilution in a water body). This is the ‘worst case’ scenario.
- Step 2: In-River Impacts (predicts the concentrations of pollutants after mixing within the receiving water body). At this stage, the ability of the receiving watercourse to disperse sediments is considered and, if sediment is predicted to accumulate, the potential extent of sediment coverage (i.e. the deposition index, DI) is also considered.
- Step 3: In-River Impacts with mitigation. Steps 1 and 2 assume that the road drainage system incorporates no mitigation measures to reduce the risk. Step 3 includes mitigation, in the form of sustainable drainage systems (SUDS), which takes into account the risk reduction associated with any existing measures or any proposed new measures. SUDS are a requirement under the Water Environment (Controlled Activities) (Scotland) Amendment Regulations 2013 (CAR) for new development, even if the risks in HAWRAT are shown to be acceptable, i.e. ‘Pass’, prior

to any mitigation. Refer to ES Chapter 9 (Road Drainage and the Water Environment) for details on SUDS measures for the proposed scheme.

- 2.1.6 Step 2 also incorporates two ‘tiers’ of assessment for sediment accumulation, based on different levels of input parameters. If one or more risks are defined as unacceptable at Tier 1, i.e. ‘Fail’, then a more detailed Tier 2 assessment is undertaken, which requires further parameters relating to the physical dimensions of the receiving watercourse, including bed width, Manning’s ‘n’, bank slope and channel gradient.

Spillage Risk Calculations

- 2.1.7 Along any road, there is a risk of vehicular collision that could result in the spillage of fuels, oils or chemicals, particularly if tankers are involved. A risk assessment of a serious spillage causing a pollution incident was undertaken using the methodology outlined in the DMRB HD 45/09 (Highways Agency et al., 2009a).
- 2.1.8 The risk is calculated assuming that an accident involving spillage of pollutants onto the carriageway would occur at an assumed frequency, expressed as annual probabilities, based on calculated traffic volumes and the type of road/junction (Table 4). The annual probability of a serious accidental spillage leading to a serious pollution incident also depends upon the emergency services response time. A risk factor is applied depending on the location and likely response time and the type of receiving water body (Table 5).

Table 4: Serious Accidental Spillages per Billion HGV (km/year)

	Motorways	Rural Trunk Roads	Urban Trunk Roads
No Junction	0.36	0.29	0.31
Slip Road	0.43	0.83	0.36
Roundabout	3.09	3.09	5.35
Crossroad	n/a	0.88	1.46
Side Road	n/a	0.93	1.81

Source: DMRB HD 45/09 (Highways Agency et al., 2009a).
Note: Risk factor applies to all road lengths within 100m of these junction types.

Table 5: Probability of a Serious Accidental Spillage Leading to a Serious Pollution Incident

Receiving Waterbody	Urban (response time to site <20 mins)	Rural (response time to site <1 hour)	Remote (response time to site >1 hour)
Surface Watercourse	0.45	0.6	0.75
Groundwater	0.3	0.3	0.5

Source: DMRB HD 45/09 (Highways Agency et al., 2009a).

- 2.1.9 The probability of a serious accidental spillage was calculated as follows:

$$P_{SPL} = RL \times SS \times (AADT \times 365 \times 10^{-9}) \times (\%HGV \div 100)$$

Where:

- P_{SPL} = probability of a serious accidental spillage in one year over a given road length.
- RL = road length in kilometres.
- SS = serious spillage rates from Table 4 of this appendix (or local data if available).
- AADT = Annual Average Daily Traffic (in design year 2033).
- %HGV = percentage of Heavy Goods Vehicles (in design year 2033).

2.1.10 The probability that a spillage would cause a pollution incident is calculated thus:

$$P_{INC} = P_{SPL} \times P_{POL}$$

Where:

- P_{POL} = the risk reduction factor, dependent upon emergency services response times, which determines the probability of a serious spillage leading to a serious pollution incident (Table 5).

2.1.11 In line with the DMRB (Highways Agency et al., 2009a), where spillage risk is calculated as less than 1% Annual Exceedance Probability (AEP) or less frequent than 1 in 100 years, the spillage falls within acceptable limits and no further spillage prevention measures would be required. Where assessed to be greater than 1% AEP (more frequent than 1 in 100 years), the risk is unacceptable and mitigation would be required to reduce the risk of an impact occurring.

3 Routine Runoff Assessment – HAWRAT Output Sheets (Location Details, User Parameters and Results)

3.1.1 The site characteristics at the outfall location and assessment parameters for the routine runoff assessment undertaken in HAWRAT are provided in Table 6 and Table 7, respectively. Table 8 includes the detailed assessment result from HAWRAT.

Table 6: Location Details: Scatter Burn

Assessment Type	Non-cumulative assessment (single outfall)	
Receiving watercourse	Scatter Burn	
OS grid reference of assessment point (m)	Easting	391059
	Northing	809177
OS grid reference of outfall structure (m)	Easting	391059
	Northing	809177
Outfall number	Scatter Burn outfall	
List of outfalls in cumulative assessment	n/a	

Table 7: Assessment Parameters: Scatter Burn

Parameter	Units	Value used	Notes/Sources
Runoff Risk Assessments			
AADT	vpd	>10000 and <50000	Design year 2033 Source: ASAM4A Traffic model (January 2015)
Climatic Region	-	Colder Dry	Source: HAWRAT Help v1.0 (Highways Agency, 2009b)
Rainfall Site	-	Edinburgh (SAAR 676mm)	Source: HAWRAT Help v1.0 (Highways Agency, 2009b)
95%ile River Flow	m ³ /s	0.0038 0.0024 (sensitivity test – approx. 60% of estimated Q95)	Source: Q95 in Scatter Burn was estimated from analysis of flow data of most hydrologically similar low flow estimate (LFE) gauges in Hydrometric Areas 9 -13. Sensitivity analysis undertaken (40% reduction of Q95 estimate) due to the high uncertainty associated with the Q95 flow estimate (highly urbanised catchment and various inputs from the drainage network).
Baseflow Index	-	0.61	Source: FEH CD-ROM (CEH, 2009)
Impermeable road area drained	ha	2.2907	Source: Scheme information
Permeable area	ha	0.3841	Source: Scheme information

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draining to outfall			This area makes up the remaining portion of 'Interior Catchment' such as verges, adjacent cuttings and embankments which are assumed to be free from highway-derived pollutants.
Is the discharge in or within 1km upstream of a protected site for conservation?	-	Yes	Scatter Burn flows into the River Don, which is classified as salmonid waters under WFD.
Is there a downstream structure, lake, pond or canal that reduces the velocity within 100m of the point of discharge?	-	No	
Hardness	-	Low <50mg CaCO ₃ /l	Worst-case scenario based on underlying geology, in absence of hardness data.
Use Tier 1	-	TRUE	
Tier 1 Estimated river width at Q95	m	1.0	Source: site information, cross-section survey data.
Existing treatment for solubles	%	0	Precautionary approach to assume no existing treatment.
Existing attenuation – restricted discharge rate	l/s	Unlimited	
Existing settlement of sediments	%	0	
Proposed treatment for solubles	%	15	Two levels of SUDS treatment: vortex separator, detention basin (dry).
Proposed attenuation – restricted discharge rate	l/s	Unlimited	
Proposed settlement of sediments	%	70	

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Table 8: Detailed Results – Scatter Burn

Summary of predictions		Soluble - Acute Impact		Sediment - Chronic Impact																	
Prediction of impact		Copper	Zinc	Copper	Zinc	Cadmium	Total PAH	Pyrene	Fluoranthene	Anthracene	Phenanthrene										
Step1																					
Step2																					
Step3																					
DETAILED RESULTS																					
In Runoff																					
Step 1		Copper		Zinc		Copper		Zinc		Cadmium		Total PAH		Pyrene		Fluoranthene		Anthracene		Phenanthrene	
Allowable Exceedances/year		1		1		1		1		1		1		1		1		1		1	
No. of exceedances/year		24.90		37.40		46.40		77.20		1.30		39.00		90.70		39.00		17.80		74.30	
No. of exceedances/worst year		33		46		52		88		4		42		105		42		24		88	
Allowable Exceedances/year		1		1		1		1		1		1		1		1		1		1	
No. of exceedances/year		4.60		10.30		46.40		77.20		1.30		39.00		90.70		39.00		17.80		74.30	
No. of exceedances/worst year		8		18		52		88		4		42		105		42		24		88	
Thresholds		(ug/l)		(ug/l)		(mg/kg)		(mg/kg)		(mg/kg)		(ug/kg)		(ug/kg)		(ug/kg)		(ug/kg)		(ug/kg)	
RST24		21		60		197		315		3.5		16770		875		2355		245		515	
RST6		42		120		219		819		1		15606		2700		2591		165		730	
Event Statistics		Mean		Mean		529		1987		1		28184		4876		4679		299		1319	
90%ile		28.66		112.55		679		2673		2		35481		6138		5890		376		1661	
95%ile		37.01		154.77		975		4718		4		89125		15419		14795		945		4171	
99%ile		60.95		329.68																	
In River (no mitigation)																					
Step 2		Copper		Zinc		Velocity		DI		% settlement needed		Tier 1 is used for the calculation									
Allowable Exceedances/year		1		1		0.03		253.95		61											
No. of exceedances/year		0		0.8																	
No. of exceedances/worst year		0		2																	
No. of exceedances/summer		0		0.7																	
No. of exceedances/worst summer		0		2																	
Allowable Exceedances/year		0.5		0.5																	
No. of exceedances/year		0		0																	
No. of exceedances/worst year		0		0																	
No. of exceedances/summer		0		0																	
No. of exceedances/worst summer		0		0																	
Annual average concentration (ug/l)		0.23		0.95																	
Thresholds		(ug/l)		(ug/l)																	
RST24		21		60																	
RST6		42		120																	
Event Statistics		Mean		Mean																	
90%ile		0.91		3.61																	
95%ile		2.78		9.50																	
99%ile		4.16		14.04																	
		8.47		47.23																	
In River (with mitigation)																					
Step 3		Copper		Zinc		DI															
Allowable Exceedances/year		1		1		99.04															
No. of exceedances/year		0.00		0.40																	
No. of exceedances/worst year		0		1																	
No. of exceedances/summer		0		0.3																	
No. of exceedances/worst summer		0		1																	
Allowable Exceedances/year		0.5		0.5																	
No. of exceedances/year		0.00		0.00																	
No. of exceedances/worst year		0		0																	
No. of exceedances/summer		0		0																	
No. of exceedances/worst summer		0		0																	
Annual average concentration (ug/l)		0.20		0.81																	
Thresholds		(ug/l)		(ug/l)																	
RST24		21		60																	
RST6		42		120																	
Event Statistics		Mean		Mean																	
90%ile		0.78		3.06																	
95%ile		2.37		8.07																	
99%ile		3.53		11.93																	
		7.20		40.15																	
Details of the chosen rainfall site		SAAR (mm)		676.2		Altitude (m)		57		Easting		3254		Northing		6733		Coastal distance (km)		3.4	

4 Accidental Spillage Risk Assessment – Calculation Tables

4.1.1 The Spillage Risk Assessment inputs and results are shown in Tables 9 and 10.

Table 9: Inputs to spillage risk assessment: Scatter Burn

Parameter	Units	Value used	Notes/Sources
Spillage Risk Assessment			
Water Body Type	-	Surface watercourse	Surface watercourse or Groundwater
Length of road draining to outfall	m	1077m	Source: scheme information.
Road Type (A-road or motorway)	-	A-road	
Junction Type	-	No junction; 1 side road	Source: scheme information
Location	-	<20 minutes	Urban location
Traffic flow (AADT two way)	-	41,924 (mainline) 5,947 (side roads)	Design year 2033 Source: ASAM4A Traffic model (January 2015)
%HGV	%	4.31 (mainline) 1.49 (side roads)	
Spillage factor	-	0.31 (mainline) 1.81 (side roads)	Source: DMRB HD 45/09, Table D1.1

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Table 10: Spillage Risk Assessment - Scatter Burn

Assessment of Priority Outfalls								
Method D - assessment of risk from accidental spillage		Additional columns for use if other roads drain to the same outfall						
	A (main road)	B	C	D	E	F		
D1	Water body type	Surface watercourse	Surface watercourse					
D2	Length of road draining to outfall (m)	273	804					
D3	Road Type (A-road or Motorway)	A	A					
D4	If A road, is site urban or rural?	Urban	Urban					
D5	Junction type	No junction	Side road					
D6	Location	< 20 minutes	< 20 minutes					
D7	Traffic flow (AADT two way)	41,924	5,947					
D8	% HGV	4.31	1.49					
D8	Spillage factor (no/10 ⁹ HGV/km/year)	0.31	1.81					
D9	Risk of accidental spillage	0.00006	0.00005	0.00000	0.00000	0.00000	0.00000	
D10	Probability factor	0.45	0.45					
D11	Risk of pollution incident	0.00003	0.00002	0.00000	0.00000	0.00000	0.00000	
D12	Is risk greater than 0.01?	No	No					
D13	Return period without pollution reduction measures	0.00003	0.00002	0.00000	0.00000	0.00000	0.00000	
D14	Existing measures factor	1	1					
D15	Return period with existing pollution reduction measures	0.00003	0.00002	0.00000	0.00000	0.00000	0.00000	
D16	Proposed measures factor	0.5	0.5					
D17	Residual with proposed Pollution reduction measures	0.00001	0.00001	0.00000	0.00000	0.00000	0.00000	
							Totals	
								Return Period (years)
							0.0000	21600
							0.0000	21600
							0.0000	43199

Justification for choice of existing measures factors:	Justification for choice of proposed measures factors:
None	2 SUDS in series: estimaters spillage reduction of 50%

Location	Serious Accidental Spillages (Billion HGV km/ year)		
	Motorways	Rural Trunk	Urban Trunk
No junction	0.36	0.29	0.31
Slip road	0.43	0.83	0.36
Roundabout	3.09	3.09	5.35
Cross road	-	0.88	1.46
Side road	-	0.93	1.81
Total	0.37	0.45	0.85

System	Optimum Risk Reduction Factor
Filter Drain	0.6
Grassed Ditch / Swale	0.6
Pond	0.5
Wetland	0.4
Soakaway / Infiltration basin	0.6
Sediment Trap	0.6
Unlined Ditch	0.7
Penstock / valve	0.4
Notched Weir	0.6
Oil Separator	0.5

The worksheet should be read in conjunction with DMRB 11.3.10.

5 References

Centre for Ecology and Hydrology (CEH) (2009). Flood Estimation Handbook (FEH) Version 3 and associated software. Wallingford.

Highways Agency (2009a). Design Manual for Roads and Bridges (DMRB) HD 45/09: Volume 11, Section 3, Part 10, Road Drainage and the Water Environment. The Highways Agency, Transport Scotland, Welsh Assembly Government and The Department for Regional Development Northern Ireland.

Highways Agency (2009b). Water Risk Assessment Tool (HAWRAT) version 1.0. November 2009.

A10.1: Legislation and Conservation Status

1 International Conventions and Directives

The Convention on Biological Diversity (CBD) (1992)

- 1.1.1 The CBD provides a legal framework for biodiversity conservation. Contracting Parties are required to create and enforce national strategies and action plans to conserve, protect and enhance biological diversity. The UK Government published the UK Biodiversity Action Plan (UKBAP) in 1994, and to compliment the UKBAP, the Scottish Biodiversity Strategy was launched in 2004.
- 1.1.2 In 2010 the Contracting Parties adopted a revised and updated Strategic Plan for Biodiversity, including the Aichi Biodiversity Targets, for the 2011-2020 period. The Aichi Biodiversity Targets have five strategic goals, relating generally to addressing biodiversity loss, improving biodiversity status, and enhancing implementation of measures. Each strategic goal has a number of targets associated with it adding up to a total of 20 targets. Full details can be found at <http://www.cbd.int/sp/targets/default.shtml>.

The Conservation of European Wildlife and Natural Habitats (the Bern Convention) (1979)

- 1.1.3 The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) imposes legal obligations on EU member States and non-member States (as appropriate) to ensure conservation and protection of wild plant and animal species listed within the Convention. Special attention is given to endangered and vulnerable species, including endangered and vulnerable migratory species specified in appendices. The convention was adopted in Bern, Switzerland in 1979 and was ratified by the UK in 1982. It was implemented in the UK in 1982 through the Wildlife and Countryside Act 1981 (as amended) and the Nature Conservation (Scotland) Act 2004 (as amended).

The Convention on Conservation of Migratory Species of Wild Animals (the Bonn Convention) (1979)

- 1.1.4 The Bonn Convention was adopted in 1979 and came into force in 1985. Signatories work together to conserve migratory species and their habitats by providing strict protection for endangered migratory species (listed in Appendix I of the Convention), concluding multilateral agreements for the conservation and management of migratory species which require or would benefit from international cooperation (listed in Appendix II), and by undertaking cooperative research activities. The Convention aims to achieve the effective management of migratory species across national or jurisdictional boundaries. In the UK, the legal requirement for the strict protection of Appendix I species is provided by the Wildlife and Countryside Act 1981 (as amended).

European Council Directive (79/409/EEC) on the Conservation of Wild Birds (the Birds Directive) (1979)

- 1.1.5 The Directive is a primary tool for delivering EU obligations under the CBD (1979), the Ramsar and the Bonn Convention (1979). The Birds Directive requires Member States to protect all bird species, their sites and their habitats. Article 4 of the Directive makes provision for the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex I of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance. Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 is the codified version of Directive 79/409/EEC (as amended) (the Birds Directive (2009)).

European Council Directive (92/43/EEC) on the Conservation of Natural Habitats and Wild Fauna and Flora (the Habitats Directive) (1992)

- 1.1.6 The EC Directive (92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora (the Habitats Directive, 1992) is the means by which Member States meet obligations made as a signatory of the Bern Convention. The main aim of the Directive is to promote the

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maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species at a favourable conservation status, introducing robust protection for those habitats and species of European importance. Each Member State is required to prepare and propose a national list of sites for evaluation in order to form a European network of Sites of Community Importance (SCIs). Once adopted, these are designated by Member States as Special Areas of Conservation (SACs).

- 1.1.7 Article 3 of the Directive requires that designated sites contribute to a coherent European ecological network of protected sites under the title Natura 2000. In addition, the Article requires that SPAs are also included in this network. Member States should also endeavour to improve the ecological coherence of the Natura 2000 network by maintaining, and where appropriate developing, features of the landscape which are of major importance for wild fauna and flora.
- 1.1.8 The Directive was amended in 1997 and 2003 due to the enlargement of the European Union, with a consolidated version issued in 2007.

European Council Directive (2000/60/EC) Water Framework Directive (WFD) (2000)

- 1.1.9 In October 2000 Directive 2000/60/EC established a framework for Community action in the field of water policy (Water Framework Directive or WFD) and came into force in December 2000. The Directive requires that all inland and coastal watercourses in Europe do not deteriorate from their current condition and reach at least 'good' ecological status by 2015. Under the WFD, the ecological status of watercourses is now the focus of river management and impact assessment. Transposition into national law occurred through the Water Environment and Water Services (Scotland) Act 2003 (WEWS Act).

European Council Directive (2006/44/EC) Freshwater Fish Directive (2006)

- 1.1.10 The Freshwater Fish Directive sought to protect freshwater bodies identified by Member States as waters suitable for sustaining fish populations. The Directive was repealed on 22 December 2013 when waters designated under the Freshwater Fish Directive became protected areas under the Water Framework Directive.

European Council Regulation (No.: 1100/2007) Establishing measures for the recovery of the stock of European eel (2007)

- 1.1.11 In response to the decline of European eels the EU proposed an Eel Management Plan. Each Member State is required to create separate management plans for each river basin district.

2 National Legislation

The Wildlife and Countryside Act 1981 (WCA) (as amended in Scotland)

- 2.1.1 The WCA is the principal mechanism for wildlife protection in the UK. Its aim is to implement the requirements of the Bern Convention and the Birds Directive. The statutory designation of Sites of Special Scientific Interest (SSSI) is the main site protection measure in the UK established under the WCA.
- 2.1.2 The WCA has undergone a number of amendments, the latest being via the Wildlife and Natural Environment (Scotland) Act 2011; see below for further details.

The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland)

- 2.1.3 The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland) transpose the EC Habitats Directive into national law. The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European sites.
- 2.1.4 Under the Regulations it is an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2 of the Regulations, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of

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purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on the conservation status of the species concerned.

Nature Conservation (Scotland) Act (NCSA) 2004

- 2.1.5 This Act requires Scottish Ministers to publish a list of habitats and species considered to be of principal importance for biodiversity. The Scottish Biodiversity List is intended to be a tool for public bodies and an important source of information and guidance for all.

Wildlife and Natural Environment (Scotland) Act (WANE) 2011

- 2.1.6 The Wildlife and Natural Environment (Scotland) Act 2011 amended a number of other pieces of legislation including the Wildlife and Countryside Act 1981 and the Deer (Scotland) Act 1996. The Act introduces new wildlife related offences, including 'vicarious liability'. It abolishes the designation of 'areas of special protection' under the Wildlife and Countryside Act 1981, adds further regulation of snaring practice, further regulates invasive and non-native species, ensures that badger licensing is consistent with that of other protected species, amends current arrangements for deer management and deer stalking, strengthens protection of badgers, changes how moor burn can be practised and makes operational changes to the management of SSSIs.
- 2.1.7 The act also changed the approach to dealing with invasive non-native species and aims to prevent the release and spread of non-native animal and plant species into areas where they can cause damage to native species and habitats and to economic interests. This act seeks to ensure a rapid response to new populations can be undertaken, and effective control and eradication measures can be carried out when problem situations arise.
- 2.1.8 A Code of Practice, issued under new section 14C of the Wildlife and Countryside 1981 Act, helps people who manage land containing non-native plants and animals or are involved in the keeping of non-native plants and animals to understand their legal responsibilities. It also provides a licensing means to derogate offences against species protected by the WCA 1981 in certain circumstances.

Environmental Protection Act 1990

- 2.1.9 This Act aims to provide protection and conservation of the natural environment. A number of provisions are set out within this Act that includes provision for the improved control of pollution arising from certain industrial and other processes.

Surface Waters (Fishlife) (Classification) (Scotland) Amendment Regulations 2007

- 2.1.10 These Regulations prescribe a system for classifying and monitoring the quality of inland waters in Scotland which need protection or improvement to support fish-life.

Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003

- 2.1.11 This Act affords protection through a number of orders to which planning authorities must adhere. Under this any person who knowingly takes, injures or destroys; or obstructs the passage of, any smolt, parr, salmon fry or alevin shall be guilty of an offence. Additionally, any person knowingly injuring or disturbing salmon spawn; or disturbs any spawning bed or any bank or shallow in which the spawn of salmon may be, shall be guilty of an offence.

Water Environment and Water Services (Scotland) Act 2003 (WEWS)

- 2.1.12 The WEWS implements the WFD in Scotland but it is now augmented by the Controlled Activities Regulations (CAR).

Water Environment (Controlled Activities) (Scotland) Regulations 2005 (CAR)

- 2.1.13 This act is the implementation in Scotland of the WFD. The Regulations apply to inland waters and wetlands linking to lochs or rivers (although they may be extended to cover all wetlands).

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UK Biodiversity Framework

- 2.1.14 All four governments in the UK (England, Northern Ireland, Scotland and Wales) work together through the Four Countries Biodiversity Group and they have agreed a framework of priorities for UK-level work for the Global Convention on Biological Diversity (CBD) 1992.
- 2.1.15 Previously most of this work was carried out under the UKBAP which resulted in the development of individual action plans for priority habitats and some of the UK's most threatened and endangered species. These Habitat and Species Action Plans (HAPs and SAPs, respectively) were developed to guide conservation action and promote biodiversity.
- 2.1.16 Devolution in 1998 led the four countries of the UK to develop their own country strategies. But a shared framework for UK biodiversity conservation was agreed by all parties, the 'UK Post-2010 Biodiversity Framework' (JNCC and Defra (on behalf of the Four Countries' Biodiversity Group), 2012). This succeeds the UKBAP and forms the UK Government's response to the new strategic plan of the CBD, published in 2010 at a meeting in Nagoya, Japan.
- 2.1.17 Although no longer operating, the UKBAP lists of priority species and habitats remain important and valuable reference sources and they have been used to draw up statutory lists of priorities.

Scottish Biodiversity List (2005)

- 2.1.18 In Scotland, the UKBAP has been replaced by the Scottish Biodiversity List (SBL). This is a list of animals, plants and habitats that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland and was developed to meet the requirements of the NCSA (2004). The list provides a guide to empower decision-makers to further the conservation of biodiversity in Scotland. It was published in 2005 and has since been updated to take account of changes to the UKBAP priorities list, the most recent version being 22 April 2013. SNH is currently preparing a version of the SBL to take into account the 'Categories for Action' which relate to the different types of activities that public bodies carry out to deliver their biodiversity duty.

Local Biodiversity Action Plans (LBAPs)

- 2.1.19 LBAPs integrate the conservation measures provided in the UKBAP to enhance biodiversity at the local and regional level. LBAPs are implemented through planning policy, identifying habitats and species of particular value or endangerment at the local or regional level. The Aberdeen City Council area is covered by the regional North East LBAP which is under development.

Locally Important Sites

- 2.1.20 District Wildlife Sites (DWS), Local Wildlife Sites (LWS), Sites of Importance for Nature Conservation (SINC) and Sites of Interest to Natural Science (SINS) are sites of local conservation interest designated by local planning authorities. Such sites are afforded a measure of protection in local development plans (see Chapter 17: Policies and Plans).

3 Non-Statutory Guidance

International Union for Conservation of Nature

- 3.1.1 The International Union for Conservation of Nature (IUCN) was founded in 1948 following an international conference in France. The IUCN aims to deliver conservation and sustainability at both the global and local level through science, delivery of conservation projects and influencing international environmental conventions, policies and law.
- 3.1.2 The IUCN has produced the IUCN Red List of Threatened Species® (IUCN, 2013) as a comprehensive and objective global approach for evaluating the conservation status of plant and animal species. The goal of the Red List is to provide information and analyses on the status, trends and threats to species in order to inform and catalyse action for biodiversity conservation. Species are classified into the following categories according to their extinction risk: Extinct; Extinct in the Wild; Critically Endangered; Endangered; Vulnerable; Near Threatened; Least Concern; and Data Deficient.

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Scottish Biodiversity Strategy

- 3.1.3 The Scottish Biodiversity Strategy (Scottish Executive, 2004) placed a duty of care on public bodies to further the conservation of biodiversity in Scotland, the execution of which is implemented through the LBAPs. The strategy has been revised in light of new International and European agreements, the European Union's Biodiversity Strategy for 2020 and the 'Aichi Biodiversity Targets'. The new document, "2020 Challenge for Scotland's Biodiversity", was launched on 19 June 2013 (Scottish Government, 2013, formerly the Scottish Executive). The 2020 Challenge is a supplement to the 2004 Strategy and the two together comprise the Scottish Biodiversity Strategy.

Scottish Planning Policy

- 3.1.4 The Scottish Planning Policy is the statement of the Scottish Government's policy on nationally important land use planning matters. This document supersedes a number of documents including National Policy Planning Guideline (NPPG) 14 Natural Heritage (The Scottish Government, 1999). It outlines planning guidance in relation to Landscape and Natural Heritage providing planning authorities with advice on how to address the maintenance and enhancement of biodiversity.

Planning Advice Note (PAN) 60: Planning for Natural Heritage

- 3.1.5 Planning Advice Note (PAN) 60 provides guidance on good practice in relation to conservation and natural heritage in Scotland. It covers the protection of biodiversity, designated sites and the wider natural heritage, with the provision that all development effects can be material considerations in the planning process.

4 Individual Receptors

Terrestrial Habitats

- 4.1.1 Semi-natural habitats may be protected under the Conservation (Habitats, &c.) Regulations 1994 (as amended in Scotland), WCA 1981 (as amended), NCSA 2004 and Habitats Directive 1992.
- 4.1.2 The WCA 1981 (as amended in Scotland) and NCSA 2004 makes it an offence (subject to exceptions) to intentionally pick, uproot or destroy any wild plant listed in Schedule 8 of the WCA; or any seed or spore attached to any such wild plant.
- 4.1.3 The WCA 1981 (as amended in Scotland) also contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife.
- 4.1.4 The SBL includes 232 species of flowering plant, 12 species of fern, seven species of stonewort, 210 species of moss and liverwort and 240 species of alga. This includes species of aquatic as well as terrestrial habitats.
- 4.1.5 The North East Scotland Local Biodiversity Action Plan (NES LBAP) is in the process of being updated. The new LBAP will be organised into five main ecosystem groups: freshwater and wetland, lowland and farmland, marine, urban communities, and woodland. No further information is currently available.

Badger

- 4.1.6 The Protection of Badgers Act 1992 (PBA 1992) legally protects badgers (*Meles meles*) from intentional cruelty (such as badger-baiting) and from the results of lawful human activities (such as housing, road or other developments). Badgers are also protected under the NCSA 2004 and WCA 1981 (as amended), both of which are summarised in Section 1 of this ES appendix.
- 4.1.7 Derogations under the PBA 1992 in respect to the destruction and disturbance of badger setts can only be undertaken under licence through consultation with SNH (the licensing authority).
- 4.1.8 Badgers are not listed on the SBL.

Bats

- 4.1.9 The Agreement on the Conservation of Populations of European Bats (EUROBATS) came into force in 1994 under the auspices of the Convention on Conservation of Migratory Species of Wild

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Animals 1979 (Bonn Convention). The agreement recognises that endangered migratory-species can only be properly protected if activities are carried out over the entire migratory range of the species, and it aims to protect all 45 species of bats identified in Europe through legislation, education, conservation measures and international co-operation.

- 4.1.10 All British bat species and their roosts are also protected under the Bern Convention (with the exception of common pipistrelle (*Pipistrellus pipistrellus*) 1979 (Appendix II); Bonn Convention 1979; Habitats Directive 1992 (Annex IV); Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland) and NCSA 2004.
- 4.1.11 Derogations under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland) in respect to destruction and disturbance of bat roosts can only be undertaken under licence through consultation with SNH.
- 4.1.12 The WCA 1981 (as amended) and NCSA 2004 taken together make it an offence to intentionally/recklessly kill or injure any bat species.
- 4.1.13 Nine species of bats are listed on the SBL.

Breeding Birds

- 4.1.14 Resident and migratory bird populations within the UK are protected under the Conservation (Habitats, &c.) Regulations 1994 (as amended in Scotland), WCA 1981 (as amended in Scotland) and NCSA 2004. They are also protected under the Birds Directive 2009 (originally 1979) and Habitats Directive 1992.
- 4.1.15 The WCA 1981 (as amended) and NCSA 2004 taken together ensure that all wild birds, their nests and eggs are protected, which makes it an offence to intentionally or recklessly kill, injure or take any wild bird; take, damage or destroy the nest of any wild bird while it is in use or being built; take or destroy the egg of any wild bird; and disturb any wild bird listed on Schedule 1 while it is nest building or is at (or near) a nest with eggs or young; or disturb the dependent young of such a bird. The Acts additionally provide protection for SSSIs, in particular those that are designated for the presence of wild bird populations.
- 4.1.16 The SBL includes 105 bird species.

Reptiles

- 4.1.17 Common lizard (*Zootoca vivipara*), slow-worm (*Anguis fragilis*) and adder (*Vipera berus*) are common and widespread in Britain and receive limited protection under the NCSA 2004 and WCA 1981 (as amended), which taken together make it an offence to intentionally/recklessly kill or injure these reptile species.
- 4.1.18 Common lizard, slow-worm and adder are all listed on the SBL.

Red Squirrel

- 4.1.19 In the UK red squirrel (*Sciurus vulgaris*) is protected under the WCA 1981 (as amended in Scotland), NCSA 2004 and WANE Act (2011). This legislation makes it an offence to intentionally or recklessly kill or injure red squirrel, disturb or destroy a place of shelter, and take or sell the species
- 4.1.20 Red squirrel is listed on the SBL.

Otter

- 4.1.21 Otter (*Lutra lutra*) is classed as a European Protected Species and is protected under the Conservation (Habitats, &c.) Regulations 1994 (as amended in Scotland), WCA 1981 (as amended in Scotland), and NCSA 2004. Otters are also protected under the Habitats Directive.
- 4.1.22 This legislation prevents the deliberate or reckless killing or injury of an otter, disturbance or obstruction of an otter or its place of shelter or resting or breeding place. Certain activities can be carried out under licence from SNH.
- 4.1.23 Otter is listed on the SBL.

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Fish

- 4.1.24 Fish species are afforded protection under one or more of the Conservation (Habitats, &c.) Regulations 1994 (as amended), European Eel (Council Regulation (EC) No 1100/2007); Salmon and Freshwater Fisheries Act (Consolidation) (Scotland) 2003, and Surface Waters (Fishlife) (Classification) (Scotland) Amendment Regulations 2007.
- 4.1.25 The WFD, through the aim of preventing the ecological status of watercourses from deteriorating from existing conditions is likely to benefit fish species.
- 4.1.26 All freshwater fish species are protected under the Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act (2003). Atlantic salmon (*Salmo salar*), bullhead (*Cottus gobio*), sea lamprey (*Petromyzon marinus*), river lamprey (*Lampetra fluviatilis*) and brook lamprey (*L. planeri*) are all listed in Annex II of the EC Habitats Directive which requires the designation of SAC. Atlantic salmon and river lamprey are also listed on Annex V of the EC Habitats Directive which lists species whose taking in the wild and exploitation may be subject to management measures.

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A10.2: Detailed Terrestrial Ecology Methods

1 Introduction

- 1.1.1 This appendix provides the detailed methodologies used to obtain and evaluate baseline information for the terrestrial Ecological Impact Assessment (EclA) of the proposed scheme. Given the limited nature of the proposed scheme and the outcomes of the Stage 2 assessment (Jacobs UK Limited, 2014), it was considered that formal surveys of aquatic receptors and breeding birds were not required.
- 1.1.2 Information for the EclA was collected through field surveys, a desk study, consultation and by reference to the results of the Design Manual for Roads and Bridges (DMRB) Stage 2 Environmental Assessment Report (Jacobs UK Limited, 2014). Field survey methods are explained below.
- 1.1.3 Surveys for all ecological receptors for the DMRB Stage 2 assessment were undertaken within a 500m buffer zone around the proposed options to fully characterise the area. For the DBRM Stage 3 assessment surveys for receptors were targeted to those areas where the Stage 2 assessment had indicated the potential presence of effects pathways (a zone of influence) (Table 1).

Table 1: Study area and zones of influence for ecological receptors

Receptor	Study Area (Stage 2)	Zone of Influence (Stage 3)
Habitats and plants (not including invasive non-native plants)	500m	500m (as necessary where habitat changes had occurred)
Invasive non-native plants	500m	50m
Badger	500m	100m
Bats	500m	All properties/trees under the footprint of the proposed scheme
Otter	500m	250m ¹
Red Squirrel	500m	Not applicable ²
All other receptors	500m	Not applicable

¹ Suitable otter habitat was >250m from the proposed scheme.

² Nearest woodland habitat 240m from the proposed scheme.

2 Habitats and Plants

- 2.1.1 Terrestrial habitats information was collected through an extended Phase 1 habitat survey (Handbook for Phase 1 habitat survey – A technique for environmental audit; Joint Nature Conservation Committee (JNCC), 2010). The survey also collected information on other features of potential value for protected species and species of ecological interest. Target notes were made where applicable; the abundance of plant species was noted using the DAFOR scale (D=dominant; A=abundant; F=frequent; O=occasional; R=rare).
- 2.1.2 Aerial photographs, Ordnance Survey (OS) maps, information such as the Ancient Woodland Inventory (AWI), the Native Woodland Survey of Scotland (Forestry Commission, 2014) and lists of designated sites were studied to identify potential habitat areas of nature conservation importance within the study area.
- 2.1.3 An extended Phase 1 habitat survey was undertaken on 29 August 2013. Update surveys were undertaken June - September 2014.

3 Bats

3.1 General

- 3.1.1 Survey methods followed the recommendations set out in the Design Manual for Roads and Bridges DMRB (The Highways Agency et al., 2001a), Hundt (2012) and Cowan (2003). Activity surveys were informed by an initial habitat and building and/or structures survey of the area of proposed works.
- 3.1.2 Roost assessments and activity surveys were carried out in the Middlefield area between June and September 2014.

3.2 Preliminary Survey

- 3.2.1 During the 2013 extended Phase 1 habitat survey, a preliminary survey was undertaken to identify features (structures and trees) which might have potential as a bat roost. Such features were recorded but not classified for their potential as per guidelines (see Tables 2 and 3 below).

3.3 Roost Assessment Surveys

- 3.3.1 Roost assessment surveys were carried out during daylight hours between 2nd and 4th June 2014.
- 3.3.2 The aim of roost assessment surveys was to identify bat roosts and suitable roosting habitat in built structures and trees. The surveys were conducted to look for signs of bat presence including droppings, urine staining, insect remains, grease marks, smoothing or a lack of cobwebs at potential access/egress points and the presence of dead/live bats (Mitchell-Jones, 2004). During these surveys potential access points for bats were assessed using binoculars, including loose bark, splits, holes, cracks, gaps in masonry, tiles and woodwork, and spaces around doors and windows.
- 3.3.3 The results of the roost assessment surveys were used to categorise the built structures and trees into a roost potential category (Tables 1 and 2).
- 3.3.4 Roost emergence/re-entry surveys were undertaken at features which were considered likely to support roosting bats and which were likely to be directly affected by the proposed works, i.e. under the scheme footprint (Section 3.3).

Table 2: Tree Roost Category (Source: Cowan, 2003)

Category	Category Description
1*	Capable of supporting large roosts
1	Potential for use by small numbers of bats
2	No obvious potential from ground survey
3	No potential to support bats

Table 3: Roost and Potential Roost Category (adapted from Mitchell-Jones, 2004)

Main Category	Sub Category	Category description (Trees)	Category Description (Structures)	Indicator
1 (Roost)	A	Trees with evidence of current or historic use by bats.	Buildings/man-made structures with evidence of current or historic use by bats.	Sighting/sound of bats (including emergence/swarming). Presence of fresh or old droppings, staining, smoothing and lack of cobwebs.
	B	Trees with anecdotal evidence of current or historical use by bats.	Buildings/man-made structures with anecdotal evidence of current or historical use by bats.	Roosts identified by personal communication from reliable source (e.g. property owner) or unconfirmed roost identified

Main Category	Sub Category	Category description (Trees)	Category Description (Structures)	Indicator
				during field surveys.
2 (Potential Roost)	A	Trees with high potential for use as roost.	Buildings/man-made structures with high potential for use as roost.	Presence of cracks, splits, knot holes, loose bark, woodpecker holes, snag ends and other hollows in trees
	B	Trees with some potential for use as roost (medium potential).	Buildings/man-made structures with some potential for use as roost.	Presence of dense ivy cover, dead wood or other features with lower potential as roost sites.
3 (No potential)		Trees with no or low potential for use as roost.	Buildings/man-made structures with low potential for use as roost.	No such features. Isolated from foraging or commuting routes.

3.4 Roost Emergence/Re-entry Surveys

- 3.4.1 The aim of roost emergence/re-entry surveys was to confirm the presence of roosts in suitable features and to identify roost type and species of bat. Dusk emergence surveys began 20-30 minutes before sunset and ended 90 minutes after sunset. Dawn re-entry surveys began 90 minutes before dawn and ended up to 20-30 minutes after sunrise. Exact survey times were determined by prevailing weather conditions, time of sunset and known activity patterns of the species likely to be encountered. Surveys were undertaken at least 24 hours apart as indicated by best practice guidance (Hundt, 2012).
- 3.4.2 Ecologists were positioned around the building(s) and/or trees to be observed and they recorded any bat activity using dual mode bat detectors (Batbox Duet). Details of the time, species and number of bats emerging and/or re-entering the roost were noted. Other information about the roosts, their location and distinguishing bat behaviour observed were also recorded.
- 3.4.3 Surveys commenced in July 2014 and were completed in September 2014.
- 3.4.4 A full list of buildings that were subject to emergence/re-entry surveys and the results of these surveys are included in Chapter 10 Ecology and Nature Conservation. Health and safety constraints prevented second surveys being undertaken at 1-7 Logie Place, 9-11 Logie Place, 22-30 Manor Avenue and 873-895 Great Northern Road. In addition, access was not taken to the roof spaces of buildings as it was not possible to ascertain the presence, if any, of asbestos or any other hazardous substance.

4 Badger

- 4.1.1 The study area was checked for field signs of badger as part of the Extended Phase 1 habitat survey in June 2013. The survey corridor comprised a 500m zone around the proposed scheme. Surveys were undertaken following DMRB guidance (The Highways Agency et al., 1997) and Harris et al. (1989). The survey corridor was searched for evidence of badgers including their setts, latrines, trails, footprints and hair, and focused in particular on field boundaries, broadleaved woodland and scrub.
- 4.1.2 Update surveys in 2014 were limited to a buffer area of 100m around the proposed scheme. Additional assessments of a location outwith this area were undertaken on receipt of anecdotal evidence of badger activity.

5 Otter

- 5.1.1 Otter (*Lutra lutra*) surveys were undertaken in accordance with otter survey guidelines (Scottish Natural Heritage (SNH), 2013; Chanin, 2003 and Strachan, 2007). Watercourses or other water

features, and areas within 50m of these features, were surveyed within the survey corridor. Signs indicative of otter presence (lying-up sites, prints, feeding signs and spraints) were recorded.

- 5.1.2 Update surveys for otter were not undertaken in 2014 as the Haudagain roundabout was more than 400m from any suitable otter habitat.

6 References

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The Highways Agency et al. (2001b). Design Manual for Roads and Bridges (DMRB) Volume 10, Section 4, Part 4 (HA80/99): Nature Conservation Advice in Relation to Otters. Highways Agency, Scottish Executive Development Department, The National Assembly for Wales and The Department of Regional Development Northern Ireland.

A10.3: Confidential – Badger and Otter

1 Introduction

- 1.1.1 This appendix provides the results of the assessment of baseline conditions with regard to badger and otter. The appendix is prepared as a confidential appendix, submitted to SNH and Scottish Government, and not included within the published Environmental Statement (ES).
- 1.1.2 A request for a copy of the appendix may be made in writing to:

Transport Scotland
Major Transport Infrastructure Projects (MTRIPS)
Buchanan House
58 Port Dundas House
Glasgow
G40HF

A10.4: Bat Survey Results

1 Introduction

1.1.1 This appendix provides the results of the habitat assessment and activity surveys with regard to bats.

2 Tree and Structure Assessments

2.1.1 One tree was assessed at Category 1 for its potential to support roosting bats (Table 1 and Figure 10.3).

Table 1: Bat Tree Assessment Results

Tree ID	Grid Reference	Tree Species	Roost Category	Survey Results
1	NJ 91116 09113	Common lime (<i>Tilia x europaea</i>)	1	Hole on trunk approximately 2m up tree. Potentially other features further upon tree.

2.1.2 Roost assessment surveys were carried out in June 2014 on 22 blocks of properties within the proposed area of works which may be potentially impacted. All properties were assessed to have medium potential (category 2b) to support roosting bats (Table 2 and Figure 10.3) (Mitchell-Jones, 2004). Emergence/re-entry surveys were subsequently undertaken on these structures (see Section 3).

Table 2: Assessments of Structures for Potential for Roosting Bats

Grid Reference and Property Name	Potential Roost Category	Property Description and Key Features	Date of Assessment
NJ 91374 08946 2 Manor Avenue / 549 North Anderson Drive	2b	Semi-detached two-storey brick built property with rendering. Pitched tiled roof with dormer windows and hanging slates. Missing slates, multiple gaps along ridge.	02.06.14
NJ 91355 08938 4-10 Manor Avenue	2b	Block of flats, granite block built, two-storey property with a pitched slate roof. Missing and broken slates, multiple gaps along ridge.	02.06.14
NJ 91331 08934 12-14 Manor Avenue	2b	Semi-detached two-storey brick built property with rendering. Pitched tiled roof with dormer windows and hanging slates. Missing slates, multiple gaps along ridge.	02.06.14
NJ 91315 08951 4-8 Logie Avenue	2b	Block of flats, granite block built, two-storey property with a pitched slate roof. Missing and broken slates, multiple gaps along ridge.	02.06.14
NJ 91280 08947 1-7 Logie Avenue	2b	Two storey block of flats, brick built with rendering and a pitched slate roof. Gaps between roof and wall head, missing slates, multiple gaps along ridge.	02.06.14
NJ 91275 08923 18-20 Manor Avenue	2b	Semi-detached two-storey brick built property with rendering and a pitched slate roof. Missing and lifted slates around windows.	02.06.14
NJ 91208 08898 22-30 Manor Avenue	2b	Building consisting of five adjoining blocks of flats. Two-storey and three-storey brick built structure with a pitched slate roof. Missing and lifted slates, multiple gaps along ridge.	02.06.14
NJ 91254 08959 1-7 Logie Place	2b	Two-storey block of flats, brick built with rendering and a pitched slate roof. Multiple gaps along ridge, lifted slates.	02.06.14
NJ 91228 08948 9-11 Logie Place	2b	Semi-detached two-storey brick built property with pitched tiled roof. Missing tiles over roof and hips, gaps along ridge.	03.06.14
NJ 91210 08940	2b	Semi-detached two-storey brick built property with pitched	03.06.14

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Grid Reference and Property Name	Potential Roost Category	Property Description and Key Features	Date of Assessment
13-15 Logie Place		tiled roof. Missing tiles over roof and hips.	
NJ 91186 08934 17-19 Logie Place	2b	Semi-detached two-storey brick built property with pitched tiled roof. Slipped and missing tiles, gaps along ridge.	03.06.14
NJ 91160 08927 21-27 Logie Place	2b	Two-storey block of flats, brick built with rendering and a pitched slate roof. Missing slates on one hip ridge, multiple missing slates across roof.	03.06.14
NJ 91214 08980 2-8 Logie Place	2b	Building consisting of four adjoining blocks of flats, a nursery and neighbourhood services. Two-storey and three-storey brick built structure with a pitched slate roof. Missing and lifted slates, multiple gaps along ridge, gaps between roof and wall head.	02.06.14
NJ 91150 08960 10-12 Logie Place	2b	Semi-detached two-storey brick built property with rendering. Pitched slate roof with dormer windows and hanging slates. Missing and lifted tiles on roof and hips, multiple gaps along ridge.	03.06.14
NJ 91246 09016 9-15 Logie Avenue	2b	Two-storey block of flats, brick built with rendering and a pitched slate roof. Missing slates, holes in ridge.	03.06.14
NJ 91225 09029 17-19 Logie Avenue	2b	Semi-detached two-storey brick built property with rendering. Missing and cracked slates, multiple gaps along ridge.	03.06.14
NJ 91123 09045 5 Logie Gardens / 27-31 Logie Avenue	2b	Building consisting of four adjoining blocks of flats. Three storey brick property with rendering and a pitched slate roof. One block is derelict. Cracked windows in derelict block, missing slates, multiple gaps along ridge, exposed brickwork through render.	03.06.14
NJ 91096 09093 34-36 Logie Avenue	2b	Building consisting of two adjoining three-storey blocks of flats, brick built with rendering and a pitched slate roof. Gaps around gutter, missing slates, multiple gaps along ridge.	03.06.14
NJ 91086 09133 20-30 Manor Avenue	2b	Three-storey block of flats, brick built with render and a pitched tiled roof. Gaps where tiles meet wall on gable ends, multiple gaps along ridge.	03.06.14
NJ 91116 09144 897-919 Great Northern Road	2b	Three storey block of flats, brick built with render and a pitched tiled roof. Missing tiles, multiple gaps along ridge, gaps in soffit boards.	03.06.14
NJ 91161 09147 873-895 Great Northern Road	2b	Three storey block of flats, brick built with render and a pitched tiled roof. Missing tiles, multiple gaps along ridge.	03.06.14
NJ 91191 09124 871 Great Northern Road	2b	Two-storey detached cottage, stone built with slate roof and dormer windows. Lifted slates, gaps where slates meet wall head.	03.06.14

3 Emergence/Re-entry Surveys

3.1.1 Bat surveys (emergence/re-entry) for the tree assessed in Section 2 were carried out in August 2014. Two dusk surveys were carried out following best practice guidance (Table 3), which states that surveys should be at least 24 hours apart (Hundt, 2012). The surveys confirmed that the tree was not currently being used as a roost.

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Table 3: Bat Tee Emergence/Re-entry Survey Results

Survey	Survey Results	Peak Bats Counts at Identified Roosts*	Survey Type, Date and Weather Conditions
1	No bat activity.	n/a	Emergence 06/08/2014 Start time: 20:41 End time: 22:41 Dry, light air, 16.4°C dropping to 14.8°C, 10% CC rising to 75% CC.
2	No bat activity.	n/a	Emergence 13/08/2014 Start time: 20:24 End time: 22:24 Dry, moderate breeze, 14.9°C dropping to 12.5°C, 100% CC dropping to 30% CC.

3.1.2 Results for the bat surveys of structures (emergence/re-entry) are presented in Table 4. Common and soprano pipistrelles (*Pipistrellus pipistrellus* and *P. pygmaeus*) were recorded during the surveys, but no confirmed bat roosts were reported.

3.1.3 Low bat activity was recorded for all of the properties surveyed (Figure 10.4). There were no more than five recorded passes in one survey.

Table 4: Structure Bat Emergence/Re-entry Survey Results

Property Name	Roost Category	Survey Results	Survey Type, Date and Weather Conditions
2 Manor Avenue / 549 North Anderson Drive	2b	No bat activity.	Emergence 31/07/2014 Start time: 21:00 End time: 22:55 Dry with initial moderate rain, calm, 15°C dropping to 12.4°C, 100% CC dropping to 80% CC.
		Single recorded pass of a Pipistrelle.	Re-entry 12/08/2014 Start time: 03:58 End time: 05:28 Dry, moderate breeze, 13.4°C dropping to 11.5°C, average of 90% CC
4-10 Manor Avenue	2b	Single recorded soprano pipistrelle commuting from west to east to the south of the property.	Emergence 31/07/2014 Start time: 21:00 End time: 23:00 Dry with initial light rain, calm, 15°C dropping to 12.4°C, average 100% CC.
		No bat activity.	Re-entry 12/08/2014 Start time: 03:58 End time: 05:45 Dry, light air, 13.4°C dropping to 11.5°C, 90% CC increasing to 100% CC
12-14 Manor Avenue	2b	No bat activity.	Re-entry 01/08/2014 Start time: 03:37 End time: 05:07 Dry, calm, 12.3°C dropping to 11.2°C, 90% CC increasing to 100% CC.
		No bat activity.	Re-entry 12/08/2014 Start time: 03:58 End time: 05:45 Dry, light air, 13.4°C dropping to 11.5°C, 90% CC increasing to 100% CC
4-8 Logie	2b	No bat activity.	Re-entry 01/08/2014

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Property Name	Roost Category	Survey Results	Survey Type, Date and Weather Conditions
Avenue			Start time: 03:37 End time: 05:07 Dry, calm, 12.3°C dropping to 11.2°C, 70% CC rising to 80% CC.
		Recorded pass of a single soprano pipistrelle and a single common pipistrelle.	Emergence 12/08/25014 Start time: 20:28 End time: 22:28 Intermittent light rain, light air, temperature not determined (N/D), average 100% CC.
1-7 Logie Avenue	2b	Two separate recorded passes of a common pipistrelle and a pipistrelle species.	Emergence 03/09/2014 Start time: 19:30 End time: 21:30 Dry, light air, 18.1°C dropping to 16.4°C, average 100% CC.
		Single recorded pass of a pipistrelle species.	Re-entry 12/09/2014 Start time: 05:02 End time: 06:32 Dry with mist, light air, 15.9°C dropping to 12°C, average 100% CC.
18-20 Manor Avenue	2b	Single recorded pass of a common pipistrelle.	Emergence 03/09/2014 Start time: 19:30 End time: 21:30 Dry, calm, 18.1°C dropping to 16.6°C, average 100% CC.
		Single recorded pass of a common pipistrelle.	Re-entry 12/09/2014 Start time: 05:02 End time: 06:32 Dry with mist, 15.9°C dropping to 12°C, 100% CC dropping to 10% CC.
22-30 Manor Avenue	2b	Five separate recordings of common pipistrelle (three commuting and two foraging in the communal gardens).	Emergence 04/09/2014 Start time: 19:28 End time: 21:28 Dry, calm, 17.3°C dropping to 14.6°C, 100% CC dropping to 50% CC.
		N/A	N/A
1-7 Logie Place	2b	Single recorded pass of a soprano pipistrelle.	Emergence 12/08/2014 Start time: 20:27 End time: 22:27 Intermittent light rain, light air, temperature N/D, average 90% CC.
		N/A	N/A
9-11 Logie Place	2b	Single recorded pass of a pipistrelle species.	Emergence 14/08/2014 Start time: 20:30 End time: 22:30 Dry, light air, 15.2°C dropping to 11.1°C, 40% CC dropping to 10% CC.
		N/A	N/A
13-15 Logie Place	2b	No bat activity.	Emergence 14/08/2014 Start time: 20:22 End time: 22:22 Dry, light air, 15.2°C dropping to 11.1°C, 20% CC dropping to 0% CC.
		No bat activity.	Re-entry 10/09/2014 Start time: 04:58 End time: 06:28 Dry, calm, 12.4°C dropping to 8.9°C,

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Property Name	Roost Category	Survey Results	Survey Type, Date and Weather Conditions
			0% CC increasing to 50% CC.
17-19 Logie Place	2b	No bat activity.	Re-entry 15/08/2014 Start time: 04:10 End time: 05:34 Dry, light air, 11.2°C dropping to 10.3°C, 20% CC increasing to 30% CC.
		No bat activity.	Emergence 08/09/2014 Start time: 19:30 End time: 21:15 Dry, calm, 12.5°C dropping to 10.1°C, 20% CC increasing to 100% CC.
21-27 Logie Place	2b	No bat activity.	Re-entry 15/08/2014 Start time: 04:04 End time: 05:34 Dry, light air, 11.2°C dropping to 10.3°C, 5% CC increasing to 60% CC.
		No bat activity.	Emergence 08/09/2014 Start time: 19:30 End time: 21:16 Dry, light air, 12.5°C dropping to 10.1°C, 10% CC increasing to 85% CC.
2-8 Logie Place	2b	Two recorded passes of pipistrelle species.	Emergence 11/08/2014 Start time: 20:30 End time: 22:30 Dry, light air, 13.4°C dropping to 10.7°C, 80% CC dropping to 30% CC.
		No bat activity.	Re-entry 04/09/2014 Start time: 04:46 End time: 06:16 Dry, light air, 15.1°C dropping to 13.8°C, average 100% CC.
10-12 Logie Place	2b	One recorded pass of a common pipistrelle.	Re-entry 04/08/14 Start time: 04:46 End time: 06:16 Dry, light air, 15.1°C dropping to 13.8°C, average 100% CC.
		Two recorded passes of common pipistrelles.	Emergence 09/09/2014 Start time: 19:14 End time: 21:14 Dry, calm, 13.3°C dropping to 7.8°C, 25% CC dropping to 0% cloud cover.
17-19 Logie Avenue	2b	Three recorded passes of pipistrelle species.	Re-entry 06/08/2014 Start time: 03:46 End time: 05:16 Light shower turning dry, 16.3°C dropping to 15.9°C, average 100% CC.
		One recorded pass of a soprano pipistrelle.	Emergence 10/09/2014 Start time: 19:10 End time: 21:10 Dry, light air, 18.6°C dropping to 13.0°C, 10% cloud cover rising to 30% CC.
5 Logie Gardens/27-31 Logie Avenue	2b	One recorded unidentified species pass.*	Re-entry 07/08/2014 Start time: 03:48 End time: 05:18 Dry, light air, 14.9°C dropping to 13.0°C, average 95% CC.

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Property Name	Roost Category	Survey Results	Survey Type, Date and Weather Conditions
		No bat activity.	Re-entry 11/09/2014 Start time: 05:00 End time: 06:30 Dry, light air, 14.1°C dropping to 11.0°C, 90% CC dropping to 40% CC.
34-36 Logie Avenue	2b	One recorded pass of pipistrelle species.	Emergence 06/08/2014 Start time: 20:41 End time: 22:41 Dry, light air, 16.4°C dropping to 14.8°C. 20% CC rising to 70% CC.
		One recorded pass of common pipistrelle.	Re-entry 14/08/2014 Start time: 04:02 End time: 05:40 Dry turning to light rain, light air, 13.0°C dropping to 11.5°C, 40% CC rising to 100%.
20-30 Manor Drive	2b	One recorded pass of soprano pipistrelle.	Re-entry 05/09/2014 Start time: 04:48 End time: 06:18 Dry night, calm, 15.1°C dropping to 14.0°C, average 100% CC.
		No bat activity recorded.	Re-entry 11/09/2014 Start time: 19:10 End time: 21:10 Dry night, light air, 13.2°C dropping to 12.4°C, 5% CC rising to 40% CC.
897-919 Great Northern Road	2b	One recorded pass of common pipistrelle.	Re-entry 13/08/2014 Start time: 04:00 End time: 05:35 Dry night with some light showers, light air, temperature N/D, 50% CC rising to 100% CC.
		No bat activity recorded.	Emergence 11/09/2014 Start time: 19:10 End time: 21:10 Dry night, light air, 13.2°C dropping to 12.4°C, 20% CC rising to 90%.
873-895 Great Northern Road	2b	One recorded pass of common pipistrelle.	Re-entry 13/08/2014 Start time: 04:00 End time: 05:35 Dry night with some light showers, light air, temperature N/D, 50% CC rising to 100% CC.
		N/A	N/A
871 Great Northern Road	2b	No bat activity recorded.	Emergence 13/08/2014 Start time: 20:24 End time: 22:24 Dry night, light air, temperature N/D, average 100% CC.
		One recorded pass of pipistrelle species.	Re-entry 09/09/2014 Start time: 04:56 End time: 06:26 Dry night, light air, 14.1°C dropping to 10.8°C.
9-15 Logie Avenue	2b	One recorded pass of soprano pipistrelle.	Re-entry 06/08/2014 Start time: 03:46 End time: 05:16

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Property Name	Roost Category	Survey Results	Survey Type, Date and Weather Conditions
			Dry night, light air, 16.3°C dropping to 15.9°C, average 100% CC.
		Two recorded passes of pipistrelle species.	Emergence 10/09/2014 Start time: 19:10 End time: 21:10 Dry night, light air, 18.6°C dropping to 12.5°C, 20% CC rising to 90% CC.

*Although unidentified, it is considered likely that this would be pipistrelle species.

4 References

Hundt L (2012). Bat Surveys: Good Practice Guidelines, 2nd Edition, Bat Conservation Trust.

Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

A11.1: Urban Character Areas (UCAs)

1 Introduction

- 1.1.1 This appendix supports Chapter 11 (Landscape and Visual) of the ES, and sets out the baseline townscape character using Urban Character Areas (UCAs) to describe the study area for the proposed scheme. For each UCA the description includes townscape quality (conditions), scenic quality, rarity, representativeness, conservation/ cultural interest, recreational value, perceptual aspects and associations.
- 1.1.2 The location of the UCAs and photograph viewpoint locations are shown on Figure 11.1 of the ES. Corresponding viewpoint photographs are shown on Figures 11.1a-e.

2 Baseline Conditions

- 2.1.1 The UCAs within the study area are listed and described below, including a breakdown of their value assessment.

Urban Character Areas UCAs

- 2.1.2 Within the study area the urban pattern has been largely dictated by the main roads and the local roads interlinking residential areas. The A90 provides the main north to south route through Aberdeen connecting to the A96 at Haudagain Roundabout and provides the road link between Aberdeen and Inverness.

- 2.1.3 The urban character areas are represented by the residential character and distinguished through the structure of the urban patterns with the following areas identified:

- North Middlefield UCA;
- South Middlefield UCA;
- Auchmill Road UCA;
- Great Northern Road UCA; and
- Haudagain Commercial and Industrial UCA.

- 2.1.4 The urban character areas are in close proximity within distinctive residential areas predominantly located to the south-west of Haudagain Roundabout. The natural topography in these areas slopes from south to north towards the River Don valley. Two of the urban character areas are predominantly residential, the remaining three vary from residential to commercial and industrial but are dominated by the presence of the A96 running west and east of the Haudagain Roundabout.

North Middlefield UCA

- 2.1.5 North Middlefield UCA is the largest of the five identified urban character areas, and is situated south of Manor Avenue and North of Manor Avenue. The extents of this character area is defined to the west by the caravan park boundary wall and change in architectural design of the residential properties on Manor Avenue to the south and the A90 North Anderson Drive to the east. The A96 forms the boundary to the north.

- 2.1.6 The architecture is composed of pre-WWII residential tenements designed around central semi-public communal courtyards. The overall urban texture and colour varies with differing scales and styles and the built form is repetitive with a geometric linear layout. Dwellings vary from 3 storey high flats around central semi-public communal courtyards, 2 storey cottage flats and red brick semi-detached housing with private gardens. A number of properties are in poor condition, derelict, vacant and boarded up.

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- 2.1.7 Local minor roads such as Manor Drive, Logie Place and Logie Avenue run centrally through the area linking the majority of the houses.
- 2.1.8 The natural topography of the area slopes from south to north and dwellings will be directly affected or located in close proximity to the proposed development. The existing structure is relatively compact with few views out apart from distant views north from the higher, southern reaches of the UCA. Open spaces are made up of small public parks, communal gardens and play parks created following the demolition of a tenement block. Existing tree and scrub vegetation is found sporadically throughout the area but amenity grass dominates. The main mature vegetation can be found in the small adjacent parks between Logie Place and Manor Avenue and in private gardens.
- 2.1.9 The majority of the semi-detached or terrace houses have private, well-maintained gardens with ornamental and shrub vegetation which creates well screened, safe private gardens.
- 2.1.10 In the context of the surrounding townscape out with the UCA, recreational areas comprise of a football ground, playing fields and allotment gardens. Manor Park Caravan Park is located on the edge of the character area with potentially limited visibility of the proposed scheme due to screening by intermittent properties, the existing boundary wall and vegetation. The public parks at Manor Terrace, a community park at Logie Gardens and two storey housing blocks converted into community facilities form the recreational facilities within this UCA.

Table 1: Value Assessment of North Middlefield UCA

UCA Attribute	Description
Townscape Quality (Condition)	<ul style="list-style-type: none"> • Situated south-west of Haudagain Roundabout, south of the Aberdeen to Inverness railway line. • Predominantly composed of pre-WWII (1935) tenements. • Residential housing designed around central semi-public communal courtyards. • Comprising of diverse scales and styles of pre-war housing. • A number of tenements in poor condition, vacant and boarded, particularly at Logie Gardens. • The natural topography of the area slopes down from south to north. • Small number of semi-detached red brick houses on Logie Place. • Extensive open spaces, smaller roads and some dwellings with front and back garden which help diversify the residential pattern. • Built form largely comprises of regular geometric patterns including linear, rectangular and curved patterns with 3 storey high flats. • Some properties with designated off street parking allows areas of the road to be clear of parked cars specifically on Logie Place.
Scenic Quality	<ul style="list-style-type: none"> • Low scenic quality. • Topography and residential layout creates a relatively compact structure. • There are limited views out with the area towards the surrounding townscape. • Distant views of rural landscape to the north can be gained from the higher ground on the southern extents of the UCA. • Higher storey buildings appear to discourage residents' engagement with their surrounding communal gardens, which appear sparse and unused. <p>Only notable vegetation apart from grass is located in private gardens and in the parks between Logie Place and Manor Avenue.</p>
Rarity	No notable rare elements, features or townscapes.
Representativeness	<ul style="list-style-type: none"> • Some well-maintained private gardens. • Well-maintained parks with mature established hedgerow and tree park boundary. • Limited unstructured shrub planting within residential areas. • Repetitive structured layout focused around communal open space.
Conservation/ Cultural Interest	Nothing notable
Recreation Value	<ul style="list-style-type: none"> • Football ground, playing fields and allotment gardens are located in close proximity but out with character area. • A community play park at Logie Gardens. • Green open recreational areas are located at Logie Gardens and Manor Terrace. • A number of smaller two storey tenement blocks have been converted into community facilities.
Perceptual Aspects	Communal space around dwellings can appear sparse and exposed due to the limited vegetation amount of tree and scrub vegetation. The scale and geometric form of the larger tenements appears imposing and due to the presence of boarded up properties there is the perception of dereliction and being unwelcoming and slightly unsafe.

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Associations	No relevant associations with notable figures.
The UCA is considered to be of low value	

South Middlefield UCA

- 2.1.11 The South Middlefield UCA is situated south of Manor Avenue and comprises varying scales and styles of pre-war housing. The properties are located on the rising slope and along with communal space and mix of building scales combines to create a relatively diverse residential townscape. The area is relatively tidy with no litter and communal space is well-maintained.
- 2.1.12 Narrow access roads, off street parking and well-maintained front and back gardens add to the diversity of the townscape pattern. Travelling west along Manor Avenue the majority of properties are two storey block of flats with open sparsely vegetated front gardens. To the east properties tend to have gardens with more established well-maintained planting creating sense of private ownership and a perception increase value.
- 2.1.13 On Fairlie Street, to the west of the A90 North Anderson Drive, a liner group of three four storey tenements face on to the street in contrast to the semi-detached properties opposite. Their presence, along with the high rise block of flats at Smithfield Court, slightly detracts from the quality of the area due to their imposing scale and stark architecture. To the east of North Anderson Drive where Clifton Road meets the A90, the style of housing changes again however the change in topography, angle of road alignment and position of existing vegetation combine to partially screen it from the A90 and properties opposite.
- 2.1.14 The South Middlefield UCA is located on the higher reaches of the rising topography which allows distant views over the townscape to the northern hills beyond. Linear geometric urban form consists of semi-detached red brick housing and granite two storey flats.
- 2.1.15 There are a number of community properties located in the UCA, Middlefield Parish Church and a community hall. They appear heavily secured with bars on the windows and steel shuttering covering the doors. The obvious concern with security in this location has the effect of detracting from the overall townscape value of the UCA.

Table 2: Value Assessment of South Middlefield UCA

UCA Attribute	Description
Townscape Quality (Condition)	<ul style="list-style-type: none"> Residential housing of a varying scales and styles. Mix of semi-detached, two, three and four storey houses and tenements and high rise flats. Diverse residential townscape including combinations of open communal space, smaller roads and private and public housing with private off street parking. Mature well-maintained shrub planting in localised areas and gardens, hedgerows garden boundaries and some specimen trees.
Scenic Quality	<ul style="list-style-type: none"> Linear geometric building forms dominated by granite two storey flats and largely red brick built pitched roofs. Medium to low scenic quality.
Rarity	None
Representativeness	<ul style="list-style-type: none"> Properties with well-maintained, established, private gardens. Well-maintained communal space. Distant views to the rural landscape to the north.
Conservation/ Cultural Interest	None
Recreation Value	Presence of Middlefield Parish Church and a church community hall. Appear heavily secured so appear not to be freely open to the community.
Perceptual Aspects	<ul style="list-style-type: none"> Presence of well-maintained gardens and communal space gives the perception of private ownership and pride of place. Scale of high density housing can appear imposing by comparison. Perception of security concerns due to the heavy protection measures visible on community properties.
Associations	No relevant associations with notable figures.
The UCA is considered to be of low to medium value	

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Auchmill Road UCA

2.1.16 Auchmill Road UCA comprises of semi-detached granite villas facing directly on to the A96(T) Auchmill Road. The properties are a variety of interesting architectural styles with narrow well maintained front gardens. All have large back gardens or yards and private off the road parking. Stone walls border the majority of the houses. Properties look out on to well-maintained and matured trees with glimpsed and open view out towards the distant rural landscape to the north.

Table 3: Value Assessment of Auchmill Road UCA

UCA Attribute	Description
Townscape Quality (Condition)	<ul style="list-style-type: none"> Well-maintained semi-detached villas facing directly on to A96(T) Auchmill Road. Private well-maintained front and back gardens and designated car parking. Properties look out on to the busy A96, mature vegetation with distant views of the rural landscape to the north.
Scenic Quality	<ul style="list-style-type: none"> Distant views north to the rural landscape. Well established shrubs and mature trees along northern boundary. In close proximity to Aberdeen to Inverness railway link. Interesting granite architecture building styles.
Rarity	None
Representativeness	<ul style="list-style-type: none"> Properties of a variety of grey granite architectural styles with narrow gardens and stone boundary walls. All face out on to the A96 with glimpsed views of the rural landscape beyond.
Conservation/ Cultural Interest	All the buildings are constructed of granite with varying architectural styles.
Recreation Value	None
Perceptual Aspects	Private granite properties of varying architectural styles with well-maintained narrow front gardens. The busy A96 can give a sense of exposure for pedestrians using the roadside footpaths. However clear visibility from the road creates a sense of safety & security.
Associations	No relevant associations with notable figures.
The UCA is considered to be of medium value	

Great Northern Road UCA

2.1.17 Great Northern Road UCA contains predominantly high density housing blocks situated along the busy A96 directly to the east of the Haudagain Roundabout. On the higher levels the properties will have views overlooking the townscape on all sides. However due to the intermediate properties, views of the proposed route are anticipated to be limited. Communal open/green space around the blocks is limited, car parking takes priority. The A96, Haudagain Roundabout and the retail park to the south dominates the sense of place at ground level.

Table 4: Value Assessment of Great Northern Road UCA

UCA Attribute	Description
Townscape Quality (Condition)	<ul style="list-style-type: none"> Predominantly high density housing blocks located along the busy A96 Great Northern Road. Built form largely comprises geometric blocks with flat or angled roofs. Private car parking takes priority over open/ communal green space. A96, the Haudagain Roundabout and Retail Park tend to dominate at ground level.
Scenic Quality	<ul style="list-style-type: none"> Limited high density busy urban environment dominated by traffic movement and retail facilities. Scenic quality limited.
Rarity	None
Representativeness	<ul style="list-style-type: none"> Small amounts of communal space but car parking and road infrastructure take priority.
Conservation/ Cultural Interest	None
Recreation Value	None

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Perceptual Aspects	Dominated by the busy A96.
Associations	No relevant associations with notable figures.
The UCA is considered to be of low value	

Haudagain Commercial and Industrial UCA

2.1.18 Haudagain Commercial and Industrial UCA includes commercial premises and retail units around Haudagain Roundabout including, a number of retail units along the busy A96(T) Auchmill Road and a petrol station is located close to the existing roundabout. Commercial properties are a mix of one storey high modern commercial units to the west and to the east there are traditional brick and granite properties with accommodation in the upper floors. There is limited tree and scrub vegetation.

Table 5: Value Assessment of Haudagain Commercial and Industrial UCA

UCA Attribute	Description
Townscape Quality (Condition)	<ul style="list-style-type: none"> • Modern commercial units primarily one storey with few or no views out. • Various commercial premises located in traditional properties, some derelict or requiring refurbishment, a few containing residential accommodation on the upper floors. These properties tend to be more intertwined with the surrounding fabric of the traditional townscape character. • Limited planting provides slight softening to the hard build environment.
Scenic Quality	None
Rarity	None
Representativeness	<ul style="list-style-type: none"> • Tradition granite stone commercial properties intermixed with more modern generic retail units. • Commercial properties located on both sides of the A96 in linear groupings.
Conservation/ Cultural Interest	None
Recreation Value	None
Perceptual Aspects	<ul style="list-style-type: none"> • Area dominated by the busy A96 and Haudagain Roundabout, sense of being located in on the outskirts well away from the main retail centre.
Associations	No relevant associations with notable figures.
The UCA is considered to be of low value	

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Appendix 11:2: Built and Outdoor Receptor Assessment Tables

A11.2: Built and Outdoor Receptor Assessment Tables

- 1.1.1 Table 1 provides the assessment of built receptors, and Table 2 provides an assessment of outdoor receptors. This information supports the assessment presented in Chapter 11 (Landscape and Visual) of the ES.
- 1.1.2 A key to abbreviations is provided below.

Key to Abbreviations

Table Column	Abbreviations Used
Type and Number	dw = dwellings I = industrial c = commercial rd = road o = other
Existing view	u = urban r = rural rd = road i = industrial d = derelict
Sensitivity of Receptor	h = high m = medium l = low
Elements of Proposed Scheme Visible	rs = road surface v = vehicles l = lighting / traffic lights s = signs e = earthworks d = change in view due to demolition su = SUDS basin nb = noise barriers
Magnitude of Change	h = high m = medium l = low
Impact Significance	n = negligible sl = slight sl/m = slight/ moderate m = moderate m/s = moderate/ substantial sub = substantial

Table 1: Built Receptor Assessment Table

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
1 Manor Drive	o (Caravan Park) 10no.	u, rd	m	<p>Partial screening and enhancement from individual tree groups, avenue tree and hedgerows planting.</p> <p>Amenity grass seeding to assist enhancement and integration of an amenity open space, area surrounding SUDS and cuttings. Wildflower seeding of SUDS to increase biodiversity and visual enhancement.</p> <p>Climbing species planted on both sides of the proposed noise barriers.</p>	rs, v, l, s, e, d, su, nb	m	m	<p>Increased enhancement and screening provided by established tree planting, hedgerows, climbing plants and increased integration through establishment of grass seeding.</p>	rs, v, l, s, e, d, su, nb	l/m	sl/m

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
2 A96 Auchmill Road	dw 6no.	u, r, rd	m	<p>Partial screening and enhancement from individual tree groups, avenue tree and hedgerows planting.</p> <p>Sensitive replacement of hard surfacing including reinstatement of footpaths and associated roadside furniture to the front of dwellings to tie-in with existing elements.</p> <p>Amenity grass seeding to assist enhancement and integration of amenity open space, area surrounding SUDS and cuttings. Wildflower seeding of SUDS to increase biodiversity and visual enhancement.</p> <p>Climbing species planted on both sides of the proposed noise barriers.</p>	rs, v, l, s, e, d, su, nb	l/m	sl/m	<p>Increased enhancement and screening provided by established tree planting, hedgerows, climbing plants and increased integration through the establishment of grass seeding.</p>	rs, v, l, s, e, d, su, nb	l	sl

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
3 Manor Drive	dw 12no.	u, rd	m	<p>Partial screening and enhancement from individual tree group planting on landscape earthworks and from avenue tree planting.</p> <p>Amenity grass seeding to assist enhancement and integration of amenity open space, area surrounding SUDS basin and cuttings. Wildflower seeding of SUDS basin to increase biodiversity potential and enhance open space.</p> <p>Climbing species planted on both sides of the proposed noise barriers.</p>	rs, v, l, s, e, d, su, nb	m/h	m/s	<p>Increased enhancement and screening provided by established tree planting, hedgerows, climbing plants and increased integration through the establishment of grass seeding.</p>	rs, v, l, s, e, d, nb	m	m
4 Manor Drive and Manor Walk	dw 12no.	u, rd	m	<p>Partial screening and enhancement from individual tree group planting on landscape earthworks and from avenue tree planting.</p> <p>Amenity grass seeding to assist enhancement and integration of amenity open space, landscape earthworks and cuttings.</p>	rs, v, l, s, e, d	m	m	<p>Increased enhancement and screening provided by established tree planting, hedgerows and increased integration through the establishment of grass seeding.</p>	rs, v, l, s, d,	l/m	sl/m

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
5 Manor Drive	dw 4no.	u, rd	m	<p>Partial screening and enhancement from individual tree group planting on landscape earthworks and from avenue tree planting.</p> <p>Enhancement from reinstatement of park boundary with hedgerow if required and tree planting along Logie Place.</p> <p>Amenity grass seeding to assist enhancement and integration of amenity open space, landscape earthworks and cuttings.</p>	rs, v, l, s, e	m/l	sl/m	<p>Increased enhancement and screening provided by established tree planting, hedgerows and increased integration through the establishment of grass seeding.</p>	v, l	l	sl
6 Manor Drive	dw 3no.	u, rd	m	<p>Partial screening and enhancement from individual tree group planting on landscape earthworks and from avenue tree planting.</p> <p>Enhancement from reinstatement of park boundary with hedgerow if required and tree planting along Logie Place.</p> <p>Amenity grass seeding to assist enhancement and integration of amenity open space, landscape earthworks and cuttings.</p>	rs, v, l, s, e, d	m	m	<p>Increased enhancement and screening provided by established tree planting, hedgerows and increased integration through to establishment of grass seeding.</p>	rs, v, l, d	l/m	sl/m

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
7 Logie Place	dw 3no.	u, rd	m	<p>Partial screening and enhancement from individual tree group planting on landscape earthworks and park boundary hedgerow and tree planting.</p> <p>Enhancement from reinstatement of park boundary with hedgerow if required and tree planting along Logie Place.</p> <p>Amenity grass seeding to assist enhancement and integration of amenity open space, landscape earthworks and cuttings.</p>	rs, v, l, s, e	l/m	sl/m	<p>Increased enhancement and screening provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.</p>	v, l, s, e	l	sl
8 Logie Terrace	dw 9no.	u, rd	m	<p>Partial screening from park boundary hedgerow and tree planting.</p> <p>Enhancement from reinstatement of park boundary with hedgerow and tree planting along linking road between Logie Place and Manor Avenue.</p> <p>Amenity grass seeding to assist enhancement and integration of amenity open space, landscape earthworks and cuttings.</p>	rs, v, l, s, e, d	m/h	m/s	<p>Increased enhancement and screening provided by established tree hedgerow planting and increased integration through the establishment of grass seeding.</p>	rs, v, l, s, e	m	m

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
9 Manor Avenue	dw 7no.	u, rd	m	Amenity grass seeding to assist enhancement and integration of amenity space, and cuttings. Enhancement from reinstatement of park boundary with hedgerow and tree planting. Enhancement from tree group planting.	rs, v, l, s, e	l/m	sl/m	Increased enhancement and screening provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, s, e	l	sl
10 Manor Avenue	dw 8no.	u, rd	m	Amenity grass seeding to assist enhancement and integration of amenity space and cuttings. Enhancement from reinstatement of park boundary with hedgerow and tree planting. Enhancement from tree group planting.	rs, v, l, s, e	m	m	Increased enhancement and screening provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, s, e	l/m	sl/m
11 Manor Avenue	o (Church and community hall)	u. rd	l	Amenity grass seeding to assist enhancement and integration of amenity space and cuttings. Enhancement from reinstatement of park boundary with hedgerow and tree planting. Enhancement from tree group planting.	rs, v, l, s, e, d	m/h	sl/m	Increased enhancement and screening provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d	m	sl

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
12 Manor Drive	dw 9no.	u, r, rd	m	Partial screening and enhancement from individual tree group planting and park boundary hedgerow and tree planting. Amenity grass seeding to assist enhancement and integration of amenity space and cuttings.	rs, v, l, s, e, d	h	sub	Increased enhancement and screening provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d	m/h	m/s
13 Manor Avenue	dw 22no.	u, r, rd	m	Partial screening and enhancement from individual tree group planting on landscape earthworks and from avenue tree planting. Amenity grass seeding to assist enhancement and integration of amenity space and cuttings. Climbing species planted on both sides of the proposed noise barriers.	rs, v, l, s, e, d, nb	h	sub	Increased enhancement and screening provided by established tree and hedgerow planting, climbing plants and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d, nb	m/h	m/s

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
14 Wilkie Avenue	dw 4no.	u, rd	m	Partial screening and enhancement from individual tree group planting. Enhancement from reinstatement of park boundary with hedgerows and tree planting. Amenity grass seeding to assist enhancement and integration of amenity space and cuttings.	rs, v, l, s, e	l/m	sl/m	Increased enhancement and screening provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, s, e	l	sl
15 Wilkie Avenue and Fowler Avenue	dw 8no.	u, rd	m	Amenity grass seeding to assist enhancement and integration of amenity space and cuttings.	l, e	l	sl	Increased enhancement establishment of grass seeding.	l, e	l	n
16 Manor Avenue	dw 8no.	u, rd	m	Partial screening and enhancement from individual tree group planting and landscape earthworks and avenue trees and hedgerow planting.	rs, v, l, s, e, d	m/h	m/s	Increased enhancement and screening provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d	m	m

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
17 Manor Avenue	dw 12no.	u, rd	m	Partial screening and enhancement from avenue tree planting, individual tree group planting and hedgerow planting. Amenity grass seeding to assist enhancement and integration of landscape earthworks on amenity space and on embankments.	rs, v, l, s, e, d, nb	h	sub	Increased enhancement and screening provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d, nb	m/h	m/s
18 Manor Avenue and A90 North Anderson Drive	dw 15no.	u, rd	m	Partial enhancement from avenue tree planting and hedgerow planting. Reinstatement of footpath and amenity grass seeding to assist enhancement and integration of realigned verges. Reinstatement of garden grass seeding and boundary treatment. Amenity grass seeding to assist enhancement and integration of amenity space and cuttings. Climbing species planted on both sides of the proposed noise barriers.	rs, v, l, s, e, d, nb	h	sub	Increased enhancement provided by established tree and hedgerow planting, climbing plants and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d, nb	h	sub

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
19 Fowler Avenue	dw 21no.	u, rd	m	Reinstatement of footpath and amenity grass seeding to assist enhancement and integration of realigned verges. Reinstatement of garden grass seeding and boundary treatment.	e, s, l	l	sl	Increased enhancement provided through establishment of grass seeding.	e, s, l	l	n
20 Fowler Avenue	dw 13no.	u, rd	m	Partial screening and enhancement from avenue tree planting, individual tree group planting and hedgerow planting. Amenity grass seeding to assist enhancement and integration of landscape earthworks, amenity space, cuttings and embankments.	v, l, e	l/m	sl/m	Increased enhancement and screening provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	e	l	sl
21 Hilton Drive	dw 8no.	u, rd	m/l	Reinstatement of footpath and amenity grass seeding to assist enhancement and integration of realigned verges. Partial enhancement from avenue tree planting and hedgerow planting.	rs, v, l, s, e	l	n/sl	Increased enhancement and screening provided by established tree and hedgerow planting and increased integration due to establishment of grass seeding.	rs, v, l, s, e	l	n
22 A90 North Anderson Drive and Clifton Road	dw 6no. & 22no.	u, rd	m/l	Reinstatement of footpath and amenity grass seeding to assist enhancement and integration of realigned verges. Partial enhancement from avenue tree planting and	rs, v, l, s	l	sl	Increased enhancement provided by established tree and hedgerow planting and increased integration through the establishment of grass	rs, v, l, s	l	n/sl

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
				hedgerow planting.				seeding.			
23 Hilton Drive and A90 North Anderson Drive	dw 22no.	u, r	m	Partial enhancement from avenue tree planting and hedgerow planting. Reinstatement of footpath and amenity grass seeding to assist enhancement and integration of realigned verges.	rs, v, l, s, e, d	l/m	sl/m	Increased enhancement provided by established tree and hedgerow planting and increased integration due to establishment of grass seeding.	rs, v, l, s, e	l	sl
24 Smithfield Drive and Fairlie Street	dw 58no.	u, rd	m	Enhancement from avenue tree planting, individual tree group planting and hedgerow planting. Amenity grass seeding to assist enhancement and integration of landscape earthworks amenity space and embankments. Climbing species planted on both sides of the proposed noise barriers.	rs, v, l, e, nb	l/m	sl/m	Increased enhancement provided by established tree and hedgerow planting, climbing plants and increased integration through the establishment of grass seeding.	rs, v, l, e, nb	l	sl
25 A90 North Anderson Drive	dw 6no.	u, rd	m	Partial screening and enhancement from avenue tree planting, individual tree group planting and hedgerow planting. Amenity grass seeding to assist enhancement and integration of landscape earthworks amenity space and embankments. Climbing species planted on both sides of the proposed noise barriers.	rs, v, l, s, e, d, nb	h	sub	Increased enhancement and screening provided by established tree and hedgerow planting, climbing plants and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d, nb	m/h	m/s

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
26 A90 North Anderson Drive	dw 15no.	u, rd	m	Partial screening and enhancement from avenue tree planting and hedgerow planting. Amenity grass seeding to assist enhancement and integration of amenity space and on embankment. Climbing species planted on both sides of the proposed noise barriers.	rs, v, l, s, e, d, nb	m/h	m/s	Increased enhancement provided by established tree and hedgerow planting climbing plants and increased integration due to establishment of grass seeding.	rs, v, l, s, e, d, nb	m	m
27 Logie Avenue	dw 9no.	u, rd	m	Partial screening and enhancement from avenue tree planting and hedgerow planting. Amenity grass seeding to assist enhancement and integration of landscape earthworks on amenity space and on embankments. Climbing species planted on both sides of the proposed noise barriers.	rs, v, l, s, e, d, nb	h	sub	Increased enhancement provided by established tree and hedgerow planting, climbing plants and increased integration through the establishment of grass seeding,	rs, v, l, s, e, d, nb	m/h	m/s
28 A90 North Anderson Drive	dw 6no.	u, rd	m	Partial enhancement from avenue tree planting and hedgerow planting Amenity grass seeding to assist enhancement and integration of landscape earthworks on amenity space and on embankments.	rs, v, l, el	l/m	sl/m	Increased enhancement provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, e	l	sl

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
29 Logie Avenue	dw 9no.	u, rd	m	Partial enhancement from avenue tree planting and hedgerow planting. Amenity grass seeding to assist enhancement and integration of landscape earthworks on amenity space and on embankments. Climbing species planted on both sides of the proposed noise barriers.	rs, v, l, s, e, d, nb	m/h	m/s	Increased enhancement provided by established tree and hedgerow planting, climbing plants and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d, nb	m	m
30 Logie Avenue	dw 21no.	u, rd	m	Partial enhancement from individual tree groups, avenue tree planting and hedgerow planting. Amenity grass seeding to assist enhancement and integration of landscape earthworks on amenity space and on embankments. Climbing species planted on both sides of the proposed noise barriers.	rs, v, l, s, e, d, nb	h	sub	Increased enhancement and screening provided by established tree and hedgerow planting, climbing plants and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d, nb	h/m	m/s
31 A96 Auchmill Road	dw 2no. & 1no.	u, rd	m	Partial screening and enhancement from hedgerow boundary planting and individual tree planting to boundary of SUDS. Amenity grass and wildflower seeding to assist	l, e, d, su	l	sl	Increased enhancement and screening provided by established tree and hedgerow planting, and increased integration through the establishment of grass seeding.	l, e, d	l	n/sl

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
				enhancement and integration SUDS and surrounding area.							
32 Logie Avenue	dw 36no.	u, rd	m	<p>Partial enhancement from individual tree groups, avenue tree planting and hedgerow planting.</p> <p>Amenity grass seeding to assist enhancement and integration of landscape earthworks, amenity space and cuttings.</p> <p>Amenity grass and wildflower seeding to assist enhancement and integration of SUDS and surrounding area.</p> <p>Climbing species planted on both sides of the proposed noise barriers.</p>	rs, v, l, s, e, d, nb	h	sub	Increased enhancement and screening provided by established tree and hedgerow planting, climbing plants and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d, nb	h	sub
33 A96 Auchmill Road	c 5no.	u, rd	l	<p>Partial screening and enhancement from hedgerow boundary planting and individual tree planting to boundary of SUDS.</p> <p>Partial enhancement from avenue tree planting and hedgerow planting.</p> <p>Amenity grass and wildflower seeding to assist enhancement and integration of SUDS and</p>	rs, v, l, s, e, d, s, l, e	m	sl	Increased enhancement and screening provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d	m	n/sl

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening				
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	
				surrounding area.								
34 Manor Drive	dw 6no.	u, rd	m	Partial screening and enhancement from individual tree groups, avenue tree planting and hedgerow planting. Amenity grass seeding to assist enhancement and integration of landscape earthworks, amenity space and cuttings. Climbing species planted on both sides of the proposed noise barriers.	rs, v, l, s, e, d, nb	h	sub	Increased enhancement and screening provided by established tree and hedgerow planting, climbing plants and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d, nb	h		m/s
35 Logie Place	dw 12no.	u, rd	m	Partial screening and enhancement from individual tree groups and park planting, avenue tree planting and hedgerow planting. Amenity grass seeding to assist enhancement and integration of landscape earthworks and amenity space.	rs, v, l, e, d	l	sl	Increased enhancement and screening provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, e, d	l		n/sl
36 A96 Auchmill Road	dw 1no.	u, r, rd	l	Partial screening and enhancement from individual tree groups around the SUDS, avenue tree planting and hedgerow planting Amenity grass seeding to assist enhancement and integration of amenity	rs, v, l, s, e, d	l	sl	Increased screening and enhancement provided by established tree and hedgerow planting and increased integration due to establishment of grass seeding.	rs, v, l, s, d	l		n/sl

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
				space.							
37 Manor Avenue	dw 35no.	u, rd	m	Enhancement from individual tree groups, avenue tree planting and hedgerow planting. Amenity grass seeding to assist enhancement and integration of amenity space and cuttings.	rs, v, l, s, e	l/m	sl	Increased enhancement provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, s, e	l	n/sl
38 Manor Avenue	dw 18no.	u, rd	m	Enhancement from individual tree groups, avenue tree planting and hedgerow planting. Amenity grass seeding to assist enhancement and integration of amenity space and cuttings.	rs, l, s	l/m	sl	Increased enhancement provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, l, s	l	n/sl
39 Clifton Road	dw 2no.	u, rd	m	Reinstatement of footpath and amenity grass seeding to assist enhancement and integration of realigned verges. Partial screening and enhancement from avenue tree planting and hedgerow planting.	v, e,	l	sl	Increased enhancement and screening provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	v,e	l	n/sl
40 Clifton Road	c 2no	u, rd	l	Reinstatement of footpath and amenity grass seeding to assist enhancement and integration of realigned verges.	v,e	l	n/sl	Increased enhancement and screening provided by established tree and hedgerow planting and	v,e	m	n

Receptor Group No. Location	Type and Number (Approx.)	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
				Partial screening and enhancement from avenue tree planting and hedgerow planting.				increased integration through to establishment of grass seeding.			
41 Fullerton Court	dw 20no.	u, rd,	m	Enhancement from individual tree groups, avenue tree planting and hedgerow planting Amenity grass seeding to assist enhancement and integration of landscape earthworks, amenity space and cuttings. Amenity grass and wildflower seeding to assist enhancement and integration of SUDS and surrounding area.	l, s, d, su	m/l	sl/m	Increased enhancement provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	l, s, d	l	sl
42 Fullerton Court and A96 Great Northern Road	dw 10no.	r, rd	m	Enhancement from individual tree groups and hedgerow planting around SUDS. Amenity grass and wildflower seeding to assist enhancement and integration of SUDS and surrounding area.	l, s, d	l	sl	Increased enhancement provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	l, s, d	l	n
43 Fullerton Court and A96 Great Northern Road	dw 10no.	r, rd	m	Enhancement from individual tree groups and hedgerow planting around SUDS. Amenity grass and wildflower seeding to assist enhancement and integration of SUDS and surrounding area.	l, s, d	l	sl	Increased enhancement provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	l, s, d	l	n/sl

Table 2: Outdoor Receptor Assessment Table

Receptor No. House or road name	Type	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
O1 Park Logie Terrace	rd+o	u	m	Partial screening and enhancement from park tree and hedgerow planting. Amenity grass seeding to assist enhancement and integration of landscape earthworks and amenity space.	rs, v, l, s, e, d	h	sub	Increased screening and enhancement provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	v, l, s, d	m	m
O2 Road & Footpath Manor Avenue	rd & o	u	l	Partial screening and enhancement from individual tree groups and park planting, avenue tree planting and hedgerow planting. Amenity grass seeding to assist enhancement and integration of landscape earthworks and amenity space.	rs, v, l, s, e, d	h	m/s	Increased screening and enhancement provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d	m/l	m
O3 Road & Footpath Logie Place	rd & o	u	l	Partial screening and enhancement from individual tree groups and park tree and hedgerow planting. Amenity grass seeding to assist enhancement and integration of landscape earthworks and amenity space.	rs, v, l, s, e, d	h	m/s	Increased screening and enhancement provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d	m/l	m

Receptor No. House or road name	Type	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
O4 Road & Footpath Manor Drive	rd + o	u	l	<p>Partial screening and enhancement from individual tree groups, avenue tree and hedgerow planting, SUDS individual tree planting and hedgerow boundary planting.</p> <p>Amenity grass and wildflower seeding to assist enhancement and integration of landscape earthworks, amenity areas, SUDS and surrounding area.</p> <p>Climbing species planted on both sides of the proposed noise barriers.</p>	rs, v, l, s, e, d, nb	m	m	<p>Increased screening and enhancement provided by established tree and hedgerow planting, climbing plants and increased integration through the establishment of grass seeding.</p>	rs, v, l, s, e, d, nb	l	sl
O5 Road & Footpath A96 Auchmill Road and A96 Great Northern Road	rd + o	u	l	<p>Partial screening and enhancement from hedgerow boundary planting and individual tree planting to boundary of SUDS.</p> <p>Partial enhancement from avenue tree planting and hedgerow planting.</p> <p>Amenity grass and wildflower seeding to assist enhancement and integration of landscape earthworks, amenity areas, SUDS and surrounding area.</p>	rs, v, l, s, e, d	l	sl	<p>Increased screening and enhancement provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.</p>	rs, v, l, s, e, d	l	n

Receptor No. House or road name	Type	Existing view	Sensitivity of receptor	Winter Year of Opening				Summer 15 Years after opening			
				Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact	Description of mitigation measures	Elements of proposed scheme visible	Magnitude of change	Impact
O6 Road & Footpath A90 North Anderson Drive	rd + o	u	l	Enhancement from avenue tree and hedgerow planting. Reinstatement of footpath and amenity grass seeding to assist enhancement and integration of realigned verges.	rs, v, l, s, e, d	l	sl	Increased enhancement provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, s, e, d	l	n
O7 Road & Footpath Manor Avenue	rd + o	u	l	Enhancement from individual tree groups, avenue tree and hedgerow planting and park boundary planting. Amenity grass seeding to assist enhancement and integration of amenity space and cuttings.	rs, v, l, s, e	l	sl	Increased enhancement provided by established tree and hedgerow planting and increased integration through the establishment of grass seeding.	rs, v, l, s, e	sl/n	n

A11.3: Urban Design Objectives

Respect the character and sensitivities of the surrounding area and integrate the road into the townscape

- By integration with the existing urban landscape patterns such as street layouts, vegetation patterns and landform.
- By route alignment to provide the best possible landform fit and minimise impacts on important features, using retaining elements/slope steepening where appropriate.
- By designing the shape and orientation of drainage Sustainable Drainage Systems (SuDS).basins/ponds for the best landscape fit as well as to be part of a soft landscape setting to the wider area.

Enhance 'sense of place'

- By using distinctive planting (appropriate to the location).
- By using a consistent and distinctive palette of hard landscape (and street furniture) elements.
- By using a, consistent design approach throughout, sympathetic to context to create a clear identity.

Provide varied and interesting views

- By creation of a varied and interesting sequence of views from the road.
- By maximising opportunities to gain views of notable features in the townscape/landscape.
- By manipulation of planting and screening elements to create new vistas.
- By creating attractive, interesting short range views within the road corridor.

Mitigate environmental impacts on the land, people, water and wildlife

- By avoiding adverse impacts where practicable.
- By integration with the townscape.
- By providing an analysis of the built form and open space remaining after construction to inform the development of the emerging masterplan for the Logie/Manor area of Middlefield.
- By providing screening measures such as planting, earth mounding and fencing where appropriate.
- By careful design of any noise attenuation measures and consideration of adverse visual or townscape impacts.

Maintain access and connectivity for Non-Motorised Users (NMUs) within and between communities

- By minimising traffic-induced severance on the local community.
- By providing routes along desire lines for NMUs.
- By providing safe pedestrian crossings, with desire lines in mind to maintain the best connectivity possible for the community.
- By provision of cycle lanes.

Provide a Design that can contribute to the council's regeneration aims by complementing the proposed future redevelopment of the Logie/Manor area of Middlefield whilst remaining sensitive to the needs of the surrounding communities

- By early engagement and continued liaison with Aberdeen City Council's master-planning team and the masterplanning team engaged by Aberdeen City Council Housing Investment and Regeneration.
- By using a flexible approach which allows for integration with a range of future land uses.
- By creation of an attractive welcoming, useable environment.

Provide a Design that is safe and supports crime prevention

- By creation of a safe, pleasant well lit environment with the incorporation of security measures where necessary.
- By avoiding creation of 'leftover', poorly functioning spaces that are likely to be underused.

Use resources wisely

- By minimising waste.
- By taking opportunities to recycle/reuse materials where practicable.
- By careful consideration of longer term maintenance requirements in the design and specification.

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Site No.	Site Name	Site Type	Sub Topic	NGR	NMRS/HER No.	Source	Condition	Designation	Sensitivity	Description
19	Boundary Marker 49	Stone	Historic Building	NJ9093 0945	211400, NJ90NW 0432	RCAHMS, SMR	Good	None	Low	<p>This granite boundary stone is situated immediately E of the public road at the S end of Persley Bridge (NJ 9090 0945) and is a relatively modern replacement of the late-18th-early-19th-century stone (NJ90NW 143), which stood at the confluence of the Scatterburn and the River Don (NJ 9095 0945) some 50m to the E. Rectangular in section, the stone measures 0.34m in breadth by 0.23m transversely and 0.4m in height; the top of the W face is bevelled and bears the incised letters ABD below the number 49. The earlier stone is depicted at its original location on the 1st edition of the OS 6-inch map (Aberdeenshire 1869, sheet lxxv), but it is not shown on the 2nd edition of the map (1902, sheet lxxv.NW). A photograph showing the stone was published in 1929, but it may have been taken at a much earlier date. Visited by RCAHMS (JRS, ATW), 18 March 1997. J Cruickshank and D B Gunn 1929.</p>
20	Persley Bridge Pillbox	Pillbox	Historic Building	NJ9089 0944	81847, NJ90NW 0271	RCAHMS, SMR	Good	None	Low	<p>(GRC 271: NJ 9089 0944). This pillbox is situated on the S bank of the River Don on the SW side of the Persley Bridge (NJ90NW 339) on a World War Two caravan site. Measuring about 10 feet in width, built of concrete, six sided with one door, the five loopholes have been blocked up. (GRC 272: NJ 9098 0946: NJ90NW 325). About 70m E of the bridge down a track on the S bank there is a brick and concrete loophole built into an old</p>

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Site No.	Site Name	Site Type	Sub Topic	NGR	NMRS/HER No.	Source	Condition	Designation	Sensitivity	Description
										<p>ruin. Visited by Mr J Gray, 28 July 1992. J Guy 1992; NMRS MS/712/8 and MS/810/1.</p> <p>This pillbox is situated within a residential mobile home park on a low rise on the S side of the River Don a short distance to the SW of Persley Bridge (NJ90NW 339). It is hexagonal on plan, elongated along its E to W axis, and measures 4.25m from E to W by 3.8m transversely over concrete walls. On the S side there is an entrance with a modern wooden door, to the W of which is a small loop-hole. Scarring on the wall immediately to the E of the entrance suggests that a blast-wall has been removed. In the remaining five sides the original loop-holes have been blocked. Within the interior there is a central concrete anti-ricochet wall. (see also NJ90NW 325). Pillboxes of this design fall into H Will's (1985) type-22 category. Visited by RCAHMS (JRS, ATW), 18 March 1997.</p>
23	Grove Cemetery	Lodge	Historic Building	NJ9087 0937	NJ90NW 0324	SMR	Good	None	Negligible	Grove Cemetery was established in 1989.
24	Woodside House	Walled Garden	Historic Building	NJ 9103 0941	221968, NJ90NW 0354	Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS), Site and Monuments Record (SMR)	Good	None	Low	Walled Garden. Probably originally part of Woodside House Garden.
25	Woodside House	Building	Archaeological Remains	NJ 9104 0933		Map Regression	Unknown	None	Low	Nothing is visible of a large building that is depicted on the 2nd edition of the Ordnance Survey 6" to the mile map. It is not depicted on the current

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Site No.	Site Name	Site Type	Sub Topic	NGR	NMRS/HER No.	Source	Condition	Designation	Sensitivity	Description
										edition.
26	Mugiemoss Road Stone (1)	Stone	Archaeological Remains	NJ 9110 0939	NJ90NW 0447	SMR/Walkover Survey	Destroyed	None	Negligible	Boundary Stone. No Further Information - SMR During the walkover survey this Asset could not be located.
27	Persley Railway Station	Station	Archaeological Remains	NJ 9118 0924	NJ90NW 0773	SMR	Unknown	None	Low	Railway Station opened in 1903. Used as a private dwelling in 1955. No longer extant.
28	Mugiemoss Road Stone (2)	Stone	Archaeological Remains	NJ 9128 0922	NJ90NW 0446	SMR/Walkover Survey	Destroyed	None	Negligible	No Further Information – SMR. During the walkover survey this Asset could not be located.
29	The Colwyn, 868 Great Northern Road	House	Archaeological Remains	NJ 9130 0918	20451, 149560, NJ90NW 0326	Historic Scotland, RCAHMS, SMR	Destroyed	None	Negligible	Early C19th house, recorded prior to demolition. Information from RCAHMS (CS) 2006. Style of John Smith c.1830. 2-storey villa, harled with margins and consoled cornices to ground floor openings; octagonal corner tower slightly higher; broad eaved low-pitched roofs. Listed 12. Jan. 1967. (HB No. 20451). Information from Historic Scotland.
30	Fullerton Court	Tower Block	Historic Building	NJ 9150 0915	174622	RCAHMS	Good	None	Low	A development of two ten-storey tower blocks built as public housing along the A96 Great Northern Road for Aberdeen Borough Council. The development was one of several in this area. This particular contract was 'Great Northern Rd 'A'. Phase 2'. The two blocks contain a total of 112 dwellings. The Contractor for the development was Alexander Hall & Son (Builders) Ltd. Construction began in 1974. Glendinning and Methusius 1994.
31	Great Northern Road 'A' Phase 2	Tower Block	Historic Building	NJ 9153 0914	300072	RCAHMS	Good	None	Low	A development of two ten-storey tower blocks built as public housing along the A96 Great Northern Road for Aberdeen Borough Council. The development was one of several in this

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										area. This particular contract was 'Great Northern Rd 'A'. Phase 2'. The two blocks contain a total of 112 dwellings. The Contractor for the development was Alexander Hall & Son (Builders) Ltd. Construction began in 1974. Glendinning and Methusius 1994.
32	Murray Court	Tower Block	Historic Building	NJ9155 0913	174621	RCAHMS	Good	None	Low	A development of two ten-storey tower blocks built as public housing along the Great Northern Road for Aberdeen Borough Council. The development was one of several in this area. This particular contract was 'Great Northern Rd 'A'. Phase 2'. The two blocks contain a total of 112 dwellings. The contractor for the development was Alexander Hall & Son (Builders) Ltd. Construction began in 1974. Glendinning and Methusius 1994.
38	Aberdeenshire Canal	Canal	Archaeological Remains		NJ81SE18b	SMR	Unknown	None	Low	The Aberdeenshire Canal was operational between 1805 and 1854 and ran from Waterloo Quay to Port Elphinstone. In 1854 the canal was bought by the Great North of Scotland Railway and much of route was redeveloped for the railway line
39	Heathryfold Farmstead (2)	Farmstead	Archaeological Remains	NJ9073 0921	NJ90NW 0994	SMR / Map regression	Unknown	None	Low	Appears on the 1867 OS map. No longer extant – SMR. On the 1st edition map the farmstead is depicted as a single rectilinear building. By the time of the 2nd edition a second smaller building has been built to the west – Map regression.
40	Heathryfold Farmstead (1)	Farmstead	Archaeological Remains	NJ 9089 0920	NJ90NW 0993	SMR/Map regression	Unknown	None	Low	Appears on the 1867 OS map. No longer extant – SMR. The steading comprised five buildings with the main range U-shaped in plan with the wings towards the A96 Great Northern Road – Map regression.

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Site No.	Site Name	Site Type	Sub Topic	NGR	NMRS/HER No.	Source	Condition	Designation	Sensitivity	Description
41	Denhead Gas Works	Gas Works	Archaeological Remains	NJ 9102 0913	NJ90NW 0992	SMR/Map regression	Unknown	None	Low	No Further Information – SMR. Depicted on both the 1st and 2nd edition Ordnance Survey 6” to the mile map – Map regression.
42	Middlefield Buildings (1)	Buildings	Archaeological Remains	NJ 9113 0914	NJ90NW 0991	SMR/Map regression	Unknown	None	Low	No Further Information – SMR Depicted on the 1st and 2nd edition Ordnance Survey 6” to the mile map. There are six buildings of varying size depicted. Map regression has identified that the partial remains of two buildings may have survived the redevelopment of the A96 Great Northern Road and the construction of Logie Avenue in the pre and post war periods.
43	Middlefield Buildings (2)	Buildings	Archaeological Remains	NJ 9113 0914	NJ90NW 0991	SMR/Map regression	Unknown	None	Low	No Further Information – SMR Depicted on the 1st and 2nd edition Ordnance Survey 6” to the mile map. There are six buildings of varying size depicted. Map regression has identified that the partial remains of two buildings may have survived the redevelopment of the A96 Great Northern Road and the construction of Logie Avenue in the pre and post war periods.
44	Middlefield Cottage	Cottage	Historic Building	NJ 9118 0912	NJ90NW 0990	SMR/Map regression	Good	None	Low	No Further Information – SMR. Depicted on both the 1st and 2nd edition Ordnance Survey 6” to the mile map – Map regression.
45	Upper Middlefield Boundary Stone 10	Boundary Stone	Archaeological Remains	NJ 9127 0913	226624	RCAHMS	Destroyed	None	Negligible	This boundary stone has been removed and its site is now occupied by the junction of the A947 and the A96 Great Northern Road. The stone marked part of the boundary of the burgh of Woodside, a description of which is given by Morgan, who details the line that the boundary followed and notes that it was marked by stones bearing an incised W, standing for

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Site No.	Site Name	Site Type	Sub Topic	NGR	NMRS/HER No.	Source	Condition	Designation	Sensitivity	Description
										Woodside, and a number. The number on this stone, which is depicted on the 2nd edition of the Ordnance Survey 6" to the mile map (Aberdeenshire, 1902, sheet lxxv.NW), was 10. Visited by RCAHMS (JRS), 20 May 2002.
46	Upper Middlefield Boundary Stone 11	Boundary Stone	Archaeological Remains	NJ 9131 0913	226623	RCAHMS	Destroyed	None	Negligible	This boundary stone has been removed and its site is now occupied by the junction of the A947 and the A96 Great Northern Road. The stone marked part of the boundary of the burgh of Woodside, a description of which is given by Morgan, who details the line that the boundary followed and notes that it was marked by stones bearing an incised W, standing for Woodside, and a number. The number on this stone, which is depicted on the 2nd edition of the Ordnance Survey 6" to the mile map (Aberdeenshire, 1902, sheet lxxv.NW), was 11. Visited by RCAHMS (JRS), 20 May 2002.
47	Great Northern Road Inn	Inn	Archaeological Remains	NJ 9134 0911	NJ90NW 1011	SMR/Walkover Survey	Unknown	None	Low	No Further Information – SMR. This asset stood on land that has been developed for retail units. No evidence of this Asset was discerned during the walkover survey – Walkover Survey.
48	Denhead Gas Works Boundary Walls	Wall	Historic Building	NJ 9144 0665	NJ90NW 0534	SMR	Good	None	Low	No Further Information.
49	Woodside Spearhead Findspot	Findspot	Archaeological Remains	NJ 91 09	NJ90NW 0069	RCAHMS, SMR	Lost	None	Negligible	A bronze spear-head from Woodside (NJ 91 09) Aberdeen, formed part of the collection of D Anderson, Aberdeen, which was sold by S Shaw, Auctioneers, Aberdeen in 1898. Shaw Auctioneers 1898; D Anderson

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Site No.	Site Name	Site Type	Sub Topic	NGR	NMRS/HER No.	Source	Condition	Designation	Sensitivity	Description
										1898. The present whereabouts of this spearhead, which was sold at auction in 1898, is not known. Information from RCAHMS (JRS), 9 May 1997.
54	Middlefield Parish Church and Church Hall	Church	Historic Building	NJ 9110 0878	148726	RCAHMS	Good	None	Low	No Further Information.
55	Middlefield Boundary Stone 9	Boundary Stone	Archaeological Remains	NJ 9125 0886	226626	RCAHMS	Destroyed	None	Negligible	This boundary stone has been removed and its site is now lies beneath a modern housing estate (Manor Avenue). The stone marked part of the boundary of the burgh of Woodside, a description of which is given by Morgan, who details the line that the boundary followed and notes that it was marked by stones bearing an incised W, standing for Woodside, and a number. The number on this stone, which, unlike some of the other stones in the sequence, is not depicted on the 2nd edition of the Ordnance Survey 6" to the mile map (Aberdeenshire, 1902, sheet lxxv.NW), was 9. Visited by RCAHMS (JRS), 20 May 2002.
56	Middlefield Boundary Stone 7	Boundary Stone	Archaeological Remains	NJ 9141 0889	226627	RCAHMS	Destroyed	None	Negligible	This boundary stone has been removed and its site now lies beneath a modern housing estate (A90(T) North Anderson Drive/ Manor Avenue). The stone marked part of the boundary of the burgh of Woodside, a description of which is given by Morgan, who details the line that the boundary followed and notes that it was marked by stones bearing an incised W, standing for Woodside, and a number. The number on this stone,

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Site No.	Site Name	Site Type	Sub Topic	NGR	NMRS/HER No.	Source	Condition	Designation	Sensitivity	Description
										which, unlike some of the other stones in the sequence, is not depicted on the 2nd edition of the Ordnance Survey 6" to the mile map (Aberdeenshire, 1902, sheet lxxv.NW), was 7. Visited by RCAHMS (JRS), 20 May 2002.
57	Middlefield Boundary Stone 8	Boundary Stone	Archaeological Remains	NJ 9140 0888	211402	RCAHMS	Destroyed	None	Negligible	Nothing is visible of this boundary stone, which stood on land that is now occupied by modern housing on the west side of A90(T) North Anderson Drive about 200m NNW of Upper Middlefield farm steading (NJ90NW 1675). The stone is first depicted on the 2nd edition of the Ordnance Survey 6" to the mile map (Aberdeenshire, 1902, sheet lxxv.NW). Visited by RCAHMS (JRS), 30 April 2002. This boundary stone has been removed and its site lies beneath a modern housing estate (Fowler Avenue). The stone marked part of the boundary of the burgh of Woodside, a description of which is given by Morgan, who details the line that the boundary followed and notes that it was marked by stones bearing an incised W, standing for Woodside, and a number. The number on this stone, which is depicted on the 2nd edition of the Ordnance Survey 6" to the mile map (Aberdeenshire, 1902, sheet lxxv.NW), was 8. Visited by RCAHMS (JRS), 20 May 2002.
58	Smithfield Court	Tower Block	Historic Building	NJ 9140 0880	300129	RCAHMS	Good	None	Low	A ten-storey tower block built as a public housing development in Middlefield for Aberdeen Borough

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Site No.	Site Name	Site Type	Sub Topic	NGR	NMRS/HER No.	Source	Condition	Designation	Sensitivity	Description
										Council. The block contains 58 dwellings. The Contractor for the development was Alexander Hall & Son (Builders) Ltd. Construction started in 1971. Glendinning and Methusius 1994.
59	Upper Middlefield Boundary Stone 6	Boundary Stone	Archaeological Remains	NJ 9159 0892	226628	RCAHMS	Destroyed	None	Negligible	This boundary stone has been removed and its site is now occupied by a modern housing estate (Clifton Road). The stone marked part of the boundary of the burgh of Woodside, a description of which is given by Morgan (1886, 251-2), who details the line that the boundary followed and notes that it was marked by stones bearing an incised W, standing for Woodside, and a number. The number on this stone, which unlike some of the other stones in the sequence is not depicted on the 2nd edition of the Ordnance Survey 6" to the mile map (Aberdeenshire, 1902, sheet lxxv.NW), was 6. Visited by RCAHMS (JRS), 20 May 2002.
60	Smithfield Farmstead	Farmstead	Archaeological Remains	NJ9174 0874	NJ90NW 0988, 210351	SMR, RCAHMS	Unknown	None	Low	Appears on 1867 OS map – SMR Nothing is visible of this farmsteading, which stood on land that has since been developed as part of a housing estate (Hilton Drive). As depicted on both the 1st and 2nd editions of the OS 6-inch map (Aberdeenshire, 1869, sheet lxxv and 1902, sheet lxxv.NW), the farmstead comprised two opposing L-shaped ranges enclosing a central yard with entrances on the NW and SE respectively. A detached building immediately to the S may have been a cottage, since it stood on the N side of a garden, and a mill pond lay immediately W of the garden. On the 2nd edition of the map the pond is

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Site No.	Site Name	Site Type	Sub Topic	NGR	NMRS/HER No.	Source	Condition	Designation	Sensitivity	Description
										labelled 'Smithfield Reservoir (Aberdeen Water Works)'. Visited by RCAHMS (JRS), 19 April 2002 – RCAHMS.
62	Upper Middlefield Private Lunatic Asylum	Asylum	Archaeological Remains	NJ 9142 0866	210350, NJ90NW 0987	RCAHMS, SMR	Unknown	None	Low	Nothing is visible of Upper Middlefield Private Lunatic Asylum, which was probably originally built as a private country house, and stood on land that has since been developed as part of a housing estate. Its site lies in the Middlefield district of Aberdeen between Newton Road to the west and Smithfield Drive to the east. The house and its large garden, together with what were probably four cottages immediately to the east, are depicted on both the 1st and 2nd editions of the Ordnance Survey 6" to the mile map (Aberdeenshire, 1869, sheet lxx and 1902, sheet lxx.NW), but it is only annotated as an asylum on the earlier map. Visited by RCAHMS (JRS), 19 April 2002.
66	Gatelodge to Woodside House (site of)	Gatelodge	Archaeological Remains	NJ9113 0927	NJ90NW 0325	SMR	Poor	None	Low	Gatelodge to Woodside House identified by SMR
HLT 1	Designed Landscape, 17th-19th Century Policies and Parkland		Historic Landscape			RCAHMS, Map regression, Walkover Survey	Good	None	Medium	17th -19th Century Policies and Parkland comprise elements of woodland and parkland associated with Woodside House that was built in 1769 and extended from 1840 to 1850. This type is characterised by tree lined avenues and footpaths and includes the formal walled garden (Asset 24). Views to the north are restricted by the mature planting along the edge of the River Don. Views to the south are somewhat restricted by the tree lined avenues and the land as it rises towards the A96 Great Northern Road.

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Site No.	Site Name	Site Type	Sub Topic	NGR	NMRS/HER No.	Source	Condition	Designation	Sensitivity	Description
										In consideration of its historic interest as part of a designed landscape this type has been assessed to be of Medium sensitivity.
HLT 2	18th Century-Present Cemetery		Historic Landscape			RCAHMS, Map regression, Walkover Survey	Good	None	Low	18th Century-Present Cemetery: this type is characterised by the formal and ordered regular layout of the burial plots. There are good views to the north and Persley Bridge, views to the south are restricted by the land as it rises towards the A96 Great Northern Road. This historic landscape type has some historic legibility and interest. This type has been assessed to be of Low sensitivity.
HLT 3	Recreation Area, 20th Century-Present, Allotments and Sports Fields		Historic Landscape			RCAHMS, Map regression, Walkover Survey	Good	None	Negligible	This type has been identified in the west of the study area, its main characteristics are a series of allotments, bounded to the east by the pitch and associated buildings of Sunnybank FC and to the south by playing fields and parkland. All round views are dominated by housing. In consideration of its limited time depth and lack of rarity this type has been assessed to be of negligible sensitivity.
HLT 4	Built-up Area, Late 20th Century		Historic Landscape			RCAHMS, Map regression, Walkover Survey	Good	None	Negligible	Built-up Area Late 20th Century comprises late 20th Century housing units of both detached and semi-detached houses and blocks of flats of both public and private stock. The main characteristics of this type are the restricted views afforded from the properties and the uniformity of the design of the units. In consideration of its limited time depth and lack of rarity this type has been assessed to be of negligible sensitivity.
HLT 5	Built-up Area, Mid to Late 20th		Historic Landscape			RCAHMS, Map regression, Walkover Survey	Good	None	Negligible	To the south of the study area is Built-up Area, Mid to Late 20th Century comprising pre and post war developments of housing units usually

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Site No.	Site Name	Site Type	Sub Topic	NGR	NMRS/HER No.	Source	Condition	Designation	Sensitivity	Description
	Century					Survey				comprising blocks of four flats over two storeys. Developed in the middle of the 20th century as affordable public housing stock the main characteristics of this type are the restricted views afforded from the properties and the uniformity of the design. In consideration of its limited time depth and lack of rarity this type has been assessed to be of negligible sensitivity.
HLT 6	Late 20th Century-Present Woodland Plantation		Historic Landscape			RCAHMS, Map regression, Walkover Survey	Good	None	Negligible	Late 20th Century-Present Woodland Plantation is to be found to the north-west of the study area and comprises an area of shrub planting that borders a golf course and is crossed by paths both formally and informally created and used as a public amenity area. In consideration of its limited time depth and lack of rarity this type has been assessed to be of negligible sensitivity.
HLT 7	19th Century-Present Industrial and Commercial Area, Commercial Units		Historic Landscape			RCAHMS, Map regression, Walkover Survey	Good	None	Negligible	Towards the north of the study area strung out along the A96 Great Northern Road and A90(T) Mugiemoos Road are a series of commercial units. The main characteristics of this type are the restricted views afforded from the units, the uniformity of construction material (predominately) brick and the frontage of the units onto A96 Great Northern and A90(T) Mugiemoos Road and potential customers. In consideration of its limited time depth and lack of rarity this type has been assessed to be of negligible sensitivity.
HLT 8	19th Century-Present Railway		Historic Landscape			RCAHMS, Map regression, Walkover Survey	Good	None	Negligible	19th Century-Present Railway. Originally depicted on the 1st edition Ordnance Survey 6" to the mile map annotated as the Great North of Scotland Railway and now known as the Aberdeen to Inverness line. This type is characterised by the linear nature of its form. In consideration of

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Site No.	Site Name	Site Type	Sub Topic	NGR	NMRS/HER No.	Source	Condition	Designation	Sensitivity	Description
										its limited time depth and lack of rarity this type has been assessed to be of negligible sensitivity.
HLT 9	20th Century-Present Industrial and Commercial Area, Industrial Estate		Historic Landscape			RCAHMS, Map regression, Walkover Survey	Good	None	Negligible	To the north west of the study area on the south bank of the River Don are a series of Industrial Units servicing industry. The main characteristic of this type is the large size of the units, restricted views afforded from the units and the uniformity of construction material, predominately corrugated aluminium.

A13.1: Air Quality Methodology

1 Introduction

1.1.1 This appendix provides supplementary information to support Chapter 13 (Air Quality).

2 Construction

2.1 Traffic

2.1.1 Environmental Protection UK (EPUK, 2010) guidance recommends that the local air quality assessment includes construction traffic for those large, long-term construction sites that would generate large Heavy Goods Vehicle (HGV) flows (>200 movements per day) over a period of a year or more, or would affect annual average daily traffic flows (>5-10%).

2.1.2 Based on the site size and the type of construction works and duration of activities that are anticipated, emission impacts from construction traffic have therefore not been considered further in this assessment.

2.2 Dust

2.2.1 Construction dust assessments have tended to be risk based, focusing on the appropriate measures to be used to keep dust impacts at an acceptable level. The Design Manual for Roads and Bridges (DMRB) HA207/07 (Highways Agency et al., 2007) guidance is non-prescriptive in its approach to the assessment of construction dust impacts and states that *'the locations of any sensitive receptors within 200m of a construction site should be clearly identified ... so that mitigation measures to reduce dust emissions can be rigorously applied'*. The approach to assessment has continued to evolve over recent years and has been complemented by the recently updated Institute of Air Quality Management Guidance on the Assessment of Dust from Demolition and Construction (IAQM, 2014).

2.3 Institute of Air Quality Management (IAQM) Assessment Methodology

2.3.1 The IAQM guidance aims to estimate the impacts of both particulate matter (PM₁₀) and nuisance dust together, through a single risk-based assessment procedure. The IAQM guidance provides a methodological framework, but notes that professional judgement is required to assess impacts. This assessment does not consider the air quality impacts of dust from any contaminated land or buildings. If contamination is identified in the vicinity of the proposed scheme, the impacts will be assessed in other technical discipline reports.

2.3.2 The IAQM guidance categorises the likely magnitude of the dust sources during demolition, earthworks, construction and track-out. These dust emission classes are based on the size of the building(s), method of construction and the materials used.

2.3.3 These example classifications have been combined with details of the period of construction activities to provide a ranking for the source magnitude, set out in Table 1.

Table 1: Magnitude of Dust Impacts examples

Features of the source of dust emissions	Dust Magnitude
Demolition - building over 50,000m ³ . Potentially dusty construction material (e.g. concrete), on-site crushing and screening. Demolition activities >20m above ground level. Earthworks – total site area over 10,000m ² (potentially dusty soil type (e.g. clay); >10 Heavy earth moving vehicles active at any one time, formation of bunds >8m high, total material moved >100,000 tonnes. Construction - total building volume over 100,000m ³ , activities include piling, on-site concrete batching, sand-blasting. Period of construction activities more than two years. Track-out - >50 HGV (>3.5t) movements (one way) in any one day, potentially dusty	Large

Features of the source of dust emissions	Dust Magnitude
surface material (e.g. high clay content), unpaved road length >100m.	
Demolition – Total building volume between 20,000 to 50,000m ³ ; potentially dusty construction material, demolition activities 10-20m above ground level. Earthworks – total site area between 2,500 to 10,000m ² . Moderately dusty soil type, 5-10 heavy earth moving vehicles active at any one time, formation of bunds 4m – 8m in height, total earth moved 20,000 – 100,000 tonnes. Construction - total building volume between 25,000 and 100,000m ³ , use of potentially dusty construction material (e.g. concrete) activities include on-site concrete batching. Period of construction activities between one and two years. Track-out – 10-50 HGV (>3.5t) movements (one way) in any one day, moderately dusty surface material (e.g. high clay content), unpaved road length 50-100m.	Medium
Demolition – Total building volume less than 20,000m ³ . Construction material with low potential for dust release (e.g. metal cladding or timber), demolition activities <10m above ground, demolition during wetter months. Earthworks – total site area less than 2,500m ² , <5 heavy earth moving vehicles active at any one time, formation of bunds <4m in height, total material moved <20,000 tonnes, earthworks during wetter months. Construction - total building volume below 25,000m ³ , use of construction materials with low potential for dust release (e.g. metal cladding or timber). Period of construction activities less than one year. Track-out – <10 HGV (>3.5t) outward movements in any one day, surface material with low potential for dust release, unpaved road length <50m.	Small

2.3.4 The IAQM guidance includes a category for track-out, defined as the transport of dust and dirt from the construction/demolition site onto the public road network, where it may be deposited and then re-suspended by vehicles using the network.

2.4 Receptors

2.4.1 The methodology used to assess the proposed scheme has categorised the sensitivity of the identified receptors, as set out in Table 2. There are no statutory or non statutory ecological designations within the assessed study area and no further consideration is made in this assessment.

Table 2: Receptor Sensitivities Guidance (Box 6, Box 7 and Box 8: IAQM, 2014)

Sensitivity	Sensitivities of		
	People to Dust Soiling Effects	People to Health Effects of PM ₁₀	Receptors to Ecological Effects ^c
High	<ul style="list-style-type: none"> Users can reasonably expect^a a enjoyment of a high level of amenity; or The appearance, aesthetics or value of their property would be diminished by soiling; and the people or property would reasonably be expected to be present continuously, or at least regularly for extended periods, as part of the normal pattern of use of the land. Indicative examples include dwellings, museums and other culturally important collections, medium and long term car parks and car showrooms. 	<ul style="list-style-type: none"> Locations where members of the public are exposed over a time period relevant to the air quality objective for PM₁₀ (in the case of the 24-hour objectives, a relevant location would be one where individuals may be exposed for eight hours or more in a day^b. Indicative examples include residential properties. Hospitals, schools and residential care homes should also be considered as having equal sensitivity to residential areas for the purposes of this assessment. 	<ul style="list-style-type: none"> Locations with an international or national designation and the designated features may be affected by dust soiling; or Locations where there is a community of a particularly dust sensitive species such as vascular species included in the Red Data List for Great Britainb. Indicative examples include a Special Area of Conservation (SAC) designated for acid heathlands or a local site designated for lichens adjacent to the demolition of a large site containing concrete (alkali) buildings.
Medium	<ul style="list-style-type: none"> Users would expect to enjoy a reasonable level of amenity, but would not reasonably expect to enjoy 	<ul style="list-style-type: none"> Locations where the people exposed are workers^d, and exposure is over a time period relevant to the air quality 	<ul style="list-style-type: none"> Locations where there is a particularly important plant species, where its dust sensitivity is uncertain or

Sensitivity	Sensitivities of		
	People to Dust Soiling Effects	People to Health Effects of PM ₁₀	Receptors to Ecological Effects ^c
	the same level of amenity as in their home; or <ul style="list-style-type: none"> • The appearance, aesthetics or value of their property could be diminished by soiling; or • The people or property wouldn't reasonably be expected^a to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land. 	objective for PM ₁₀ (in the case of the 24-hour objectives, a relevant location would be one where individuals may be exposed for eight hours or more in a day). <ul style="list-style-type: none"> • Indicative examples include office and shop workers, but would generally not include workers occupationally exposed to PM₁₀, as protection is covered by Health and Safety at Work legislation. 	unknown; or <ul style="list-style-type: none"> • Locations with a national designation where the features may be affected by dust deposition. • Indicative example is a Site of Special Scientific Interest (SSSI) with dust sensitive features.
Low	<ul style="list-style-type: none"> • The enjoyment of amenity would not reasonably be expected^a, or • Property would not reasonably be expected to be diminished in appearance, aesthetics or value by soiling; or • There is transient exposure, where the people or property would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use of the land. • Indicative examples include playing fields, farmland (unless commercially sensitive horticultural), footpaths, short term car parks and roads. 	<ul style="list-style-type: none"> • Locations where human exposure is transient^e. • Indicative examples include public footpaths, playing fields, parks and shopping streets. 	<ul style="list-style-type: none"> • Locations with a local designation where the features may be affected by dust deposition. • Indicative example is a local Nature Reserve with dust sensitive features.

^a People's expectations would vary depending on the existing dust deposition in the area.

^b This follows the Department for Environment, Food and Rural Affairs (Defra, 2009) guidance as set out in LAQM.TG(09).

^c Only if there are habitats that might be sensitive to dust. A Habitat Regulation Assessment of the site may be required as part of the planning process, if the site lies close to an internationally designated site i.e. Special Conservation Areas (SACs), Special Protection Areas (SPAs) designated under the Habitats Directive (92/43/EEC) and RAMSAR sites.

^d Notwithstanding the fact that the air quality objectives and limit values do not apply to people in the workplace, such people can be affected to exposure of PM₁₀. However, they are considered to be less sensitive than the general public as a whole because those most sensitive to the effects of air pollution, such as young children are not normally workers. For this reason workers have been included in the medium sensitivity category.

^e there is no standards that apply to short-term exposure, e.g. one or two hours, but there is still a risk of health impacts, albeit less certain.

2.4.2 The IAQM guidance advises consideration of the risk associated with the nearest receptors to each phase of work.

2.4.3 Where there are multiple receptors in a single location, a worst case representative receptor location is considered and the highest risk applicable is allocated.

2.5 Sensitivity of the Area

2.5.1 Tables 3, 4 and 5 show how the sensitivity of the area may be determined for dust soiling, ecosystem impacts and human health respectively. It is noted that distances are to the dust source and so a different area may be affected by trackout than by on-site works.

Table 3: Sensitivity of the Area to Dust Soiling Effects on People and Property

Receptor Sensitivity	Number of Receptors	Distance from the Source (m) ^a			
		<20	<50	<100	<350
High	>100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

^a For trackout, the distances should be measured from the side of the roads used by construction traffic. Without site specific mitigation, trackout may occur from roads up to 500m from large sites, 200m from medium sites and 50m from small sites, as measured from the site exit.

Table 4: Sensitivity of the Area to Ecological Impacts

Receptor Sensitivity	Number of Receptors	Distance from the Source (m) ^a	
		<20	<50
High	>100	High	High
Medium	10-100	High	Medium
Low	1-10	Medium	Low

2.5.2 There are no designated sites of ecological importance that require consideration in this assessment. The ecological assessment is screened out of the assessment for construction dust impacts.

Table 5: Sensitivity of the Area to Human Health Impacts

Receptor Sensitivity	Annual Mean PM ₁₀ concentration (µg/m ³)	Number of Receptors	Distance from the Source (m)				
			<20	<50	<100	<200	<350
High	>18	>100	High	High	High	Medium	Low
		10-100	High	High	Medium	Low	Low
		1-10	High	Medium	Low	Low	Low
	16-18	>100	High	High	Medium	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	High	Medium	Low	Low	Low
	14-16	>100	High	Medium	Low	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	<14	>100	Medium	Low	Low	Low	Low
		10-100	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
Medium	-	>10	High	Medium	Low	Low	Low
	-	1-10	Medium	Low	Low	Low	Low
Low	-	>1	Low	Low	Low	Low	Low

2.6 Assessment Criteria and Significance

2.6.1 The evaluation of significance is based on the IAQM, 2014 guidance and professional judgement, taking into account the overall pattern of potential dust risk impact (having established the 'Dust Emission Magnitude' and 'Area Sensitivity'). The dust impact matrices for each construction activity are presented in Tables 6 to 9 and enable a summary of the site dust risk, which is used to determine the site specific mitigation required.

Table 6: Risk of Dust Impacts - Demolition

Sensitivity of Surrounding Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible

Table 7: Risk of Dust Impacts - Earthworks

Sensitivity of Surrounding Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Table 8: Risk of Dust Impacts - Construction

Sensitivity of Surrounding Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Table 9: Risk of Dust Impacts - Trackout

Sensitivity of Surrounding Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Low Risk	Negligible
Low	Low Risk	Low Risk	Negligible

3 Operation - Local Air Quality – Human Health

3.1 Relevant Legislation, Plans, Policies and Background

3.1.1 The assessment considers the relevant air quality legislation and the process of Local Air Quality Management (LAQM). The pollutants relevant to this assessment are nitrogen dioxide (NO₂) and PM₁₀.

3.1.2 NO₂ is a colourless, odourless gas which has been shown to have adverse health effects including causing respiratory irritation in asthmatics. There is believed to be a threshold above which it has an impact. It is formed principally from the oxidation of nitric oxide (NO) through the action of ozone in the atmosphere. Combustion in air forms mainly NO and with some NO₂ (collectively termed 'NO_x') from the combination of atmospheric nitrogen and oxygen. NO_x emitted from internal combustion engines as well as other forms of combustion and formed from natural sources such as lightning. NO_x is a precursor to PM₁₀.

- 3.1.3 PM₁₀ is the fraction of particulate matter (dust) in the air with an average aerodynamic diameter of less than 10 µm. This size range of particulate matter can penetrate deep into the lungs and has been shown to have a range of adverse health effects. These include a causal association with cardiovascular and respiratory illnesses. According to the Air Quality Strategy (AQS) (Defra, 2007), *'it is not currently possible to discern a threshold concentration below which there are no effects on the whole population's health'*. That is to say, scientific research cannot say whether any concentration of PM₁₀ at all does no harm. There is no proven safe threshold. In terms of harm, economically PM₁₀ is costed as being many times as harmful as NO₂. PM₁₀ is formed from both man-made and natural sources. Primary PM₁₀ is formed from the incomplete combustion of fuel (e.g. soot from diesel exhausts), sea-salt and wind-blown dust. Secondary PM₁₀ is formed in the atmosphere from other pollutants such as NO_x and sulphur oxides, and in certain circumstances in photochemical smogs. PM₁₀ has a residence time of several days in the atmosphere, so pollution events occur in southern England when polluted air is blown from the continent.
- 3.1.4 The majority of Scotland's Air Quality Management Areas (AQMA) have been declared for NO₂ concentrations, mostly as a result of road traffic. Where there are significant local sources of PM₁₀ or SO₂, there have been AQMA declared for these pollutants also.
- 3.1.5 The AQS introduces measures to control exposure to PM_{2.5} (the fraction of particulate matter with an average aerodynamic diameter less than 2.5µm). This is intended to be done at national level, so the control of PM_{2.5} concentrations has not been incorporated into LAQM, and authorities have no statutory obligation to review and assess against them. The objective value of 12µg/m³ is designed to deliver a minimum level of protection everywhere.

3.2 Methodology

Introduction

- 3.2.1 This assessment identifies the potential air quality impacts by predicting the changes in air quality which would result from the combination of background concentrations with the contributions from the roads in the defined study area, including the proposed scheme.
- 3.2.2 This assessment conforms to the standard practice of environmental impact assessment, whereby the baseline is established, and then the situation with the option in place (Do Something (DS)) is compared with the situation without it (Do Minimum (DM)).
- 3.2.3 The air quality situation is related to the national emissions inventory, which in turn is affected by year-on-year changes in the composition of, and the emissions from, the national vehicle fleet. The changes in emissions into the future are predicted on behalf of the government. For this reason, air quality for road schemes is normally assessed for a baseline year (in the recent past) and for the opening year with and without the proposed scheme in place.
- 3.2.4 The impact of the proposed scheme has been assessed using the Design Manual for Roads and Bridges air quality assessment methodology (DMRB) and LAQM TG(09) (Defra, 2009). DMRB allows for either a 'detailed' or 'simple' assessment. For the proposed scheme, a detailed assessment has been carried out, which takes into account diurnal changes in traffic flows using a dispersion model.
- 3.2.5 Regarding the operational phase of the proposed development, the UK AQS identifies the pollutants associated with road traffic emissions and local air quality as NO_x, PM₁₀, carbon monoxide (CO), 1, 3-butadiene and benzene. Emissions of CO and benzene associated with road traffic are no longer considered to be a significant issue in the UK and are not included within the current version of the DMRB methodology.
- 3.2.6 Emissions of total NO_x from motor vehicle exhausts comprise of NO and NO₂. NO oxidises in the atmosphere to form NO₂. Currently, Air Quality Management Areas (AQMA) designated in the UK attributable to road traffic emissions are associated with high concentrations of NO₂ and PM₁₀.

3.2.7 The local air quality assessment focuses on changes in NO₂ and PM₁₀ concentrations associated with the proposed scheme.

Assessment Methodology

3.2.8 Traffic data for the modelling scenarios has been provided by Jacobs' traffic consultants. The base year air quality model uses traffic data and pollution measurements from 2012.

3.2.9 The Local air quality assessment study area or 'affected' road network is defined by qualifying criteria published in DMRB HA207/07 paragraph 3.12 (Highway's Agency et al., 2007), based on changes between the 'without scheme' and 'with scheme' scenarios:

- Road alignment will change by 5m or more.
- Daily traffic flows (2way) will change by $\geq 1,000$ Annual Average Daily Traffic (AADT).
- Heavy Duty Vehicle (HDV) flows (2way) will change by ≥ 200 AADT.
- Daily average speed will change by ≥ 10 kph.
- Peak hour speed will change by ≥ 20 kph.

3.2.10 EPUK 2010 guidance for significant change stipulates a flow change of $\pm 5\%$ is appropriate for traffic in an AQMA.

3.2.11 The qualifying criteria for the regional air quality assessment is outlined in paragraph 3.20, based on changes between the 'without scheme' and 'with scheme' scenarios:

- a change of more than 10% in AADT; or
- a change of more than 10% HDVs; or
- a change in daily average speed of more than 20kph.

Dispersion Model

3.2.12 The assessment of the potential air quality impacts of the proposed scheme has been undertaken using the ADMS-Roads Atmospheric Dispersion Modelling System (ADMS-Roads).

3.2.13 ADMS-Roads has been developed by Cambridge Environmental Research Consultants Ltd and is a version of an atmospheric modelling system that focuses on road traffic as a source of pollutant emissions. It is based on a Gaussian model of plume dispersion and is known as a new generation model, as it includes complex descriptions of the atmospheric boundary layer taking into account the physical and chemical processes involved in the transport, dispersion, transformation and deposition of pollutants.

3.2.14 The assessment of air quality has been undertaken using ADMS-Roads v3.2 (October 2013). This is a formally validated model widely used both by regulatory authorities and commercially to assist in decisions related to air quality and traffic management, urban planning and public health in many countries around the world. The latest developments in LAQM Technical Guidance (TG)09 and updated national mapped background pollution concentrations have been taken into account.

3.2.15 Predictions of current and future pollutant concentrations arising from vehicle emissions, both with and without the proposed scheme, were made using ADMS-Roads and added to relevant background concentrations. Annual-mean NO₂ concentrations have been derived from the modelled road-related annual-mean NO_x concentration using the LAQM "NO_x to NO₂ calculator v4.1 (Defra, 2014d). Where appropriate adjustment factors have been applied to modelled the Road contribution NO_x in accordance with TG(09).

3.2.16 It should be noted that dispersion models provide an estimate of concentrations arising from input emissions and historical meteorological data. The estimates produced, while appropriately representing the complex factors involved in atmospheric dispersion, are subject to uncertainty. Whilst the predictions provided by the models should not be regarded as definitive statements of

concentrations that would arise in the future, they are the most reasonable, robust and representative estimates available. The estimates are composed of calculations made at a single point on each selected residential property.

Meteorological Data

- 3.2.17 The effect of meteorological conditions on dispersion is included within the model. The most significant factors in the dispersion of emitted pollutants are wind speed and direction. The meteorological data site considered to be most representative of conditions across the study area is Aberdeen Airport, Dyce for 2012, which is approximately 4.8km north-west of the study area.
- 3.2.18 LAQM TG(09) states that *'In the case of annual mean concentrations, the choice of one year against another usually has only a small effect on modelled concentrations from local sources, and can largely be ignored'* and recommends that *'the year of meteorological data (and year of baseline assessment) should not be more than five years old.'*

Vehicle Emissions

- 3.2.19 The modelling has been undertaken using Defra's 2014 Emission Factor Toolkit (EFT version 6.0.2) (Defra, 2014b) which draws on emissions generated by the European Environment Agency (EEA) COPERT 4 (v10.0) emission calculation tool and includes new NO_x emission factor assumptions for Euro 5 and 6 diesel cars and LGVs.
- 3.2.20 These emissions are vehicle-weighted averaged emissions for the national vehicle fleet. Emissions factors are defined by year to represent the predicted vehicle fleet, and the range of vehicle types and EURO emissions standards present across the fleet. The modelling system takes into account the emissions produced by Light Duty Vehicles (LDV, less than 3.5 tonnes) and HDVs, travelling at a certain speed along a section of road over an average hour, and predicts the dispersion of these emissions.
- 3.2.21 The EFT projects to 2030. Therefore the emission factors for the design year (2033) will be set at 2030 and is a conservative approach, using higher emission rates.

Receptors

- 3.2.22 The air quality assessment predicts the impacts at locations that could be sensitive to any changes. Such sensitive receptors should be selected where the public is regularly present and likely to be exposed over the averaging period of the objective.
- 3.2.23 LAQM TG(09) Box 1.4 provides examples of exposure locations and where air quality objectives should/ should not apply.
- 3.2.24 Sensitive receptors fronting onto affected roads and in areas of relevant exposure have been included in the modelling. Building usage was determined using Ordnance Survey Address Base dataset, and calculations were made at the façades expected to experience the maximum air quality concentrations. Whilst all of the modelled receptors are presented in the figures, only a subset is reported in the tables. These were selected to enable a description of the representative spatial variation of the maximum impacts of the proposed scheme. The long and short-term objectives apply at the façades of all the properties identified of relevant exposure.
- 3.2.25 For model verification purposes, grid references for relevant local authority diffusion tubes were included within the model setup.

Long term Pollutant Concentrations

- 3.2.26 Annual-mean road-related contributions of NO_x and PM₁₀ have been combined with urban background concentrations. Annual-mean NO₂ concentrations have been derived from the modelled annual-mean NO_x concentration using the LAQM TG(09) calculator after appropriate adjustments have been applied.

Short term Pollutant Concentrations

1 Hour Mean NO₂ Objective

- 3.2.27 Research undertaken in support of LAQM.TG(09) has indicated that the hourly-mean limit value and objective for NO₂ is unlikely to be exceeded at a roadside location where the annual-mean NO₂ concentration is less than 60µg/m³. In May 2008, a re-analysis of the relationship between annual and hourly-mean NO₂ concentrations was undertaken using data collated between 2003 and 2007 (AEAT, 2008). The conclusions and recommendations of that report are:

'Analysis shows that statistically, on the basis of the dataset available here, the chance of measuring an hourly nitrogen dioxide objective exceedence whilst reporting an annual mean NO₂ of less than 60 µg/m³ is very low....It is therefore recommended that local authorities continue to use the threshold of 60 µg/m³ NO₂ as the guideline for considering a likely exceedence of the hourly-mean nitrogen dioxide objective.'

- 3.2.28 Following the above recommendation, the 1 hour mean objective was not considered further as the annual mean NO₂ concentration was predicted to be less than 60µg/m³.

24 Hour Mean PM₁₀ Objective

- 3.2.29 The number of exceedences of the 24 hour mean air quality objective for PM₁₀, of 50µg/m³ may be estimated using the relationship set out in LAQM.TG(09).

- 3.2.30 Number of Exceedences of Daily Mean of 50µg/m³ = $-18.5 + 0.00145^* (\text{Predicted Annual-mean PM}_{10})^3 + 206 / (\text{Predicted Annual-mean PM}_{10} \text{ Concentration})$.

- 3.2.31 This relationship suggests that the 24 hour mean air quality objective for PM₁₀ is likely to be met, if the predicted annual-mean PM₁₀ concentration is 22.4µg/m³ or less, based on the Scottish AQO, which allows 7 exceedences per year. The Air Quality Strategy Volume 2 (Defra, 2007) evidence base states, that an annual-mean PM₁₀ concentration of 22.4µg/m³ is approximately equivalent to the 24 hour mean air quality objectives.

- 3.2.32 The PM₁₀ 24 hour mean air quality objectives is not considered further as the annual-mean PM₁₀ concentration was predicted to be less than 22.4µg/m³.

Fugitive PM₁₀ Emissions

- 3.2.33 Fugitive emissions of particulates from road transport include brake dust, tyre wear and re-suspended road dust. Improvements in vehicle technologies are reducing PM₁₀ exhaust emissions. Therefore, the relative importance of fugitive PM₁₀ emissions is increasing. Current emission factors for particulate matter include brake dust and tyre wear. A value for re-suspended brake dust and tyre wear is provided in the background maps published by Defra.

Background Concentrations

- 3.2.34 'Background' air quality is a concept used to enable assessments of the impacts of particular emissions sources, without the need for all sources in the area to be considered explicitly. For the purposes of this assessment, the background air quality is the boundary condition of the road emissions pollution model. The road derived pollution is added to the background pollution concentrations.

- 3.2.35 Defra provides empirically-derived national background maps, which provide estimates of background pollutant concentrations on a 1km x 1km grid square resolution. This model relates the National Atmospheric Emissions Inventory to the national network of pollution measurements.

- 3.2.36 Ricardo-AEA on behalf of the Scottish Government and as part of the Scottish Air Quality Database (SAQD) project provides mapped concentrations on a 1km x 1km square grid basis (Ricardo-AEA, 2014). These annual mean pollutant maps combine Scottish pollutant measurement data with the

spatially disaggregated emissions information from the UK's National Atmospheric Emissions Inventory (NAEI) to provide estimated pollutant concentrations for the whole of Scotland.

- 3.2.37 There are now sufficient monitoring sites in the SAQD for mapping to be undertaken for NO_x, NO₂ and PM₁₀ for Scotland using Scottish only monitoring data. The UK Pollution Climate Mapping (PCM) methodology has been applied to provide pollutant maps of Scotland for the Scottish Government for 2011 using measurements exclusively from Scottish air quality monitoring sites and Scottish meteorology (from RAF Leuchars) to create the Scotland-specific model.
- 3.2.38 The background map data for the Base Year were compared against the available representative background monitoring data, an NO₂ diffusion tube location close the scheme, and the mapping showed good agreement with the measured data.
- 3.2.39 To avoid double counting of emissions during the modelling process. Background concentrations have been adjusted in accordance with LAQM TG(09) and Defra guidance (Defra, 2014a). The NO₂ background maps are then adjusted in proportion to the reductions in NO_x as a result of removing the specific source sectors. The latest version (v4.0) of the NO₂ Adjustment for NO_x Sector Removal has been used (Defra, 2014c).
- 3.2.40 The 'in-grid square' contribution from trunk 'A' road, primary 'A' road and minor road sectors have been removed from the background annual mean NO_x and PM₁₀ concentration estimates, and background annual mean NO₂ estimates have been corrected. This process has been undertaken to avoid double counting of road traffic emissions that are represented in the air quality model. The predicted background pollutant concentrations in the study area are significantly below the AQOs.

Prediction of Environmental Concentrations including Adjustment for Long Term Trends in NO_x and NO₂

- 3.2.41 The model is used to predict the road traffic contributions to NO_x and PM₁₀ concentrations at specified sensitive receptors. Adjustments are applied to the model predictions based on a comparison against measured air quality concentrations, in a process known as model verification and adjustment. The modelled road contributions of NO_x, NO₂ and PM₁₀ were adjusted to correct them against measured road components derived from monitoring data, following an adjustment method set out in LAQM TG(09). NO_x and NO₂ concentrations were calculated using the NO_x from NO₂ calculator (version 4.1) available on the Defra website. A total environmental concentration is then produced by addition of the adjusted road contribution to the background concentration. Further detail on the verification process is provided in the model verification, verification methodology and verification summary sections of this appendix.
- 3.2.42 As noted in Chapter 13 (Air Quality), NO₂ concentrations have stabilised with little to no reduction between 2004 and 2012. As a result of this, there is a gap between current projected vehicle emission reductions and projections on the annual rate of improvements in ambient air quality, which is built into the vehicle emission factors, the projected background maps and the NO_x to NO₂ calculator.
- 3.2.43 The Highways Agency (HA) has developed the Gap Analysis methodology to adjust model predictions based on the method in LAQM TG(09) to account for the long term NO_x and NO₂ profiles. This uses the relationship between the Base year vehicle emission rates and the Opening year vehicle emission rates, and the measured trends in roadside air quality concentrations to uplift opening year predicted concentrations to align them better with the long term trends of NO_x and NO₂.
- 3.2.44 The current trends in air quality are based on measurements of emissions from the existing vehicle fleet. New vehicles would need to comply with the more stringent Euro 6/VI emissions standards from September 2014 onwards. Vehicles complying with the Euro 6/VI emissions standard have not been on the road network long enough for their performance to be present in the long term air quality monitoring trends. If the Euro 6/VI fleet emissions perform as predicted, then this should lead to substantial reductions in predicted future roadside air quality concentrations.
- 3.2.45 However, because the likely effects of Euro 6/VI vehicles on air quality are yet to be fully understood, the HA's advice is that a long term trend based on the existing fleet should be used (i.e. doesn't

capture the Euro 6/VI benefits) into the future. The Euro 6/VI penetration in the Scottish fleet mix is approximately 50% for LDVs and 75% for HGVs in the opening year based on the EFT v6.0.2 for an urban road.

- 3.2.46 The Gap Analysis methodology (IAN 170/12v1) (Highways Agency, 2012) used in this assessment does not incorporate the Euro 6/VI improvements and as such, modelled predictions would be higher than those predicted by the EFT alone. This is a conservative approach.
- 3.2.47 The Gap Analysis method is not applied to PM₁₀ predictions, and the results based on the LAQM TG(09) method are the final predicted concentrations throughout the assessment.
- 3.2.48 When forming a judgement on the significance of the effects, both the LAQM TG(09) results and the results adjusted using the Gap Analysis method (to reflect Long Term Trends (LTT) should be provided. Predictions for NO₂ using the LAQM TG(09) method, which are lower, can also be used in the final assessment to provide context for the uncertainty in model predictions. Full results including both LAQM TG(09) and LTT results are presented in Section 2.4, only the LTT results are presented in the ES chapter.
- 3.2.49 The DMRB regional air quality assessment methodology is completed for the study area. This is an estimate of the change in total emissions of PM₁₀, NO_x, carbon dioxide (CO₂) and hydrocarbons (HC) per year from all vehicles on the affected roads. The predicted concentrations have been calculated using the EFT v6.0.2 tool kit and following the methodology outlined within DMRB HA 207/07 (Highways Agency et al, 2007).

Model Output and Significance Criteria

- 3.2.50 The model results are used to assess whether there any significant effects as a result of the proposed scheme.
- 3.2.51 The HA’s approach to evaluating significant air quality effects, is set out in two Interim Advice Notes (IANs) (Highways Agency et al., 2013a; 2013b) published in June 2013. These IANs are intended to reflect the change in national planning policy associated with the National Planning Policy Framework 2012 (NPPF). Scotland’s more recent National Planning Framework 3 (NPF3), implemented in January 2014, is not considered to be dis-similar in relation to the requirements for air quality.
- 3.2.52 Table 10 provides an extract of the criteria provided for describing the change in magnitude of pollutant concentrations as a result of the operation of the proposed scheme.

Table 10: Descriptors for changes in Magnitude of Predicted Pollutant Concentration

Magnitude of change in Concentration	Value of Change in Annual Average NO ₂	Value of Change in Annual Average PM ₁₀
Large	> 10% of AQO (>4.0 µgm ⁻³)	(>1.8 µgm ⁻³)
Small	5 – 10% of AQO (>2.0-4.0 µgm ⁻³)	5 – 10% of AQO (>0.9-1.8 µgm ⁻³)
Medium	1 – 5% of AQO (>0.4-2.0 µgm ⁻³)	1 – 5% of AQO (>0.18-0.9 µgm ⁻³)
Imperceptible	<1% of AQO (<0.4 µgm ⁻³)	<1% of AQO (<0.18 µgm ⁻³)

Source: Highways Agency et al. (2013a) Table 2.1: Magnitude of Change Criteria p7.

- 3.2.53 When describing the air quality impact at a sensitive receptor, the change in magnitude of the concentration should be considered in the context of the absolute concentration at the sensitive receptor. The change is focussed on only those receptors exceeding the air quality thresholds in either the ‘DM’ scenario and / or ‘DS’ scenario.
- 3.2.54 The significance of impacts for the proposed scheme as a whole is approached by banded property numbers and magnitude of change (as illustrated in Table 13.3 of the ES). The IAN 174/13 (Highways Agency et al, 2014a) guidance advocates that *‘where the results reside between the lower and upper guideline bands for any of the magnitude criteria, then the scheme effects could be significant and a judgement is required taking into account all six categories. This judgement is*

based on the technical knowledge and experience of the air quality professional.’ To assist this judgement, consideration should be given to (but not limited to) the following:

Scheme effects are more likely to be significant where:

- There are no/few receptors with any improvements.
- PM₁₀ annual averages are also affected by small, medium or large deteriorations.
- Short term exceedences may be caused or worsened by the Scheme for either NO₂ or PM₁₀.

Scheme effects are more likely not to be significant where:

- There are receptors with small, medium or large improvements.
- PM₁₀ annual averages are not affected by small, medium or large deteriorations.
- Short term exceedences are not caused or worsened by the Scheme for either NO₂ or PM₁₀.

3.2.55 The upper and lower bands presented are guidelines and not absolutes. On occasions when the number of properties affected is above the upper guideline band, then consideration should be given to all the evidence that may support or detract from a conclusion of a significant impact when coming to a concluding view. The further above the upper guideline band the more likely it is that local air quality impacts would be significant.

Compliance Risk

3.2.56 The proposed scheme study area contains a number of roads which form part of Defra's assessment for the European Commission on the status of air quality in the UK. The Compliance Risk Road Network (CRRN) relevant to this study area is presented in Figure 13.1 of the ES. The modelling used for the local air quality assessment is combined with Defra's Pollution Climate Mapping (PCM) model dataset to determine whether the proposed scheme may effect compliance with the EU directive on ambient air quality.

3.2.57 The results in Table 11 are based on the opening year scenario in 2018, being the A90 with a speed limit of 40mph and the A96 with a speed limit of 50mph. The PCM concentrations for 2033 are forecasted to reduce from 2018. Consequently, the effect of the proposed scheme in the opening year captures the maximum risk for this assessment.

3.2.58 The values reported by Defra based on the PCM model are all below the EU limit values for the CRRN in 2018, and the impact of the proposed scheme would not lead to increases in concentrations sufficient to alter these conclusions.

3.2.59 The PCM model dataset used in this assessment is the 2009 validated dataset, as issued by Defra. The dataset is currently being updated, but this was unavailable at the time of assessment.

3.2.60 The latest Defra PCM results are projected from a base year of 2011 (issued July 2014 http://uk-air.defra.gov.uk/assets/documents/no2ten/140708_N02_projection_tables_FINAL.pdf), (Defra, 2014e), but these are not publicly available. However, zonal level information has been published. This indicates that the maximum concentrations in the zone (North East Scotland) are comparable with those used in this assessment and that the predicted year of compliance is still 2020. Therefore, it is concluded that the overall risk rating for compliance with the EU Air Quality Directive is low.

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A13.1: Air Quality Methodology

Table 11: Compliance Risk Assessment Analysis Results

Highways Agency Compliance Risk Analysis Tool v1.0																					
Scheme Opening Year		2018		Compile																	
Defra Reference Year		2015		Clear Contents																	
Proceeding Year		2020																			
Following Year																					
INPUTS										OUTPUTS											
Inputs					Defra PCM Model and Compliance Information					HA Receptor Results			Compliance Descriptors					Outcome			
AQ Assessment Receptor or ID	Scheme Traffic link ID	Defra's PCM Data			Proceeding Year: Total NO2 2015	Following Year: Total NO2 2020	Equivalent at Opening Year: Total NO2 2018	Compliance Info		NO2 Concentration (Nearest Receptor to Defra Link)			Equivalent PCM DS (µg/m³)	A - Change (increase) greater than 1% of EU LY	B - Does the Scheme cause a compliance zone to become non-compliance?	C - Delay Defra Compliance?	D - Does the Scheme Increase Road Length that Exceeds	E - Does the scheme worsen air quality over A, B, C or	Exceeds to SA QAP (If answer to A, B, C or	AQAP effective?	Compliance risk rating
		Defra Link ID	Zone / Agglomeration Ref No	Is it a Compliance Zone?				Maximum Modelled Concentration	Projected Compliance Year	Annual Mean DM NO2 (µg/m³)	Annual Mean DS NO2 (µg/m³)	Change in Annual Mean (DS-DM)									
41	313_315	40869	UK0038	NO	32.66	22.00	26.3	56.5	2020	29.3	29.6	0.2		NO	NO	NO	NO			LOW	
36	333_351	74314	UK0038	NO	32.16	21.38	25.7	56.5	2020	25.6	25.6	0.0		NO	NO	NO	NO			LOW	
41	315_322	40869	UK0038	NO	32.66	22.00	26.3	56.5	2020	29.3	29.6	0.2		NO	NO	NO	NO			LOW	
43	308_313	40869	UK0038	NO	32.66	22.00	26.3	56.5	2020	24.3	24.4	0.1		NO	NO	NO	NO			LOW	
42	302_308	40869	UK0038	NO	32.66	22.00	26.3	56.5	2020	32.7	33.1	0.4		NO	NO	NO	NO			LOW	
42	297_302	40869	UK0038	NO	32.66	22.00	26.3	56.5	2020	32.7	33.1	0.4		NO	NO	NO	NO			LOW	
45	287_288	40869	UK0038	NO	32.66	22.00	26.3	56.5	2020	29.5	30.0	0.5		NO	NO	NO	NO			LOW	
45	286_287	40869	UK0038	NO	32.66	22.00	26.3	56.5	2020	29.5	30.0	0.5		NO	NO	NO	NO			LOW	
44	288_297	40869	UK0038	NO	32.66	22.00	26.3	56.5	2020	27.5	27.7	0.2		NO	NO	NO	NO			LOW	
41	325_326	40869	UK0038	NO	32.66	22.00	26.3	56.5	2020	29.3	29.6	0.2		NO	NO	NO	NO			LOW	
41	322_325	40869	UK0038	NO	32.66	22.00	26.3	56.5	2020	29.3	29.6	0.2		NO	NO	NO	NO			LOW	
36	323_339	1178	UK0038	NO	30.65	20.78	24.7	56.5	2020	25.6	25.6	0.0		NO	NO	NO	NO			LOW	
38	301_323	1178	UK0038	NO	30.65	20.78	24.7	56.5	2020	25.1	24.6	-0.5		NO	NO	NO	NO			LOW	
38	298_301	1178	UK0038	NO	30.65	20.78	24.7	56.5	2020	25.1	24.6	-0.5		NO	NO	NO	NO			LOW	
4	263_270	75459	UK0038	NO	32.50	20.48	25.3	56.5	2020	31.1	29.2	-1.9		NO	NO	NO	NO			LOW	
10	268_269	75459	UK0038	NO	32.50	20.48	25.3	56.5	2020	46.1	38.3	-7.8		NO	NO	NO	NO			LOW	
15	267_268	75459	UK0038	NO	32.50	20.48	25.3	56.5	2020	30.7	35.4	4.7		NO	NO	NO	NO			LOW	
15	266_267	75459	UK0038	NO	32.50	20.48	25.3	56.5	2020	30.7	35.4	4.7		NO	NO	NO	NO			LOW	
34	285_298	1178	UK0038	NO	30.65	20.78	24.7	56.5	2020	23.0	22.8	-0.1		NO	NO	NO	NO			LOW	
22	256_257	75459	UK0038	NO	32.50	20.48	25.3	56.5	2020	35.6	35.4	-0.1		NO	NO	NO	NO			LOW	
22	257_260	75459	UK0038	NO	32.50	20.48	25.3	56.5	2020	35.6	35.4	-0.1		NO	NO	NO	NO			LOW	
23	260_264	75459	UK0038	NO	32.50	20.48	25.3	56.5	2020	30.8	31.1	0.3		NO	NO	NO	NO			LOW	
23	264_265	75459	UK0038	NO	32.50	20.48	25.3	56.5	2020	30.8	31.1	0.3		NO	NO	NO	NO			LOW	
23	265_266	75459	UK0038	NO	32.50	20.48	25.3	56.5	2020	30.8	31.1	0.3		NO	NO	NO	NO			LOW	
47	282_286	40869	UK0038	NO	32.66	22.00	26.3	56.5	2020	27.0	27.3	0.2		NO	NO	NO	NO			LOW	
22	243_256	75459	UK0038	NO	32.50	20.48	25.3	56.5	2020	35.6	35.4	-0.1		NO	NO	NO	NO			LOW	

3.3 Dispersion Model Set-up and Model Verification

3.3.1 The ADMS-Roads model has been developed by Cambridge Environmental Research Consultants Ltd (CERC) and is a version of an atmospheric modelling system that focuses on road traffic as a source of pollutant emissions. Version 3.2.4 has been used for this study.

3.3.2 The modelling system takes into account the emissions produced by light duty and HDVs travelling at a certain speed along a section of road over an average hour and predicts the dispersion of these emissions using appropriate historical meteorological data. The effect of meteorological conditions on dispersion is included within the model. The most significant factors are wind speed and direction and the boundary layer height which is the calculated mixing depth of the troposphere.

Model Scenarios and Parameters

3.3.3 Modelling has been undertaken for the base year (2012) for verification purposes and the first year in which the proposed scheme is expected to be fully operational (2018), with and without the proposed scheme. These are termed the 'Do-Something' and 'Do-Minimum' scenarios respectively.

Road Links

3.3.4 ADMS-Roads requires lengths of road of equal width (and height if specified as a canyon) to be input into the model. Roads can be split into several 'links' to allow for bends and curves in the road layout. Road alignment and width were determined using the Ordnance Survey Mastermap 1:1250 scale data.

Traffic Emissions

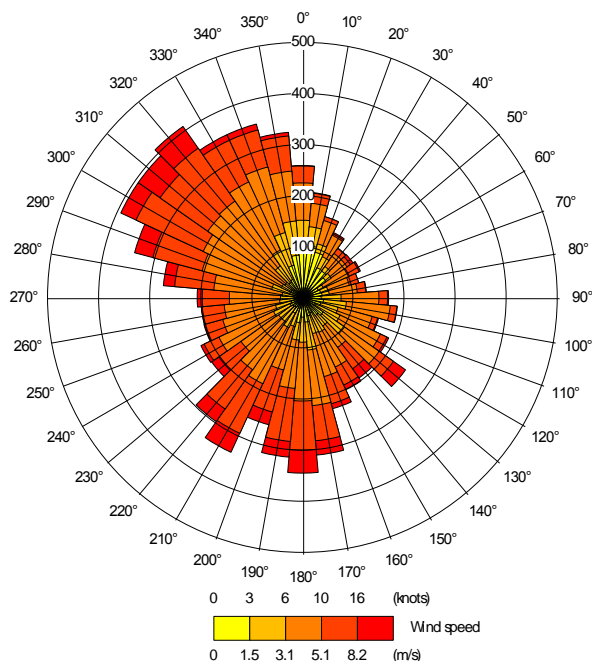
3.3.5 The traffic flow data for the model was prepared by Jacobs. Emission rates representing links in the traffic model were calculated based on the traffic flow, HDV composition, speed and road type with the UK EFT v6.0.2.

Meteorological Data

3.3.6 In order to assess the impact of the development upon local air quality using a dispersion model, it is important to use representative meteorological data. In simple terms, meteorology is the next most significant factor in determining ambient pollutant levels, after emissions.

3.3.7 Meteorological data for the dispersion modelling assessment was taken from Aberdeen Airport, Dyce, which is considered to be the most representative source for the study area. The windrose for 2012 is shown in Diagram 1. The study area is on the outskirts of an urban area, and is densely populated. Aberdeen airport is regarded as less densely built. A meteorological data site surface roughness of 0.3m was selected and a dispersion site surface roughness length of 1.0m was used in this assessment.

Diagram 1: Meteorological Windrose at Aberdeen Airport, Dyce - 2012



Monin Obukhov Length

- 3.3.8 ADMS models use the Monin Obukhov length as a parameter to describe the turbulent length scale which is dependent on meteorological conditions. Given the nature of the majority of the study area tends to be developed, a Monin Obukhov length of 30m was set for the study area which is appropriate for cities and large towns.

Terrain Data

- 3.3.9 The terrain has an effect on the flow field in the air above it. It is recommended that the effect of terrain is incorporated into ADMS-Roads where gradients of greater than 10% exist within the modelled area, or a short way outside of it. Therefore, it has not been necessary to include the effect of terrain in the assessment.

Street Canyons

- 3.3.10 'Street canyons' in air pollution science are roads with continuous high buildings on either side. This arrangement tends to impede the dispersion of pollutants from the road, particularly when the wind is at right angles to it, since a vortex is created in the 'street canyon', retaining the pollution.
- 3.3.11 No road links were identified as being 'street canyons'. This feature was therefore not included within the modelling assessment.

Model Verification

- 3.3.12 Model verification refers to checks that are carried out on model performance at a local level. Modelled concentrations are compared with the results of monitoring and, where there is a disparity between modelled and monitored concentrations, an adjustment may be established and applied.
- 3.3.13 For the verification and adjustment of NO_x and NO₂ concentrations, a representative adjustment factor of all locations modelled was applied and in accordance with LAQM TG(09). Appropriate verification sites selected for this assessment are presented on Figure 13.1.
- 3.3.14 Modelled results may not compare well with monitoring data for a number of reasons. Model verification investigates the discrepancies between modelled and measured concentrations, which

can arise due to the presence of inaccuracies and/or uncertainties in model input data, modelling and monitoring data assumptions. Examples of potential causes of such discrepancy are:

- estimates of background pollutant concentrations;
- meteorological data uncertainties;
- traffic data uncertainties;
- model input parameters, such as 'roughness length'; and
- overall limitations of the dispersion model.

3.3.15 Sensitive receptors can have different surrounding environments which influence the concentrations of pollutants. The sensitive receptors in this assessment have been adjusted using a single verification zone.

Model Precision

3.3.16 Residual uncertainty may remain after systematic error or 'model accuracy' has been accounted for in the final predictions. Residual uncertainty may be considered synonymous with the 'precision' of the model predictions, i.e. how wide the scatter or residual variability of the predicted values compare with the monitored true value, once systematic error has been allowed for. The quantification of model precision provides an estimate of how the final predictions may deviate from true (monitored) values at the same location over the same period.

Model Performance

3.3.17 An evaluation of model performance has been undertaken to establish confidence in model results. LAQM.TG (09) identifies a number of statistical procedures that are appropriate to evaluate model performance and assess uncertainty. The statistical parameters used in this assessment are:

- Root mean square error (RMSE).
- Fractional bias (FB).
- Correlation coefficient (CC).

3.3.18 A brief explanation of each statistic is provided in Table 12 and further details can be found in LAQM.TG(09) Box A3.7.

Table 12: Model Performance Statistics

Statistical Parameter	Comments	Ideal Value
Root Mean Squared Error (RMSE)	<p>RMSE is used to define the average error or uncertainty of the model. The units of RMSE are the same as the quantities compared.</p> <p>If the RMSE values are higher than 25% of the objective being assessed, it is recommended that the model inputs and verification should be revisited in order to make improvements.</p> <p>For example, if the model predictions are for the annual mean NO₂ objective of 40 µg/m³, if an RMSE of 10µg/m³ or above is determined for a model it is advised to revisit the model parameters and model verification.</p> <p>Ideally an RMSE within 10% of the air quality objective would be derived, which equates to 4 µg/m³ for the annual mean NO₂ objective.</p>	0.01
Fractional Bias (FB)	<p>FB is used to identify if the model shows a systematic tendency to over or under predict.</p> <p>FB values vary between +2 and -2 and have an ideal value of zero. Negative values suggest a model over-prediction and positive values suggest a model under-prediction.</p>	0.00
Correlation Coefficient (CC)	<p>CC is used to measure the linear relationship between predicted and observed data. A value of zero means no relationship and a value of 1 means absolute relationship.</p> <p>This statistic can be particularly useful when comparing a large number of model and observed data points.</p>	1.00

- 3.3.19 These parameters estimate how the model results agree or diverge from the observations. These calculations have been carried out prior to, and after adjustment and provide information on the improvement of the model predictions as a result of the application of the verification adjustment factors.
- 3.3.20 The verification process compares modelled pollutant concentrations against corresponding monitoring data to determine how well the air quality model has performed. An adjustment is applied to the modelled results depending on the outcome of the verification process.
- 3.3.21 The acceptable limits of model verification performance are set out in LAQM TG(09) (Defra, 2009).
- 3.3.22 These calculations have been carried out prior to, and after adjustment and provide information on the improvement of the model predictions as a result of the application of the verification adjustment factors.

Air Quality Monitoring Data

- 3.3.23 The air quality monitoring data collected as part of this assessment as detailed in Chapter 13 (Air Quality) was reviewed to determine the suitability of each of the monitoring locations for inclusion in the model verification process. The criteria used to determine the suitability of the monitoring data for inclusion into the verification process are outlined below:
- monitoring location required to be on roads of similar nature to those where modelled receptors are located; and
 - monitoring data capture in 2012 required to be $\geq 90\%$.

Verification Methodology – NO_x/NO₂

- 3.3.24 The verification method followed the process detailed in LAQM TG(09). An initial comparison of the modelled versus monitored results indicated that the model tended to under-predict against the monitored concentrations. Additionally, there was a high degree of uncertainty or scatter in the model predictions. Model verification adjustment therefore, focussed on reducing the under-prediction and uncertainty associated with the modelled results.
- 3.3.25 The first stage of verification was undertaken by comparing the modelled versus monitored Road NO_x. Road NO_x measured at the diffusion tubes were calculated using the latest Defra NO_x to NO₂ calculator, as diffusion tubes only measure NO₂ and do not directly measure NO_x.
- 3.3.26 Once the modelled Road NO_x component had been adjusted, this value was used in the Defra NO_x to NO₂ calculator, and the calculated Road NO₂ component was adjusted following comparison with the monitored Road NO₂.

Verification Summary – NO_x/NO₂

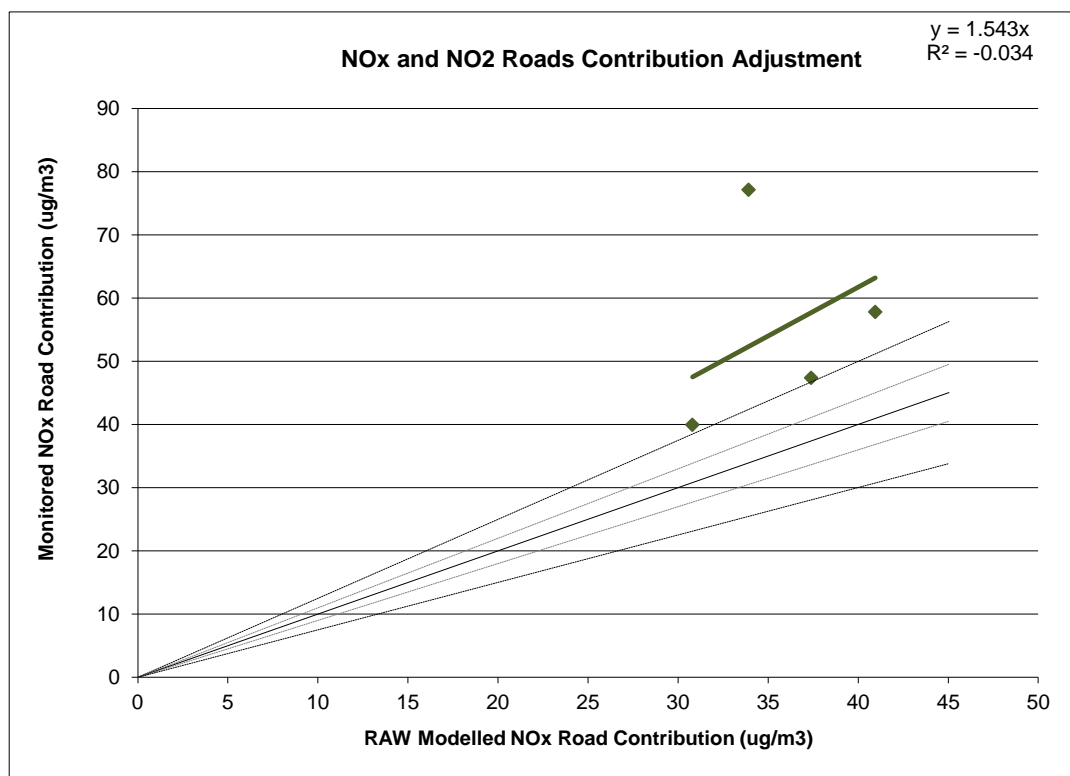
- 3.3.27 A review was undertaken of the modelled versus monitoring performance across the whole study area. In total 4 sites were used in the model verification process (as shown on Figure 13.1 and presented in Table 13.4 of the air quality chapter). Table 13 provides the justification for the site exclusion from the verification process.

Table 13: Nitrogen Dioxide Measurement Sites within the Assessment Area

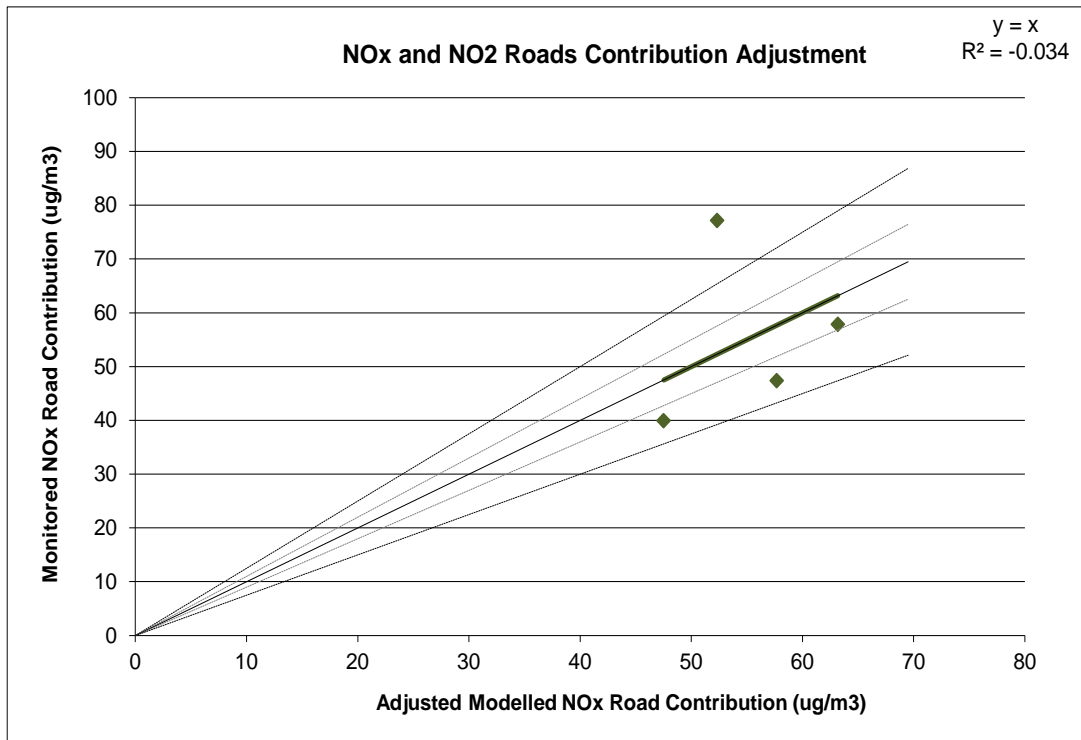
Tube ID	Tube Location	Exclusion from Verification Process
ACC_1	Bucksburn Primary School, Inverurie Road	Inconsistent with nearby site ACC_24. ACC_24 is retained and is a façade location and higher concentration.
ACC_2	885 Gt Northern Rd	Included
ACC_3	549 N Anderson Dr	Data capture <90%; measures lower concentrations than other sites
ACC_23	785 Gt Northern Rd	Included
ACC_24	40 Auchmill Rd	Included
ACC_39	819 Gt Northern Rd	Data capture <90%
ACC_40	852 Fullerton Ct (facade)	Included
ACC_41	852 Fullerton Ct (roadside)	Inconsistent with AAC_40. Site ACC_40 is retained and is a façade location and higher concentration

3.3.28 Scatter plots showing the unadjusted and adjusted Rd NO_x, and Total NO₂ following adjustment are presented in Graphs 1, 2 and 3, respectively.

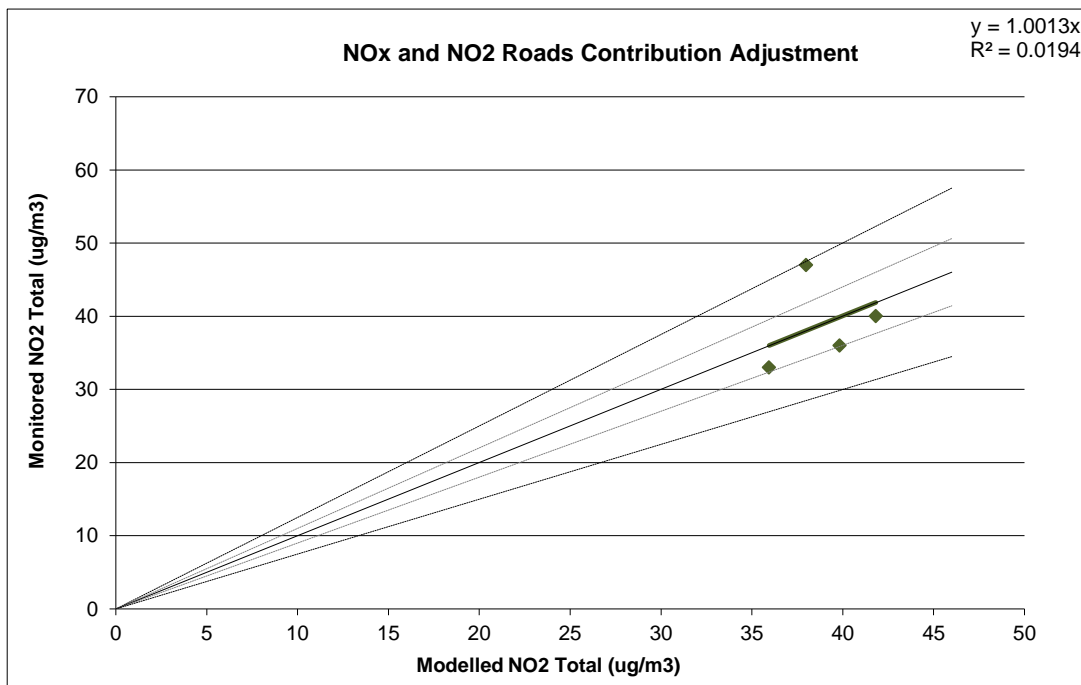
Graph 1 – Unadjusted Modelled NO_x Road Contribution (µg.m⁻³)



Graph 2 – Adjusted Modelled NOx Road Contribution ($\mu\text{g}\cdot\text{m}^{-3}$)



Graph 3 – Modelled NO₂ Total ($\mu\text{g}\cdot\text{m}^{-3}$)



3.3.29 The summary results and model performance statistics defined in LAQM.TG(09) are provided in Table 14.

Table 14: Verification Zone Model Performance Statistics – NO₂

Parameter	No adjustment	With adjustment
No. of monitoring sites	4	4

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Parameter	No adjustment	With adjustment
NO _x road adjustment factor	-	1.543
NO ₂ road adjustment factor	-	0.995
RMSE (Root Mean Square Error)	9.2	5.2
FB (Fractional Bias)	0.2	0.0
CC (Correlation Coefficient)	0.24	0.23
No. sites within +/- 25%	3	4

- 3.3.30 The statistics support the methodology adopted. The statistics show that the RMSE and FB are improved when model adjustment is applied, when compared to the RMSE and FB for results unadjusted across the whole study area.
- 3.3.31 In the absence of PM₁₀ monitoring data for model verification, the NO_x road adjustment has also been applied to the modelled PM₁₀ road contributions, following guidance in LAQM TG(09).

3.4 Local Air Quality – Specific Receptor Modelled Results

Table 15: Modelled and Adjusted NO₂ Results at all Receptors

Rec_ID	Easting	Northing	Base Adj RD NO _x	2012 B'grd NO _x	2012 B'grd NO ₂	Base NO ₂ Total	LTT Adj RD NO _x	2018 B'grd NO _x	2018 B'grd NO ₂	Projected NO ₂ Total	DM Adj RD NO _x	2018 B'grd NO _x	2018 B'grd NO ₂	DM Tot NO ₂ 2018 (LAQM)	DS Adj RD NO _x	DS Tot NO ₂ 2018 (LAQM)	LTT DM NO ₂ Adj 2018	LTT DS NO ₂ Adj 2018	Chng LTT Adj (DS-DM)
1	391239	808907	6.6	23.5	17.0	20.3	4.3	19.9	14.7	16.9	3.5	19.9	14.7	16.5	6.5	18.0	19.0	20.7	1.7
2	391422	808986	28.6	23.5	17.0	30.5	18.0	19.9	14.7	23.6	13.7	19.9	14.7	21.6	13.1	21.3	26.7	26.4	-0.4
3	390986	808813	2.5	20.2	15.0	16.2	1.6	17.0	12.8	13.6	1.6	17.0	12.8	13.6	2.4	14.0	15.5	16.0	0.5
4	391364	809156	47.7	19.6	14.5	36.0	29.9	16.4	12.4	26.8	24.2	16.4	12.4	24.2	21.0	22.7	31.1	29.2	-1.9
5	391163	809153	42.0	19.6	14.5	33.7	25.6	16.4	12.4	24.9	18.6	16.4	12.4	21.6	20.2	22.4	28.0	29.0	1.0
6	391388	808909	19.0	23.5	17.0	26.2	12.3	19.9	14.7	20.9	9.4	19.9	14.7	19.5	12.7	21.1	23.4	25.3	1.9
7	391102	808826	4.5	23.5	17.0	19.3	3.0	19.9	14.7	16.3	2.9	19.9	14.7	16.2	3.2	16.4	18.4	18.6	0.2
8	391367	808971	35.6	23.5	17.0	33.4	22.9	19.9	14.7	25.9	16.7	19.9	14.7	23.0	15.5	22.4	28.4	27.7	-0.7
9	391421	808904	32.1	23.5	17.0	32.0	20.5	19.9	14.7	24.8	14.9	19.9	14.7	22.1	19.4	24.3	27.3	30.0	2.7
10	391299	809135	103.8	19.6	14.5	55.1	65.5	16.4	12.4	41.1	51.7	16.4	12.4	35.9	36.9	29.8	46.1	38.3	-7.8
11	391138	808956	5.6	23.5	17.0	19.8	3.6	19.9	14.7	16.6	2.9	19.9	14.7	16.2	6.7	18.1	18.5	20.7	2.2
12	391556	808796	20.6	23.5	17.0	26.9	12.5	19.9	14.7	21.0	9.7	19.9	14.7	19.6	9.4	19.5	24.1	23.9	-0.1
13	391689	809105	18.3	19.6	14.5	23.5	10.9	16.4	12.4	17.9	8.6	16.4	12.4	16.8	9.1	17.0	21.1	21.4	0.3
14	391722	809076	30.9	19.6	14.5	29.1	18.5	16.4	12.4	21.6	13.5	16.4	12.4	19.2	14.8	19.8	24.8	25.6	0.8
15	391048	809181	47.6	19.6	14.5	36.0	29.1	16.4	12.4	26.4	22.7	16.4	12.4	23.5	30.6	27.1	30.7	35.4	4.7
16	390851	809415	25.6	22.9	16.6	28.8	17.1	19.1	14.2	22.6	13.6	19.1	14.2	20.9	13.7	21.0	25.5	25.6	0.1
17	391052	808853	4.6	23.5	17.0	19.4	3.2	19.9	14.7	16.4	3.2	19.9	14.7	16.4	3.8	16.7	18.6	18.9	0.3
18	390884	809379	27.6	22.9	16.6	29.6	18.4	19.1	14.2	23.3	15.2	19.1	14.2	21.7	15.4	21.8	26.4	26.5	0.1
19	389776	809664	18.2	19.8	14.7	23.6	11.6	16.6	12.6	18.4	8.5	16.6	12.6	16.9	8.1	16.7	20.8	20.5	-0.2
20	389752	809576	41.0	19.8	14.7	33.5	25.0	16.6	12.6	24.8	20.1	16.6	12.6	22.5	20.0	22.5	29.1	29.1	0.0
21	389741	809606	58.5	19.8	14.7	40.3	35.3	16.6	12.6	29.4	26.9	16.6	12.6	25.7	26.7	25.6	33.8	33.6	-0.1
22	390202	809515	53.4	22.9	16.6	40.1	32.4	19.1	14.2	29.6	27.5	19.1	14.2	27.4	27.2	27.3	35.6	35.4	-0.1
23	390599	809259	40.2	22.9	16.6	34.9	23.9	19.1	14.2	25.8	19.5	19.1	14.2	23.8	19.9	24.0	30.8	31.1	0.3

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Rec_ID	Easting	Northing	Base Adj RD NO _x	2012 B'grd NO _x	2012 B'grd NO ₂	Base NO ₂ Total	LTT Adj RD NO _x	2018 B'grd NO _x	2018 B'grd NO ₂	Projected NO ₂ Total	DM Adj RD NO _x	2018 B'grd NO _x	2018 B'grd NO ₂	DM Tot NO ₂ 2018 (LAQM)	DS Adj RD NO _x	DS Tot NO ₂ 2018 (LAQM)	LTT DM NO ₂ Adj 2018	LTT DS NO ₂ Adj 2018	Chng LTT Adj (DS-DM)
24	389508	809627	36.9	19.8	14.7	31.8	22.1	16.6	12.6	23.5	17.0	16.6	12.6	21.1	17.0	21.0	27.4	27.2	-0.1
25	389830	809635	29.3	19.8	14.7	28.6	18.3	16.6	12.6	21.7	14.6	16.6	12.6	19.9	13.9	19.6	25.1	24.7	-0.4
26	389904	809600	49.5	19.8	14.7	36.9	29.9	16.6	12.6	27.0	25.7	16.6	12.6	25.1	25.3	24.9	32.9	32.6	-0.3
27	389737	809745	11.2	19.8	14.7	20.3	7.3	16.6	12.6	16.3	5.3	16.6	12.6	15.3	5.1	15.2	18.3	18.1	-0.1
28	389911	809852	16.6	19.8	14.7	22.8	10.8	16.6	12.6	18.1	3.2	16.6	12.6	14.2	2.8	14.0	17.1	16.9	-0.2
29	390191	809843	8.8	22.9	16.6	21.0	6.0	19.1	14.2	17.2	23.5	19.1	14.2	25.6	23.3	25.5	29.9	29.8	-0.1
30	392824	807788	8.2	27.6	19.6	23.6	5.7	23.7	17.2	20.0	5.5	23.7	17.2	19.9	5.0	19.7	22.5	22.3	-0.2
31	391513	807874	17.0	26.4	18.9	27.0	10.4	23.1	16.8	22.0	8.8	23.1	16.8	21.2	8.8	21.2	24.9	24.9	0.0
32	392021	808034	7.9	26.2	18.7	22.6	5.4	22.1	16.2	18.9	4.9	22.1	16.2	18.7	4.3	18.4	21.4	21.1	-0.3
33	391245	807670	16.0	26.4	18.9	26.6	9.9	23.1	16.8	21.7	8.3	23.1	16.8	20.9	8.3	20.9	24.5	24.5	0.0
34	391627	808551	16.6	23.5	17.0	25.1	10.1	19.9	14.7	19.8	8.2	19.9	14.7	18.9	8.0	18.8	23.0	22.8	-0.1
35	390781	808743	4.0	20.2	15.0	17.0	2.7	17.0	12.8	14.2	3.0	17.0	12.8	14.3	2.9	14.3	16.4	16.4	0.0
36	391181	807519	18.4	26.4	18.9	27.7	11.4	23.1	16.8	22.4	9.6	23.1	16.8	21.6	9.6	21.6	25.6	25.6	0.0
37	391547	808026	15.0	23.5	17.0	24.4	9.1	19.9	14.7	19.4	7.6	19.9	14.7	18.6	7.6	18.6	22.4	22.4	0.0
38	391727	808177	21.5	23.5	17.0	27.3	14.1	19.9	14.7	21.8	12.3	19.9	14.7	20.9	11.4	20.5	25.1	24.6	-0.5
39	392360	807846	14.0	27.6	19.6	26.3	9.9	23.7	17.2	22.1	8.9	23.7	17.2	21.6	8.2	21.2	24.6	24.2	-0.5
40	392445	807805	32.1	27.6	19.6	34.3	22.4	23.7	17.2	27.9	21.1	23.7	17.2	27.3	20.0	26.8	32.2	31.6	-0.6
41	393095	807790	16.2	31.3	21.8	29.5	10.1	26.7	19.0	24.0	12.0	26.7	19.0	24.9	12.4	25.1	29.3	29.6	0.2
42	393103	808281	27.2	26.9	19.1	31.8	16.9	22.6	16.4	24.7	20.8	22.6	16.4	26.5	21.4	26.8	32.7	33.1	0.4
43	393076	808030	10.9	26.9	19.1	24.5	6.6	22.6	16.4	19.7	7.9	22.6	16.4	20.4	8.1	20.5	24.3	24.4	0.1
44	393072	808415	20.0	26.9	19.1	28.7	12.2	22.6	16.4	22.5	12.3	22.6	16.4	22.5	12.7	22.7	27.5	27.7	0.2
45	392808	808549	27.9	26.2	18.7	31.7	16.5	22.1	16.2	24.3	15.0	22.1	16.2	23.6	15.8	24.0	29.5	30.0	0.5
46	392419	808913	24.8	26.2	18.7	30.4	14.7	22.1	16.2	23.4	12.6	22.1	16.2	22.5	13.9	23.1	28.0	28.8	0.7
47	392719	808716	21.0	26.2	18.7	28.7	12.6	22.1	16.2	22.5	11.8	22.1	16.2	22.1	12.3	22.3	27.0	27.3	0.2

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Table 16: Modelled and Adjusted PM₁₀ Results at all Receptors

Rec_ID	Easting	Northing	Base Adj RD PM ₁₀	2012 B'grd PM ₁₀	Base 2012 PM ₁₀ Total	DM Adj RD PM ₁₀	2018 B'grd PM ₁₀	DM 2018 PM ₁₀ Total	DS Adj RD PM ₁₀	2018 B'grd PM ₁₀	DS 2018 PM ₁₀ Total	Chng DS-DM
1	391239	808907	0.5	12.5	12.9	0.3	11.9	12.2	0.6	11.9	12.5	0.3
2	391422	808986	2.0	12.5	14.5	1.4	11.9	13.3	1.1	11.9	13.0	-0.3
3	390986	808813	0.2	11.9	12.0	0.1	11.3	11.5	0.2	11.3	11.5	0.0
4	391364	809156	2.8	12.6	15.4	1.9	12.1	13.9	1.6	12.1	13.7	-0.2
5	391163	809153	2.6	12.6	15.2	1.9	12.1	13.9	1.4	12.1	13.5	-0.4
6	391388	808909	1.3	12.5	13.8	0.9	11.9	12.8	1.1	11.9	13.0	0.2
7	391102	808826	0.3	12.5	12.8	0.3	11.9	12.2	0.3	11.9	12.2	0.0
8	391367	808971	2.4	12.5	14.9	1.6	11.9	13.5	1.3	11.9	13.2	-0.3
9	391421	808904	2.2	12.5	14.7	1.5	11.9	13.4	1.5	11.9	13.4	0.0
10	391299	809135	5.9	12.6	18.5	4.0	12.1	16.0	2.8	12.1	14.8	-1.2
11	391138	808956	0.4	12.5	12.8	0.3	11.9	12.2	0.6	11.9	12.5	0.3
12	391556	808796	1.6	12.5	14.1	1.1	11.9	13.0	1.1	11.9	13.0	0.0
13	391689	809105	1.3	12.6	13.9	1.0	12.1	13.0	1.0	12.1	13.1	0.1
14	391722	809076	2.2	12.6	14.8	1.5	12.1	13.6	1.7	12.1	13.7	0.1
15	391048	809181	3.2	12.6	15.8	2.3	12.1	14.4	2.5	12.1	14.6	0.2
16	390851	809415	1.8	13.4	15.2	1.3	12.7	14.0	1.3	12.7	14.0	0.0
17	391052	808853	0.3	12.5	12.8	0.3	11.9	12.2	0.3	11.9	12.2	0.0
18	390884	809379	1.8	13.4	15.1	1.3	12.7	14.0	1.3	12.7	14.0	0.0
19	389776	809664	1.4	13.0	14.3	0.9	12.4	13.2	0.8	12.4	13.2	0.0
20	389752	809576	3.0	13.0	15.9	2.0	12.4	14.4	2.0	12.4	14.3	-0.1
21	389741	809606	4.1	13.0	17.1	2.7	12.4	15.1	2.7	12.4	15.0	-0.1
22	390202	809515	3.8	13.4	17.2	2.8	12.7	15.5	2.8	12.7	15.5	0.0
23	390599	809259	3.0	13.4	16.4	2.2	12.7	15.0	2.2	12.7	14.9	-0.1
24	389508	809627	2.6	13.0	15.5	1.7	12.4	14.0	1.7	12.4	14.0	0.0
25	389830	809635	2.1	13.0	15.0	1.4	12.4	13.8	1.4	12.4	13.7	-0.1
26	389904	809600	3.5	13.0	16.5	2.6	12.4	14.9	2.5	12.4	14.9	0.0
27	389737	809745	0.9	13.0	13.9	0.6	12.4	12.9	0.5	12.4	12.9	0.0

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Rec_ID	Easting	Northing	Base Adj RD PM ₁₀	2012 B'grd PM ₁₀	Base 2012 PM ₁₀ Total	DM Adj RD PM ₁₀	2018 B'grd PM ₁₀	DM 2018 PM ₁₀ Total	DS Adj RD PM ₁₀	2018 B'grd PM ₁₀	DS 2018 PM ₁₀ Total	Chng DS- DM
28	389911	809852	1.4	13.0	14.3	0.3	12.4	12.7	0.3	12.4	12.6	-0.1
29	390191	809843	0.7	13.4	14.1	2.0	12.7	14.7	1.9	12.7	14.7	0.0
30	392824	807788	0.7	12.9	13.6	0.6	12.2	12.8	0.5	12.2	12.7	-0.1
31	391513	807874	1.4	13.1	14.5	1.0	12.5	13.5	1.0	12.5	13.5	0.0
32	392021	808034	0.7	12.7	13.4	0.6	12.1	12.7	0.5	12.1	12.6	-0.1
33	391245	807670	1.2	13.1	14.3	0.9	12.5	13.4	0.9	12.5	13.4	0.0
34	391627	808551	1.4	12.5	13.9	1.0	11.9	12.9	0.9	11.9	12.8	-0.1
35	390781	808743	0.3	11.9	12.2	0.3	11.3	11.6	0.3	11.3	11.6	0.0
36	391181	807519	1.4	13.1	14.5	1.0	12.5	13.5	1.0	12.5	13.5	0.0
37	391547	808026	1.2	12.5	13.7	0.9	11.9	12.8	0.9	11.9	12.8	0.0
38	391727	808177	1.5	12.5	13.9	1.0	11.9	13.0	1.0	11.9	12.9	-0.1
39	392360	807846	1.1	12.9	14.0	0.8	12.2	13.1	0.8	12.2	13.0	-0.1
40	392445	807805	2.2	12.9	15.1	1.7	12.2	13.9	1.6	12.2	13.8	-0.1
41	393095	807790	1.1	13.5	14.6	1.0	12.9	13.9	1.1	12.9	13.9	0.0
42	393103	808281	1.6	13.1	14.7	1.5	12.5	14.0	1.6	12.5	14.1	0.1
43	393076	808030	0.8	13.1	13.8	0.7	12.5	13.2	0.8	12.5	13.2	0.0
44	393072	808415	1.2	13.1	14.3	0.9	12.5	13.4	1.0	12.5	13.5	0.1
45	392808	808549	1.9	12.7	14.6	1.4	12.1	13.6	1.5	12.1	13.6	0.0
46	392419	808913	1.7	12.7	14.4	1.2	12.1	13.3	1.4	12.1	13.5	0.2
47	392719	808716	1.3	12.7	14.0	1.0	12.1	13.1	1.0	12.1	13.1	0.0

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A14.1: Acoustical Technical Definitions

1 Introduction

- 1.1.1 This appendix provides definitions of some of the terms used in the noise and vibration chapter to aid understanding.
- 1.1.2 The sound wave travelling through the air is a regular disturbance in ambient atmospheric pressure. These pressure fluctuations, when of frequencies within the audible range, are detected by the human ear which passes nerve responses to the brain, producing the sensation of hearing. Noise has been defined in a variety of ways and is very much dependant on factors such as the listener's attitude to the source of the sound and their environment, but is essentially any sound that is unwanted by the recipient.
- 1.1.3 It is impossible to measure the degree of nuisance caused by noise directly, as this is essentially a subjective response of the listener, but it is possible to measure the 'loudness' of that noise. Loudness is related to both the sound pressure (the magnitude of the maximum excursion of the pressure wave around the ambient atmospheric pressure) and the frequency, both of which can be measured.
- 1.1.4 The human ear is sensitive to a wide range of sound levels; the sound pressure level of the threshold of pain is over a million times that of the quietest audible sound. In order to reduce the relative magnitude of the numbers involved, a logarithmic scale of decibels (dB) based on a reference level of the lowest audible sound is used.
- 1.1.5 Also, the response of the human ear is not constant over all frequencies. It is therefore usual to weight the measured frequency to approximate human response. This is achieved by using filters to vary the contribution of different frequencies to the measured level. The 'A' weighting network is the most commonly used and has been shown to correlate closely to the non-linear and subjective response of humans to sound. The use of this weighting is denoted by a capital A in the unit abbreviation (i.e. LA_{max}, LA_{eq}, LA₉₀ etc.) or a capital A in brackets after a dB level (i.e. 3 dB(A)).

2 Technical Definitions

Sound Pressure Level

- 1.1.6 The sound pressure level (L_p or SPL) is the instantaneous acoustic pressure and is measured in dB. Since the ear is sensitive to variations in pressure, rather than source power or intensity, the measurement of this parameter gives an indication of the impact on people. The SPL is defined as:

$$SPL = 10 \log_{10} \left(\frac{p^2}{p_{ref}^2} \right) \quad \text{or} \quad SPL = 20 \log_{10} \left(\frac{p}{p_{ref}} \right)$$

- 1.1.7 Where p is the root mean square (rms) pressure of the sound in question (in pascals) and p_{ref} is the reference sound pressure, defined as the limit of human audibility (2×10^{-5} Pa).

Sound Power Level

- 1.1.8 The sound power level (L_W or PWL) is a measure of the acoustic energy output of a source and is a property of the source itself. The PWL is also measured in dB and is given by:

$$PWL = 10 \log_{10} \left(\frac{W}{W_0} \right)$$

- 1.1.9 Where W is the sound power of the source (in watts) and W_0 is the reference sound power (10^{-12} watts).

L_{eq}

- 1.1.10 The L_{eq} is defined as the equivalent continuous sound level and is the most widely used parameter for assessing environmental noise. Since this descriptor is a type of average level, it must by definition have an associated time period over which the measurement is referring to. This is often included in the abbreviation in the form $L_{eq,T}$, where T is the time period (i.e. $L_{Aeq,5 \text{ min}}$). The formula for calculating the L_{eq} is:

$$L_{eq} = 10 \log_{10} \left(\frac{1}{t_2 - t_1} \int_{t_1}^{t_2} \frac{p^2}{p_{ref}^2} \cdot dt \right)$$

- 1.1.11 In practice, since most modern sound level meters are digital and hence take periodic samples of the sound pressure level, the L_{eq} will be the logarithmic average of all the SPL samples taken in the measurement period.

L_{max}

- 1.1.12 The L_{max} is defined as the maximum rms level recorded during a measurement period.

L_n

- 1.1.13 The L_n is a statistical descriptor and refers to the level that is exceeded for n% of the time during a particular measurement period. Again, the measurement period that the descriptor refers to is often included in the abbreviation in the format L_n, T . Two of the most commonly used statistical descriptors used for environmental noise assessments are the L_{90} and the L_{10} . These are described in more detail below.

L_{10}

- 1.1.14 The L_{10} refers to the level exceeded for 10% of the measurement period and is commonly used in assessing road traffic noise as it has been found to give a good indication of the subjective human response to this type of noise.

L_{90}

- 1.1.15 The L_{90} refers to the level exceeded for 90% of the measurement period and is widely considered to represent background sound levels, or the underlying sound in an area between noisy events (such as cars passing etc.).

Free-Field

- 1.1.16 The term Free-Field refers to sound levels that have been measured or predicted in the absence of any influence of reflections from nearby surfaces. In practice, a measurement is considered to be free-field if it was taken at a distance of over 3.5 m from any reflecting surfaces.

Façade Level

- 1.1.17 Façade levels refer to levels taken at a distance of between 1 and 3.5 m of the façade of a building. The difference between the façade and free-field level will depend on the distance from the reflecting surface, but is generally accepted to be approximately 2.5 dB(A).

L_{night}

- 1.1.18 The L_{night} is a façade noise index derived from the $L_{A10,18h}$ index using TRL conversion method.

$L_{\text{night,outside}}$

- 1.1.19 The $L_{\text{night,outside}}$ is defined as the free-field A-weighted long-term average sound level of the 8-hour night-time period determined over all nights of a year outside a property.

A14.2: Baseline Noise Monitoring Results

1 Introduction

- 1.1.1 This appendix details the results of the baseline noise monitoring undertaken for the proposed scheme. The noise survey was undertaken to provide a basis for the validation of noise modelling undertaken for the Do Minimum situation in the baseline year and to indicate the existing noise climate at representative noise sensitive receptors.
- 1.1.2 Measurements were undertaken at seven locations, using class 1 sound level meters (Cirrus 811B). At five of the locations monitoring was undertaken to the Calculation of Road Traffic Noise 1988 (CRTN) shortened measurement procedure. Longer term noise monitoring over a two day period was undertaken at the remaining two locations.
- 1.1.3 At each noise monitoring location the instrument was set up in a free field location at a height of approximately 1.5m above ground level. Instrumentation was calibrated at the start of each survey and checked at the end. There were no significant changes in calibration.

2 Monitoring Results

ST1 - Green Space opposite 3 Logie Terrace

- 2.1.1 During the survey, noise sources noted included, road traffic, helicopter movements, a dog barking, power washers, and an ambulance siren. Weather conditions were dry, cloudy with a light wind. Weather conditions were dry, overcast with a light wind.

Table 1: Noise Monitoring Results – Green space opp. 3 Logie Terrace (Thursday 25 September 2014)

Period	Measured Noise Level dB				
	L _{Aeq}	L _{Amax}	L _{A1}	L _{A10}	L _{A90}
14:00 – 15:00	58.9	77.1	67.4	62.2	48.9
15:00 – 16:00	58.7	76.7	67.8	62.3	48.6
16:00 – 17:00	61.1	79.9	70.5	63.8	51.9
Averaged Day Levels	60	78	68	63	50
18-hr L_{A10}	-	-	-	62	-

- 1) 15-minute period between 16:15 and 16:30 affected by member of public shouting into microphone. This period has been omitted from the averages presented within the table.

- 2.1.2 With the measurement between 16:15 and 16:30 omitted, measured noise levels were reasonably consistent over the period of the noise survey, with LA10 noise levels varying between 62 and 64 dB.

ST2 - Grass verge opposite 548 Clifton Road

- 2.1.3 During the survey, noise sources noted included, road traffic noise, aeroplane and helicopter movements, sirens, and children playing. Weather conditions were dry, overcast, and slight to moderate winds with gusts.

Table 2: Noise Monitoring Results – Grass verge opp. 548 Clifton Road (Friday 26 September 2014)

Period	Measured Noise Level dB				
	L _{Aeq}	L _{Amax}	L _{A1}	L _{A10}	L _{A90}
13:30 – 14:30	58.8	75.4	68.8	61.4	52.4
14:30 – 15:30	60.0	75.2	70.1	63.7	52.3
15:30 – 16:30	58.4	73.7	69.1	62.1	50.8
Averaged Day Levels	59	75	69	62	52

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Period	Measured Noise Level dB				
	L _{Aeq}	L _{Amax}	L _{A1}	L _{A10}	L _{A90}
18-hr L _{A10}	-	-	-	61	-

1) 15-minute period between 15:30 and 15:45 affected by children shouting close to microphone. This period has been omitted from the averages presented within the table.

2.1.4 With the measurement between 15:30 and 15:45 omitted, measured noise levels were reasonably consistent for the periods monitored, with LA10 noise levels varying between 61 and 64 dB.

ST3 – 51 Manor Avenue

2.1.5 During the survey, noise sources noted included, road traffic noise from light traffic on Manor Avenue, though this did not dominate the acoustic environment. Additional sources included grass cutting, aeroplane and helicopter movements and a dog barking. Weather conditions were dry, overcast with a moderate wind.

Table 3: Noise Monitoring Results – 49/ 51 Manor Avenue (Wednesday 24 September 2014)

Period	Measured Noise Level dB				
	L _{Aeq}	L _{Amax}	L _{A1}	L _{A10}	L _{A90}
13:58 – 14:58	60.2	74.3	69.8	64.3	51.2
14:58 – 15:58	61.4	74.5	70.3	66.2	51.0
15:58 – 16:58	62.5	75.4	70.7	66.8	50.9
Averaged Day Levels	61	75	70	66	51
18-hr L _{A10}	-	-	-	65	-

2.1.6 Measured noise levels were reasonably consistent for the periods monitored, with LA10 noise levels varying between 64 and 67 dB.

ST4 - Grass Verge opposite Logie Place, between 10 and 16 Logie Avenue

2.1.7 During the survey steady traffic on the A90 (east of the monitoring location) was observed and was considered fairly dominant throughout the survey. Additional sources included aeroplane and helicopter movements, people talking and a dog barking. Weather conditions were dry, cloudy with a light wind and moderate gusts.

Table 4: Noise Monitoring Results – Grass verge opp. Logie Place (Friday 26 September 2014)

Period	Measured Noise Level dB				
	L _{Aeq}	L _{Amax}	L _{A1}	L _{A10}	L _{A90}
10:00 – 11:00	56.1	76.2	63.1	57.5	52.0
11:00 – 12:00	55.2	73.7	61.7	57.5	51.6
12:00 – 13:00	56.5	71.4	64.8	57.8	51.9
Averaged Day Levels	56	74	63	58	52
18-hr L _{A10}	-	-	-	57	-

1) Two 15-minute periods between 10:45 and 11:00, and 11:15 and 11:30, were affected by the microphone blowing over due to a strong gust of wind and voices of nearby members of the public.

2.1.8 With the measurements between 10:45 and 11:00 and 11:15 and 11:30 omitted, measured noise levels were consistent for the periods monitored and there was little variation in the LA10 noise levels recorded.

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ST5 - Centre of grass verge on Logie Gardens

2.1.9 During the survey, noise sources noted included, road traffic noise was audible but not a dominant source of noise, airplane and helicopter movements were audible, as were distant sirens, a refuse collection vehicle, crow calling, idle car, and birdsong. Weather conditions were overcast and dry.

Table 5: Noise Monitoring Results – Centre of grass verge on Logie Gardens (Thursday 25 September 2014)

Period	Measured Noise Level dB				
	L _{Aeq}	L _{Amax}	L _{A1}	L _{A10}	L _{A90}
10:00 – 11:00	54.7	72.5	63.5	55.7	49.8
11:00 – 12:00	50.9	67.7	58.2	53.0	46.9
12:00 – 13:00	51.2	69.7	57.8	53.0	47.7
Averaged Day Levels	53	70	60	54	48
18-hr L_{A10}	-	-	-	53	-

1) 15-minute period between 12:15 and 12:30 affected by a car idling close to microphone. This period has been omitted from the averages presented within the table.

2.1.10 With the measurement between 12:15 and 12:30 omitted, measured noise levels were reasonably consistent for the periods monitored, with LA10 noise levels varying between 53 and 56dB.

LT1 - 12 Manor Drive

2.1.11 Local road traffic noise, and distant road traffic noise from the A90 and A96, dominated at this monitoring location. Weather conditions were dry and overcast, with slight to moderate wind.

Table 6: Noise Monitoring Results – 12 Manor Drive (Wednesday 24 to Friday 26 September 2014)

Period	Measured Noise Level dB				
	L _{Aeq}	L _{Amax}	L _{A1}	L _{A10}	L _{A90}
Weekday Averages					
Day (07:00 – 19:00)	55	77	63	54	44
Evening (19:00 – 23:00)	50	73	59	50	39
Night (23:00 – 7:00)	46	66	52	43	33
18-hr (06:00 – 00:00)	-	-	-	52	-
Wednesday 24 September 2014					
13:29 – 14:00	54.9	85.5	60.8	53.1	45.8
14:00 – 15:00	54.7	80.9	63.4	53.8	45.3
15:00 – 16:00	51.8	77.1	61.0	53.5	44.3
16:00 – 17:00	51.2	74.4	60.4	53.5	43.4
17:00 – 18:00	52.9	77.4	61.1	53.1	42.3
18:00 – 19:00	51.3	75.4	61.3	52.7	42.6
19:00 – 20:00	49.3	71.2	59.4	51.0	41.9
20:00 – 21:00	47.9	67.9	58.5	50.0	39.6
21:00 – 22:00	45.8	66.7	56.0	48.5	37.7
22:00 – 23:00	44.2	69.1	54.5	45.3	35.8
23:00 – 00:00	40.6	67.1	51.6	40.7	31.4
Thursday 25 September 2014					
00:00 – 01:00	37.4	63.6	47.7	36.3	29.6
01:00 – 02:00	39.0	62.9	46.7	41.0	30.2
02:00 – 03:00	34.4	57.4	43.5	35.8	28.6
03:00 – 04:00	39.1	61.4	50.5	39.6	29.8
04:00 – 05:00	41.3	59.7	52.0	43.0	33.2

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Period	Measured Noise Level dB				
	L _{Aeq}	L _{Amax}	L _{A1}	L _{A10}	L _{A90}
05:00 – 06:00	46.3	71.5	56.4	48.4	37.3
06:00 – 07:00	53.9	79.7	62.7	53.6	42.9
07:00 – 08:00	60.6	81.6	73.8	60.6	47.6
08:00 – 09:00	59.3	78.8	68.1	62.1	48.2
09:00 – 10:00	54.6	79.4	65.0	55.3	45.6
10:00 – 11:00	56.8	85.1	66.5	54.9	43.9
11:00 – 12:00	49.4	65.8	59.2	52.9	40.5
12:00 – 13:00	50.8	74.1	60.9	52.3	40.2
13:00 – 14:00	55.9	82.1	62.9	54.1	39.5
14:00 – 15:00	49.7	66.6	57.7	52.7	42.3
15:00 – 16:00	51.3	78.1	60.6	52.2	39.8
16:00 – 17:00	55.5	81.6	68.2	54.8	42.7
17:00 – 18:00	54.3	79.8	62.1	52.8	42.1
18:00 – 19:00	56.4	83.7	68.4	56.4	42.9
19:00 – 20:00	53.3	74.3	62.7	55.4	42.7
20:00 – 21:00	51.6	77.5	63.4	52.2	40.5
21:00 – 22:00	50.8	81.0	61.7	49.1	38.6
22:00 – 23:00	44.3	74.2	53.3	44.5	37.4
23:00 – 00:00	40.5	62.1	51.0	41.1	33.5
Friday 26 September 2014					
00:00 – 01:00	37.1	62.9	48.3	35.9	30.1
01:00 – 02:00	42.6	75.6	52.9	43.2	32.6
02:00 – 03:00	42.8	69.0	53.4	44.7	32.6
03:00 – 04:00	39.4	62.7	49.4	40.5	32.0
04:00 – 05:00	41.6	65.5	52.8	42.7	32.2
05:00 – 06:00	46.5	65.9	57.3	48.8	37.0
06:00 – 07:00	50.9	76.2	58.7	53.3	42.5
07:00 – 08:00	53.1	76.1	59.2	54.9	48.4
08:00 – 09:00	51.7	76.6	59.7	53.9	45.5
09:00 – 10:00	52.4	79.9	62.2	53.2	44.8
10:00 – 11:00	51.0	72.0	61.2	53.1	43.6
11:00 – 12:00	50.3	68.1	59.5	53.0	44.1
12:00 – 13:00	55.3	81.8	66.4	53.6	44.6
13:00 – 13:10	52.2	78.4	58.6	52.9	45.3

2.1.12 An average daytime (07:00 – 19:00) LA10 noise level of 54dB was determined for this location with evening (19:00 – 23:00) and night time (23:00 – 07:00) averaged levels of 50dB and 43dB respectively. A level of 52dB LA10 was determined for the 06:00 to midnight 18 hour period.

LT2 - 17 Logie Place

2.1.13 Local road traffic noise, and distant road traffic noise from the A90 and A96, dominated at this monitoring location. Weather conditions were dry, overcast, with slight to moderate wind.

Table 7: Noise Monitoring Results – 17 Logie Place (Wednesday 24 to Friday 26 September 2014)

Period	Measured Noise Level dB				
	L _{Aeq}	L _{Amax}	L _{A1}	L _{A10}	L _{A90}
Weekday Averages					
Day (07:00 – 19:00)	54	76	64	55	47
Evening (19:00 – 23:00)	50	72	59	50	42
Night (23:00 – 7:00)	46	63	52	44	36
18-hr (06:00 – 00:00)	-	-	-	53	-

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Period	Measured Noise Level dB				
	L _{Aeq}	L _{Amax}	L _{A1}	L _{A10}	L _{A90}
Wednesday 24 September 2014					
13:06 – 14:00	55.7	80.2	63.9	60.2	48.3
14:00 – 15:00	53.9	79.6	63.2	53.6	47.1
15:00 – 16:00	51.2	66.9	59.5	53.7	47.1
16:00 – 17:00	51.8	75.9	63.1	52.9	45.8
17:00 – 18:00	52.4	75.4	63.4	53.1	45.0
18:00 – 19:00	52.2	76.0	63.0	53.1	45.4
19:00 – 20:00	50.2	72.1	58.1	52.0	46.3
20:00 – 21:00	51.0	71.3	62.1	52.1	44.7
21:00 – 22:00	46.8	70.9	55.6	48.8	42.3
22:00 – 23:00	45.8	69.3	54.2	47.3	40.4
23:00 – 00:00	43.6	70.5	52.7	43.2	35.1
Thursday 25 September 2014					
00:00 – 01:00	38.4	56.4	45.9	40.5	31.9
01:00 – 02:00	37.9	52.1	45.4	39.6	32.7
02:00 – 03:00	36.6	58.3	46.9	37.0	28.7
03:00 – 04:00	37.9	59.5	47.6	39.7	30.1
04:00 – 05:00	40.1	60.7	49.0	41.4	33.3
05:00 – 06:00	45.0	69.3	55.5	46.4	37.3
06:00 – 07:00	53.2	77.7	63.5	52.5	44.5
07:00 – 08:00	60.4	79.8	72.9	61.8	50.3
08:00 – 09:00	56.1	77.5	68.0	56.5	48.9
09:00 – 10:00	54.2	77.5	64.9	54.9	47.4
10:00 – 11:00	57.5	81.4	66.2	61.1	48.2
11:00 – 12:00	52.9	73.4	63.6	55.5	44.9
12:00 – 13:00	50.1	72.7	59.6	51.1	43.8
13:00 – 14:00	54.4	78.3	65.2	51.2	43.3
14:00 – 15:00	49.7	72.6	59.8	51.9	43.0
15:00 – 16:00	51.9	77.2	63.0	52.1	43.7
16:00 – 17:00	54.3	76.2	67.2	54.1	45.6
17:00 – 18:00	56.3	87.8	62.4	52.1	44.0
18:00 – 19:00	52.2	72.1	63.6	54.6	43.8
19:00 – 20:00	51.6	75.9	62.6	52.2	43.4
20:00 – 21:00	50.8	74.2	61.9	52.4	42.7
21:00 – 22:00	50.8	78.1	61.7	47.5	39.8
22:00 – 23:00	43.3	62.6	51.8	45.7	38.0
23:00 – 00:00	42.2	62.9	51.3	44.4	35.8
Friday 26 September 2014					
00:00 – 01:00	37.2	58.8	45.7	39.1	32.0
01:00 – 02:00	44.0	66.4	54.4	46.7	35.5
02:00 – 03:00	46.5	63.7	55.9	49.7	37.2
03:00 – 04:00	42.4	60.0	52.3	45.5	35.0
04:00 – 05:00	41.5	65.2	50.2	44.3	34.5
05:00 – 06:00	45.1	59.3	52.3	47.3	39.7
06:00 – 07:00	50.8	63.0	56.8	53.4	46.1
07:00 – 08:00	53.5	73.0	61.1	55.0	50.7
08:00 – 09:00	53.3	76.6	61.9	55.0	48.9
09:00 – 10:00	52.9	74.6	62.5	53.8	48.0
10:00 – 11:00	52.9	77.6	64.1	53.2	47.2
11:00 – 12:00	54.4	74.5	63.4	57.1	48.6
12:00 – 12:54	53.4	75.9	64.2	53.6	47.9

2.1.14 An average daytime (07:00 – 19:00) LA10 noise level of 55dB was determined for this location with evening (19:00 – 23:00) and night time (23:00 – 07:00) averaged levels of 50dB and 44dB respectively. A level of 53dB LA10 was determined for the 06:00 to midnight 18 hour period.

A14.3: Assumed Construction Plant and Scenarios

1 Introduction

1.1.1 This appendix provides information on likely construction scenarios. The Noise and Vibration chapter considered three construction scenarios, which were selected as worst-case examples of noise and vibration construction impacts likely to result from the proposed scheme.

2 Scenarios

2.1.1 The construction scenarios modelled as part of the assessment include:

- Demolition.
- Earthworks and drainage.
- Piling.

2.1.2 A principal construction contractor had not been appointed at the time of undertaking this assessment. As such, a number of assumptions on likely construction activities and plant were made. The source data used within the models is shown in Table 1, while details of the scenarios are shown in Table 2.

Table 1: Sound Power Level Data Used Within Construction Noise Models

Name of Plant Item or Noise Source	OBCF Noise Level (Hz), dB										Source
	32	63	125	250	500	1k	2k	4k	8k	dBA	
Demolition											
Breaker mounted on wheeled backhoe	-	107	110	109	110	114	114	114	113	120.5	BS5228-1, Table C.1.1
Wheeled backhoe loader	-	102	94	92	92	91	88	87	78	95.9	BS5228-1, Table C.2.8
Tracked excavator (205 kW / 40T)	-	109	108	108	111	110	107	104	101	114.4	BS5228-1, Table C 1.13
Wheeled excavator (90 kW / 18T)	-	92	88	91	92	90	85	79	73	94.0	BS5228-1, Table C 4.10
Skips being collected and dropped off (i.e. 1 complete trip)	62	70	72	79	86	93	92	82	71	96.3	Measured source data
Skip wagon ¹⁾	-	110	112	106	103	99	98	93	87	105.8	BS5228-1, Table C8.21
Hand-held circular saw (petrol) cutting concrete slabs (3kW/ 300mm diameter/ 9.2 kg)	-	112	114	106	106	105	106	110	108	114.6	BS5228-1, Table C5.36
Groundworks and Drainage											
Tracked excavator (205 kW / 40T)	-	109	108	108	111	110	107	104	101	114.4	BS5228-1, Table C 1.13
Wheeled excavator (90 kW / 18T)	-	92	88	91	92	90	85	79	73	94.0	BS5228-1, Table C 4.10
Tracked excavator (102 kW / 22T)	-	108	111	104	101	100	98	97	94	105.9	BS5228-1, Table C 2.3
Articulated dump truck (187 kW / 23T) ¹⁾	-	113	115	105	103	104	101	97	90	108.5	BS5228-1, Table C 2.33

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Name of Plant Item or Noise Source	OBCF Noise Level (Hz), dB										Source
	32	63	125	250	500	1k	2k	4k	8k	dBA	
Articulated dump truck (187 kW / 23T) tipping fill	-	108	104	101	98	97	94	91	86	102.0	BS5228-1, Table C2.32
Site dumpers (81kW / 7T) ¹⁾	-	112	109	102	101	100	96	89	81	104.3	BS5228-1, Table C 4.3
Site Dumper (75kW / 9T) idling	-	101	92	83	83	88	84	78	71	90.9	BS5228-1, Table C4.5
Vibratory Roller (Trench compactor (12kW / 1.5T))	-	110	108	104	101	98	98	91	87	104.5	BS5228-1, Table C 5.28
Piling											
Vibratory piling rig, sheet steel piling (52T)	-	111	110	107	110	112	110	105	95	115.9	BS5228-1 Table C.3.8
Piling rig power pack	-	108	103	97	95	89	83	77	71	96.0	BS5228-1 Table C.3.10

1) A weighted Octave Band Spectrum, drive-by maximum sound level

OBCF Octave Band Centre Frequency

Table 2: Sources Included Within Construction Modelling Scenarios

Name of Plant Item or Noise Source	L _{wa}	% on-site	No.
Demolition			
Breaker Mounted on a Wheeled backhoe	120.5	80	2
Hand-held circular saw (petrol) (3kW/ 300mm diameter/ 9.2 kg)	114.6	40	6
Skip dropping and collecting	96.3	18 ²⁾	1
Wheeled excavator (90 kW/ 18T)	94.0	80	4
Tracked excavator (205 kW/ 40T)	114.4	80	4
Wheeled backhoe loader	95.9	80	2
Skip wagon on haul route ¹⁾	105.8	6 movements per hour per vehicle	1
Groundworks and Drainage			
Articulated dump truck (187 kW / 23T) tipping fill	102.0	50	2
Site Dumper (75kW / 9T) idling	90.9	50	1
Tracked excavator (102 kW / 22T)	105.9	80	1
Tracked excavator (205 kW / 40T)	114.4	80	3
Vibratory Roller (Trench compactor (12kW / 1.5T))	104.5	80	1
Wheeled excavator (90 kW / 18T)	94.0	80	1
Articulated dump trucks (187 kW / 23T) ¹⁾	108.5	6 circuits per hour per vehicle	2
Site dumper (81kW / 7T) ¹⁾	104.3	6 circuits per hour per vehicle	1
Piling			
Vibratory piling rig, sheet steel piling (52T)	115.9	80	1
Piling rig power pack	96.0	80	1

1) Modelled as a moving point source (line source)

2) Proportion of time spent collecting and dropping skips, when assuming a combined drop and collect time of 3.5 minutes (based on observations)

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
1. ALEXANDER DRIVE	Dwelling	46.6	47.3	46.6	0.0	No Change	47.5	0.9	Negligible Adverse	35.7	36.3	36.5
10. ALEXANDER DRIVE	Dwelling	48.0	48.8	47.9	-0.1	Negligible Beneficial	49.0	1.0	Negligible Adverse	36.9	37.7	37.8
11. ALEXANDER DRIVE	Dwelling	47.3	48.0	47.2	-0.1	Negligible Beneficial	48.3	1.0	Negligible Adverse	36.3	36.9	37.2
12. ALEXANDER DRIVE	Dwelling	48.2	49.0	48.1	-0.1	Negligible Beneficial	49.2	1.0	Negligible Adverse	37.1	37.8	38.0
13. ALEXANDER DRIVE	Dwelling	48.2	48.9	48.2	0.0	No Change	49.2	1.0	Negligible Adverse	37.1	37.7	38.0
14. ALEXANDER DRIVE	Dwelling	48.8	49.6	48.7	-0.1	Negligible Beneficial	49.8	1.0	Negligible Adverse	37.7	38.4	38.6
15. ALEXANDER DRIVE	Dwelling	47.8	48.5	47.7	-0.1	Negligible Beneficial	48.6	0.8	Negligible Adverse	36.8	37.4	37.5
16. ALEXANDER DRIVE	Dwelling	48.5	49.4	48.4	-0.1	Negligible Beneficial	49.5	1.0	Negligible Adverse	37.4	38.2	38.3
17. ALEXANDER DRIVE	Dwelling	47.6	48.4	47.6	0.0	No Change	48.5	0.9	Negligible Adverse	36.6	37.3	37.4
18. ALEXANDER DRIVE	Dwelling	48.5	49.4	48.3	-0.2	Negligible Beneficial	49.5	1.0	Negligible Adverse	37.4	38.2	38.3
19. ALEXANDER DRIVE	Dwelling	47.6	48.4	47.5	-0.1	Negligible Beneficial	48.5	0.9	Negligible Adverse	36.6	37.3	37.4
2. ALEXANDER DRIVE	Dwelling	47.4	48.2	47.3	-0.1	Negligible Beneficial	48.4	1.0	Negligible Adverse	36.4	37.1	37.3
20. ALEXANDER DRIVE	Dwelling	48.6	49.5	48.5	-0.1	Negligible Beneficial	49.6	1.0	Negligible Adverse	37.5	38.3	38.4
21. ALEXANDER DRIVE	Dwelling	47.7	48.5	47.6	-0.1	Negligible Beneficial	48.5	0.8	Negligible Adverse	36.7	37.4	37.4
22. ALEXANDER DRIVE	Dwelling	48.9	49.8	48.7	-0.2	Negligible Beneficial	49.8	0.9	Negligible Adverse	37.7	38.6	38.6
23. ALEXANDER DRIVE	Dwelling	48.4	49.6	48.2	-0.2	Negligible Beneficial	49.5	1.1	Negligible Adverse	37.3	38.4	38.3
24. ALEXANDER DRIVE	Dwelling	49.2	50.3	49.1	-0.1	Negligible Beneficial	50.2	1.0	Negligible Adverse	38.0	39.0	38.9
25. ALEXANDER DRIVE	Dwelling	48.6	49.8	48.4	-0.2	Negligible Beneficial	49.6	1.0	Negligible Adverse	37.5	38.6	38.4
26. ALEXANDER DRIVE	Dwelling	48.0	49.3	47.8	-0.2	Negligible Beneficial	49.1	1.1	Negligible Adverse	36.9	38.1	37.9
27. ALEXANDER DRIVE	Dwelling	46.5	47.7	46.4	-0.1	Negligible Beneficial	47.6	1.1	Negligible Adverse	35.6	36.7	36.6
28. ALEXANDER DRIVE	Dwelling	47.9	49.2	47.7	-0.2	Negligible Beneficial	49.0	1.1	Negligible Adverse	36.8	38.0	37.8
29. ALEXANDER DRIVE	Dwelling	46.3	47.6	46.1	-0.2	Negligible Beneficial	47.3	1.0	Negligible Adverse	35.4	36.6	36.3
3. ALEXANDER DRIVE	Dwelling	46.8	47.4	46.7	-0.1	Negligible Beneficial	47.7	0.9	Negligible Adverse	35.9	36.4	36.7
30. ALEXANDER DRIVE	Dwelling	48.0	49.4	47.8	-0.2	Negligible Beneficial	49.2	1.2	Negligible Adverse	36.9	38.2	38.0
31. ALEXANDER DRIVE	Dwelling	47.3	48.5	47.1	-0.2	Negligible Beneficial	48.4	1.1	Negligible Adverse	36.3	37.4	37.3
32. ALEXANDER DRIVE	Dwelling	48.5	49.8	48.2	-0.3	Negligible Beneficial	49.3	1.1	Negligible Adverse	37.4	38.6	38.4
33. ALEXANDER DRIVE	Dwelling	47.4	49.0	47.0	-0.4	Negligible Beneficial	48.7	1.3	Negligible Adverse	36.4	37.8	37.6
34. ALEXANDER DRIVE	Dwelling	48.7	50.1	48.5	-0.2	Negligible Beneficial	49.9	1.2	Negligible Adverse	37.6	38.8	38.6
35. ALEXANDER DRIVE	Dwelling	46.2	48.2	45.5	-0.7	Negligible Beneficial	47.7	1.5	Negligible Adverse	35.3	37.1	36.7
36. ALEXANDER DRIVE	Dwelling	48.1	49.8	47.7	-0.4	Negligible Beneficial	49.4	1.3	Negligible Adverse	37.0	38.6	38.2
37. ALEXANDER DRIVE	Dwelling	46.2	48.2	45.5	-0.7	Negligible Beneficial	47.7	1.5	Negligible Adverse	35.3	37.1	36.7
38. ALEXANDER DRIVE	Dwelling	48.2	50.0	47.7	-0.5	Negligible Beneficial	49.5	1.3	Negligible Adverse	37.1	38.7	38.3
39. ALEXANDER DRIVE	Dwelling	46.2	48.2	45.5	-0.7	Negligible Beneficial	47.7	1.5	Negligible Adverse	35.3	37.1	36.7
4. ALEXANDER DRIVE	Dwelling	47.5	48.4	47.5	0.0	No Change	48.6	1.1	Negligible Adverse	36.5	37.3	37.5
40. ALEXANDER DRIVE	Dwelling	48.1	50.1	47.5	-0.6	Negligible Beneficial	49.5	1.4	Negligible Adverse	37.0	38.8	38.3
41. ALEXANDER DRIVE	Dwelling	46.2	48.2	45.5	-0.7	Negligible Beneficial	47.7	1.5	Negligible Adverse	35.3	37.1	36.7
42. ALEXANDER DRIVE	Dwelling	48.9	50.8	48.3	-0.6	Negligible Beneficial	50.2	1.3	Negligible Adverse	37.7	39.5	38.9
43. ALEXANDER DRIVE	Dwelling	46.2	48.2	45.5	-0.7	Negligible Beneficial	47.7	1.5	Negligible Adverse	35.3	37.1	36.7
44. ALEXANDER DRIVE	Dwelling	49.4	51.2	48.8	-0.6	Negligible Beneficial	50.7	1.3	Negligible Adverse	38.2	39.8	39.4
45. ALEXANDER DRIVE	Dwelling	48.2	49.2	48.2	-0.7	Negligible Beneficial	47.7	1.5	Negligible Adverse	37.1	38.3	37.1
46. ALEXANDER DRIVE	Dwelling	55.1	57.2	54.1	-1.0	Minor Beneficial	56.6	1.5	Negligible Adverse	43.3	45.2	44.7
47. ALEXANDER DRIVE	Dwelling	46.2	48.2	45.5	-0.7	Negligible Beneficial	47.7	1.5	Negligible Adverse	35.3	37.1	36.7
48. ALEXANDER DRIVE	Dwelling	54.9	57.3	53.6	-1.3	Minor Beneficial	56.5	1.6	Negligible Adverse	43.1	45.3	44.6
49. ALEXANDER DRIVE	Dwelling	46.2	48.2	45.5	-0.7	Negligible Beneficial	47.7	1.5	Negligible Adverse	35.3	37.1	36.7
5. ALEXANDER DRIVE	Dwelling	46.2	47.0	46.2	0.0	No Change	47.2	1.0	Negligible Adverse	35.3	36.0	36.2
50. ALEXANDER DRIVE	Dwelling	55.0	57.6	53.7	-1.3	Minor Beneficial	56.7	1.7	Negligible Adverse	43.2	45.6	44.8
51. ALEXANDER DRIVE	Dwelling	44.7	46.5	44.2	-0.5	Negligible Beneficial	46.0	1.3	Negligible Adverse	34.0	35.6	35.1
52. ALEXANDER DRIVE	Dwelling	55.3	58.0	53.9	-1.4	Minor Beneficial	57.1	1.8	Negligible Adverse	43.5	45.9	45.1
53. ALEXANDER DRIVE	Dwelling	44.7	46.5	44.2	-0.5	Negligible Beneficial	46.0	1.3	Negligible Adverse	34.0	35.6	35.1
54. ALEXANDER DRIVE	Dwelling	55.4	58.2	54.0	-1.4	Minor Beneficial	57.3	1.9	Negligible Adverse	43.6	46.1	45.3
55. ALEXANDER DRIVE	Dwelling	44.7	46.5	44.2	-0.5	Negligible Beneficial	46.0	1.3	Negligible Adverse	34.0	35.6	35.1
56. ALEXANDER DRIVE	Dwelling	55.9	58.8	54.3	-1.6	Minor Beneficial	57.8	1.9	Negligible Adverse	44.0	46.7	45.8
57. ALEXANDER DRIVE	Dwelling	44.7	46.5	44.2	-0.5	Negligible Beneficial	46.0	1.3	Negligible Adverse	34.0	35.6	35.1
58. ALEXANDER DRIVE	Dwelling	55.6	58.0	54.0	-1.6	Minor Beneficial	57.6	2.0	Negligible Adverse	43.8	46.4	45.6
59. ALEXANDER DRIVE	Dwelling	44.7	46.5	44.2	-0.5	Negligible Beneficial	46.0	1.3	Negligible Adverse	34.0	35.6	35.1
6. ALEXANDER DRIVE	Dwelling	47.9	48.7	47.8	-0.1	Negligible Beneficial	48.9	1.0	Negligible Adverse	36.8	37.6	37.7
60. ALEXANDER DRIVE	Dwelling	52.3	55.1	50.8	-1.5	Minor Beneficial	54.3	2.0	Negligible Adverse	40.8	43.3	42.6
61. ALEXANDER DRIVE	Dwelling	44.7	46.5	44.2	-0.5	Negligible Beneficial	46.0	1.3	Negligible Adverse	34.0	35.6	35.1
62. ALEXANDER DRIVE	Dwelling	49.8	52.2	48.7	-1.1	Minor Beneficial	51.5	1.7	Negligible Adverse	38.6	40.7	40.1
63. ALEXANDER DRIVE	Dwelling	44.7	46.5	44.2	-0.5	Negligible Beneficial	46.0	1.3	Negligible Adverse	34.0	35.6	35.1
64. ALEXANDER DRIVE	Dwelling	51.1	53.7	49.8	-1.3	Minor Beneficial	53.0	1.9	Negligible Adverse	39.7	42.1	41.4
65. ALEXANDER DRIVE	Dwelling	44.7	46.5	44.2	-0.5	Negligible Beneficial	46.0	1.3	Negligible Adverse	34.0	35.6	35.1
67. ALEXANDER DRIVE	Dwelling	43.8	45.3	43.4	-0.4	Negligible Beneficial	45.0	1.2	Negligible Adverse	33.2	34.5	34.2
69. ALEXANDER DRIVE	Dwelling	43.8	45.3	43.4	-0.4	Negligible Beneficial	45.0	1.2	Negligible Adverse	33.2	34.5	34.2
7. ALEXANDER DRIVE	Dwelling	46.7	47.4	46.7	0.0	No Change	47.7	1.0	Negligible Adverse	35.8	36.4	36.7
71. ALEXANDER DRIVE	Dwelling	43.8	45.3	43.4	-0.4	Negligible Beneficial	45.0	1.2	Negligible Adverse	33.2	34.5	34.2
73. ALEXANDER DRIVE	Dwelling	43.8	45.3	43.4	-0.4	Negligible Beneficial	45.0	1.2	Negligible Adverse	33.2	34.5	34.2
75. ALEXANDER DRIVE	Dwelling	43.8	45.3	43.4	-0.4	Negligible Beneficial	45.0	1.2	Negligible Adverse	33.2	34.5	34.2
77. ALEXANDER DRIVE	Dwelling	43.8	45.3	43.4	-0.4	Negligible Beneficial	45.0	1.2	Negligible Adverse	33.2	34.5	34.2
79. ALEXANDER DRIVE	Dwelling	43.8	45.3	43.4	-0.4	Negligible Beneficial	45.0	1.2	Negligible Adverse	33.2	34.5	34.2
8. ALEXANDER DRIVE	Dwelling	47.8	48.6	47.7	-0.1	Negligible Beneficial	48.8	1.0	Negligible Adverse	36.8	37.5	37.7
81. ALEXANDER DRIVE	Dwelling	43.8	45.3	43.4	-0.4	Negligible Beneficial	45.0	1.2	Negligible Adverse	33.2	34.5	34.2
83. ALEXANDER DRIVE	Dwelling	43.9	45.6	43.5	-0.4	Negligible Beneficial	45.1	1.2	Negligible Adverse	33.2	34.8	34.3
85. ALEXANDER DRIVE	Dwelling	43.9	45.6	43.5	-0.4	Negligible Beneficial	45.1	1.2	Negligible Adverse	33.2	34.8	34.3
87. ALEXANDER DRIVE	Dwelling	43.9	45.6	43.5	-0.4	Negligible Beneficial	45.1	1.2	Negligible Adverse	33.2	34.8	34.3
89. ALEXANDER DRIVE	Dwelling	43.9	45.6	43.5	-0.4	Negligible Beneficial	45.1	1.2	Negligible Adverse	33.2	34.8	34.3
9. ALEXANDER DRIVE	Dwelling	46.3	47.1	46.2	-0.1	Negligible Beneficial	47.2	0.9	Negligible Adverse	35.4	36.1	36.2
91. ALEXANDER DRIVE	Dwelling	43.9	45.6	43.5	-0.4	Negligible Beneficial	45.1	1.2	Negligible Adverse	33.2	34.8	34.3
93. ALEXANDER DRIVE	Dwelling	43.9	45.6	43.5	-0.4	Negligible Beneficial	45.1	1.2	Negligible Adverse	33.2	34.8	34.3
95. ALEXANDER DRIVE	Dwelling	43.9	45.6	43.5	-0.4	Negligible Beneficial	45.1	1.2	Negligible Adverse	33.2	34.8	34.3
97. ALEXANDER DRIVE	Dwelling	43.9	45.6	43.5	-0.4	Negligible Beneficial	45.1	1.2	Negligible Adverse	33.2	34.8	34.3
FLAT A. 2. ALEXANDER TERRACE, HAYTON	Dwelling	44.8	46.4	44.4	-0.4	Negligible Beneficial	46.0	1.2	Negligible Adverse	34.1	35.5	35.1
FLAT B. 2. ALEXANDER TERRACE, HAYTON	Dwelling	44.8	46.4	44.4	-0.4	Negligible Beneficial	46.0	1.2	Negligible Adverse	34.1	35.5	35.1

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
FLAT B, 22, ALEXANDER TERRACE, HAYTON	Dwelling	46.1	47.0	46.2	0.1	Negligible Adverse	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
FLAT C, 22, ALEXANDER TERRACE, HAYTON	Dwelling	46.1	47.0	46.2	0.1	Negligible Adverse	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
FLAT D, 22, ALEXANDER TERRACE, HAYTON	Dwelling	46.1	47.0	46.2	0.1	Negligible Adverse	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
FLAT E, 22, ALEXANDER TERRACE, HAYTON	Dwelling	46.1	47.0	46.2	0.1	Negligible Adverse	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
FLAT F, 22, ALEXANDER TERRACE, HAYTON	Dwelling	46.1	47.0	46.2	0.1	Negligible Adverse	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
FLAT A, 24, ALEXANDER TERRACE, HAYTON	Dwelling	45.9	46.7	46.0	0.1	Negligible Adverse	46.6	0.7	Negligible Adverse	35.0	35.8	35.7
FLAT B, 24, ALEXANDER TERRACE, HAYTON	Dwelling	45.9	46.7	46.0	0.1	Negligible Adverse	46.6	0.7	Negligible Adverse	35.0	35.8	35.7
FLAT C, 24, ALEXANDER TERRACE, HAYTON	Dwelling	45.9	46.7	46.0	0.1	Negligible Adverse	46.6	0.7	Negligible Adverse	35.0	35.8	35.7
FLAT D, 24, ALEXANDER TERRACE, HAYTON	Dwelling	45.9	46.7	46.0	0.1	Negligible Adverse	46.6	0.7	Negligible Adverse	35.0	35.8	35.7
FLAT E, 24, ALEXANDER TERRACE, HAYTON	Dwelling	45.9	46.7	46.0	0.1	Negligible Adverse	46.6	0.7	Negligible Adverse	35.0	35.8	35.7
FLAT F, 24, ALEXANDER TERRACE, HAYTON	Dwelling	45.9	46.7	46.0	0.1	Negligible Adverse	46.6	0.7	Negligible Adverse	35.0	35.8	35.7
WAYSIDE COTTAGE, 2, ANDERSON AVENUE	Dwelling	56.6	59.4	57.5	0.9	Negligible Adverse	60.1	3.5	Minor Adverse	44.7	47.2	47.8
10, ANDERSON AVENUE	Dwelling	48.3	49.9	48.5	0.2	Negligible Adverse	49.9	1.6	Negligible Adverse	37.2	38.6	38.6
100, ANDERSON AVENUE	Dwelling	49.6	50.7	49.6	0.0	No Change	50.6	1.0	Negligible Adverse	38.4	39.4	39.3
101, ANDERSON AVENUE	Dwelling	50.3	51.1	50.3	0.0	No Change	51.1	0.8	Negligible Adverse	39.0	39.7	39.7
103, ANDERSON AVENUE	Dwelling	50.3	51.1	50.3	0.0	No Change	51.1	0.8	Negligible Adverse	39.0	39.7	39.7
11, ANDERSON AVENUE	Dwelling	50.8	52.1	51.0	0.2	Negligible Adverse	52.5	1.7	Negligible Adverse	39.5	40.6	41.0
12, ANDERSON AVENUE	Dwelling	48.3	49.9	48.5	0.2	Negligible Adverse	49.9	1.6	Negligible Adverse	37.2	38.6	38.6
13, ANDERSON AVENUE	Dwelling	50.7	51.9	50.8	0.1	Negligible Adverse	52.2	1.5	Negligible Adverse	39.4	40.4	40.7
14, ANDERSON AVENUE	Dwelling	48.4	49.9	48.6	0.2	Negligible Adverse	49.9	1.5	Negligible Adverse	37.3	38.6	38.6
15, ANDERSON AVENUE	Dwelling	50.7	51.9	50.8	0.1	Negligible Adverse	52.2	1.5	Negligible Adverse	39.4	40.4	40.7
16, ANDERSON AVENUE	Dwelling	48.4	49.9	48.6	0.2	Negligible Adverse	49.9	1.5	Negligible Adverse	37.3	38.6	38.6
17, ANDERSON AVENUE	Dwelling	50.6	51.7	50.7	0.1	Negligible Adverse	52.0	1.4	Negligible Adverse	39.3	40.3	40.5
18, ANDERSON AVENUE	Dwelling	48.9	50.3	49.0	0.1	Negligible Adverse	50.3	1.4	Negligible Adverse	37.7	39.0	39.0
19, ANDERSON AVENUE	Dwelling	50.6	51.7	50.7	0.1	Negligible Adverse	52.0	1.4	Negligible Adverse	39.3	40.3	40.5
20, ANDERSON AVENUE	Dwelling	50.3	51.4	50.3	0.1	Negligible Adverse	51.4	1.1	Negligible Adverse	37.4	39.0	39.0
21, ANDERSON AVENUE	Dwelling	50.0	51.1	50.1	0.1	Negligible Adverse	51.5	1.5	Negligible Adverse	38.7	39.7	40.1
22, ANDERSON AVENUE	Dwelling	49.2	50.6	49.3	0.1	Negligible Adverse	50.5	1.3	Negligible Adverse	38.0	39.3	39.2
23, ANDERSON AVENUE	Dwelling	49.8	51.0	50.0	0.2	Negligible Adverse	51.4	1.6	Negligible Adverse	38.6	39.6	40.0
24, ANDERSON AVENUE	Dwelling	49.2	50.6	49.3	0.1	Negligible Adverse	50.5	1.3	Negligible Adverse	38.0	39.3	39.2
25, ANDERSON AVENUE	Dwelling	48.3	49.6	48.4	0.1	Negligible Adverse	49.7	1.4	Negligible Adverse	37.2	38.4	38.5
26, ANDERSON AVENUE	Dwelling	49.4	50.8	49.5	0.1	Negligible Adverse	50.7	1.3	Negligible Adverse	38.2	39.5	39.4
27, ANDERSON AVENUE	Dwelling	48.3	49.5	48.4	0.1	Negligible Adverse	49.6	1.3	Negligible Adverse	37.2	38.3	38.4
28, ANDERSON AVENUE	Dwelling	49.4	50.8	49.5	0.1	Negligible Adverse	50.7	1.3	Negligible Adverse	38.2	39.5	39.4
29, ANDERSON AVENUE	Dwelling	49.5	50.5	49.5	0.0	No Change	50.7	1.2	Negligible Adverse	38.3	39.2	39.4
30, ANDERSON AVENUE	Dwelling	48.8	50.2	48.8	0.0	No Change	50.0	1.2	Negligible Adverse	37.7	38.9	38.7
31, ANDERSON AVENUE	Dwelling	49.5	50.5	49.5	0.0	No Change	50.7	1.2	Negligible Adverse	38.3	39.2	39.4
32, ANDERSON AVENUE	Dwelling	48.8	50.2	48.8	0.0	No Change	50.0	1.2	Negligible Adverse	37.7	38.9	38.7
33, ANDERSON AVENUE	Dwelling	48.8	50.0	48.9	0.1	Negligible Adverse	50.1	1.3	Negligible Adverse	37.7	38.7	38.8
34, ANDERSON AVENUE	Dwelling	48.5	49.9	48.6	0.1	Negligible Adverse	49.8	1.3	Negligible Adverse	37.4	38.6	38.6
35, ANDERSON AVENUE	Dwelling	48.8	50.0	48.9	0.1	Negligible Adverse	50.1	1.3	Negligible Adverse	37.7	38.7	38.8
36, ANDERSON AVENUE	Dwelling	48.5	49.9	48.5	0.0	No Change	49.7	1.2	Negligible Adverse	37.4	38.6	38.5
37, ANDERSON AVENUE	Dwelling	49.3	50.3	49.3	0.0	No Change	50.4	1.1	Negligible Adverse	38.1	39.0	39.1
38, ANDERSON AVENUE	Dwelling	51.7	53.0	51.8	0.1	Negligible Adverse	52.8	1.1	Negligible Adverse	40.3	41.4	41.3
39, ANDERSON AVENUE	Dwelling	49.3	50.3	49.3	0.0	No Change	50.4	1.1	Negligible Adverse	38.1	39.0	39.1
4, ANDERSON AVENUE	Dwelling	48.5	50.4	48.8	0.3	Negligible Adverse	50.7	2.2	Negligible Adverse	37.4	39.1	39.4
40, ANDERSON AVENUE	Dwelling	51.7	53.0	51.8	0.1	Negligible Adverse	52.8	1.1	Negligible Adverse	40.3	41.4	41.3
41, ANDERSON AVENUE	Dwelling	49.0	50.1	49.1	0.1	Negligible Adverse	50.2	1.2	Negligible Adverse	37.8	38.8	38.9
42, ANDERSON AVENUE	Dwelling	52.7	53.9	52.7	0.0	No Change	53.7	1.0	Negligible Adverse	41.2	42.2	42.1
43, ANDERSON AVENUE	Dwelling	49.1	50.2	49.1	0.0	No Change	50.2	1.1	Negligible Adverse	37.9	38.9	38.9
44, ANDERSON AVENUE	Dwelling	52.6	53.8	52.6	0.0	No Change	53.6	1.0	Negligible Adverse	41.1	42.2	42.0
45, ANDERSON AVENUE	Dwelling	49.1	50.1	49.1	0.0	No Change	50.2	1.1	Negligible Adverse	37.9	38.8	38.9
46, ANDERSON AVENUE	Dwelling	54.4	55.6	54.4	0.0	No Change	55.4	1.0	Negligible Adverse	42.7	43.8	43.6
47, ANDERSON AVENUE	Dwelling	49.1	50.1	49.1	0.0	No Change	50.2	1.1	Negligible Adverse	37.9	38.8	38.9
48, ANDERSON AVENUE	Dwelling	54.4	55.6	54.4	0.0	No Change	55.4	1.0	Negligible Adverse	42.7	43.8	43.6
49, ANDERSON AVENUE	Dwelling	51.0	52.0	51.1	0.1	Negligible Adverse	52.0	1.0	Negligible Adverse	39.6	40.5	40.5
50, ANDERSON AVENUE	Dwelling	55.4	56.6	55.5	0.1	Negligible Adverse	56.4	1.0	Negligible Adverse	43.6	44.7	44.5
51, ANDERSON AVENUE	Dwelling	51.0	52.0	51.1	0.1	Negligible Adverse	52.0	1.0	Negligible Adverse	39.6	40.5	40.5
52, ANDERSON AVENUE	Dwelling	55.4	56.6	55.5	0.1	Negligible Adverse	56.4	1.0	Negligible Adverse	43.6	44.7	44.5
53, ANDERSON AVENUE	Dwelling	51.8	52.8	51.9	0.1	Negligible Adverse	52.8	1.0	Negligible Adverse	40.4	41.3	41.3
54, ANDERSON AVENUE	Dwelling	57.4	58.6	57.5	0.1	Negligible Adverse	58.4	1.0	Negligible Adverse	45.4	46.5	46.3
55, ANDERSON AVENUE	Dwelling	51.9	52.8	51.9	0.0	No Change	52.8	0.9	Negligible Adverse	40.4	41.3	41.3
56, ANDERSON AVENUE	Dwelling	57.4	58.6	57.5	0.1	Negligible Adverse	58.4	1.0	Negligible Adverse	45.4	46.5	46.3
57, ANDERSON AVENUE	Dwelling	53.5	54.4	53.5	0.0	No Change	54.3	0.8	Negligible Adverse	41.9	42.7	42.6
58, ANDERSON AVENUE	Dwelling	59.1	60.3	59.2	0.1	Negligible Adverse	60.1	1.0	Negligible Adverse	46.9	48.0	47.8
59, ANDERSON AVENUE	Dwelling	53.5	54.4	53.5	0.0	No Change	54.3	0.8	Negligible Adverse	41.9	42.7	42.6
6, ANDERSON AVENUE	Dwelling	49.2	49.9	48.5	0.3	Negligible Adverse	50.0	1.8	Negligible Adverse	37.1	38.6	38.7
60, ANDERSON AVENUE	Dwelling	59.2	60.3	59.2	0.1	Negligible Adverse	60.1	1.0	Negligible Adverse	46.9	48.0	47.8
61, ANDERSON AVENUE	Dwelling	54.7	55.8	54.8	0.1	Negligible Adverse	55.6	0.9	Negligible Adverse	43.0	43.8	43.8
62, ANDERSON AVENUE	Dwelling	62.7	63.7	62.8	0.1	Negligible Adverse	63.6	0.9	Negligible Adverse	50.2	51.1	51.0
63, ANDERSON AVENUE	Dwelling	54.7	55.6	54.8	0.1	Negligible Adverse	55.5	0.8	Negligible Adverse	43.0	43.8	43.7
64, ANDERSON AVENUE	Dwelling	62.7	63.7	62.8	0.1	Negligible Adverse	63.6	0.9	Negligible Adverse	50.2	51.1	51.0
65, ANDERSON AVENUE	Dwelling	56.7	57.6	56.7	0.0	No Change	57.5	0.8	Negligible Adverse	44.8	45.6	45.5
66, ANDERSON AVENUE	Dwelling	62.7	63.7	62.8	0.1	Negligible Adverse	63.6	0.9	Negligible Adverse	50.2	51.1	51.0
67, ANDERSON AVENUE	Dwelling	56.7	57.6	56.7	0.0	No Change	57.5	0.8	Negligible Adverse	44.8	45.6	45.5
68, ANDERSON AVENUE	Dwelling	62.7	63.7	62.8	0.1	Negligible Adverse	63.6	0.9	Negligible Adverse	50.2	51.1	51.0
69, ANDERSON AVENUE	Dwelling	58.6	59.5	58.6	0.0	No Change	59.5	0.9	Negligible Adverse	46.5	47.3	47.3
70, ANDERSON AVENUE	Dwelling	58.4	59.5	58.4	0.0	No Change	59.2	0.8	Negligible Adverse	46.3	47.3	47.0
71, ANDERSON AVENUE	Dwelling	58.6	59.5	58.6	0.0	No Change	59.5	0.9	Negligible Adverse	46.5	47.3	47.3
72, ANDERSON AVENUE	Dwelling	58.4	59.5	58.4	0.0	No Change	59.2	0.8	Negligible Adverse	46.3	47.3	47.0
73, ANDERSON AVENUE	Dwelling	63.9	63.9	63.9	0.1	Negligible Adverse	63.8	1.0	Negligible Adverse	50.3	51.2	51.2
74, ANDERSON AVENUE	Dwelling	58.4	59.5	58.4	0.0	No Change	59.2	0.8	Negligible Adverse	46.3	47.3	47.0
75, ANDERSON AVENUE	Dwelling	62.8	63.9	62.9	0.1	Negligible Adverse	63.8	1.0	Negligible Adverse	50.3	51.2	51.2

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
76. ANDERSON AVENUE	Dwelling	58.4	59.5	58.4	0.0	No Change	59.2	0.8	Negligible Adverse	46.3	47.3	47.0
77. ANDERSON AVENUE	Dwelling	62.8	63.9	62.9	0.1	Negligible Adverse	63.8	1.0	Negligible Adverse	50.3	51.2	51.2
78. ANDERSON AVENUE	Dwelling	50.9	52.0	50.8	-0.1	Negligible Beneficial	51.7	0.8	Negligible Adverse	39.5	40.5	40.3
79. ANDERSON AVENUE	Dwelling	62.8	63.9	62.9	0.1	Negligible Adverse	63.8	1.0	Negligible Adverse	50.3	51.2	51.2
8. ANDERSON AVENUE	Dwelling	48.2	49.9	48.5	0.3	Negligible Adverse	50.0	1.8	Negligible Adverse	37.1	38.6	38.7
80. ANDERSON AVENUE	Dwelling	50.9	52.0	50.8	-0.1	Negligible Beneficial	51.7	0.8	Negligible Adverse	39.5	40.5	40.3
81. ANDERSON AVENUE	Dwelling	58.5	59.4	58.5	0.0	No Change	59.2	0.7	Negligible Adverse	46.4	47.2	47.0
82. ANDERSON AVENUE	Dwelling	50.9	52.0	50.8	-0.1	Negligible Beneficial	51.7	0.8	Negligible Adverse	39.5	40.5	40.3
83. ANDERSON AVENUE	Dwelling	58.5	59.4	58.5	0.0	No Change	59.2	0.7	Negligible Adverse	46.4	47.2	47.0
84. ANDERSON AVENUE	Dwelling	50.9	52.0	50.8	-0.1	Negligible Beneficial	51.7	0.8	Negligible Adverse	39.5	40.5	40.3
85. ANDERSON AVENUE	Dwelling	58.5	59.4	58.5	0.0	No Change	59.2	0.7	Negligible Adverse	46.4	47.2	47.0
86. ANDERSON AVENUE	Dwelling	49.8	51.0	49.7	-0.1	Negligible Beneficial	50.7	0.9	Negligible Adverse	38.6	39.6	39.4
87. ANDERSON AVENUE	Dwelling	58.5	59.4	58.5	0.0	No Change	59.2	0.7	Negligible Adverse	46.4	47.2	47.0
88. ANDERSON AVENUE	Dwelling	49.8	51.0	49.7	-0.1	Negligible Beneficial	50.7	0.9	Negligible Adverse	38.6	39.6	39.4
89. ANDERSON AVENUE	Dwelling	51.4	52.1	51.3	-0.1	Negligible Beneficial	52.1	0.7	Negligible Adverse	40.0	40.6	40.6
9. ANDERSON AVENUE	Dwelling	50.8	52.1	51.0	0.2	Negligible Adverse	52.5	1.7	Negligible Adverse	39.5	40.6	41.0
90. ANDERSON AVENUE	Dwelling	49.8	51.0	49.7	-0.1	Negligible Beneficial	50.7	0.9	Negligible Adverse	38.6	39.6	39.4
91. ANDERSON AVENUE	Dwelling	51.4	52.1	51.3	-0.1	Negligible Beneficial	52.1	0.7	Negligible Adverse	40.0	40.6	40.6
92. ANDERSON AVENUE	Dwelling	49.8	51.0	49.7	-0.1	Negligible Beneficial	50.7	0.9	Negligible Adverse	38.6	39.6	39.4
93. ANDERSON AVENUE	Dwelling	51.4	52.1	51.3	-0.1	Negligible Beneficial	52.1	0.7	Negligible Adverse	40.0	40.6	40.6
94. ANDERSON AVENUE	Dwelling	49.6	50.7	49.6	0.0	No Change	50.6	1.0	Negligible Adverse	38.4	39.4	39.3
95. ANDERSON AVENUE	Dwelling	51.4	52.1	51.3	-0.1	Negligible Beneficial	52.1	0.7	Negligible Adverse	40.0	40.6	40.6
96. ANDERSON AVENUE	Dwelling	49.6	50.7	49.6	0.0	No Change	50.6	1.0	Negligible Adverse	38.4	39.4	39.3
97. ANDERSON AVENUE	Dwelling	50.3	51.1	50.3	0.0	No Change	51.1	0.8	Negligible Adverse	39.0	39.7	39.7
98. ANDERSON AVENUE	Dwelling	49.6	50.7	49.6	0.0	No Change	50.6	1.0	Negligible Adverse	38.4	39.4	39.3
99. ANDERSON AVENUE	Dwelling	50.3	51.1	50.3	0.0	No Change	51.1	0.8	Negligible Adverse	39.0	39.7	39.7
1. ANDERSON LANE	Dwelling	45.8	47.4	46.0	0.2	Negligible Adverse	47.5	1.7	Negligible Adverse	35.0	36.4	36.5
2. ANDERSON LANE	Dwelling	45.5	47.1	45.7	0.2	Negligible Adverse	47.2	1.7	Negligible Adverse	34.7	36.1	36.2
3. ANDERSON LANE	Dwelling	45.4	46.9	45.5	0.1	Negligible Adverse	47.0	1.6	Negligible Adverse	34.6	35.9	36.0
4. ANDERSON LANE	Dwelling	45.3	46.9	45.4	0.1	Negligible Adverse	46.9	1.6	Negligible Adverse	34.5	35.9	35.9
5. ANDERSON LANE	Dwelling	45.1	46.6	45.2	0.1	Negligible Adverse	46.7	1.6	Negligible Adverse	34.3	35.7	35.8
1. ANDERSON ROAD	Dwelling	65.4	67.4	65.8	0.4	Negligible Adverse	67.6	2.2	Negligible Adverse	52.6	54.4	54.6
17. ANDERSON ROAD	Dwelling	61.3	62.4	61.3	0.0	No Change	62.9	1.6	Negligible Adverse	48.9	49.9	50.3
19. ANDERSON ROAD	Dwelling	61.3	62.4	61.3	0.0	No Change	62.9	1.6	Negligible Adverse	48.9	49.9	50.3
20. ANDERSON ROAD	Dwelling	58.5	59.5	58.6	0.1	Negligible Adverse	60.0	1.5	Negligible Adverse	46.4	47.3	47.7
21. ANDERSON ROAD	Dwelling	61.3	62.4	61.3	0.0	No Change	62.9	1.6	Negligible Adverse	48.9	49.9	50.3
22. ANDERSON ROAD	Dwelling	58.5	59.5	58.6	0.1	Negligible Adverse	60.0	1.5	Negligible Adverse	46.4	47.3	47.7
23. ANDERSON ROAD	Dwelling	51.7	52.5	51.8	0.1	Negligible Beneficial	53.0	1.3	Negligible Adverse	40.3	41.0	41.4
24. ANDERSON ROAD	Dwelling	58.5	59.5	58.6	0.1	Negligible Adverse	60.0	1.5	Negligible Adverse	46.4	47.3	47.7
25. ANDERSON ROAD	Dwelling	51.7	52.5	51.8	0.1	Negligible Beneficial	53.0	1.3	Negligible Adverse	40.3	41.0	41.4
26. ANDERSON ROAD	Dwelling	58.5	59.5	58.6	0.1	Negligible Adverse	60.0	1.5	Negligible Adverse	46.4	47.3	47.7
27. ANDERSON ROAD	Dwelling	51.7	52.5	51.8	0.1	Negligible Beneficial	53.0	1.3	Negligible Adverse	40.3	41.0	41.4
28. ANDERSON ROAD	Dwelling	54.2	55.0	54.2	0.0	No Change	55.4	1.2	Negligible Adverse	42.5	43.2	43.6
29. ANDERSON ROAD	Dwelling	51.7	52.5	51.8	0.1	Negligible Beneficial	53.0	1.3	Negligible Adverse	40.3	41.0	41.4
3. ANDERSON ROAD	Dwelling	64.8	67.0	65.3	0.5	Negligible Adverse	67.2	2.4	Negligible Adverse	52.1	54.0	54.2
30. ANDERSON ROAD	Dwelling	54.2	55.0	54.2	0.0	No Change	55.4	1.2	Negligible Adverse	42.5	43.2	43.6
31. ANDERSON ROAD	Dwelling	51.4	52.1	51.4	0.0	No Change	52.6	1.2	Negligible Adverse	40.0	40.6	41.1
32. ANDERSON ROAD	Dwelling	54.2	55.0	54.2	0.0	No Change	55.4	1.2	Negligible Adverse	42.5	43.2	43.6
33. ANDERSON ROAD	Dwelling	51.4	52.1	51.4	0.0	No Change	52.6	1.2	Negligible Adverse	40.0	40.6	41.1
34. ANDERSON ROAD	Dwelling	54.2	55.0	54.2	0.0	No Change	55.4	1.2	Negligible Adverse	42.5	43.2	43.6
35. ANDERSON ROAD	Dwelling	51.4	52.1	51.4	0.0	No Change	52.6	1.2	Negligible Adverse	40.0	40.6	41.1
36. ANDERSON ROAD	Dwelling	51.8	52.5	51.9	0.1	Negligible Adverse	53.0	1.2	Negligible Adverse	40.4	41.0	41.4
37. ANDERSON ROAD	Dwelling	51.4	52.1	51.4	0.0	No Change	52.6	1.2	Negligible Adverse	40.0	40.6	41.1
38. ANDERSON ROAD	Dwelling	51.8	52.5	51.9	0.1	Negligible Adverse	53.0	1.2	Negligible Adverse	40.4	41.0	41.4
39. ANDERSON ROAD	Dwelling	51.8	52.3	51.8	0.0	No Change	52.9	1.1	Negligible Adverse	40.4	40.8	41.3
40. ANDERSON ROAD	Dwelling	51.8	52.5	51.9	0.1	Negligible Adverse	53.0	1.2	Negligible Adverse	40.4	41.0	41.4
42. ANDERSON ROAD	Dwelling	51.8	52.5	51.9	0.1	Negligible Adverse	53.0	1.2	Negligible Adverse	40.4	41.0	41.4
44. ANDERSON ROAD	Dwelling	51.0	51.7	51.0	0.0	No Change	52.1	1.1	Negligible Adverse	39.6	40.3	40.6
46. ANDERSON ROAD	Dwelling	51.0	51.7	51.0	0.0	No Change	52.1	1.1	Negligible Adverse	39.6	40.3	40.6
48. ANDERSON ROAD	Dwelling	51.0	51.7	51.0	0.0	No Change	52.1	1.1	Negligible Adverse	39.6	40.3	40.6
5. ANDERSON ROAD	Dwelling	64.0	66.7	64.5	0.5	Negligible Adverse	66.7	2.7	Negligible Adverse	51.3	53.8	53.8
50. ANDERSON ROAD	Dwelling	51.0	51.7	51.0	0.0	No Change	52.1	1.1	Negligible Adverse	39.6	40.3	40.6
52. ANDERSON ROAD	Dwelling	50.6	51.4	50.6	0.0	No Change	51.8	1.2	Negligible Adverse	39.3	40.0	40.4
54. ANDERSON ROAD	Dwelling	50.6	51.4	50.6	0.0	No Change	51.8	1.2	Negligible Adverse	39.3	40.0	40.4
56. ANDERSON ROAD	Dwelling	50.6	51.4	50.6	0.0	No Change	51.8	1.2	Negligible Adverse	39.3	40.0	40.4
58. ANDERSON ROAD	Dwelling	50.6	51.4	50.6	0.0	No Change	51.8	1.2	Negligible Adverse	39.3	40.0	40.4
7. ANDERSON ROAD	Dwelling	64.8	66.8	64.8	0.5	Negligible Adverse	66.9	2.6	Negligible Adverse	51.6	53.9	53.9
ALLOTMENTS, ANDERSON ROAD	Allotments	50.2	50.9	50.1	-0.1	Negligible Beneficial	51.1	0.9	Negligible Adverse	38.9	39.7	39.7
AUXILIARY CADET FORCE HQ HALL, ANDERSON ROAD	Hall	51.9	53.0	51.9	0.0	No Change	53.0	1.1	Negligible Adverse	40.4	41.4	41.4
GRANGE COTTAGE, 158, AUCHMILL ROAD	Dwelling	73.3	73.3	73.3	0.0	No Change	73.8	0.5	Negligible Adverse	59.7	59.7	60.2
GRANGE COTTAGE, 160, AUCHMILL ROAD	Dwelling	73.3	73.3	73.3	0.0	No Change	73.8	0.5	Negligible Adverse	59.7	59.7	60.2
ROSELEA, 162, AUCHMILL ROAD	Dwelling	73.4	73.4	73.4	0.0	No Change	73.9	0.5	Negligible Adverse	59.8	59.8	60.2
CAIRN VILLA, 184, AUCHMILL ROAD	Dwelling	71.7	71.4	71.6	-0.1	Negligible Beneficial	72.0	0.3	Negligible Adverse	58.3	58.0	58.5
FLAT A, 256, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.0	0.1	Negligible Adverse	44.9	44.4	45.0
FLAT B, 256, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.0	0.1	Negligible Adverse	44.9	44.4	45.0
FLAT C, 256, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.0	0.1	Negligible Adverse	44.9	44.4	45.0
FLAT D, 256, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.0	0.1	Negligible Adverse	44.9	44.4	45.0
FLAT E, 256, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.0	0.1	Negligible Adverse	44.9	44.4	45.0
FLAT F, 256, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.0	0.1	Negligible Adverse	44.9	44.4	45.0
FLAT G, 256, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.0	0.1	Negligible Adverse	44.9	44.4	45.0
FLAT H, 256, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.0	0.1	Negligible Adverse	44.9	44.4	45.0
FLAT A, 258, AUCHMILL ROAD	Dwelling	56.9	56.7	56.7	-0.2	Negligible Beneficial	57.1	0.2	Negligible Adverse	44.9	44.4	45.1
FLAT B, 258, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.1	0.2	Negligible Adverse	44.9	44.4	45.1

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
FLAT C, 258, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.1	0.2	Negligible Adverse	44.9	44.4	45.1
FLAT D, 258, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.1	0.2	Negligible Adverse	44.9	44.4	45.1
FLAT E, 258, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.1	0.2	Negligible Adverse	44.9	44.4	45.1
FLAT F, 258, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.1	0.2	Negligible Adverse	44.9	44.4	45.1
FLAT G, 258, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.1	0.2	Negligible Adverse	44.9	44.4	45.1
FLAT H, 258, AUCHMILL ROAD	Dwelling	56.9	56.3	56.7	-0.2	Negligible Beneficial	57.1	0.2	Negligible Adverse	44.9	44.4	45.1
FLAT A, 260, AUCHMILL ROAD	Dwelling	55.5	55.4	55.3	-0.2	Negligible Beneficial	55.8	0.3	Negligible Adverse	43.7	43.6	44.0
FLAT B, 260, AUCHMILL ROAD	Dwelling	55.5	55.4	55.3	-0.2	Negligible Beneficial	55.8	0.3	Negligible Adverse	43.7	43.6	44.0
FLAT C, 260, AUCHMILL ROAD	Dwelling	55.5	55.4	55.3	-0.2	Negligible Beneficial	55.8	0.3	Negligible Adverse	43.7	43.6	44.0
FLAT D, 260, AUCHMILL ROAD	Dwelling	55.5	55.4	55.3	-0.2	Negligible Beneficial	55.8	0.3	Negligible Adverse	43.7	43.6	44.0
FLAT E, 260, AUCHMILL ROAD	Dwelling	55.5	55.4	55.3	-0.2	Negligible Beneficial	55.8	0.3	Negligible Adverse	43.7	43.6	44.0
FLAT F, 260, AUCHMILL ROAD	Dwelling	55.5	55.4	55.3	-0.2	Negligible Beneficial	55.8	0.3	Negligible Adverse	43.7	43.6	44.0
FLAT G, 260, AUCHMILL ROAD	Dwelling	55.5	55.4	55.3	-0.2	Negligible Beneficial	55.8	0.3	Negligible Adverse	43.7	43.6	44.0
FLAT H, 260, AUCHMILL ROAD	Dwelling	55.5	55.4	55.3	-0.2	Negligible Beneficial	55.8	0.3	Negligible Adverse	43.7	43.6	44.0
FLAT A, 262, AUCHMILL ROAD	Dwelling	56.1	55.9	55.8	-0.3	Negligible Beneficial	56.4	0.3	Negligible Adverse	44.2	44.0	44.5
FLAT B, 262, AUCHMILL ROAD	Dwelling	56.1	55.9	55.8	-0.3	Negligible Beneficial	56.4	0.3	Negligible Adverse	44.2	44.0	44.5
FLAT C, 262, AUCHMILL ROAD	Dwelling	56.1	55.9	55.8	-0.3	Negligible Beneficial	56.4	0.3	Negligible Adverse	44.2	44.0	44.5
FLAT D, 262, AUCHMILL ROAD	Dwelling	56.1	55.9	55.8	-0.3	Negligible Beneficial	56.4	0.3	Negligible Adverse	44.2	44.0	44.5
FLAT E, 262, AUCHMILL ROAD	Dwelling	56.1	55.9	55.8	-0.3	Negligible Beneficial	56.4	0.3	Negligible Adverse	44.2	44.0	44.5
FLAT F, 262, AUCHMILL ROAD	Dwelling	56.1	55.9	55.8	-0.3	Negligible Beneficial	56.4	0.3	Negligible Adverse	44.2	44.0	44.5
FLAT G, 262, AUCHMILL ROAD	Dwelling	56.1	55.9	55.8	-0.3	Negligible Beneficial	56.4	0.3	Negligible Adverse	44.2	44.0	44.5
FLAT H, 262, AUCHMILL ROAD	Dwelling	56.1	55.9	55.8	-0.3	Negligible Beneficial	56.4	0.3	Negligible Adverse	44.2	44.0	44.5
FLAT A, 264, AUCHMILL ROAD	Dwelling	57.1	56.5	56.8	-0.3	Negligible Adverse	57.2	0.1	Negligible Adverse	45.1	44.6	45.2
FLAT B, 264, AUCHMILL ROAD	Dwelling	57.1	56.5	56.8	-0.3	Negligible Adverse	57.2	0.1	Negligible Adverse	45.1	44.6	45.2
FLAT C, 264, AUCHMILL ROAD	Dwelling	57.1	56.5	56.8	-0.3	Negligible Adverse	57.2	0.1	Negligible Adverse	45.1	44.6	45.2
FLAT D, 264, AUCHMILL ROAD	Dwelling	57.1	56.5	56.8	-0.3	Negligible Adverse	57.2	0.1	Negligible Adverse	45.1	44.6	45.2
FLAT E, 264, AUCHMILL ROAD	Dwelling	57.1	56.5	56.8	-0.3	Negligible Adverse	57.2	0.1	Negligible Adverse	45.1	44.6	45.2
FLAT F, 264, AUCHMILL ROAD	Dwelling	57.1	56.5	56.8	-0.3	Negligible Adverse	57.2	0.1	Negligible Adverse	45.1	44.6	45.2
FLAT G, 264, AUCHMILL ROAD	Dwelling	57.1	56.5	56.8	-0.3	Negligible Adverse	57.2	0.1	Negligible Adverse	45.1	44.6	45.2
FLAT H, 264, AUCHMILL ROAD	Dwelling	57.1	56.5	56.8	-0.3	Negligible Adverse	57.2	0.1	Negligible Adverse	45.1	44.6	45.2
CAIRN VIEW, 268, AUCHMILL ROAD	Dwelling	77.2	77.6	77.1	-0.1	Negligible Beneficial	77.6	0.4	Negligible Adverse	63.2	63.6	63.6
CUSHNIE VILLA, 286, AUCHMILL ROAD	Dwelling	60.6	60.2	60.4	-0.2	Negligible Beneficial	60.7	0.1	Negligible Adverse	48.3	47.9	48.4
DRUMMALLOCHIE, 344, AUCHMILL ROAD	Dwelling	71.7	72.0	71.4	-0.3	Negligible Beneficial	71.9	0.2	Negligible Adverse	58.3	58.5	58.4
TORNAVEEN, 366, AUCHMILL ROAD	Dwelling	71.6	72.0	71.2	-0.4	Negligible Beneficial	72.1	0.5	Negligible Adverse	58.2	58.5	58.6
BADENOCH, 370, AUCHMILL ROAD	Dwelling	71.6	71.9	71.2	-0.4	Negligible Beneficial	72.0	0.4	Negligible Adverse	58.2	58.4	58.5
AYTON, 372, AUCHMILL ROAD	Dwelling	71.4	71.6	70.9	-0.5	Negligible Beneficial	71.7	0.3	Negligible Adverse	58.0	58.2	58.3
LONAGH, 390, AUCHMILL ROAD	Dwelling	71.0	70.8	70.1	-0.9	Negligible Beneficial	71.0	0.0	No Change	57.6	57.5	57.6
CORRYBEG, 394, AUCHMILL ROAD	Dwelling	72.2	71.8	71.3	-0.9	Negligible Beneficial	72.0	-0.2	Negligible Beneficial	58.7	58.4	58.5
CRAIGMYLE, 398, AUCHMILL ROAD	Dwelling	72.4	71.7	71.4	-1.0	Minor Beneficial	72.0	-0.4	Negligible Beneficial	58.9	58.3	58.5
164, AUCHMILL ROAD	Dwelling	73.4	73.4	73.4	0.0	No Change	73.9	0.5	Negligible Adverse	59.8	59.8	60.2
166, AUCHMILL ROAD	Dwelling	73.4	73.4	73.4	0.0	No Change	73.9	0.5	Negligible Adverse	59.8	59.8	60.2
168, AUCHMILL ROAD	Dwelling	73.6	73.5	73.5	-0.1	Negligible Beneficial	74.0	0.4	Negligible Adverse	60.0	59.9	60.3
170, AUCHMILL ROAD	Dwelling	73.6	73.6	73.6	0.0	No Change	74.0	0.4	Negligible Adverse	60.0	60.0	60.3
172, AUCHMILL ROAD	Dwelling	73.6	73.5	73.5	-0.1	Negligible Beneficial	74.0	0.4	Negligible Adverse	60.0	59.9	60.3
174, AUCHMILL ROAD	Dwelling	73.6	73.6	73.6	0.0	No Change	74.0	0.4	Negligible Adverse	60.0	60.0	60.3
176, AUCHMILL ROAD	Dwelling	73.7	73.6	73.6	-0.1	Negligible Beneficial	74.1	0.4	Negligible Adverse	60.1	60.0	60.4
178, AUCHMILL ROAD	Dwelling	73.7	73.6	73.7	0.0	No Change	74.1	0.4	Negligible Adverse	60.1	60.0	60.4
180, AUCHMILL ROAD	Dwelling	73.7	73.6	73.7	0.0	No Change	74.1	0.4	Negligible Adverse	60.1	60.0	60.4
182, AUCHMILL ROAD	Dwelling	73.7	73.6	73.6	-0.1	Negligible Beneficial	74.1	0.4	Negligible Adverse	60.1	60.0	60.4
186, AUCHMILL ROAD	Dwelling	71.7	71.4	71.6	-0.1	Negligible Beneficial	72.0	0.3	Negligible Adverse	58.3	58.0	58.5
188, AUCHMILL ROAD	Dwelling	72.0	71.7	71.9	-0.1	Negligible Beneficial	72.2	0.2	Negligible Adverse	58.5	58.3	58.7
190, AUCHMILL ROAD	Dwelling	72.0	71.7	71.9	-0.1	Negligible Beneficial	72.2	0.2	Negligible Adverse	58.5	58.3	58.7
194, AUCHMILL ROAD	Dwelling	72.1	71.8	72.0	-0.1	Negligible Beneficial	72.4	0.3	Negligible Adverse	58.6	58.4	58.9
196, AUCHMILL ROAD	Dwelling	72.1	71.8	72.0	-0.1	Negligible Beneficial	72.3	0.2	Negligible Adverse	58.6	58.4	58.8
200, AUCHMILL ROAD	Dwelling	72.1	71.8	72.0	-0.1	Negligible Beneficial	72.3	0.2	Negligible Adverse	58.6	58.4	58.8
202, AUCHMILL ROAD	Dwelling	72.2	72.0	72.1	-0.1	Negligible Beneficial	72.5	0.3	Negligible Adverse	58.7	58.5	59.0
206, AUCHMILL ROAD	Dwelling	72.2	72.0	72.1	-0.1	Negligible Beneficial	72.5	0.3	Negligible Adverse	58.7	58.5	59.0
208, AUCHMILL ROAD	Dwelling	72.3	72.0	72.2	-0.1	Negligible Beneficial	72.5	0.2	Negligible Adverse	58.8	58.5	59.0
212, AUCHMILL ROAD	Dwelling	72.3	72.0	72.2	-0.1	Negligible Beneficial	72.5	0.2	Negligible Adverse	58.8	58.5	59.0
214, AUCHMILL ROAD	Dwelling	72.3	72.0	72.2	-0.1	Negligible Beneficial	72.5	0.2	Negligible Adverse	58.8	58.5	59.0
216, AUCHMILL ROAD	Dwelling	72.2	71.9	72.1	-0.1	Negligible Beneficial	72.5	0.3	Negligible Adverse	58.7	58.4	59.0
270, AUCHMILL ROAD	Dwelling	77.2	77.6	77.1	-0.1	Negligible Beneficial	77.6	0.4	Negligible Adverse	63.2	63.6	63.6
282, AUCHMILL ROAD	Dwelling	74.4	74.6	74.1	-0.3	Negligible Beneficial	74.6	0.2	Negligible Adverse	60.7	60.9	60.9
284, AUCHMILL ROAD	Dwelling	74.4	74.6	74.1	-0.3	Negligible Beneficial	74.6	0.2	Negligible Adverse	60.7	60.9	60.9
286, AUCHMILL ROAD	Dwelling	77.2	77.5	76.9	-0.3	Negligible Beneficial	77.4	0.2	Negligible Adverse	63.2	63.5	63.4
288, AUCHMILL ROAD	Dwelling	77.1	77.4	76.8	-0.3	Negligible Beneficial	77.4	0.3	Negligible Adverse	63.1	63.4	63.4
290, AUCHMILL ROAD	Dwelling	76.7	77.1	76.5	-0.2	Negligible Beneficial	77.0	0.3	Negligible Adverse	62.8	63.1	63.0
328, AUCHMILL ROAD	Dwelling	70.9	71.2	70.6	-0.3	Negligible Beneficial	71.1	0.2	Negligible Adverse	57.5	57.8	57.7
330, AUCHMILL ROAD	Dwelling	71.3	71.0	71.0	-0.3	Negligible Beneficial	71.5	0.2	Negligible Adverse	57.9	58.1	58.1
332, AUCHMILL ROAD	Dwelling	71.7	72.0	71.3	-0.4	Negligible Beneficial	71.9	0.2	Negligible Adverse	58.3	58.5	58.4
334, AUCHMILL ROAD	Dwelling	71.9	72.1	71.5	-0.4	Negligible Beneficial	72.1	0.2	Negligible Adverse	58.4	58.6	58.6
336, AUCHMILL ROAD	Dwelling	72.0	72.3	71.7	-0.3	Negligible Beneficial	72.2	0.2	Negligible Adverse	58.5	58.8	58.7
338, AUCHMILL ROAD	Dwelling	72.1	72.4	71.7	-0.4	Negligible Beneficial	72.3	0.2	Negligible Adverse	58.6	58.9	58.8
340, AUCHMILL ROAD	Dwelling	71.9	72.2	71.6	-0.3	Negligible Beneficial	72.2	0.3	Negligible Adverse	58.4	58.7	58.7
342, AUCHMILL ROAD	Dwelling	71.8	72.1	71.5	-0.3	Negligible Beneficial	72.1	0.3	Negligible Adverse	58.4	58.6	58.6
346, AUCHMILL ROAD	Dwelling	71.7	72.0	71.4	-0.3	Negligible Beneficial	72.0	0.3	Negligible Adverse	58.3	58.5	58.5
348, AUCHMILL ROAD	Dwelling	71.8	72.1	71.5	-0.3	Negligible Beneficial	72.0	0.2	Negligible Adverse	58.4	58.6	58.5
350, AUCHMILL ROAD	Dwelling	71.8	72.2	71.6	-0.2	Negligible Beneficial	72.1	0.3	Negligible Adverse	58.4	58.7	58.6
352, AUCHMILL ROAD	Dwelling	72.0	72.4	71.8	-0.2	Negligible Beneficial	72.3	0.3	Negligible Adverse	58.5	58.9	58.8
354, AUCHMILL ROAD	Dwelling	72.0	72.5	71.8	-0.2	Negligible Beneficial	72.4	0.4	Negligible Adverse	58.5	59.0	58.9
356, AUCHMILL ROAD	Dwelling	72.1	72.5	71.9	-0.3	Negligible Beneficial	72.4	0.3	Negligible Adverse	58.6	59.0	58.9
358, AUCHMILL ROAD	Dwelling	71.9	72.6	71.9	-0.2	Negligible Beneficial	72.5	0.4	Negligible Adverse	58.6	59.1	59.0
360, AUCHMILL ROAD	Dwelling	72.0	72.5	71.8	-0.2	Negligible Beneficial	72.4	0.4	Negligible Adverse	58.5	59.0	58.9

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
362. AUCHMILL ROAD	Dwelling	71.6	72.0	71.3	-0.3	Negligible Beneficial	72.0	0.4	Negligible Adverse	58.2	58.5	58.5
364. AUCHMILL ROAD	Dwelling	70.4	70.8	70.1	-0.3	Negligible Beneficial	70.9	0.5	Negligible Adverse	57.1	57.5	57.5
368. AUCHMILL ROAD	Dwelling	71.9	72.2	71.4	-0.5	Negligible Beneficial	72.3	0.4	Negligible Adverse	58.4	58.7	58.8
374. AUCHMILL ROAD	Dwelling	71.2	71.4	70.6	-0.6	Negligible Beneficial	71.5	0.3	Negligible Adverse	57.8	58.0	58.1
376. AUCHMILL ROAD	Dwelling	71.0	71.0	70.3	-0.7	Negligible Beneficial	71.1	0.1	Negligible Beneficial	57.6	57.6	57.7
378. AUCHMILL ROAD	Dwelling	70.8	70.8	70.1	-0.7	Negligible Beneficial	70.9	0.1	Negligible Adverse	57.5	57.5	57.5
380. AUCHMILL ROAD	Dwelling	70.5	70.5	69.8	-0.7	Negligible Beneficial	70.6	0.1	Negligible Beneficial	57.2	57.2	57.3
382. AUCHMILL ROAD	Dwelling	70.1	70.1	69.4	-0.7	Negligible Beneficial	70.2	0.1	Negligible Adverse	56.8	56.8	56.9
384. AUCHMILL ROAD	Dwelling	64.3	64.2	63.5	-0.8	Negligible Beneficial	64.3	0.0	No Change	51.6	51.5	51.6
386. AUCHMILL ROAD	Dwelling	72.1	72.0	71.3	-0.8	Negligible Beneficial	72.1	0.0	No Change	58.6	58.5	58.6
388. AUCHMILL ROAD	Dwelling	71.6	71.5	70.8	-0.8	Negligible Beneficial	71.6	0.0	No Change	58.2	58.1	58.2
392. AUCHMILL ROAD	Dwelling	75.0	74.8	74.1	-0.9	Negligible Beneficial	74.9	-0.1	Negligible Beneficial	61.2	61.1	61.1
396. AUCHMILL ROAD	Dwelling	72.5	71.8	71.5	-1.0	Minor Beneficial	72.1	-0.4	Negligible Beneficial	59.0	58.4	58.6
400. AUCHMILL ROAD	Dwelling	72.5	71.7	71.3	-1.2	Minor Beneficial	71.9	-0.6	Negligible Beneficial	59.0	58.3	58.4
418. AUCHMILL ROAD	Dwelling	72.6	72.0	71.2	-1.4	Minor Beneficial	71.9	-0.7	Negligible Beneficial	59.1	58.5	58.4
420. AUCHMILL ROAD	Dwelling	72.5	72.0	71.2	-1.3	Minor Beneficial	71.9	-0.6	Negligible Beneficial	59.0	58.5	58.4
422. AUCHMILL ROAD	Dwelling	73.1	72.7	71.6	-1.5	Minor Beneficial	72.3	-0.8	Negligible Beneficial	59.5	59.2	58.8
424. AUCHMILL ROAD	Dwelling	73.1	72.7	71.7	-1.4	Minor Beneficial	72.4	-0.7	Negligible Beneficial	59.5	59.2	58.9
426. AUCHMILL ROAD	Dwelling	69.9	69.9	68.2	-1.7	Minor Beneficial	69.1	-0.8	Negligible Beneficial	56.6	56.6	55.9
430. AUCHMILL ROAD	Dwelling	65.2	64.4	65.2	0.0	No Change	66.1	0.9	Negligible Adverse	52.4	51.7	53.2
434. AUCHMILL ROAD	Dwelling	75.2	75.3	73.3	-1.9	Minor Beneficial	74.1	-1.1	Negligible Beneficial	61.4	61.5	60.4
434. AUCHMILL ROAD	Dwelling	75.2	75.3	73.3	-1.9	Minor Beneficial	74.1	-1.1	Negligible Beneficial	61.4	61.5	60.4
434. AUCHMILL ROAD	Dwelling	75.2	75.3	73.3	-1.9	Minor Beneficial	74.1	-1.1	Negligible Beneficial	61.4	61.5	60.4
434. AUCHMILL ROAD	Dwelling	75.2	75.3	73.3	-1.9	Minor Beneficial	74.1	-1.1	Negligible Beneficial	61.4	61.5	60.4
434. AUCHMILL ROAD	Dwelling	75.2	75.3	73.3	-1.9	Minor Beneficial	74.1	-1.1	Negligible Beneficial	61.4	61.5	60.4
434. AUCHMILL ROAD	Dwelling	75.2	75.3	73.3	-1.9	Minor Beneficial	74.1	-1.1	Negligible Beneficial	61.4	61.5	60.4
438. AUCHMILL ROAD	Dwelling	75.7	75.9	73.7	-2.0	Minor Beneficial	74.6	-1.1	Negligible Beneficial	61.9	62.0	60.9
440. AUCHMILL ROAD	Dwelling	72.4	71.7	71.4	-1.0	Minor Beneficial	72.0	-0.4	Negligible Beneficial	58.9	58.3	58.5
440. AUCHMILL ROAD	Dwelling	72.4	71.7	71.4	-1.0	Minor Beneficial	72.0	-0.4	Negligible Beneficial	58.9	58.3	58.5
440. AUCHMILL ROAD	Dwelling	72.4	71.7	71.4	-1.0	Minor Beneficial	72.0	-0.4	Negligible Beneficial	58.9	58.3	58.5
1. AUCHMILL TERRACE, BUCKSBURN	Dwelling	59.6	59.4	59.4	-0.2	Negligible Beneficial	59.8	0.2	Negligible Adverse	47.4	47.2	47.6
10. AUCHMILL TERRACE, BUCKSBURN	Dwelling	58.4	58.0	58.2	-0.2	Negligible Beneficial	58.6	0.2	Negligible Adverse	46.3	45.9	46.5
11. AUCHMILL TERRACE, BUCKSBURN	Dwelling	59.0	58.6	58.7	-0.3	Negligible Beneficial	59.2	0.2	Negligible Adverse	46.8	46.5	47.0
14. AUCHMILL TERRACE, BUCKSBURN	Dwelling	59.1	58.7	58.9	-0.2	Negligible Beneficial	59.3	0.2	Negligible Adverse	46.9	46.6	47.1
15. AUCHMILL TERRACE, BUCKSBURN	Dwelling	59.3	59.0	59.1	-0.2	Negligible Beneficial	59.5	0.2	Negligible Adverse	47.1	46.8	47.3
16. AUCHMILL TERRACE, BUCKSBURN	Dwelling	59.1	58.9	58.9	-0.2	Negligible Beneficial	59.3	0.2	Negligible Adverse	46.9	46.7	47.1
17. AUCHMILL TERRACE, BUCKSBURN	Dwelling	59.3	59.1	59.1	-0.2	Negligible Beneficial	59.6	0.3	Negligible Adverse	47.1	46.9	47.4
18. AUCHMILL TERRACE, BUCKSBURN	Dwelling	59.5	59.4	59.3	-0.2	Negligible Beneficial	59.8	0.3	Negligible Adverse	47.3	47.2	47.6
19. AUCHMILL TERRACE, BUCKSBURN	Dwelling	59.8	59.7	59.5	-0.3	Negligible Beneficial	60.1	0.3	Negligible Adverse	47.6	47.5	47.8
2. AUCHMILL TERRACE, BUCKSBURN	Dwelling	57.8	57.3	57.6	-0.2	Negligible Beneficial	58.0	0.2	Negligible Adverse	45.8	45.3	45.9
20. AUCHMILL TERRACE, BUCKSBURN	Dwelling	60.2	60.3	59.9	-0.3	Negligible Beneficial	60.5	0.3	Negligible Adverse	47.9	47.8	48.2
21. AUCHMILL TERRACE, BUCKSBURN	Dwelling	60.0	59.9	59.8	-0.2	Negligible Beneficial	60.3	0.3	Negligible Adverse	47.7	47.6	48.0
22. AUCHMILL TERRACE, BUCKSBURN	Dwelling	60.3	60.2	60.0	-0.3	Negligible Beneficial	60.6	0.3	Negligible Adverse	48.0	47.9	48.3
23. AUCHMILL TERRACE, BUCKSBURN	Dwelling	60.5	60.4	60.2	-0.3	Negligible Beneficial	60.8	0.3	Negligible Adverse	48.2	48.1	48.5
24. AUCHMILL TERRACE, BUCKSBURN	Dwelling	60.6	60.7	60.4	-0.2	Negligible Beneficial	61.0	0.4	Negligible Adverse	48.3	48.4	48.6
25. AUCHMILL TERRACE, BUCKSBURN	Dwelling	61.4	61.4	61.2	-0.2	Negligible Beneficial	61.9	0.5	Negligible Adverse	49.0	49.0	49.4
26. AUCHMILL TERRACE, BUCKSBURN	Dwelling	54.1	54.3	54.1	0.0	No Change	54.9	0.8	Negligible Adverse	42.4	42.6	43.1
27. AUCHMILL TERRACE, BUCKSBURN	Dwelling	53.9	54.0	53.6	-0.3	Negligible Beneficial	54.4	0.5	Negligible Adverse	42.2	42.3	42.7
28. AUCHMILL TERRACE, BUCKSBURN	Dwelling	54.2	54.5	53.9	-0.3	Negligible Beneficial	54.6	0.4	Negligible Adverse	42.5	42.8	42.9
29. AUCHMILL TERRACE, BUCKSBURN	Dwelling	53.3	53.4	52.9	-0.4	Negligible Beneficial	53.6	0.3	Negligible Adverse	41.7	41.8	42.0
3. AUCHMILL TERRACE, BUCKSBURN	Dwelling	57.4	56.9	57.3	-0.1	Negligible Beneficial	57.7	0.3	Negligible Adverse	45.4	44.9	45.7
30. AUCHMILL TERRACE, BUCKSBURN	Dwelling	53.1	53.2	52.7	-0.4	Negligible Beneficial	53.5	0.4	Negligible Adverse	41.5	41.6	41.9
31. AUCHMILL TERRACE, BUCKSBURN	Dwelling	53.4	53.4	53.0	-0.4	Negligible Beneficial	53.7	0.3	Negligible Adverse	41.8	41.8	42.1
32. AUCHMILL TERRACE, BUCKSBURN	Dwelling	52.7	52.8	52.3	-0.4	Negligible Beneficial	53.0	0.3	Negligible Adverse	41.2	41.3	41.4
33. AUCHMILL TERRACE, BUCKSBURN	Dwelling	52.5	52.7	52.1	-0.4	Negligible Beneficial	52.9	0.4	Negligible Adverse	41.0	41.2	41.3
34. AUCHMILL TERRACE, BUCKSBURN	Dwelling	53.2	53.4	52.9	-0.3	Negligible Beneficial	53.6	0.4	Negligible Adverse	41.6	41.8	42.0
35. AUCHMILL TERRACE, BUCKSBURN	Dwelling	53.2	53.3	52.8	-0.4	Negligible Beneficial	53.5	0.3	Negligible Adverse	41.6	41.7	41.9
36. AUCHMILL TERRACE, BUCKSBURN	Dwelling	53.6	53.8	53.3	-0.3	Negligible Beneficial	54.0	0.4	Negligible Adverse	42.0	42.2	42.3
37. AUCHMILL TERRACE, BUCKSBURN	Dwelling	56.0	55.1	55.8	-0.2	Negligible Beneficial	56.1	0.1	Negligible Adverse	44.1	43.3	44.2
38. AUCHMILL TERRACE, BUCKSBURN	Dwelling	52.3	52.0	52.0	-0.3	Negligible Beneficial	52.7	0.4	Negligible Adverse	40.8	41.0	41.2
39. AUCHMILL TERRACE, BUCKSBURN	Dwelling	52.4	52.5	52.1	-0.3	Negligible Beneficial	52.7	0.3	Negligible Adverse	40.9	41.0	41.2
4. AUCHMILL TERRACE, BUCKSBURN	Dwelling	57.3	56.7	57.1	-0.2	Negligible Beneficial	57.5	0.2	Negligible Adverse	45.3	44.8	45.5
40. AUCHMILL TERRACE, BUCKSBURN	Dwelling	54.6	54.2	54.4	-0.2	Negligible Beneficial	54.9	0.3	Negligible Adverse	42.9	42.5	43.1
41. AUCHMILL TERRACE, BUCKSBURN	Dwelling	56.2	55.3	56.1	-0.1	Negligible Beneficial	56.4	0.2	Negligible Adverse	44.3	43.5	44.5
42. AUCHMILL TERRACE, BUCKSBURN	Dwelling	56.1	55.2	55.9	-0.2	Negligible Beneficial	56.2	0.1	Negligible Adverse	44.2	43.4	44.3
43. AUCHMILL TERRACE, BUCKSBURN	Dwelling	53.2	53.3	52.9	-0.3	Negligible Beneficial	53.5	0.3	Negligible Adverse	41.6	41.7	41.9
44. AUCHMILL TERRACE, BUCKSBURN	Dwelling	54.9	54.7	54.7	-0.2	Negligible Beneficial	55.2	0.3	Negligible Adverse	43.1	42.7	43.4
45. AUCHMILL TERRACE, BUCKSBURN	Dwelling	56.1	56.2	55.9	-0.2	Negligible Beneficial	56.2	0.1	Negligible Adverse	44.2	43.4	44.3
46. AUCHMILL TERRACE, BUCKSBURN	Dwelling	56.2	56.0	56.0	-0.2	Negligible Beneficial	56.3	0.1	Negligible Beneficial	44.3	43.5	44.4
47. AUCHMILL TERRACE, BUCKSBURN	Dwelling	56.2	55.4	56.1	-0.1	Negligible Beneficial	56.3	0.1	Negligible Beneficial	44.3	43.6	44.4
48. AUCHMILL TERRACE, BUCKSBURN	Dwelling	52.6	52.6	52.3	-0.3	Negligible Beneficial	52.9	0.3	Negligible Adverse	41.1	41.1	41.3
49. AUCHMILL TERRACE, BUCKSBURN	Dwelling	53.2	53.2	53.0	-0.2	Negligible Beneficial	53.5	0.3	Negligible Adverse	41.6	41.6	41.9
5. AUCHMILL TERRACE, BUCKSBURN	Dwelling	52.6	53.1	52.4	-0.2	Negligible Beneficial	53.2	0.6	Negligible Adverse	41.1	41.5	41.6
50. AUCHMILL TERRACE, BUCKSBURN	Dwelling	53.9	53.9	53.7	-0.2	Negligible Beneficial	54.2	0.3	Negligible Adverse	42.2	42.2	42.5
51. AUCHMILL TERRACE, BUCKSBURN	Dwelling	54.3	54.2	54.1	-0.2	Negligible Beneficial	54.5	0.2	Negligible Adverse	42.6	42.5	42.8
52. AUCHMILL TERRACE, BUCKSBURN	Dwelling	54.4	54.2	54.1	-0.3	Negligible Beneficial	54.6	0.2	Negligible Adverse	42.7	42.5	42.9
53. AUCHMILL TERRACE, BUCKSBURN	Dwelling	54.5	54.3	54.3	-0.2	Negligible Beneficial	54.7	0.2	Negligible Adverse	42.8	42.6	43.0
54. AUCHMILL TERRACE, BUCKSBURN	Dwelling	58.5	58.1	58.3	-0.2	Negligible Beneficial	58.7	0.2	Negligible Adverse	46.4	46.0	46.6
55. AUCHMILL TERRACE, BUCKSBURN	Dwelling	58.5	58.1	58.3	-0.2	Negligible Beneficial	58.7	0.2	Negligible Adverse	46.4	46.0	46.6
56. AUCHMILL TERRACE, BUCKSBURN	Dwelling	58.9	58.6	58.7	-0.2	Negligible Beneficial	59.1	0.2	Negligible Adverse	46.7	46.5	46.9
57. AUCHMILL TERRACE, BUCKSBURN	Dwelling	59.0	58.9	59.0	-0.3	Negligible Beneficial	59.4	0.1	Negligible Adverse	47.1	46.7	47.2
58. AUCHMILL TERRACE, BUCKSBURN	Dwelling	59.7	59.5	59.5	-0.2	Negligible Beneficial	59.9	0.2	Negligible Adverse	47.5	47.3	47.6
59. AUCHMILL TERRACE, BUCKSBURN	Dwelling	62.9	62.8	62.7	-0.2	Negligible Beneficial	63.1	0.2	Negligible Adverse	50.3	50.3	50.5

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
6. AUCHMILL TERRACE, BUCKSBURN	Dwelling	54.7	54.4	54.7	0.0	No Change	55.1	0.4	Negligible Adverse	43.0	42.7	43.3
7. AUCHMILL TERRACE, BUCKSBURN	Dwelling	56.3	55.5	56.3	0.0	No Change	56.6	0.3	Negligible Adverse	44.4	43.7	44.7
8. AUCHMILL TERRACE, BUCKSBURN	Dwelling	58.0	57.5	57.8	-0.2	Negligible Beneficial	58.2	0.2	Negligible Adverse	45.9	45.5	46.1
9. AUCHMILL TERRACE, BUCKSBURN	Dwelling	58.3	57.8	58.1	-0.2	Negligible Beneficial	58.5	0.2	Negligible Adverse	46.2	45.8	46.4
1. BAKER ROAD	Dwelling	52.2	55.5	52.5	0.3	Negligible Adverse	54.6	2.4	Negligible Adverse	40.7	43.7	42.9
11. BAKER ROAD	Dwelling	46.3	48.6	46.4	0.1	Negligible Adverse	48.0	1.7	Negligible Adverse	35.4	37.5	36.9
15. BAKER ROAD	Dwelling	46.3	48.6	46.4	0.1	Negligible Adverse	48.0	1.7	Negligible Adverse	35.4	37.5	36.9
17. BAKER ROAD	Dwelling	46.3	48.6	46.4	0.1	Negligible Adverse	48.0	1.7	Negligible Adverse	35.4	37.5	36.9
19. BAKER ROAD	Dwelling	46.3	48.6	46.4	0.1	Negligible Adverse	48.0	1.7	Negligible Adverse	35.4	37.5	36.9
2. BAKER ROAD	Dwelling	55.7	62.4	55.5	-0.2	Negligible Beneficial	60.3	4.6	Minor Adverse	43.9	49.9	48.0
21. BAKER ROAD	Dwelling	46.3	48.6	46.4	0.1	Negligible Adverse	48.0	1.7	Negligible Adverse	35.4	37.5	36.9
23. BAKER ROAD	Dwelling	46.3	48.6	46.4	0.1	Negligible Adverse	48.0	1.7	Negligible Adverse	35.4	37.5	36.9
25. BAKER ROAD	Dwelling	46.3	48.6	46.4	0.1	Negligible Adverse	48.0	1.7	Negligible Adverse	35.4	37.5	36.9
27. BAKER ROAD	Holiday Let/Accommodation/Short- Term Let	45.2	47.4	45.3	0.1	Negligible Beneficial	46.9	1.7	Negligible Adverse	34.4	36.4	35.9
29. BAKER ROAD	Holiday Let/Accommodation/Short- Term Let	45.2	47.4	45.3	0.1	Negligible Beneficial	46.9	1.7	Negligible Adverse	34.4	36.4	35.9
3. BAKER ROAD	Dwelling	52.2	55.5	52.5	0.3	Negligible Adverse	54.6	2.4	Negligible Adverse	40.7	43.7	42.9
31. BAKER ROAD	Holiday Let/Accommodation/Short- Term Let	45.2	47.4	45.3	0.1	Negligible Beneficial	46.9	1.7	Negligible Adverse	34.4	36.4	35.9
33. BAKER ROAD	Dwelling	46.3	48.6	46.4	0.1	Negligible Adverse	48.0	1.7	Negligible Adverse	35.4	37.5	36.9
35. BAKER ROAD	Dwelling	46.3	48.6	46.4	0.1	Negligible Adverse	48.0	1.7	Negligible Adverse	35.4	37.5	36.9
37. BAKER ROAD	Dwelling	46.3	48.6	46.4	0.1	Negligible Adverse	48.0	1.7	Negligible Adverse	35.4	37.5	36.9
39. BAKER ROAD	Dwelling	45.4	47.3	45.4	0.0	No Change	46.8	1.4	Negligible Adverse	34.6	36.3	35.9
4. BAKER ROAD	Dwelling	52.1	56.2	52.3	0.2	Negligible Adverse	55.0	2.9	Negligible Adverse	40.6	44.3	43.2
41. BAKER ROAD	Dwelling	45.4	47.3	45.4	0.0	No Change	46.8	1.4	Negligible Adverse	34.6	36.3	35.9
43. BAKER ROAD	Dwelling	45.4	47.3	45.4	0.0	No Change	46.8	1.4	Negligible Adverse	34.6	36.3	35.9
5. BAKER ROAD	Dwelling	52.2	55.5	52.5	0.3	Negligible Adverse	54.6	2.4	Negligible Adverse	40.7	43.7	42.9
7. BAKER ROAD	Dwelling	52.2	55.5	52.5	0.3	Negligible Adverse	54.6	2.4	Negligible Adverse	40.7	43.7	42.9
9. BAKER ROAD	Dwelling	46.3	48.6	46.4	0.1	Negligible Adverse	48.0	1.7	Negligible Adverse	35.4	37.5	36.9
10. BALGOWNIE DRIVE, BRIDGE OF DON	Dwelling	68.6	69.4	68.5	-0.1	Negligible Beneficial	69.9	1.3	Negligible Adverse	55.5	56.2	56.6
11. BALGOWNIE DRIVE, BRIDGE OF DON	Dwelling	68.6	69.4	68.5	-0.1	Negligible Beneficial	69.9	1.3	Negligible Adverse	55.5	56.2	56.6
12. BALGOWNIE DRIVE, BRIDGE OF DON	Dwelling	68.6	69.4	68.5	-0.1	Negligible Beneficial	69.9	1.3	Negligible Adverse	55.5	56.2	56.6
13. BALGOWNIE DRIVE, BRIDGE OF DON	Dwelling	68.6	69.4	68.5	-0.1	Negligible Beneficial	69.9	1.3	Negligible Adverse	55.5	56.2	56.6
14. BALGOWNIE DRIVE, BRIDGE OF DON	Dwelling	68.6	69.4	68.5	-0.1	Negligible Beneficial	69.9	1.3	Negligible Adverse	55.5	56.2	56.6
15. BALGOWNIE DRIVE, BRIDGE OF DON	Dwelling	68.6	69.4	68.5	-0.1	Negligible Beneficial	69.9	1.3	Negligible Adverse	55.5	56.2	56.6
16. BALGOWNIE DRIVE, BRIDGE OF DON	Dwelling	68.6	69.4	68.5	-0.1	Negligible Beneficial	69.9	1.3	Negligible Adverse	55.5	56.2	56.6
17. BALGOWNIE DRIVE, BRIDGE OF DON	Dwelling	61.6	62.4	61.5	-0.1	Negligible Beneficial	62.9	1.3	Negligible Adverse	49.2	49.9	50.3
7. BALGOWNIE DRIVE, BRIDGE OF DON	Dwelling	68.6	69.4	68.5	-0.1	Negligible Beneficial	69.9	1.3	Negligible Adverse	55.5	56.2	56.6
8. BALGOWNIE DRIVE, BRIDGE OF DON	Dwelling	68.6	69.4	68.5	-0.1	Negligible Beneficial	69.9	1.3	Negligible Adverse	55.5	56.2	56.6
9. BALGOWNIE DRIVE, BRIDGE OF DON	Dwelling	68.6	69.4	68.5	-0.1	Negligible Beneficial	69.9	1.3	Negligible Adverse	55.5	56.2	56.6
PLAYING FIELDS, BALGOWNIE DRIVE, BRIDGE OF DON	Playing Field	57.0	57.1	57.0	0.0	No Change	58.4	1.4	Negligible Adverse	45.0	45.1	46.3
14. BANK STREET, FERRYHILL	Dwelling	61.2	61.9	61.4	0.2	Negligible Adverse	62.0	0.8	Negligible Adverse	48.8	49.4	49.5
14. BANK STREET, FERRYHILL	Dwelling	61.2	61.9	61.4	0.2	Negligible Adverse	62.0	0.8	Negligible Adverse	48.8	49.4	49.5
12. BANK STREET, WOODSIDE	Dwelling	61.2	61.9	61.4	0.2	Negligible Adverse	62.0	0.8	Negligible Adverse	48.8	49.4	49.5
12. BANK STREET, WOODSIDE	Dwelling	61.2	61.9	61.4	0.2	Negligible Adverse	62.0	0.8	Negligible Adverse	48.8	49.4	49.5
14. BANK STREET, WOODSIDE	Dwelling	61.2	61.9	61.4	0.2	Negligible Adverse	62.0	0.8	Negligible Adverse	48.8	49.4	49.5
14. BANK STREET, WOODSIDE	Dwelling	61.2	61.9	61.4	0.2	Negligible Adverse	62.0	0.8	Negligible Adverse	48.8	49.4	49.5
14. BANK STREET, WOODSIDE	Dwelling	61.2	61.9	61.4	0.2	Negligible Adverse	62.0	0.8	Negligible Adverse	48.8	49.4	49.5
14. BANK STREET, WOODSIDE	Dwelling	61.2	61.9	61.4	0.2	Negligible Adverse	62.0	0.8	Negligible Adverse	48.8	49.4	49.5
6. BANK STREET, WOODSIDE	Dwelling	66.2	66.9	66.4	0.2	Negligible Adverse	67.1	0.9	Negligible Adverse	53.3	53.9	54.1
6. BANK STREET, WOODSIDE	Dwelling	66.1	66.9	66.3	0.2	Negligible Adverse	67.0	0.9	Negligible Adverse	53.2	53.9	54.0
6. BANK STREET, WOODSIDE	Dwelling	66.1	66.9	66.3	0.2	Negligible Adverse	67.0	0.9	Negligible Adverse	53.2	53.9	54.0
6. BANK STREET, WOODSIDE	Dwelling	66.1	66.9	66.3	0.2	Negligible Adverse	67.0	0.9	Negligible Adverse	53.2	53.9	54.0
6. BANK STREET, WOODSIDE	Dwelling	66.1	66.9	66.3	0.2	Negligible Adverse	67.0	0.9	Negligible Adverse	53.2	53.9	54.0
7. BANK STREET, WOODSIDE	Dwelling	73.8	74.6	73.9	0.1	Negligible Adverse	74.6	0.8	Negligible Adverse	60.2	60.9	60.9
8. BANK STREET, WOODSIDE	Dwelling	66.1	66.9	66.3	0.2	Negligible Adverse	67.0	0.9	Negligible Adverse	53.2	53.9	54.0
8. BANK STREET, WOODSIDE	Dwelling	66.1	66.9	66.3	0.2	Negligible Adverse	67.0	0.9	Negligible Adverse	53.2	53.9	54.0
8. BANK STREET, WOODSIDE	Dwelling	66.1	66.9	66.3	0.2	Negligible Adverse	67.0	0.9	Negligible Adverse	53.2	53.9	54.0
9. BANK STREET, WOODSIDE	Dwelling	57.2	57.9	57.4	0.2	Negligible Adverse	58.0	0.8	Negligible Adverse	45.2	45.8	45.9
FLAT A, 1, BARRON STREET	Dwelling	59.8	60.1	60.0	0.2	Negligible Adverse	60.1	0.3	Negligible Adverse	47.6	47.8	47.8
FLAT B, 1, BARRON STREET	Dwelling	59.8	60.1	60.0	0.2	Negligible Adverse	60.1	0.3	Negligible Adverse	47.6	47.8	47.8
FLAT C, 1, BARRON STREET	Dwelling	59.8	60.1	60.0	0.2	Negligible Adverse	60.1	0.3	Negligible Adverse	47.6	47.8	47.8
FLAT D, 1, BARRON STREET	Dwelling	59.8	60.1	60.0	0.2	Negligible Adverse	60.1	0.3	Negligible Adverse	47.6	47.8	47.8
FLAT E, 1, BARRON STREET	Dwelling	59.8	60.1	60.0	0.2	Negligible Adverse	60.1	0.3	Negligible Adverse	47.6	47.8	47.8
FLAT F, 1, BARRON STREET	Dwelling	59.8	60.1	60.0	0.2	Negligible Adverse	60.1	0.3	Negligible Adverse	47.6	47.8	47.8
FLAT A, 2, BARRON STREET	Dwelling	60.8	61.0	60.9	0.1	Negligible Adverse	61.1	0.3	Negligible Adverse	48.5	48.6	48.7
FLAT B, 2, BARRON STREET	Dwelling	60.8	61.0	60.9	0.1	Negligible Adverse	61.1	0.3	Negligible Adverse	48.5	48.6	48.7
FLAT C, 2, BARRON STREET	Dwelling	60.8	61.0	60.9	0.1	Negligible Adverse	61.1	0.3	Negligible Adverse	48.5	48.6	48.7
FLAT D, 2, BARRON STREET	Dwelling	60.8	61.0	60.9	0.1	Negligible Adverse	61.1	0.3	Negligible Adverse	48.5	48.6	48.7
FLAT E, 2, BARRON STREET	Dwelling	60.8	61.0	60.9	0.1	Negligible Adverse	61.1	0.3	Negligible Adverse	48.5	48.6	48.7
FLAT F, 2, BARRON STREET	Dwelling	60.8	61.0	60.9	0.1	Negligible Adverse	61.1	0.3	Negligible Adverse	48.5	48.6	48.7
1. BIRCH ROAD	Dwelling	55.6	57.4	55.5	-0.1	Negligible Beneficial	56.9	1.3	Negligible Adverse	43.8	45.4	44.9
11. BIRCH ROAD	Dwelling	53.1	54.5	53.1	0.0	No Change	54.1	1.0	Negligible Adverse	41.5	42.8	42.4
3. BIRCH ROAD	Dwelling	54.6	56.4	54.5	-0.1	Negligible Beneficial	55.9	1.3	Negligible Adverse	42.9	44.5	44.0
5. BIRCH ROAD	Dwelling	54.6	56.5	54.5	-0.1	Negligible Beneficial	56.1	1.4	Negligible Adverse	42.9	44.6	44.1
7. BIRCH ROAD	Dwelling	54.9	56.7	54.8	-0.1	Negligible Beneficial	56.2	1.3	Negligible Adverse	43.1	44.8	44.3
9. BIRCH ROAD	Dwelling	54.4	56.2	54.3	-0.1	Negligible Beneficial	55.7	1.3	Negligible Adverse	42.7	44.3	43.9
1. BLACKTHORN CRESCENT	Dwelling	56.3	56.6	56.3	0.0	No Change	56.6	0.3	Negligible Adverse	44.4	44.7	44.7

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
10. BLACKTHORN CRESCENT	Dwelling	51.1	51.8	51.0	-0.1	Negligible Beneficial	51.7	0.6	Negligible Adverse	39.7	40.4	40.3
11. BLACKTHORN CRESCENT	Dwelling	54.4	55.0	54.4	0.0	No Change	54.9	0.5	Negligible Adverse	42.7	43.2	43.1
12. BLACKTHORN CRESCENT	Dwelling	51.3	52.0	51.2	-0.1	Negligible Beneficial	51.9	0.6	Negligible Adverse	39.9	40.5	40.4
13. BLACKTHORN CRESCENT	Dwelling	52.0	52.8	52.0	0.0	No Change	52.7	0.7	Negligible Adverse	40.5	41.3	41.2
14. BLACKTHORN CRESCENT	Dwelling	50.6	51.2	50.6	0.0	No Change	51.2	0.6	Negligible Adverse	39.3	39.8	39.8
15. BLACKTHORN CRESCENT	Dwelling	51.8	52.7	51.8	0.0	No Change	52.5	0.7	Negligible Adverse	40.4	41.2	41.0
16. BLACKTHORN CRESCENT	Dwelling	53.1	54.5	53.1	0.0	No Change	54.2	1.1	Negligible Adverse	41.5	42.8	42.5
17. BLACKTHORN CRESCENT	Dwelling	51.7	52.7	51.7	0.0	No Change	52.5	0.8	Negligible Adverse	40.3	41.2	41.0
18. BLACKTHORN CRESCENT	Dwelling	53.2	54.5	53.1	-0.1	Negligible Beneficial	54.2	1.0	Negligible Adverse	41.6	42.8	42.5
19. BLACKTHORN CRESCENT	Dwelling	51.7	52.7	51.7	0.0	No Change	52.5	0.8	Negligible Adverse	40.3	41.2	41.0
2. BLACKTHORN CRESCENT	Dwelling	56.0	56.3	56.1	0.1	Negligible Adverse	56.4	0.4	Negligible Adverse	44.1	44.4	44.5
20. BLACKTHORN CRESCENT	Dwelling	53.2	53.1	53.1	-0.1	Negligible Beneficial	54.2	1.0	Negligible Adverse	41.6	42.8	42.5
21. BLACKTHORN CRESCENT	Dwelling	51.8	52.8	51.8	0.0	No Change	52.6	0.8	Negligible Adverse	40.4	41.3	41.1
22. BLACKTHORN CRESCENT	Dwelling	53.5	54.8	53.4	-0.1	Negligible Beneficial	54.5	1.0	Negligible Adverse	41.9	43.1	42.8
23. BLACKTHORN CRESCENT	Dwelling	52.0	53.0	51.9	-0.1	Negligible Beneficial	52.8	0.8	Negligible Adverse	40.5	41.4	41.3
24. BLACKTHORN CRESCENT	Dwelling	54.0	55.1	53.9	-0.1	Negligible Beneficial	54.9	0.9	Negligible Adverse	42.3	43.3	43.1
25. BLACKTHORN CRESCENT	Dwelling	52.2	53.2	52.2	0.0	No Change	53.0	0.8	Negligible Adverse	40.7	41.6	41.4
26. BLACKTHORN CRESCENT	Dwelling	56.8	57.6	56.8	0.0	No Change	57.6	0.8	Negligible Adverse	44.9	45.6	45.6
27. BLACKTHORN CRESCENT	Dwelling	49.6	50.8	49.5	-0.1	Negligible Beneficial	50.5	0.9	Negligible Adverse	38.4	39.5	39.2
28. BLACKTHORN CRESCENT	Dwelling	52.7	54.2	52.7	0.0	No Change	53.8	1.1	Negligible Adverse	41.2	42.5	42.2
29. BLACKTHORN CRESCENT	Dwelling	54.3	55.9	54.3	0.0	No Change	55.5	1.2	Negligible Adverse	42.6	44.0	43.7
3. BLACKTHORN CRESCENT	Dwelling	55.9	56.3	55.9	0.0	No Change	56.3	0.4	Negligible Adverse	44.0	44.4	44.4
30. BLACKTHORN CRESCENT	Dwelling	54.2	55.5	54.2	0.0	No Change	55.2	1.0	Negligible Adverse	42.5	43.7	43.4
31. BLACKTHORN CRESCENT	Dwelling	53.4	54.8	53.3	-0.1	Negligible Beneficial	54.4	1.0	Negligible Adverse	41.8	43.1	42.7
32. BLACKTHORN CRESCENT	Dwelling	57.4	58.1	57.4	-0.1	Negligible Beneficial	55.7	1.0	Negligible Adverse	43.0	43.0	43.9
33. BLACKTHORN CRESCENT	Dwelling	55.7	57.3	55.6	-0.1	Negligible Beneficial	56.8	1.2	Negligible Adverse	43.9	45.3	44.9
34. BLACKTHORN CRESCENT	Dwelling	55.1	56.6	55.0	-0.1	Negligible Beneficial	56.2	1.1	Negligible Adverse	43.3	44.7	44.3
35. BLACKTHORN CRESCENT	Dwelling	56.9	58.5	56.8	-0.1	Negligible Beneficial	58.1	1.2	Negligible Adverse	44.9	46.4	46.0
36. BLACKTHORN CRESCENT	Dwelling	56.0	57.6	56.0	0.0	No Change	57.2	1.2	Negligible Adverse	44.1	45.6	45.2
37. BLACKTHORN CRESCENT	Dwelling	59.2	61.1	59.1	-0.1	Negligible Beneficial	60.6	1.4	Negligible Adverse	47.0	48.7	48.3
38. BLACKTHORN CRESCENT	Dwelling	57.0	58.5	56.9	-0.1	Negligible Beneficial	58.1	1.1	Negligible Adverse	45.0	46.4	46.0
4. BLACKTHORN CRESCENT	Dwelling	53.0	53.4	53.0	0.0	No Change	53.4	0.4	Negligible Adverse	41.4	41.8	41.8
40. BLACKTHORN CRESCENT	Dwelling	57.7	59.4	57.7	0.0	No Change	58.9	1.2	Negligible Adverse	45.7	47.2	46.7
42. BLACKTHORN CRESCENT	Dwelling	59.3	61.0	59.2	-0.1	Negligible Beneficial	60.5	1.2	Negligible Adverse	47.1	48.6	48.2
5. BLACKTHORN CRESCENT	Dwelling	55.6	56.1	55.6	0.0	No Change	56.1	0.5	Negligible Adverse	43.8	44.2	44.2
6. BLACKTHORN CRESCENT	Dwelling	49.9	50.5	49.9	0.0	No Change	50.5	0.6	Negligible Adverse	38.6	39.2	39.2
7. BLACKTHORN CRESCENT	Dwelling	55.1	55.6	55.0	-0.1	Negligible Beneficial	55.6	0.5	Negligible Adverse	43.3	43.8	43.8
8. BLACKTHORN CRESCENT	Dwelling	50.9	51.6	50.9	0.0	No Change	51.5	0.6	Negligible Adverse	39.5	40.2	40.1
9. BLACKTHORN CRESCENT	Dwelling	53.2	53.9	53.2	0.0	No Change	53.9	0.7	Negligible Adverse	41.6	42.2	42.2
BRAEFOOT COTTAGE, 2, GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	51.5	52.0	51.3	-0.2	Negligible Beneficial	52.6	1.1	Negligible Adverse	40.1	40.5	41.1
BRAEFOOT COTTAGE, 3, GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	51.7	52.2	51.5	-0.2	Negligible Beneficial	52.7	1.0	Negligible Adverse	40.3	40.7	41.2
BRAEFOOT COTTAGE, 4, GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	51.2	51.7	51.1	-0.1	Negligible Beneficial	52.4	1.2	Negligible Adverse	39.8	40.3	40.9
1. BRAMBLE BRAE, CUMMINGS PARK	Dwelling	63.9	65.4	64.0	0.1	Negligible Adverse	65.4	1.5	Negligible Adverse	51.2	52.6	52.6
2. BRAMBLE BRAE, CUMMINGS PARK	Dwelling	62.1	63.6	62.0	0.1	Negligible Adverse	63.6	1.5	Negligible Adverse	49.6	51.0	51.0
3. BRAMBLE BRAE, CUMMINGS PARK	Dwelling	59.1	60.5	59.2	0.1	Negligible Adverse	60.5	1.4	Negligible Adverse	46.9	48.2	48.2
4. BRAMBLE BRAE, CUMMINGS PARK	Dwelling	62.1	63.6	62.2	0.1	Negligible Adverse	63.6	1.5	Negligible Adverse	49.6	51.0	51.0
5. BRAMBLE BRAE, CUMMINGS PARK	Dwelling	57.4	58.8	57.5	0.1	Negligible Adverse	58.8	1.4	Negligible Adverse	45.4	46.7	46.7
6. BRAMBLE BRAE, CUMMINGS PARK	Dwelling	57.7	59.2	57.8	0.1	Negligible Adverse	59.2	1.5	Negligible Adverse	45.7	47.0	47.0
7. BRAMBLE BRAE, CUMMINGS PARK	Dwelling	56.5	57.7	56.5	0.0	No Change	57.8	1.3	Negligible Adverse	44.6	45.7	45.8
8. BRAMBLE BRAE, CUMMINGS PARK	Dwelling	57.6	59.1	57.7	0.1	Negligible Adverse	59.1	1.5	Negligible Adverse	45.6	46.9	46.9
1. BRANDER PLACE, DANESTONE	Dwelling	57.3	58.1	57.1	-0.2	Negligible Beneficial	58.7	1.4	Negligible Adverse	45.3	46.0	46.6
10. BRANDER PLACE, DANESTONE	Dwelling	55.7	56.5	55.4	-0.3	Negligible Beneficial	57.0	1.3	Negligible Adverse	43.9	44.6	45.0
2. BRANDER PLACE, DANESTONE	Dwelling	59.4	60.2	59.2	-0.2	Negligible Beneficial	60.6	1.2	Negligible Adverse	47.2	47.9	48.3
3. BRANDER PLACE, DANESTONE	Dwelling	64.2	65.1	64.0	-0.2	Negligible Beneficial	65.5	1.3	Negligible Adverse	51.5	52.3	52.7
4. BRANDER PLACE, DANESTONE	Dwelling	67.2	68.1	66.9	-0.3	Negligible Beneficial	68.6	1.4	Negligible Adverse	54.2	55.0	55.5
5. BRANDER PLACE, DANESTONE	Dwelling	63.6	64.5	63.3	-0.3	Negligible Beneficial	64.9	1.3	Negligible Adverse	51.0	51.8	52.1
6. BRANDER PLACE, DANESTONE	Dwelling	68.2	69.1	67.9	-0.3	Negligible Beneficial	69.6	1.4	Negligible Adverse	55.1	55.9	56.4
7. BRANDER PLACE, DANESTONE	Dwelling	59.8	60.7	59.6	-0.2	Negligible Beneficial	61.1	1.3	Negligible Adverse	47.6	48.4	48.7
8. BRANDER PLACE, DANESTONE	Dwelling	58.8	59.6	58.5	-0.3	Negligible Beneficial	60.1	1.3	Negligible Adverse	46.7	47.4	47.8
9. BRANDER PLACE, DANESTONE	Dwelling	56.7	57.5	56.5	-0.2	Negligible Beneficial	58.0	1.3	Negligible Adverse	44.8	45.5	45.9
1. BRIDGE STREET, WOODSIDE	Dwelling	53.9	54.1	54.0	0.1	Negligible Adverse	54.6	0.7	Negligible Adverse	42.2	42.4	42.9
2. BRIDGE STREET, WOODSIDE	Dwelling	50.9	51.6	50.8	-0.1	Negligible Beneficial	51.6	0.7	Negligible Adverse	39.5	40.2	40.2
21. BROWN STREET	Dwelling	59.6	59.8	59.8	0.2	Negligible Adverse	59.6	1.0	Negligible Adverse	46.5	47.6	47.4
23. BROWN STREET	Dwelling	54.3	55.2	54.3	0.2	Negligible Adverse	55.2	0.9	Negligible Adverse	42.4	43.4	43.2
24. BROWN STREET	Dwelling	48.8	51.3	49.0	0.2	Negligible Adverse	50.7	1.9	Negligible Adverse	37.7	39.9	39.4
25. BROWN STREET	Dwelling	52.9	54.0	53.1	0.2	Negligible Adverse	53.9	1.0	Negligible Adverse	41.3	42.3	42.2
26. BROWN STREET	Dwelling	48.8	51.3	48.9	0.1	Negligible Adverse	50.7	1.9	Negligible Adverse	37.7	39.9	39.4
27. BROWN STREET	Dwelling	51.8	52.9	52.0	0.2	Negligible Adverse	52.7	0.9	Negligible Adverse	40.4	41.3	41.2
29. BROWN STREET	Dwelling	52.2	53.3	52.4	0.2	Negligible Adverse	53.2	1.0	Negligible Adverse	40.7	41.7	41.6
31. BROWN STREET	Dwelling	50.8	51.9	51.0	0.2	Negligible Adverse	51.8	1.0	Negligible Adverse	39.5	40.4	40.4
33. BROWN STREET	Dwelling	49.7	50.9	49.9	0.2	Negligible Adverse	50.8	1.1	Negligible Adverse	38.5	39.5	39.5
35. BROWN STREET	Dwelling	49.8	51.0	50.0	0.2	Negligible Adverse	50.9	1.1	Negligible Adverse	38.6	39.6	39.5
37. BROWN STREET	Dwelling	49.3	50.5	49.5	0.2	Negligible Adverse	50.4	1.1	Negligible Adverse	38.1	39.2	39.1
39. BROWN STREET	Dwelling	49.7	50.9	50.0	0.3	Negligible Adverse	50.8	1.1	Negligible Adverse	38.5	39.5	39.5
9. BROWN STREET	Dwelling	62.0	63.1	62.1	0.1	Negligible Adverse	62.9	0.9	Negligible Adverse	49.5	50.5	50.3
10. BYRON CRESCENT	Dwelling	43.0	43.1	42.9	-0.1	Negligible Beneficial	43.6	0.6	Negligible Adverse	32.4	32.5	33.0
2. BYRON CRESCENT	Dwelling	42.0	42.7	41.9	-0.1	Negligible Beneficial	42.8	0.8	Negligible Adverse	31.5	32.2	32.2
4. BYRON CRESCENT	Dwelling	42.0	42.5	41.9	-0.1	Negligible Beneficial	42.7	0.7	Negligible Adverse	31.5	32.0	32.2
6. BYRON CRESCENT	Dwelling	43.2	43.1	43.2	0.0	No Change	43.2	0.6	Negligible Adverse	32.6	32.5	33.2
8. BYRON CRESCENT	Dwelling	43.0	43.0	42.9	-0.1	Negligible Beneficial	43.6	0.6	Negligible Adverse	32.4	32.4	33.0

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
1, CAIRNCRY AVENUE	Dwelling	55.3	56.8	55.0	-0.3	Negligible Beneficial	56.3	1.0	Negligible Adverse	43.5	44.9	44.4
10, CAIRNCRY AVENUE	Dwelling	48.1	48.9	47.9	-0.2	Negligible Beneficial	48.8	0.7	Negligible Adverse	37.0	37.7	37.7
11, CAIRNCRY AVENUE	Dwelling	50.5	52.2	50.4	-0.2	Negligible Beneficial	51.7	1.2	Negligible Adverse	39.2	40.7	40.3
12, CAIRNCRY AVENUE	Dwelling	49.2	50.0	49.0	-0.1	Negligible Beneficial	49.8	0.6	Negligible Adverse	38.0	38.7	38.6
13, CAIRNCRY AVENUE	Dwelling	50.1	51.7	49.9	-0.2	Negligible Beneficial	51.2	1.1	Negligible Adverse	38.8	40.3	39.8
14, CAIRNCRY AVENUE	Dwelling	49.1	49.9	49.0	-0.1	Negligible Beneficial	49.8	0.7	Negligible Adverse	37.9	38.6	38.6
15, CAIRNCRY AVENUE	Dwelling	48.4	50.0	48.3	-0.1	Negligible Beneficial	49.6	1.2	Negligible Adverse	37.3	38.7	38.4
16, CAIRNCRY AVENUE	Dwelling	48.2	49.0	48.0	-0.2	Negligible Beneficial	48.9	0.7	Negligible Adverse	37.1	37.8	37.7
17, CAIRNCRY AVENUE	Dwelling	49.5	51.2	49.4	-0.1	Negligible Beneficial	50.7	1.2	Negligible Adverse	38.3	39.8	39.4
18, CAIRNCRY AVENUE	Dwelling	48.2	49.0	48.0	-0.2	Negligible Beneficial	48.9	0.7	Negligible Adverse	37.1	37.8	37.7
19, CAIRNCRY AVENUE	Dwelling	49.7	51.3	49.5	-0.2	Negligible Beneficial	50.8	1.1	Negligible Adverse	38.5	39.9	39.5
2, CAIRNCRY AVENUE	Dwelling	49.4	50.5	49.1	-0.3	Negligible Beneficial	50.2	0.8	Negligible Adverse	38.2	39.2	38.9
20, CAIRNCRY AVENUE	Dwelling	48.1	49.0	47.9	-0.2	Negligible Beneficial	48.8	0.7	Negligible Adverse	37.0	37.8	37.7
21, CAIRNCRY AVENUE	Dwelling	50.1	51.7	50.0	-0.1	Negligible Beneficial	51.3	1.2	Negligible Adverse	38.8	40.3	39.9
22, CAIRNCRY AVENUE	Dwelling	47.9	48.8	47.8	-0.1	Negligible Beneficial	48.6	0.7	Negligible Adverse	36.8	37.7	37.5
23, CAIRNCRY AVENUE	Dwelling	50.1	51.7	50.0	-0.1	Negligible Beneficial	51.2	1.1	Negligible Adverse	38.8	40.3	39.8
24, CAIRNCRY AVENUE	Dwelling	49.0	49.9	48.9	-0.1	Negligible Beneficial	49.7	0.7	Negligible Adverse	37.8	38.6	38.5
25, CAIRNCRY AVENUE	Dwelling	48.7	50.3	48.6	-0.1	Negligible Beneficial	49.8	1.1	Negligible Adverse	37.6	39.0	38.6
26, CAIRNCRY AVENUE	Dwelling	47.5	48.5	47.3	-0.2	Negligible Beneficial	48.3	0.8	Negligible Adverse	36.5	37.4	37.2
27, CAIRNCRY AVENUE	Dwelling	48.7	50.3	48.6	-0.1	Negligible Beneficial	49.8	1.1	Negligible Adverse	37.6	39.0	38.6
29, CAIRNCRY AVENUE	Dwelling	52.2	53.8	52.0	-0.2	Negligible Beneficial	53.3	1.1	Negligible Adverse	40.7	42.2	41.7
3, CAIRNCRY AVENUE	Dwelling	52.9	54.7	52.8	-0.1	Negligible Beneficial	54.1	1.2	Negligible Adverse	41.3	43.0	42.4
31, CAIRNCRY AVENUE	Dwelling	52.2	53.9	52.1	-0.1	Negligible Beneficial	53.4	1.2	Negligible Adverse	40.7	42.2	41.8
33, CAIRNCRY AVENUE	Dwelling	50.5	52.2	50.3	-0.2	Negligible Beneficial	51.7	1.2	Negligible Adverse	39.2	40.7	40.3
35, CAIRNCRY AVENUE	Dwelling	52.3	54.1	52.2	-0.1	Negligible Beneficial	53.5	1.2	Negligible Adverse	40.8	42.4	41.9
4, CAIRNCRY AVENUE	Dwelling	49.7	49.7	48.7	-0.2	Negligible Beneficial	49.2	0.6	Negligible Adverse	37.7	38.5	38.3
5, CAIRNCRY AVENUE	Dwelling	51.8	53.5	51.6	-0.2	Negligible Beneficial	53.0	1.2	Negligible Adverse	40.4	41.9	41.4
6, CAIRNCRY AVENUE	Dwelling	49.4	50.2	49.2	-0.2	Negligible Beneficial	50.0	0.6	Negligible Adverse	38.2	38.9	38.7
7, CAIRNCRY AVENUE	Dwelling	52.0	53.7	51.8	-0.2	Negligible Beneficial	53.2	1.2	Negligible Adverse	40.5	42.1	41.6
8, CAIRNCRY AVENUE	Dwelling	48.1	49.0	47.9	-0.2	Negligible Beneficial	48.8	0.7	Negligible Adverse	37.0	37.8	37.7
9, CAIRNCRY AVENUE	Dwelling	51.1	52.8	51.0	-0.1	Negligible Beneficial	52.3	1.2	Negligible Adverse	39.7	41.3	40.8
1, CAIRNCRY CRESCENT	Dwelling	59.6	61.1	59.4	-0.2	Negligible Beneficial	60.7	1.1	Negligible Adverse	47.4	48.7	48.4
2, CAIRNCRY CRESCENT	Dwelling	58.5	60.3	58.4	-0.1	Negligible Beneficial	59.8	1.3	Negligible Adverse	46.4	48.0	47.6
3, CAIRNCRY CRESCENT	Dwelling	57.7	59.1	57.4	-0.3	Negligible Beneficial	58.7	1.0	Negligible Adverse	45.7	46.9	46.6
4, CAIRNCRY CRESCENT	Dwelling	57.3	59.0	57.2	-0.1	Negligible Beneficial	58.5	1.2	Negligible Adverse	45.3	46.8	46.4
5, CAIRNCRY CRESCENT	Dwelling	57.0	58.3	56.7	-0.3	Negligible Beneficial	57.8	0.8	Negligible Adverse	45.0	46.2	45.8
6, CAIRNCRY CRESCENT	Dwelling	55.7	56.9	55.4	-0.3	Negligible Beneficial	56.5	0.8	Negligible Adverse	43.9	44.9	44.6
7, CAIRNCRY CRESCENT	Dwelling	57.1	58.2	56.7	-0.4	Negligible Beneficial	57.8	0.7	Negligible Adverse	45.1	46.1	45.8
8, CAIRNCRY CRESCENT	Dwelling	51.2	52.0	50.8	-0.4	Negligible Beneficial	51.7	0.5	Negligible Adverse	39.8	40.5	40.3
9, CAIRNCRY CRESCENT	Dwelling	58.2	59.2	57.8	-0.4	Negligible Beneficial	58.8	0.6	Negligible Adverse	46.1	47.0	46.7
100, CAIRNCRY ROAD	Dwelling	70.5	72.4	70.4	-0.1	Negligible Beneficial	71.9	1.4	Negligible Adverse	57.4	58.7	58.4
102, CAIRNCRY ROAD	Dwelling	70.5	72.4	70.4	-0.1	Negligible Beneficial	71.8	1.3	Negligible Adverse	57.2	58.9	58.4
104, CAIRNCRY ROAD	Dwelling	70.7	72.5	70.6	-0.1	Negligible Beneficial	72.0	1.3	Negligible Adverse	57.4	59.0	58.5
106, CAIRNCRY ROAD	Dwelling	70.7	72.5	70.6	-0.1	Negligible Beneficial	72.0	1.3	Negligible Adverse	57.4	59.0	58.5
44, CAIRNCRY ROAD	Dwelling	71.9	73.9	71.8	-0.1	Negligible Beneficial	73.3	1.4	Negligible Adverse	58.4	60.2	59.7
46, CAIRNCRY ROAD	Dwelling	72.0	74.0	71.9	-0.1	Negligible Beneficial	73.4	1.4	Negligible Adverse	58.5	60.3	59.8
48, CAIRNCRY ROAD	Dwelling	71.7	73.7	71.6	-0.1	Negligible Beneficial	73.1	1.4	Negligible Adverse	58.3	60.1	59.5
50, CAIRNCRY ROAD	Dwelling	71.2	73.2	71.1	-0.1	Negligible Beneficial	72.5	1.3	Negligible Adverse	57.8	59.6	59.0
52, CAIRNCRY ROAD	Dwelling	70.6	72.6	70.4	-0.2	Negligible Beneficial	72.0	1.4	Negligible Adverse	57.3	59.1	58.5
54, CAIRNCRY ROAD	Dwelling	70.3	72.3	70.2	-0.1	Negligible Beneficial	71.7	1.4	Negligible Adverse	57.0	58.8	58.3
56, CAIRNCRY ROAD	Dwelling	70.3	72.4	70.2	-0.1	Negligible Beneficial	71.7	1.4	Negligible Adverse	57.0	58.9	58.3
58, CAIRNCRY ROAD	Dwelling	70.3	72.3	70.2	-0.1	Negligible Beneficial	71.7	1.4	Negligible Adverse	57.0	58.8	58.3
60, CAIRNCRY ROAD	Dwelling	70.3	72.3	70.2	-0.1	Negligible Beneficial	71.7	1.4	Negligible Adverse	57.0	58.8	58.3
62, CAIRNCRY ROAD	Dwelling	70.3	72.3	70.2	-0.1	Negligible Beneficial	71.7	1.4	Negligible Adverse	57.0	58.8	58.3
64, CAIRNCRY ROAD	Dwelling	70.4	72.4	70.3	-0.1	Negligible Beneficial	71.8	1.4	Negligible Adverse	57.1	58.9	58.4
66, CAIRNCRY ROAD	Dwelling	70.3	72.4	70.2	-0.1	Negligible Beneficial	71.7	1.4	Negligible Adverse	57.0	58.9	58.3
68, CAIRNCRY ROAD	Dwelling	70.4	72.4	70.3	-0.1	Negligible Beneficial	71.8	1.4	Negligible Adverse	57.1	58.9	58.4
70, CAIRNCRY ROAD	Dwelling	70.3	72.4	70.3	0.0	No Change	71.8	1.5	Negligible Adverse	57.0	58.9	58.4
72, CAIRNCRY ROAD	Dwelling	70.4	72.4	70.3	-0.1	Negligible Beneficial	71.8	1.4	Negligible Adverse	57.1	58.9	58.4
74, CAIRNCRY ROAD	Dwelling	70.4	72.5	70.3	-0.1	Negligible Beneficial	71.9	1.5	Negligible Adverse	57.1	59.0	58.4
76, CAIRNCRY ROAD	Dwelling	70.4	72.5	70.3	-0.1	Negligible Beneficial	71.8	1.4	Negligible Adverse	57.1	59.0	58.4
78, CAIRNCRY ROAD	Dwelling	70.4	72.4	70.3	-0.1	Negligible Beneficial	71.8	1.4	Negligible Adverse	57.1	58.9	58.4
80, CAIRNCRY ROAD	Dwelling	70.4	72.4	70.3	-0.1	Negligible Beneficial	71.8	1.4	Negligible Adverse	57.1	58.9	58.4
82, CAIRNCRY ROAD	Dwelling	70.3	72.4	70.2	-0.1	Negligible Beneficial	71.8	1.5	Negligible Adverse	57.0	58.9	58.4
84, CAIRNCRY ROAD	Dwelling	70.3	72.4	70.3	0.0	No Change	71.8	1.5	Negligible Adverse	57.0	58.9	58.4
86, CAIRNCRY ROAD	Dwelling	70.3	72.3	70.2	-0.1	Negligible Beneficial	71.7	1.4	Negligible Adverse	57.0	58.8	58.3
88, CAIRNCRY ROAD	Dwelling	70.3	72.3	70.2	-0.1	Negligible Beneficial	71.7	1.4	Negligible Adverse	57.0	58.8	58.3
90, CAIRNCRY ROAD	Dwelling	70.3	72.3	70.2	-0.1	Negligible Beneficial	71.7	1.4	Negligible Adverse	57.0	58.8	58.3
92, CAIRNCRY ROAD	Dwelling	68.7	68.7	66.6	-0.1	Negligible Beneficial	68.1	1.4	Negligible Adverse	53.8	55.6	55.0
94, CAIRNCRY ROAD	Dwelling	70.2	72.2	70.0	-0.2	Negligible Beneficial	71.5	1.3	Negligible Adverse	56.9	58.7	58.1
96, CAIRNCRY ROAD	Dwelling	70.5	72.4	70.4	-0.1	Negligible Beneficial	71.9	1.4	Negligible Adverse	57.2	58.9	58.4
98, CAIRNCRY ROAD	Dwelling	70.5	72.4	70.5	0.0	No Change	71.9	1.4	Negligible Adverse	57.2	58.9	58.4
10, CAIRNCRY TERRACE	Dwelling	52.4	54.0	52.2	-0.2	Negligible Beneficial	53.5	1.1	Negligible Adverse	40.9	42.3	41.9
12, CAIRNCRY TERRACE	Dwelling	52.4	53.6	52.1	-0.3	Negligible Beneficial	53.3	0.9	Negligible Adverse	40.9	42.0	41.7
14, CAIRNCRY TERRACE	Dwelling	55.1	55.7	54.6	-0.5	Negligible Beneficial	55.5	0.4	Negligible Adverse	43.3	43.9	43.7
16, CAIRNCRY TERRACE	Dwelling	56.7	57.3	56.2	-0.5	Negligible Beneficial	57.1	0.4	Negligible Adverse	44.8	45.3	45.1
2, CAIRNCRY TERRACE	Dwelling	58.7	60.6	58.6	-0.1	Negligible Beneficial	60.0	1.3	Negligible Adverse	46.6	48.3	47.7
4, CAIRNCRY TERRACE	Dwelling	57.1	58.9	57.0	-0.1	Negligible Beneficial	58.3	1.2	Negligible Adverse	45.1	46.7	46.2
6, CAIRNCRY TERRACE	Dwelling	54.3	56.2	54.2	-0.1	Negligible Beneficial	55.6	1.3	Negligible Adverse	42.6	44.3	43.8
8, CAIRNCRY TERRACE	Dwelling	53.5	55.3	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	43.5	43.0
14, CAIRNFIELD CRESCENT	Dwelling	55.3	55.3	55.3	-0.1	Negligible Beneficial	55.7	0.3	Negligible Adverse	43.6	42.9	43.9
16, CAIRNFIELD CRESCENT	Dwelling	55.7	54.9	55.6	-0.1	Negligible Beneficial	56.0	0.3	Negligible Adverse	43.9	43.1	44.1
18, CAIRNFIELD CRESCENT	Dwelling	55.6	54.8	55.5	-0.1	Negligible Beneficial	55.9	0.3	Negligible Adverse	43.8	43.1	44.0

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
CARAVAN PARK, 1, CAIRNFIELD GARDENS	Dwelling	52.4	52.0	52.3	-0.1	Negligible Beneficial	52.8	0.4	Negligible Adverse	40.9	40.5	41.3
CARAVAN PARK, 2, CAIRNFIELD GARDENS	Dwelling	54.1	53.1	54.0	-0.1	Negligible Beneficial	54.4	0.3	Negligible Adverse	42.4	41.5	42.7
CARAVAN PARK, 2, CAIRNFIELD GARDENS	Dwelling	53.0	52.5	52.9	-0.1	Negligible Beneficial	53.4	0.4	Negligible Adverse	41.4	41.0	41.8
CARAVAN PARK, 3, CAIRNFIELD GARDENS	Dwelling	54.0	53.1	53.9	-0.1	Negligible Beneficial	54.3	0.3	Negligible Adverse	42.3	41.5	42.6
CARAVAN PARK, 4, CAIRNFIELD GARDENS	Dwelling	51.3	50.9	51.2	-0.1	Negligible Beneficial	51.7	0.4	Negligible Adverse	39.9	39.5	40.3
CARAVAN PARK, 5, CAIRNFIELD GARDENS	Dwelling	54.6	53.7	54.5	-0.1	Negligible Beneficial	54.9	0.3	Negligible Adverse	42.9	42.1	43.1
CARAVAN PARK, 6, CAIRNFIELD GARDENS	Dwelling	54.2	53.2	54.1	-0.1	Negligible Beneficial	54.4	0.2	Negligible Adverse	42.5	41.6	42.7
CARAVAN PARK, 7, CAIRNFIELD GARDENS	Dwelling	54.5	53.5	54.4	-0.1	Negligible Beneficial	54.8	0.3	Negligible Adverse	42.8	41.9	43.1
CARAVAN PARK, 9, CAIRNFIELD GARDENS	Dwelling	54.3	53.8	54.2	-0.1	Negligible Beneficial	54.6	0.3	Negligible Adverse	42.6	42.2	42.9
CARAVAN PARK, 10, CAIRNFIELD GARDENS	Dwelling	54.6	54.2	54.6	0.0	No Change	55.0	0.4	Negligible Adverse	42.9	42.5	43.2
CARAVAN PARK, 11, CAIRNFIELD GARDENS	Dwelling	54.0	53.5	53.8	-0.2	Negligible Beneficial	54.3	0.3	Negligible Adverse	42.3	41.9	42.6
CARAVAN PARK, 12, CAIRNFIELD GARDENS	Dwelling	55.1	55.7	56.0	-0.1	Negligible Beneficial	56.4	0.3	Negligible Adverse	44.2	43.9	44.5
CARAVAN PARK, 13, CAIRNFIELD GARDENS	Dwelling	53.7	53.2	53.5	-0.2	Negligible Beneficial	54.0	0.3	Negligible Adverse	42.1	41.6	42.3
CARAVAN PARK, 17, CAIRNFIELD GARDENS	Dwelling	53.8	53.4	53.7	-0.1	Negligible Beneficial	54.1	0.3	Negligible Adverse	42.2	41.8	42.4
CARAVAN PARK, 22, CAIRNFIELD GARDENS	Dwelling	54.3	53.9	54.2	-0.1	Negligible Beneficial	54.6	0.3	Negligible Adverse	42.6	42.2	42.9
CARAVAN PARK, 26, CAIRNFIELD GARDENS	Dwelling	54.3	53.9	54.2	-0.1	Negligible Beneficial	54.6	0.3	Negligible Adverse	42.6	42.2	42.9
CARAVAN PARK, 28, CAIRNFIELD GARDENS	Dwelling	54.8	54.3	54.7	-0.1	Negligible Beneficial	55.0	0.2	Negligible Adverse	43.1	42.6	43.2
CAIRNFIELD GARDENS	Dwelling	54.3	53.7	54.2	-0.1	Negligible Beneficial	54.6	0.3	Negligible Adverse	42.6	42.1	42.9
CAIRNFIELD GARDENS	Dwelling	53.8	53.3	53.7	-0.1	Negligible Beneficial	54.0	0.2	Negligible Adverse	42.2	41.7	42.3
CAIRNFIELD GARDENS	Dwelling	55.6	55.1	55.5	-0.1	Negligible Beneficial	55.8	0.2	Negligible Adverse	43.8	43.3	44.0
CAIRNFIELD GARDENS	Dwelling	53.8	53.4	53.7	-0.1	Negligible Beneficial	54.1	0.3	Negligible Adverse	42.2	41.8	42.4
CAIRNFIELD GARDENS	Dwelling	51.3	50.9	51.2	-0.1	Negligible Beneficial	51.7	0.4	Negligible Adverse	39.9	39.5	40.3
CAIRNFIELD GARDENS	Dwelling	54.0	53.5	53.9	-0.1	Negligible Adverse	54.3	0.3	Negligible Adverse	42.3	41.9	42.6
CAIRNFIELD GARDENS	Dwelling	53.9	53.4	53.7	-0.2	Negligible Beneficial	54.2	0.3	Negligible Adverse	42.2	41.8	42.5
CAIRNFIELD GARDENS	Dwelling	51.3	50.9	51.2	-0.1	Negligible Beneficial	51.7	0.4	Negligible Adverse	39.9	39.5	40.3
CAIRNFIELD GARDENS	Dwelling	54.9	54.5	54.8	-0.1	Negligible Adverse	55.1	0.2	Negligible Adverse	42.8	42.3	43.3
CAIRNFIELD GARDENS	Dwelling	54.7	54.3	54.6	-0.1	Negligible Beneficial	55.1	0.4	Negligible Adverse	43.0	42.6	43.3
CAIRNFIELD GARDENS	Dwelling	54.4	54.0	54.3	-0.1	Negligible Beneficial	54.7	0.3	Negligible Adverse	42.7	42.3	43.0
CAIRNFIELD GARDENS	Dwelling	54.2	53.6	54.1	-0.1	Negligible Beneficial	54.4	0.2	Negligible Adverse	42.5	42.0	42.7
1, CAIRNVIEW CRESCENT	Dwelling	49.5	50.7	49.4	-0.1	Negligible Beneficial	50.4	0.9	Negligible Adverse	38.3	39.4	39.1
10, CAIRNVIEW CRESCENT	Dwelling	49.4	50.2	49.2	-0.2	Negligible Beneficial	50.1	0.7	Negligible Adverse	38.2	38.9	38.8
11, CAIRNVIEW CRESCENT	Dwelling	50.8	51.9	50.7	-0.1	Negligible Beneficial	51.6	0.8	Negligible Adverse	39.5	40.4	40.2
13, CAIRNVIEW CRESCENT	Dwelling	50.7	51.7	50.6	-0.1	Negligible Beneficial	51.4	0.7	Negligible Adverse	39.4	40.3	40.0
15, CAIRNVIEW CRESCENT	Dwelling	50.4	51.1	50.3	-0.1	Negligible Beneficial	51.0	0.6	Negligible Adverse	39.1	39.7	39.6
17, CAIRNVIEW CRESCENT	Dwelling	50.4	51.2	50.3	-0.1	Negligible Beneficial	51.1	0.7	Negligible Adverse	39.1	39.8	39.7
19, CAIRNVIEW CRESCENT	Dwelling	50.3	51.0	50.2	-0.1	Negligible Beneficial	50.9	0.6	Negligible Adverse	39.0	39.6	39.5
2, CAIRNVIEW CRESCENT	Dwelling	48.4	49.3	48.2	-0.2	Negligible Beneficial	49.1	0.7	Negligible Adverse	37.3	38.1	37.9
21, CAIRNVIEW CRESCENT	Dwelling	50.3	51.1	50.3	0.0	No Change	51.0	0.7	Negligible Adverse	39.0	39.7	39.6
23, CAIRNVIEW CRESCENT	Dwelling	50.2	51.0	50.2	0.0	No Change	50.9	0.7	Negligible Adverse	38.9	39.6	39.5
25, CAIRNVIEW CRESCENT	Dwelling	50.4	51.1	50.3	-0.1	Negligible Beneficial	51.0	0.6	Negligible Adverse	39.1	39.7	39.6
27, CAIRNVIEW CRESCENT	Dwelling	50.2	50.9	50.1	-0.1	Negligible Beneficial	50.8	0.6	Negligible Adverse	38.9	39.5	39.5
29, CAIRNVIEW CRESCENT	Dwelling	50.4	51.1	50.2	-0.2	Negligible Beneficial	51.0	0.6	Negligible Adverse	39.1	39.7	39.6
3, CAIRNVIEW CRESCENT	Dwelling	56.1	58.0	56.0	-0.1	Negligible Beneficial	57.4	1.3	Negligible Adverse	44.2	45.9	45.4
31, CAIRNVIEW CRESCENT	Dwelling	50.6	51.4	50.5	-0.1	Negligible Beneficial	51.3	0.7	Negligible Adverse	39.3	40.0	39.9
33, CAIRNVIEW CRESCENT	Dwelling	50.8	51.5	50.6	-0.2	Negligible Beneficial	51.4	0.6	Negligible Adverse	39.5	40.1	40.0
35, CAIRNVIEW CRESCENT	Dwelling	51.3	52.0	51.1	-0.2	Negligible Beneficial	51.9	0.6	Negligible Adverse	39.9	40.5	40.4
37, CAIRNVIEW CRESCENT	Dwelling	51.6	52.3	51.4	-0.2	Negligible Beneficial	52.3	0.7	Negligible Adverse	40.2	40.8	40.8
39, CAIRNVIEW CRESCENT	Dwelling	52.4	53.0	52.1	-0.3	Negligible Beneficial	52.9	0.5	Negligible Adverse	40.9	41.4	41.3
4, CAIRNVIEW CRESCENT	Dwelling	49.4	50.2	49.2	-0.2	Negligible Beneficial	50.1	0.7	Negligible Adverse	38.2	38.9	38.8
5, CAIRNVIEW CRESCENT	Dwelling	54.3	56.1	54.2	-0.1	Negligible Beneficial	55.5	1.2	Negligible Adverse	42.6	44.2	43.7
6, CAIRNVIEW CRESCENT	Dwelling	49.7	50.4	49.4	-0.3	Negligible Beneficial	50.3	0.6	Negligible Adverse	38.5	39.1	39.0
7, CAIRNVIEW CRESCENT	Dwelling	53.4	55.1	53.2	-0.2	Negligible Beneficial	54.6	1.2	Negligible Adverse	41.8	43.3	42.9
7, CAIRNVIEW CRESCENT	Dwelling	52.5	54.2	52.4	-0.1	Negligible Beneficial	53.7	1.2	Negligible Adverse	41.0	42.5	42.1
8, CAIRNVIEW CRESCENT	Dwelling	51.1	51.8	50.9	-0.2	Negligible Beneficial	51.7	0.6	Negligible Adverse	39.7	40.4	40.3
9, CAIRNVIEW CRESCENT	Dwelling	51.1	52.3	51.1	0.0	No Change	52.0	0.9	Negligible Adverse	39.7	40.8	40.5
2, CANAL STREET, WOODSIDE	Dwelling	53.1	54.4	52.9	-0.2	Negligible Beneficial	54.1	1.0	Negligible Adverse	41.5	42.7	42.4
2, CANAL STREET, WOODSIDE	Dwelling	53.1	54.4	52.9	-0.2	Negligible Beneficial	54.1	1.0	Negligible Adverse	41.5	42.7	42.4
2, CANAL STREET, WOODSIDE	Dwelling	53.1	54.4	52.9	-0.2	Negligible Beneficial	54.1	1.0	Negligible Adverse	41.5	42.7	42.4
2, CANAL STREET, WOODSIDE	Dwelling	53.1	54.4	52.9	-0.2	Negligible Beneficial	54.1	1.0	Negligible Adverse	41.5	42.7	42.4
2, CANAL STREET, WOODSIDE	Dwelling	53.1	54.4	52.9	-0.2	Negligible Beneficial	54.1	1.0	Negligible Adverse	41.5	42.7	42.4
2, CANAL STREET, WOODSIDE	Dwelling	53.1	54.4	52.9	-0.2	Negligible Beneficial	54.1	1.0	Negligible Adverse	41.5	42.7	42.4
2, CANAL STREET, WOODSIDE	Dwelling	53.1	54.4	52.9	-0.2	Negligible Beneficial	54.1	1.0	Negligible Adverse	41.5	42.7	42.4
2, CANAL STREET, WOODSIDE	Dwelling	53.1	54.4	52.9	-0.2	Negligible Beneficial	54.1	1.0	Negligible Adverse	41.5	42.7	42.4
2, CANAL STREET, WOODSIDE	Dwelling	48.2	49.3	48.2	0.0	No Change	49.2	1.0	Negligible Adverse	37.1	38.1	38.0
20, CANAL STREET, WOODSIDE	Dwelling	55.1	55.8	55.3	0.2	Negligible Adverse	56.0	0.9	Negligible Adverse	43.3	44.0	44.1
3, CANAL STREET, WOODSIDE	Dwelling	46.6	47.7	46.6	0.0	No Change	47.6	1.0	Negligible Adverse	35.7	36.7	36.6
4, CANAL STREET, WOODSIDE	Dwelling	49.7	49.6	49.6	-0.1	Negligible Beneficial	49.6	0.9	Negligible Adverse	37.6	38.4	38.4
4, CANAL STREET, WOODSIDE	Dwelling	48.7	49.6	48.6	-0.1	Negligible Beneficial	49.6	0.9	Negligible Adverse	37.6	38.4	38.4
4, CANAL STREET, WOODSIDE	Dwelling	48.7	49.6	48.6	-0.1	Negligible Beneficial	49.6	0.9	Negligible Adverse	37.6	38.4	38.4
4, CANAL STREET, WOODSIDE	Dwelling	48.7	49.6	48.6	-0.1	Negligible Beneficial	49.6	0.9	Negligible Adverse	37.6	38.4	38.4
4, CANAL STREET, WOODSIDE	Dwelling	48.7	49.6	48.6	-0.1	Negligible Beneficial	49.6	0.9	Negligible Adverse	37.6	38.4	38.4
4, CANAL STREET, WOODSIDE	Dwelling	47.9	49.0	47.9	0.0	No Change	48.8	0.9	Negligible Adverse	36.8	37.8	37.7
5, CANAL STREET, WOODSIDE	Dwelling	48.8	49.7	49.0	0.2	Negligible Adverse	49.8	1.0	Negligible Adverse	37.7	38.5	38.6
6, CANAL STREET, WOODSIDE	Dwelling	49.9	50.8	50.0	0.1	Negligible Adverse	50.9	1.0	Negligible Adverse	38.6	39.5	39.5
7, CANAL STREET, WOODSIDE	Dwelling	51.2	52.1	51.4	0.2	Negligible Adverse	52.2	1.0	Negligible Adverse	39.8	40.6	40.7
8, CANAL STREET, WOODSIDE	Dwelling	51.5	52.3	51.6	0.1	Negligible Adverse	52.4	0.9	Negligible Adverse	40.1	40.8	40.9
9, CANAL STREET, WOODSIDE	Dwelling	49.7	50.5	49.8	0.1	Negligible Beneficial	50.6	0.9	Negligible Adverse	38.5	39.2	39.3
1, CAPERSTOWN CRESCENT	Dwelling	50.2	50.5	50.2	0.0	No Change	51.0	0.8	Negligible Adverse	38.9	39.2	39.6
10, CAPERSTOWN CRESCENT	Dwelling	49.3	49.9	49.4	0.1	Negligible Adverse	50.3	1.0	Negligible Adverse	38.1	38.6	39.0
11, CAPERSTOWN CRESCENT	Dwelling	49.2	49.1	49.2	0.0	No Change	49.9	0.7	Negligible Adverse	38.0	37.9	38.6
12, CAPERSTOWN CRESCENT	Dwelling	49.9	49.3	49.3	0.0	No Change	50.3	1.0	Negligible Adverse	38.1	38.6	39.0
13, CAPERSTOWN CRESCENT	Dwelling	48.7	49.2	48.7	0.0	No Change	49.6	0.9	Negligible Adverse	37.6	38.0	38.4

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
14. CAPERSTOWN CRESCENT	Dwelling	49.3	49.9	49.3	0.0	No Change	50.3	1.0	Negligible Adverse	38.1	38.6	39.0
15. CAPERSTOWN CRESCENT	Dwelling	48.5	49.2	48.5	0.0	No Change	49.5	1.0	Negligible Adverse	37.4	38.0	38.3
16. CAPERSTOWN CRESCENT	Dwelling	49.5	50.0	49.5	0.0	No Change	50.4	0.9	Negligible Adverse	38.3	38.7	39.1
17. CAPERSTOWN CRESCENT	Dwelling	48.3	49.1	48.3	0.0	No Change	49.3	1.0	Negligible Adverse	37.2	37.9	38.1
18. CAPERSTOWN CRESCENT	Dwelling	49.9	50.3	49.9	0.0	No Change	50.8	0.9	Negligible Adverse	38.6	39.0	39.5
19. CAPERSTOWN CRESCENT	Dwelling	48.5	49.3	48.5	0.0	No Change	49.5	1.0	Negligible Adverse	37.4	38.1	38.3
2. CAPERSTOWN CRESCENT	Dwelling	47.2	48.1	47.2	0.0	No Change	48.3	1.1	Negligible Adverse	36.2	37.0	37.2
20. CAPERSTOWN CRESCENT	Dwelling	49.8	50.1	49.8	0.0	No Change	50.6	0.8	Negligible Adverse	38.6	38.8	39.3
21. CAPERSTOWN CRESCENT	Dwelling	48.2	49.0	48.2	0.0	No Change	49.3	1.1	Negligible Adverse	37.1	37.8	38.1
22. CAPERSTOWN CRESCENT	Dwelling	49.9	50.3	49.9	0.0	No Change	50.8	0.9	Negligible Adverse	38.6	39.0	39.5
23. CAPERSTOWN CRESCENT	Dwelling	48.2	49.0	48.2	0.0	No Change	49.3	1.1	Negligible Adverse	37.1	37.8	38.1
24. CAPERSTOWN CRESCENT	Dwelling	49.9	50.1	49.9	0.0	No Change	50.7	0.8	Negligible Adverse	38.6	38.8	39.4
25. CAPERSTOWN CRESCENT	Dwelling	48.0	48.8	48.0	0.0	No Change	49.0	1.0	Negligible Adverse	36.9	37.7	37.8
26. CAPERSTOWN CRESCENT	Dwelling	50.0	50.2	50.0	0.0	No Change	50.8	0.8	Negligible Adverse	38.7	38.9	39.5
27. CAPERSTOWN CRESCENT	Dwelling	48.3	49.0	48.2	-0.1	Negligible Beneficial	49.2	0.9	Negligible Adverse	37.2	37.8	38.0
28. CAPERSTOWN CRESCENT	Dwelling	50.1	50.2	50.1	0.0	No Change	50.8	0.7	Negligible Adverse	38.8	38.9	39.5
29. CAPERSTOWN CRESCENT	Dwelling	49.9	49.7	49.8	-0.1	Negligible Beneficial	50.5	0.6	Negligible Adverse	38.6	38.5	39.2
3. CAPERSTOWN CRESCENT	Dwelling	49.0	49.4	49.0	0.0	No Change	49.9	0.9	Negligible Adverse	37.8	38.2	38.6
30. CAPERSTOWN CRESCENT	Dwelling	49.7	50.0	49.7	0.0	No Change	50.5	0.8	Negligible Adverse	38.5	38.7	39.2
31. CAPERSTOWN CRESCENT	Dwelling	47.9	48.7	47.8	-0.1	Negligible Beneficial	48.9	1.0	Negligible Adverse	36.8	37.6	37.7
32. CAPERSTOWN CRESCENT	Dwelling	49.4	49.8	49.4	0.0	No Change	50.3	0.9	Negligible Adverse	38.2	38.6	39.0
33. CAPERSTOWN CRESCENT	Dwelling	48.2	48.9	48.2	0.0	No Change	49.2	1.0	Negligible Adverse	37.1	37.7	38.0
34. CAPERSTOWN CRESCENT	Dwelling	49.4	49.7	49.4	0.0	No Change	50.2	0.8	Negligible Adverse	38.2	38.5	38.9
35. CAPERSTOWN CRESCENT	Dwelling	48.9	49.5	48.9	0.0	No Change	49.8	0.9	Negligible Adverse	37.7	38.3	38.6
36. CAPERSTOWN CRESCENT	Dwelling	49.4	49.7	49.4	0.0	No Change	50.2	0.8	Negligible Adverse	38.2	38.5	38.9
37. CAPERSTOWN CRESCENT	Dwelling	49.7	49.9	49.7	0.0	No Change	50.7	0.8	Negligible Adverse	38.7	38.6	39.2
38. CAPERSTOWN CRESCENT	Dwelling	48.8	49.2	48.8	0.0	No Change	49.7	0.9	Negligible Adverse	37.7	38.0	38.5
39. CAPERSTOWN CRESCENT	Dwelling	48.3	49.0	48.3	0.0	No Change	49.3	1.0	Negligible Adverse	37.2	37.8	38.1
4. CAPERSTOWN CRESCENT	Dwelling	47.4	48.3	47.4	0.0	No Change	48.5	1.1	Negligible Adverse	36.4	37.2	37.4
40. CAPERSTOWN CRESCENT	Dwelling	49.1	49.3	49.1	0.0	No Change	49.9	0.8	Negligible Adverse	37.9	38.1	38.6
41. CAPERSTOWN CRESCENT	Dwelling	50.0	49.8	50.0	0.0	No Change	50.6	0.6	Negligible Adverse	38.7	38.6	39.3
42. CAPERSTOWN CRESCENT	Dwelling	48.6	49.0	48.6	0.0	No Change	49.5	0.9	Negligible Adverse	37.5	37.8	38.3
43. CAPERSTOWN CRESCENT	Dwelling	48.0	48.7	48.0	0.0	No Change	49.0	1.0	Negligible Adverse	36.9	37.6	37.8
44. CAPERSTOWN CRESCENT	Dwelling	48.7	49.1	48.7	0.0	No Change	49.6	0.9	Negligible Adverse	37.6	37.9	38.4
45. CAPERSTOWN CRESCENT	Dwelling	48.2	48.8	48.2	0.0	No Change	49.1	0.9	Negligible Adverse	37.1	37.7	37.9
46. CAPERSTOWN CRESCENT	Dwelling	48.3	48.9	48.3	0.0	No Change	49.3	1.0	Negligible Adverse	37.2	37.7	38.1
47. CAPERSTOWN CRESCENT	Dwelling	48.1	48.7	48.1	0.0	No Change	49.0	0.9	Negligible Adverse	37.0	37.6	37.8
48. CAPERSTOWN CRESCENT	Dwelling	47.9	48.7	47.9	0.0	No Change	49.0	1.1	Negligible Adverse	36.8	37.6	37.8
49. CAPERSTOWN CRESCENT	Dwelling	48.4	48.7	48.3	-0.1	Negligible Beneficial	49.2	0.8	Negligible Adverse	37.3	37.6	38.0
5. CAPERSTOWN CRESCENT	Dwelling	49.5	49.7	49.5	0.0	No Change	50.3	0.8	Negligible Adverse	38.3	38.5	39.0
50. CAPERSTOWN CRESCENT	Dwelling	47.2	48.1	47.2	0.0	No Change	48.3	1.1	Negligible Adverse	36.2	37.0	37.2
51. CAPERSTOWN CRESCENT	Dwelling	48.3	48.7	48.3	0.0	No Change	49.2	0.9	Negligible Adverse	37.2	37.6	38.0
52. CAPERSTOWN CRESCENT	Dwelling	48.8	49.6	48.8	0.0	No Change	49.8	1.0	Negligible Adverse	37.7	38.4	38.6
53. CAPERSTOWN CRESCENT	Dwelling	50.3	49.7	50.2	-0.1	Negligible Beneficial	50.8	0.5	Negligible Adverse	39.0	38.5	39.5
55. CAPERSTOWN CRESCENT	Dwelling	45.4	46.1	45.4	0.0	No Change	46.4	1.0	Negligible Adverse	34.6	35.2	35.5
57. CAPERSTOWN CRESCENT	Dwelling	49.7	49.3	49.6	-0.1	Negligible Beneficial	50.3	0.6	Negligible Adverse	38.5	38.1	39.0
59. CAPERSTOWN CRESCENT	Dwelling	49.6	49.3	49.6	0.0	No Change	50.2	0.6	Negligible Adverse	38.4	38.1	38.9
6. CAPERSTOWN CRESCENT	Dwelling	48.8	49.5	48.7	-0.1	Negligible Beneficial	49.8	1.0	Negligible Adverse	37.7	38.3	38.6
61. CAPERSTOWN CRESCENT	Dwelling	49.4	49.3	49.4	0.0	No Change	50.1	0.7	Negligible Adverse	38.2	38.1	38.8
63. CAPERSTOWN CRESCENT	Dwelling	49.2	49.2	49.2	0.0	No Change	50.0	0.8	Negligible Adverse	38.0	38.0	38.7
65. CAPERSTOWN CRESCENT	Dwelling	49.0	49.1	49.0	0.0	No Change	49.8	0.8	Negligible Adverse	37.8	37.9	38.6
67. CAPERSTOWN CRESCENT	Dwelling	49.1	49.2	49.0	-0.1	Negligible Beneficial	49.9	0.9	Negligible Adverse	37.9	38.0	38.6
69. CAPERSTOWN CRESCENT	Dwelling	48.6	48.9	48.6	0.0	No Change	49.5	0.8	Negligible Adverse	37.5	37.7	38.3
7. CAPERSTOWN CRESCENT	Dwelling	49.3	49.4	49.3	0.0	No Change	50.0	0.7	Negligible Adverse	38.1	38.2	38.7
71. CAPERSTOWN CRESCENT	Dwelling	48.4	48.9	48.4	0.0	No Change	49.3	0.9	Negligible Adverse	37.3	37.7	38.1
73. CAPERSTOWN CRESCENT	Dwelling	48.2	48.7	48.2	0.0	No Change	49.2	1.0	Negligible Adverse	37.1	37.6	38.0
75. CAPERSTOWN CRESCENT	Dwelling	47.8	48.6	47.8	0.0	No Change	48.9	1.1	Negligible Adverse	36.8	37.5	37.7
77. CAPERSTOWN CRESCENT	Dwelling	47.6	48.4	47.6	0.0	No Change	48.7	1.1	Negligible Adverse	36.6	37.3	37.6
79. CAPERSTOWN CRESCENT	Dwelling	48.5	49.3	48.5	0.0	No Change	49.6	1.1	Negligible Adverse	37.4	38.1	38.4
8. CAPERSTOWN CRESCENT	Dwelling	48.9	49.6	48.9	0.0	No Change	49.9	1.0	Negligible Adverse	37.7	38.4	38.6
9. CAPERSTOWN CRESCENT	Dwelling	49.4	49.3	49.4	0.0	No Change	50.0	0.6	Negligible Adverse	38.2	38.1	38.7
1. CHAPMAN PLACE, HEATHRYFOLD	Dwelling	43.0	43.4	42.9	-0.1	Negligible Beneficial	43.8	0.8	Negligible Adverse	32.4	32.8	33.2
11. CHAPMAN PLACE, HEATHRYFOLD	Dwelling	43.9	44.2	43.8	-0.1	Negligible Beneficial	44.6	0.7	Negligible Adverse	33.2	33.5	33.9
13. CHAPMAN PLACE, HEATHRYFOLD	Dwelling	44.8	45.4	44.7	-0.1	Negligible Beneficial	45.7	0.9	Negligible Adverse	34.1	34.6	34.9
3. CHAPMAN PLACE, HEATHRYFOLD	Dwelling	43.2	43.6	43.1	-0.1	Negligible Beneficial	44.0	0.8	Negligible Adverse	32.6	33.0	33.3
5. CHAPMAN PLACE, HEATHRYFOLD	Dwelling	43.2	43.6	43.3	-0.1	Negligible Beneficial	44.0	0.8	Negligible Adverse	32.6	33.0	33.3
7. CHAPMAN PLACE, HEATHRYFOLD	Dwelling	43.3	43.7	43.3	0.0	No Change	44.1	0.8	Negligible Adverse	32.7	33.1	33.4
9. CHAPMAN PLACE, HEATHRYFOLD	Dwelling	43.6	43.9	43.6	0.0	No Change	44.5	0.9	Negligible Adverse	33.0	33.2	33.8
1. CHAPMAN WALK, HEATHRYFOLD	Dwelling	45.0	45.8	45.0	0.0	No Change	46.0	1.0	Negligible Adverse	34.2	35.0	35.1
11. CHAPMAN WALK, HEATHRYFOLD	Dwelling	43.2	43.7	43.2	0.0	No Change	44.0	0.8	Negligible Adverse	32.6	33.1	33.3
13. CHAPMAN WALK, HEATHRYFOLD	Dwelling	44.2	44.9	44.2	0.0	No Change	45.2	1.0	Negligible Adverse	33.5	34.1	34.4
3. CHAPMAN WALK, HEATHRYFOLD	Dwelling	43.2	43.8	43.1	-0.1	Negligible Beneficial	44.1	0.9	Negligible Adverse	32.6	33.2	33.4
5. CHAPMAN WALK, HEATHRYFOLD	Dwelling	42.8	43.3	42.8	0.0	No Change	43.6	0.8	Negligible Adverse	32.3	32.7	33.0
7. CHAPMAN WALK, HEATHRYFOLD	Dwelling	42.8	43.3	42.7	-0.1	Negligible Beneficial	43.6	0.8	Negligible Adverse	32.3	32.7	33.0
9. CHAPMAN WALK, HEATHRYFOLD	Dwelling	42.9	43.4	42.9	0.0	No Change	43.7	0.8	Negligible Adverse	32.3	32.8	33.1
1. CHERRY ROAD	Dwelling	55.5	55.8	55.4	-0.1	Negligible Beneficial	55.9	0.4	Negligible Adverse	43.7	44.0	44.0
10. CHERRY ROAD	Dwelling	57.7	57.8	57.7	0.0	No Change	57.9	0.2	Negligible Adverse	45.7	45.8	45.8
11. CHERRY ROAD	Dwelling	57.2	57.5	57.1	-0.1	Negligible Beneficial	57.5	0.3	Negligible Adverse	45.2	45.5	45.5
12. CHERRY ROAD	Dwelling	56.9	57.2	56.8	-0.1	Negligible Beneficial	57.2	0.3	Negligible Adverse	44.9	45.2	45.2
14. CHERRY ROAD	Dwelling	65.6	65.7	65.7	0.1	Negligible Adverse	65.8	0.2	Negligible Adverse	52.8	52.9	53.0
16. CHERRY ROAD	Dwelling	65.7	65.7	65.7	0.1	Negligible Adverse	65.8	0.2	Negligible Adverse	52.8	52.9	53.0
18. CHERRY ROAD	Dwelling	65.6	65.7	65.7	0.1	Negligible Adverse	65.8	0.2	Negligible Adverse	52.8	52.9	53.0
2. CHERRY ROAD	Dwelling	56.6	56.8	56.7	0.1	Negligible Adverse	56.9	0.3	Negligible Adverse	44.7	44.9	44.9

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
20, CHERRY ROAD	Dwelling	65.6	65.7	65.7	0.1	Negligible Adverse	65.8	0.2	Negligible Adverse	52.8	52.9	53.0
22, CHERRY ROAD	Dwelling	65.6	65.7	65.7	0.1	Negligible Adverse	65.8	0.2	Negligible Adverse	52.8	52.9	53.0
24, CHERRY ROAD	Dwelling	65.6	65.7	65.7	0.1	Negligible Adverse	65.8	0.2	Negligible Adverse	52.8	52.9	53.0
26, CHERRY ROAD	Dwelling	65.6	65.7	65.7	0.1	Negligible Adverse	65.8	0.2	Negligible Adverse	52.8	52.9	53.0
28, CHERRY ROAD	Dwelling	65.6	65.7	65.7	0.1	Negligible Adverse	65.8	0.2	Negligible Adverse	52.8	52.9	53.0
3, CHERRY ROAD	Dwelling	55.7	56.0	55.6	-0.1	Negligible Beneficial	56.0	0.3	Negligible Adverse	43.9	44.1	44.1
30, CHERRY ROAD	Dwelling	68.0	68.2	68.1	0.1	Negligible Beneficial	68.3	0.3	Negligible Adverse	54.9	55.1	55.2
32, CHERRY ROAD	Dwelling	68.0	68.2	68.1	0.1	Negligible Beneficial	68.3	0.3	Negligible Adverse	54.9	55.1	55.2
34, CHERRY ROAD	Dwelling	68.0	68.2	68.1	0.1	Negligible Beneficial	68.3	0.3	Negligible Adverse	54.9	55.1	55.2
36, CHERRY ROAD	Dwelling	68.0	68.2	68.1	0.1	Negligible Beneficial	68.3	0.3	Negligible Adverse	54.9	55.1	55.2
38, CHERRY ROAD	Dwelling	68.0	68.2	68.1	0.1	Negligible Beneficial	68.3	0.3	Negligible Adverse	54.9	55.1	55.2
4, CHERRY ROAD	Dwelling	58.8	57.0	56.9	0.1	Negligible Adverse	57.1	0.3	Negligible Adverse	44.9	45.0	45.1
40, CHERRY ROAD	Dwelling	68.0	68.2	68.1	0.1	Negligible Beneficial	68.3	0.3	Negligible Adverse	54.9	55.1	55.2
42, CHERRY ROAD	Dwelling	68.0	68.2	68.1	0.1	Negligible Beneficial	68.3	0.3	Negligible Adverse	54.9	55.1	55.2
44, CHERRY ROAD	Dwelling	68.0	68.2	68.1	0.1	Negligible Beneficial	68.3	0.3	Negligible Adverse	54.9	55.1	55.2
5, CHERRY ROAD	Dwelling	56.1	56.4	56.0	-0.1	Negligible Beneficial	56.4	0.3	Negligible Adverse	44.2	44.5	44.5
6, CHERRY ROAD	Dwelling	57.2	57.4	57.3	0.1	Negligible Beneficial	57.5	0.3	Negligible Adverse	45.2	45.4	45.5
7, CHERRY ROAD	Dwelling	56.7	57.0	56.6	-0.1	Negligible Beneficial	57.0	0.3	Negligible Adverse	44.8	45.0	45.0
8, CHERRY ROAD	Dwelling	57.7	57.8	57.7	0.0	No Change	57.9	0.2	Negligible Adverse	45.7	45.8	45.8
9, CHERRY ROAD	Dwelling	57.7	58.0	57.6	-0.1	Negligible Beneficial	58.0	0.3	Negligible Adverse	45.7	45.9	45.9
10, CHURCH STREET, WOODSIDE	Dwelling	54.1	58.2	54.2	0.1	Negligible Adverse	56.7	2.6	Negligible Adverse	42.4	46.1	44.8
12, CHURCH STREET, WOODSIDE	Dwelling	54.1	58.2	54.3	0.2	Negligible Adverse	56.7	2.6	Negligible Adverse	42.4	46.1	44.8
14, CHURCH STREET, WOODSIDE	Dwelling	55.6	60.1	55.7	0.1	Negligible Adverse	58.5	2.9	Negligible Adverse	43.8	47.8	46.4
16, CHURCH STREET, WOODSIDE	Dwelling	55.6	60.1	55.7	0.1	Negligible Adverse	58.5	2.9	Negligible Adverse	43.8	47.8	46.4
17, CHURCH STREET, WOODSIDE	Dwelling	53.8	57.8	53.8	0.2	Negligible Adverse	55.5	2.9	Negligible Adverse	42.0	45.8	44.6
18, CHURCH STREET, WOODSIDE	Dwelling	52.6	52.6	52.6	0.1	Negligible Adverse	52.4	2.4	Negligible Adverse	41.0	44.4	43.1
19, CHURCH STREET, WOODSIDE	Dwelling	53.6	57.8	53.8	0.2	Negligible Adverse	56.5	2.9	Negligible Adverse	42.0	45.8	44.6
21, CHURCH STREET, WOODSIDE	Dwelling	54.7	58.9	54.9	0.2	Negligible Adverse	57.6	2.9	Negligible Adverse	43.0	46.7	45.6
22, CHURCH STREET, WOODSIDE	Dwelling	51.2	55.0	51.4	0.2	Negligible Adverse	53.6	2.4	Negligible Adverse	39.8	43.2	42.0
23, CHURCH STREET, WOODSIDE	Dwelling	54.7	58.9	55.0	0.3	Negligible Adverse	57.6	2.9	Negligible Adverse	43.0	46.7	45.6
24, CHURCH STREET, WOODSIDE	Dwelling	51.2	55.0	51.4	0.2	Negligible Adverse	53.6	2.4	Negligible Adverse	39.8	43.2	42.0
25, CHURCH STREET, WOODSIDE	Dwelling	54.2	58.0	54.5	0.3	Negligible Adverse	56.9	2.7	Negligible Adverse	42.5	45.9	44.9
26, CHURCH STREET, WOODSIDE	Dwelling	50.3	53.6	50.4	0.1	Negligible Adverse	52.5	2.2	Negligible Adverse	39.0	42.0	41.0
27, CHURCH STREET, WOODSIDE	Dwelling	54.2	58.0	54.5	0.3	Negligible Adverse	56.9	2.7	Negligible Adverse	42.5	45.9	44.9
28, CHURCH STREET, WOODSIDE	Dwelling	50.3	53.6	50.4	0.1	Negligible Adverse	52.5	2.2	Negligible Adverse	39.0	42.0	41.0
29, CHURCH STREET, WOODSIDE	Dwelling	49.9	52.8	50.3	0.4	Negligible Adverse	52.5	2.6	Negligible Adverse	38.6	41.3	41.0
30, CHURCH STREET, WOODSIDE	Dwelling	49.7	53.0	49.9	0.2	Negligible Adverse	51.9	2.2	Negligible Adverse	38.5	41.4	40.4
31, CHURCH STREET, WOODSIDE	Dwelling	49.9	52.8	50.3	0.4	Negligible Adverse	52.5	2.6	Negligible Adverse	38.6	41.3	41.0
32, CHURCH STREET, WOODSIDE	Dwelling	49.7	53.0	49.9	0.2	Negligible Adverse	51.9	2.2	Negligible Adverse	38.5	41.4	40.4
33, CHURCH STREET, WOODSIDE	Dwelling	51.3	54.5	51.6	0.3	Negligible Adverse	54.1	2.8	Negligible Adverse	39.9	42.8	42.4
34, CHURCH STREET, WOODSIDE	Dwelling	49.1	52.0	49.2	0.1	Negligible Adverse	51.1	2.0	Negligible Adverse	37.9	40.5	39.7
35, CHURCH STREET, WOODSIDE	Dwelling	50.7	53.7	51.1	0.4	Negligible Adverse	53.4	2.7	Negligible Adverse	39.4	42.1	41.8
36, CHURCH STREET, WOODSIDE	Dwelling	49.1	52.0	49.2	0.1	Negligible Adverse	51.1	2.0	Negligible Adverse	37.9	40.5	39.7
37, CHURCH STREET, WOODSIDE	Dwelling	49.9	52.5	50.2	0.3	Negligible Adverse	52.2	2.3	Negligible Adverse	38.6	41.0	40.7
39, CHURCH STREET, WOODSIDE	Dwelling	53.5	55.6	53.8	0.3	Negligible Adverse	55.6	2.1	Negligible Adverse	41.9	43.8	43.8
46, CHURCH STREET, WOODSIDE	Dwelling	48.1	49.9	48.2	0.1	Negligible Adverse	49.7	1.6	Negligible Adverse	37.0	38.6	38.5
48, CHURCH STREET, WOODSIDE	Dwelling	48.0	49.8	48.1	0.1	Negligible Adverse	49.6	1.6	Negligible Adverse	36.9	38.6	38.4
50, CHURCH STREET, WOODSIDE	Dwelling	47.9	49.6	48.1	0.2	Negligible Adverse	49.3	1.4	Negligible Adverse	36.8	38.4	38.1
1, CLARKE STREET	Dwelling	54.9	56.1	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	44.2	44.1
1a, CLARKE STREET	Dwelling	54.4	55.7	54.3	-0.1	Negligible Beneficial	55.6	1.2	Negligible Adverse	42.7	43.9	43.8
2, CLARKE STREET	Dwelling	53.6	54.8	53.5	-0.1	Negligible Beneficial	54.7	1.1	Negligible Adverse	42.0	43.1	43.0
4, CLARKE STREET	Dwelling	53.6	54.8	53.5	-0.1	Negligible Beneficial	54.7	1.1	Negligible Adverse	42.0	43.1	43.0
5, CLARKE STREET	Dwelling	53.0	54.3	52.9	-0.1	Negligible Beneficial	54.2	1.2	Negligible Adverse	41.4	42.6	42.5
8, CLARKE STREET	Dwelling	53.1	54.3	52.9	-0.2	Negligible Beneficial	54.2	1.1	Negligible Adverse	41.5	42.6	42.5
ABERDEEN SERVICED APARTMENTS, 43, CLIFTON LANE	Community Facility	48.7	49.6	48.9	0.2	Negligible Adverse	49.5	0.8	Negligible Adverse	37.6	38.4	38.3
10, CLIFTON PLACE	Dwelling	49.8	52.2	50.4	0.6	Negligible Adverse	52.1	2.3	Negligible Adverse	38.6	40.7	40.6
2, CLIFTON PLACE	Dwelling	63.4	67.0	64.6	1.2	Minor Adverse	66.9	3.5	Minor Adverse	50.8	54.0	53.9
4, CLIFTON PLACE	Dwelling	50.3	52.8	50.9	0.6	Negligible Adverse	52.6	2.3	Negligible Adverse	39.0	41.3	41.1
6, CLIFTON PLACE	Dwelling	50.3	52.8	50.9	0.6	Negligible Adverse	52.6	2.3	Negligible Adverse	39.0	41.3	41.1
8, CLIFTON PLACE	Dwelling	49.8	52.2	50.4	0.6	Negligible Adverse	52.1	2.3	Negligible Adverse	38.6	40.7	40.6
FLAT A, 170, CLIFTON ROAD	Dwelling	62.4	65.9	63.8	1.4	Minor Adverse	66.1	3.7	Minor Adverse	49.9	53.0	53.2
FLAT B, 170, CLIFTON ROAD	Dwelling	62.4	65.9	63.8	1.4	Minor Adverse	66.1	3.7	Minor Adverse	49.9	53.0	53.2
FLAT C, 170, CLIFTON ROAD	Dwelling	62.4	65.9	63.8	1.4	Minor Adverse	66.1	3.7	Minor Adverse	49.9	53.0	53.2
FLAT D, 170, CLIFTON ROAD	Dwelling	62.4	65.9	63.8	1.4	Minor Adverse	66.1	3.7	Minor Adverse	49.9	53.0	53.2
FLAT A, 172, CLIFTON ROAD	Dwelling	62.6	66.1	64.0	1.4	Minor Adverse	66.3	3.7	Minor Adverse	50.1	53.2	53.4
FLAT B, 172, CLIFTON ROAD	Dwelling	62.6	66.1	64.0	1.4	Minor Adverse	66.3	3.7	Minor Adverse	50.1	53.2	53.4
FLAT C, 172, CLIFTON ROAD	Dwelling	62.6	66.1	64.0	1.4	Minor Adverse	66.3	3.7	Minor Adverse	50.1	53.2	53.4
FLAT D, 172, CLIFTON ROAD	Dwelling	62.6	66.1	64.0	1.4	Minor Adverse	66.3	3.7	Minor Adverse	50.1	53.2	53.4
FLAT A, 174, CLIFTON ROAD	Dwelling	62.8	66.3	64.2	1.4	Minor Adverse	66.6	3.8	Minor Adverse	50.3	53.4	53.7
FLAT B, 174, CLIFTON ROAD	Dwelling	62.8	66.3	64.2	1.4	Minor Adverse	66.6	3.8	Minor Adverse	50.3	53.4	53.7
FLAT C, 174, CLIFTON ROAD	Dwelling	62.8	66.3	64.2	1.4	Minor Adverse	66.6	3.8	Minor Adverse	50.3	53.4	53.7
FLAT D, 174, CLIFTON ROAD	Dwelling	62.8	66.3	64.2	1.4	Minor Adverse	66.6	3.8	Minor Adverse	50.3	53.4	53.7
FLAT A, 176, CLIFTON ROAD	Dwelling	63.0	66.5	64.4	1.4	Minor Adverse	66.7	3.7	Minor Adverse	50.4	53.6	53.8
FLAT B, 176, CLIFTON ROAD	Dwelling	63.0	66.5	64.4	1.4	Minor Adverse	66.7	3.7	Minor Adverse	50.4	53.6	53.8
FLAT C, 176, CLIFTON ROAD	Dwelling	63.0	66.5	64.4	1.4	Minor Adverse	66.7	3.7	Minor Adverse	50.4	53.6	53.8
FLAT D, 176, CLIFTON ROAD	Dwelling	63.0	66.5	64.4	1.4	Minor Adverse	66.7	3.7	Minor Adverse	50.4	53.6	53.8
FLAT 2, 235, CLIFTON ROAD	Dwelling	62.9	66.5	64.1	1.2	Minor Adverse	66.9	4.0	Minor Adverse	50.3	53.6	53.9
FLAT A, 272, CLIFTON ROAD	Dwelling	62.0	65.6	63.1	1.1	Minor Adverse	65.9	3.9	Minor Adverse	49.5	52.8	53.0
FLAT B, 272, CLIFTON ROAD	Dwelling	62.0	65.6	63.1	1.1	Minor Adverse	65.9	3.9	Minor Adverse	49.5	52.8	53.0
FLAT C, 272, CLIFTON ROAD	Dwelling	62.0	65.6	63.1	1.1	Minor Adverse	65.9	3.9	Minor Adverse	49.5	52.8	53.0
FLAT D, 272, CLIFTON ROAD	Dwelling	62.0	65.6	63.1	1.1	Minor Adverse	65.9	3.9	Minor Adverse	49.5	52.8	53.0
FLAT A, 282, CLIFTON ROAD	Dwelling	61.3	65.0	62.4	1.1	Minor Adverse	65.4	4.1	Minor Adverse	48.9	52.2	52.6
FLAT B, 282, CLIFTON ROAD	Dwelling	61.3	65.0	62.4	1.1	Minor Adverse	65.4	4.1	Minor Adverse	48.9	52.2	52.6

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
FLAT C, 282, CLIFTON ROAD	Dwelling	61.3	65.0	62.4	1.1	Minor Adverse	65.4	4.1	Minor Adverse	48.9	52.2	52.6
FLAT D, 282, CLIFTON ROAD	Dwelling	61.3	65.0	62.4	1.1	Minor Adverse	65.4	4.1	Minor Adverse	48.9	52.2	52.6
CLIFTON MANOR, FLAT 10, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 11, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 12, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 13, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 14, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 15, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 16, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 17, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 18, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 19, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 2, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 20, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 21, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 22, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 23, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 24, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 3, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 4, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 5, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 6, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 8, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
CLIFTON MANOR, FLAT 9, 352, CLIFTON ROAD	Dwelling	62.6	68.1	63.6	1.0	Minor Adverse	67.7	5.1	Moderate Adverse	50.1	55.0	54.7
FLAT 1, 362, CLIFTON ROAD	Dwelling	62.1	67.2	62.9	0.8	Negligible Adverse	67.0	4.9	Minor Adverse	49.6	54.2	54.0
FLAT 2, 362, CLIFTON ROAD	Dwelling	62.1	67.2	62.9	0.8	Negligible Adverse	67.0	4.9	Minor Adverse	49.6	54.2	54.0
FLAT 3, 362, CLIFTON ROAD	Dwelling	62.1	67.2	62.9	0.8	Negligible Adverse	67.0	4.9	Minor Adverse	49.6	54.2	54.0
FLAT 4, 362, CLIFTON ROAD	Dwelling	62.1	67.2	62.9	0.8	Negligible Adverse	67.0	4.9	Minor Adverse	49.6	54.2	54.0
FLAT 5, 362, CLIFTON ROAD	Dwelling	62.1	67.2	62.9	0.8	Negligible Adverse	67.0	4.9	Minor Adverse	49.6	54.2	54.0
FLAT 6, 362, CLIFTON ROAD	Dwelling	62.1	67.2	62.9	0.8	Negligible Adverse	67.0	4.9	Minor Adverse	49.6	54.2	54.0
FLAT A, 392, CLIFTON ROAD	Dwelling	62.9	68.2	63.7	0.8	Negligible Adverse	67.6	4.7	Minor Adverse	50.3	55.1	54.6
FLAT B, 392, CLIFTON ROAD	Dwelling	62.9	68.2	63.7	0.8	Negligible Adverse	67.6	4.7	Minor Adverse	50.3	55.1	54.6
FLAT C, 392, CLIFTON ROAD	Dwelling	62.9	68.2	63.7	0.8	Negligible Adverse	67.6	4.7	Minor Adverse	50.3	55.1	54.6
FLAT D, 392, CLIFTON ROAD	Dwelling	62.9	68.2	63.7	0.8	Negligible Adverse	67.6	4.7	Minor Adverse	50.3	55.1	54.6
FLAT E, 392, CLIFTON ROAD	Dwelling	62.9	68.2	63.7	0.8	Negligible Adverse	67.6	4.7	Minor Adverse	50.3	55.1	54.6
FLAT F, 392, CLIFTON ROAD	Dwelling	62.9	68.2	63.7	0.8	Negligible Adverse	67.6	4.7	Minor Adverse	50.3	55.1	54.6
FLAT A, 394, CLIFTON ROAD	Dwelling	50.3	50.9	50.4	0.1	Negligible Adverse	51.2	0.9	Negligible Adverse	39.0	39.5	39.8
FLAT B, 394, CLIFTON ROAD	Dwelling	50.3	50.9	50.4	0.1	Negligible Adverse	51.2	0.9	Negligible Adverse	39.0	39.5	39.8
FLAT C, 394, CLIFTON ROAD	Dwelling	50.3	50.9	50.4	0.1	Negligible Adverse	51.2	0.9	Negligible Adverse	39.0	39.5	39.8
FLAT D, 394, CLIFTON ROAD	Dwelling	50.3	50.9	50.4	0.1	Negligible Adverse	51.2	0.9	Negligible Adverse	39.0	39.5	39.8
FLAT E, 394, CLIFTON ROAD	Dwelling	50.3	50.9	50.4	0.1	Negligible Adverse	51.2	0.9	Negligible Adverse	39.0	39.5	39.8
FLAT F, 394, CLIFTON ROAD	Dwelling	50.3	50.9	50.4	0.1	Negligible Adverse	51.2	0.9	Negligible Adverse	39.0	39.5	39.8
FLAT A, 396, CLIFTON ROAD	Dwelling	63.0	68.3	63.8	0.8	Negligible Adverse	67.7	4.7	Minor Adverse	50.4	55.2	54.7
FLAT B, 396, CLIFTON ROAD	Dwelling	63.0	68.3	63.8	0.8	Negligible Adverse	67.7	4.7	Minor Adverse	50.4	55.2	54.7
FLAT C, 396, CLIFTON ROAD	Dwelling	63.0	68.3	63.8	0.8	Negligible Adverse	67.7	4.7	Minor Adverse	50.4	55.2	54.7
FLAT D, 396, CLIFTON ROAD	Dwelling	63.0	68.3	63.8	0.8	Negligible Adverse	67.7	4.7	Minor Adverse	50.4	55.2	54.7
FLAT E, 396, CLIFTON ROAD	Dwelling	63.0	68.3	63.8	0.8	Negligible Adverse	67.7	4.7	Minor Adverse	50.4	55.2	54.7
FLAT F, 396, CLIFTON ROAD	Dwelling	63.0	68.3	63.8	0.8	Negligible Adverse	67.7	4.7	Minor Adverse	50.4	55.2	54.7
FLAT 1, 407, CLIFTON ROAD	Dwelling	61.5	66.2	62.2	0.7	Negligible Adverse	65.6	4.1	Minor Adverse	49.1	53.3	52.8
100, CLIFTON ROAD	Dwelling	72.3	73.8	72.4	0.1	Negligible Adverse	73.5	1.2	Negligible Adverse	58.8	60.2	59.9
102, CLIFTON ROAD	Dwelling	72.3	73.8	72.4	0.1	Negligible Adverse	73.5	1.2	Negligible Adverse	58.8	60.2	59.9
106, CLIFTON ROAD	Dwelling	68.1	70.3	68.5	0.4	Negligible Adverse	70.2	2.1	Negligible Adverse	55.0	57.0	56.9
107, CLIFTON ROAD	Dwelling	67.2	69.2	67.5	0.3	Negligible Adverse	69.0	1.8	Negligible Adverse	54.2	56.0	55.8
108, CLIFTON ROAD	Dwelling	66.0	68.6	66.6	0.6	Negligible Adverse	68.6	2.6	Negligible Adverse	53.1	55.5	55.5
108, CLIFTON ROAD	Dwelling	66.0	68.7	66.7	0.7	Negligible Adverse	68.6	2.6	Negligible Adverse	53.1	55.6	55.5
108, CLIFTON ROAD	Dwelling	66.0	68.7	66.7	0.7	Negligible Adverse	68.6	2.6	Negligible Adverse	53.1	55.6	55.5
109, CLIFTON ROAD	Dwelling	68.7	70.7	69.0	0.3	Negligible Adverse	70.5	1.8	Negligible Adverse	55.6	57.4	57.2
110, CLIFTON ROAD	Dwelling	64.9	67.9	65.8	0.9	Negligible Adverse	67.9	3.0	Minor Adverse	52.1	54.8	54.8
112, CLIFTON ROAD	Dwelling	64.2	67.5	65.2	1.0	Minor Adverse	67.5	3.3	Minor Adverse	51.5	54.5	54.5
113, CLIFTON ROAD	Dwelling	69.1	71.3	69.5	0.4	Negligible Adverse	71.2	2.1	Negligible Adverse	55.9	57.9	57.8
114, CLIFTON ROAD	Dwelling	64.2	67.5	65.2	1.0	Minor Adverse	67.5	3.3	Minor Adverse	51.5	54.5	54.5
115, CLIFTON ROAD	Dwelling	67.0	69.6	67.6	0.6	Negligible Adverse	69.5	2.5	Negligible Adverse	54.0	56.4	56.3
116, CLIFTON ROAD	Dwelling	63.9	67.3	65.0	1.1	Minor Adverse	67.3	3.4	Minor Adverse	51.2	54.3	54.3
117, CLIFTON ROAD	Dwelling	67.0	69.6	67.6	0.6	Negligible Adverse	69.5	2.5	Negligible Adverse	54.0	56.4	56.3
118, CLIFTON ROAD	Dwelling	63.9	67.3	65.0	1.1	Minor Adverse	67.3	3.4	Minor Adverse	51.2	54.3	54.3
119, CLIFTON ROAD	Dwelling	65.8	68.7	66.7	0.9	Negligible Adverse	68.8	3.0	Minor Adverse	53.0	55.7	55.7
120, CLIFTON ROAD	Dwelling	63.7	67.2	64.8	1.1	Minor Adverse	67.2	3.5	Minor Adverse	51.1	54.2	54.2
121, CLIFTON ROAD	Dwelling	66.3	69.1	66.3	1.0	Minor Adverse	68.5	3.2	Minor Adverse	52.2	55.2	55.2
122, CLIFTON ROAD	Dwelling	62.6	68.1	63.8	1.2	Minor Adverse	66.2	3.6	Minor Adverse	50.1	53.2	53.3
123, CLIFTON ROAD	Dwelling	64.8	68.0	65.8	1.0	Minor Adverse	68.0	3.2	Minor Adverse	52.1	54.9	54.9
124, CLIFTON ROAD	Dwelling	62.6	66.2	63.8	1.2	Minor Adverse	66.2	3.6	Minor Adverse	50.1	53.3	53.3
125, CLIFTON ROAD	Dwelling	64.3	67.7	65.4	1.1	Minor Adverse	67.7	3.4	Minor Adverse	51.6	54.7	54.7
126, CLIFTON ROAD	Dwelling	62.5	66.1	63.7	1.2	Minor Adverse	66.1	3.6	Minor Adverse	50.0	53.2	53.2
127, CLIFTON ROAD	Dwelling	64.0	67.5	65.1	1.1	Minor Adverse	67.5	3.5	Minor Adverse	51.3	54.5	54.5
128, CLIFTON ROAD	Dwelling	62.6	66.1	63.8	1.2	Minor Adverse	66.2	3.6	Minor Adverse	50.1	53.2	53.3
129, CLIFTON ROAD	Dwelling	63.9	67.5	65.1	1.2	Minor Adverse	67.5	3.6	Minor Adverse	51.2	54.5	54.5
130, CLIFTON ROAD	Dwelling	59.1	62.1	60.0	0.9	Negligible Adverse	62.1	3.0	Minor Adverse	46.9	49.6	49.6
131, CLIFTON ROAD	Dwelling	63.9	67.5	65.1	1.2	Minor Adverse	67.5	3.6	Minor Adverse	51.2	54.5	54.5
132, CLIFTON ROAD	Dwelling	62.1	65.5	63.3	1.2	Minor Adverse	65.4	3.3	Minor Adverse	49.6	52.7	52.6
133, CLIFTON ROAD	Dwelling	63.9	67.5	65.1	1.2	Minor Adverse	67.6	3.7	Minor Adverse	51.2	54.5	54.6
134, CLIFTON ROAD	Dwelling	63.1	65.4	63.1	1.2	Minor Adverse	65.3	3.2	Minor Adverse	49.6	52.6	52.5
135, CLIFTON ROAD	Dwelling	63.9	67.5	65.1	1.2	Minor Adverse	67.6	3.7	Minor Adverse	51.2	54.5	54.6
136, CLIFTON ROAD	Dwelling	61.9	65.3	63.1	1.2	Minor Adverse	65.1	3.2	Minor Adverse	49.4	52.5	52.3

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DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
137. CLIFTON ROAD	Dwelling	63.9	67.5	65.2	1.3	Minor Adverse	67.6	3.7	Minor Adverse	51.2	54.5	54.6
139. CLIFTON ROAD	Dwelling	64.0	67.6	65.2	1.2	Minor Adverse	67.7	3.7	Minor Adverse	51.3	54.6	54.7
140. CLIFTON ROAD	Dwelling	61.7	65.1	62.9	1.2	Minor Adverse	65.0	3.3	Minor Adverse	49.3	52.3	52.2
141. CLIFTON ROAD	Dwelling	63.9	67.5	65.1	1.2	Minor Adverse	67.5	3.6	Minor Adverse	51.2	54.5	54.5
142. CLIFTON ROAD	Dwelling	61.6	65.0	62.7	1.1	Minor Adverse	64.9	3.3	Minor Adverse	49.2	52.2	52.1
143. CLIFTON ROAD	Dwelling	63.7	67.3	64.9	1.2	Minor Adverse	67.3	3.6	Minor Adverse	51.1	54.3	54.3
144. CLIFTON ROAD	Dwelling	61.4	64.9	62.6	1.2	Minor Adverse	64.8	3.4	Minor Adverse	49.0	52.1	52.1
145. CLIFTON ROAD	Dwelling	63.6	67.1	64.8	1.2	Minor Adverse	67.1	3.5	Minor Adverse	51.0	54.1	54.1
146. CLIFTON ROAD	Dwelling	61.4	64.9	62.6	1.2	Minor Adverse	64.8	3.4	Minor Adverse	49.0	52.1	52.1
147. CLIFTON ROAD	Dwelling	63.4	66.9	64.6	1.2	Minor Adverse	66.9	3.5	Minor Adverse	50.8	53.9	53.9
148. CLIFTON ROAD	Dwelling	61.4	65.0	62.6	1.2	Minor Adverse	64.8	3.4	Minor Adverse	49.0	52.2	52.1
149. CLIFTON ROAD	Dwelling	63.3	66.8	64.5	1.2	Minor Adverse	66.7	3.4	Minor Adverse	50.7	53.9	53.8
150. CLIFTON ROAD	Dwelling	61.6	65.2	62.8	1.2	Minor Adverse	65.0	3.4	Minor Adverse	49.2	52.4	52.2
151. CLIFTON ROAD	Dwelling	63.5	66.9	64.7	1.2	Minor Adverse	66.8	3.3	Minor Adverse	50.9	53.9	53.9
152. CLIFTON ROAD	Dwelling	61.7	65.2	62.8	1.1	Minor Adverse	65.1	3.4	Minor Adverse	49.3	52.4	52.3
153. CLIFTON ROAD	Dwelling	63.5	66.9	64.8	1.3	Minor Adverse	66.8	3.3	Minor Adverse	50.9	53.9	53.9
154. CLIFTON ROAD	Dwelling	61.8	65.3	63.0	1.2	Minor Adverse	65.2	3.4	Minor Adverse	49.4	52.5	52.4
155. CLIFTON ROAD	Dwelling	63.5	67.0	64.8	1.3	Minor Adverse	66.8	3.3	Minor Adverse	50.9	54.0	53.9
156. CLIFTON ROAD	Dwelling	58.2	61.4	59.2	1.0	Minor Adverse	61.4	3.2	Minor Adverse	46.1	49.0	49.0
157. CLIFTON ROAD	Dwelling	63.5	67.0	64.7	1.2	Minor Adverse	66.8	3.3	Minor Adverse	50.9	54.0	53.9
158. CLIFTON ROAD	Dwelling	63.0	66.5	64.2	1.2	Minor Adverse	66.5	3.5	Minor Adverse	50.4	53.6	53.6
159. CLIFTON ROAD	Dwelling	63.5	67.0	64.7	1.2	Minor Adverse	66.8	3.3	Minor Adverse	50.9	54.0	53.9
160. CLIFTON ROAD	Dwelling	62.8	66.3	64.0	1.2	Minor Adverse	66.4	3.6	Minor Adverse	50.3	53.4	53.5
161. CLIFTON ROAD	Dwelling	63.5	67.1	64.8	1.3	Minor Adverse	66.9	3.4	Minor Adverse	50.9	54.1	53.9
162. CLIFTON ROAD	Dwelling	62.6	66.2	63.9	1.3	Minor Adverse	66.2	3.6	Minor Adverse	50.1	53.3	53.3
163. CLIFTON ROAD	Dwelling	63.7	67.1	64.8	1.3	Minor Adverse	67.0	3.5	Minor Adverse	50.9	54.1	54.0
164. CLIFTON ROAD	Dwelling	62.6	66.2	63.8	1.2	Minor Adverse	66.3	3.7	Minor Adverse	50.1	53.3	53.4
164. CLIFTON ROAD	Dwelling	62.6	66.3	63.8	1.2	Minor Adverse	66.3	3.7	Minor Adverse	50.1	53.4	53.4
165. CLIFTON ROAD	Dwelling	63.4	67.0	64.6	1.2	Minor Adverse	66.9	3.5	Minor Adverse	50.8	54.0	53.9
167. CLIFTON ROAD	Dwelling	63.2	66.9	64.5	1.3	Minor Adverse	66.7	3.5	Minor Adverse	50.6	53.9	53.8
168. CLIFTON ROAD	Dwelling	62.2	65.7	63.6	1.4	Minor Adverse	65.9	3.7	Minor Adverse	49.7	52.9	53.0
169. CLIFTON ROAD	Dwelling	63.2	66.9	64.5	1.3	Minor Adverse	66.7	3.5	Minor Adverse	50.6	53.9	53.8
171. CLIFTON ROAD	Dwelling	63.2	66.8	64.4	1.2	Minor Adverse	66.7	3.5	Minor Adverse	50.6	53.9	53.8
173. CLIFTON ROAD	Dwelling	63.2	66.8	64.4	1.2	Minor Adverse	66.7	3.5	Minor Adverse	50.6	53.9	53.8
175. CLIFTON ROAD	Dwelling	63.1	66.7	64.3	1.2	Minor Adverse	66.6	3.5	Minor Adverse	50.5	53.8	53.7
177. CLIFTON ROAD	Dwelling	63.0	66.6	64.2	1.2	Minor Adverse	66.5	3.5	Minor Adverse	50.4	53.7	53.6
179. CLIFTON ROAD	Dwelling	63.0	66.5	64.1	1.1	Minor Adverse	66.4	3.4	Minor Adverse	50.4	53.6	53.5
181. CLIFTON ROAD	Dwelling	63.0	66.5	64.2	1.2	Minor Adverse	66.5	3.5	Minor Adverse	50.4	53.6	53.6
183. CLIFTON ROAD	Dwelling	63.0	66.5	64.2	1.2	Minor Adverse	66.5	3.5	Minor Adverse	50.4	53.6	53.6
185. CLIFTON ROAD	Dwelling	63.0	66.5	64.2	1.2	Minor Adverse	66.5	3.6	Minor Adverse	50.4	53.6	53.7
187. CLIFTON ROAD	Dwelling	63.0	66.5	64.2	1.2	Minor Adverse	66.6	3.6	Minor Adverse	50.4	53.6	53.7
189. CLIFTON ROAD	Dwelling	63.2	66.8	64.4	1.2	Minor Adverse	66.8	3.6	Minor Adverse	50.6	53.9	53.9
191. CLIFTON ROAD	Dwelling	63.1	66.7	64.3	1.2	Minor Adverse	66.7	3.6	Minor Adverse	50.5	53.8	53.8
195. CLIFTON ROAD	Dwelling	63.3	67.0	64.6	1.3	Minor Adverse	67.1	3.8	Minor Adverse	50.7	54.0	54.1
197. CLIFTON ROAD	Dwelling	63.3	67.0	64.6	1.3	Minor Adverse	67.1	3.8	Minor Adverse	50.7	54.0	54.1
199. CLIFTON ROAD	Dwelling	63.2	66.8	64.6	1.4	Minor Adverse	67.0	3.8	Minor Adverse	50.6	53.9	54.0
201. CLIFTON ROAD	Dwelling	63.2	66.8	64.6	1.4	Minor Adverse	67.0	3.8	Minor Adverse	50.6	53.9	54.0
203. CLIFTON ROAD	Dwelling	63.4	66.9	64.8	1.4	Minor Adverse	67.1	3.7	Minor Adverse	50.8	53.9	54.1
205. CLIFTON ROAD	Dwelling	63.4	66.9	64.8	1.4	Minor Adverse	67.1	3.7	Minor Adverse	50.8	53.9	54.1
207. CLIFTON ROAD	Dwelling	63.3	66.9	64.8	1.5	Minor Adverse	67.1	3.8	Minor Adverse	50.7	53.9	54.1
207. CLIFTON ROAD	Dwelling	63.5	67.0	64.9	1.4	Minor Adverse	67.3	3.8	Minor Adverse	50.9	54.0	54.3
209. CLIFTON ROAD	Dwelling	63.5	67.0	65.0	1.5	Minor Adverse	67.3	3.8	Minor Adverse	50.9	54.0	54.3
209. CLIFTON ROAD	Dwelling	63.5	67.0	65.0	1.5	Minor Adverse	67.3	3.8	Minor Adverse	50.9	54.0	54.3
211. CLIFTON ROAD	Dwelling	63.5	67.0	64.9	1.4	Minor Adverse	67.3	3.8	Minor Adverse	50.9	54.0	54.3
211. CLIFTON ROAD	Dwelling	63.5	67.0	64.9	1.4	Minor Adverse	67.3	3.8	Minor Adverse	50.9	54.0	54.3
213. CLIFTON ROAD	Dwelling	63.5	67.1	65.0	1.5	Minor Adverse	67.3	3.8	Minor Adverse	50.9	54.1	54.3
213. CLIFTON ROAD	Dwelling	63.5	67.1	65.0	1.5	Minor Adverse	67.3	3.8	Minor Adverse	50.9	54.1	54.3
215. CLIFTON ROAD	Dwelling	63.5	67.0	65.0	1.5	Minor Adverse	67.3	3.8	Minor Adverse	50.9	54.0	54.3
215. CLIFTON ROAD	Dwelling	63.5	67.0	65.0	1.5	Minor Adverse	67.3	3.8	Minor Adverse	50.9	54.0	54.3
217. CLIFTON ROAD	Dwelling	63.5	67.0	64.9	1.4	Minor Adverse	67.3	3.8	Minor Adverse	50.9	54.0	54.3
219. CLIFTON ROAD	Dwelling	63.5	67.1	65.0	1.5	Minor Adverse	67.3	3.8	Minor Adverse	50.9	54.1	54.3
221. CLIFTON ROAD	Dwelling	63.4	67.0	64.9	1.5	Minor Adverse	67.2	3.8	Minor Adverse	50.8	54.0	54.2
223. CLIFTON ROAD	Dwelling	63.6	67.1	65.0	1.4	Minor Adverse	67.4	3.8	Minor Adverse	51.0	54.1	54.4
225. CLIFTON ROAD	Dwelling	63.6	67.1	65.1	1.5	Minor Adverse	67.4	3.8	Minor Adverse	51.0	54.1	54.4
227. CLIFTON ROAD	Dwelling	63.6	67.1	65.1	1.5	Minor Adverse	67.4	3.8	Minor Adverse	51.0	54.1	54.4
229. CLIFTON ROAD	Dwelling	63.7	67.2	65.1	1.4	Minor Adverse	67.5	3.8	Minor Adverse	51.1	54.2	54.5
231. CLIFTON ROAD	Dwelling	63.8	67.3	65.2	1.4	Minor Adverse	67.6	3.8	Minor Adverse	51.2	54.3	54.6
233. CLIFTON ROAD	Dwelling	63.8	67.4	65.2	1.2	Minor Adverse	67.5	3.8	Minor Adverse	51.2	54.4	54.6
235. CLIFTON ROAD	Dwelling	62.9	66.4	64.1	1.2	Minor Adverse	66.9	4.0	Minor Adverse	50.3	53.6	53.9
237. CLIFTON ROAD	Dwelling	62.7	66.4	63.8	1.1	Minor Adverse	66.7	4.0	Minor Adverse	50.2	53.5	53.8
239. CLIFTON ROAD	Dwelling	62.6	66.3	63.7	1.1	Minor Adverse	66.7	4.1	Minor Adverse	50.1	53.4	53.8
241. CLIFTON ROAD	Dwelling	62.4	66.1	63.5	1.1	Minor Adverse	66.4	4.0	Minor Adverse	49.9	53.2	53.5
243. CLIFTON ROAD	Dwelling	62.4	66.1	63.4	1.0	Minor Adverse	66.5	4.1	Minor Adverse	49.9	53.2	53.6
245. CLIFTON ROAD	Dwelling	62.2	66.0	63.3	1.1	Minor Adverse	66.3	4.1	Minor Adverse	49.7	53.1	53.4
247. CLIFTON ROAD	Dwelling	62.2	65.9	63.3	1.1	Minor Adverse	66.3	4.1	Minor Adverse	49.7	53.0	53.4
249. CLIFTON ROAD	Dwelling	62.2	65.9	63.3	1.1	Minor Adverse	66.3	4.1	Minor Adverse	49.7	53.0	53.4
259. CLIFTON ROAD	Dwelling	62.4	66.1	63.5	1.1	Minor Adverse	66.5	4.1	Minor Adverse	49.9	53.2	53.6
261. CLIFTON ROAD	Dwelling	62.4	66.1	63.5	1.1	Minor Adverse	66.5	4.1	Minor Adverse	49.9	53.2	53.6
263. CLIFTON ROAD	Dwelling	62.4	66.1	63.5	1.1	Minor Adverse	66.5	4.1	Minor Adverse	49.9	53.2	53.6
265. CLIFTON ROAD	Dwelling	62.4	66.1	63.5	1.1	Minor Adverse	66.5	4.1	Minor Adverse	49.9	53.2	53.6
267. CLIFTON ROAD	Dwelling	62.4	66.1	63.5	1.1	Minor Adverse	66.5	4.1	Minor Adverse	49.9	53.2	53.6
269. CLIFTON ROAD	Dwelling	62.7	66.4	63.8	1.1	Minor Adverse	66.8	4.1	Minor Adverse	50.2	53.5	53.9
271. CLIFTON ROAD	Dwelling	62.9	67.0	64.1	1.2	Minor Adverse	67.3	4.4	Minor Adverse	50.3	54.0	54.3

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
275. CLIFTON ROAD	Dwelling	63.6	67.3	65.1	1.5	Minor Adverse	68.2	4.6	Minor Adverse	51.0	54.3	55.1
277. CLIFTON ROAD	Dwelling	63.6	67.3	65.1	1.5	Minor Adverse	68.2	4.6	Minor Adverse	51.0	54.3	55.1
279. CLIFTON ROAD	Dwelling	63.6	67.3	65.1	1.5	Minor Adverse	68.2	4.6	Minor Adverse	51.0	54.3	55.1
281. CLIFTON ROAD	Dwelling	63.6	67.2	65.1	1.5	Minor Adverse	68.2	4.6	Minor Adverse	51.0	54.2	55.1
283. CLIFTON ROAD	Dwelling	63.4	67.1	64.9	1.5	Minor Adverse	68.0	4.6	Minor Adverse	50.8	54.1	54.9
285. CLIFTON ROAD	Dwelling	63.4	67.1	64.9	1.5	Minor Adverse	68.0	4.6	Minor Adverse	50.8	54.1	54.9
286. CLIFTON ROAD	Dwelling	63.3	67.2	64.5	1.2	Minor Adverse	67.6	4.3	Minor Adverse	50.7	54.2	54.6
287. CLIFTON ROAD	Dwelling	63.2	66.9	64.7	1.5	Minor Adverse	67.8	4.6	Minor Adverse	50.6	53.9	54.8
288. CLIFTON ROAD	Dwelling	62.9	66.7	64.1	1.2	Minor Adverse	67.2	4.3	Minor Adverse	50.3	53.8	54.2
289. CLIFTON ROAD	Dwelling	62.9	66.9	64.7	1.5	Minor Adverse	67.8	4.6	Minor Adverse	50.6	53.9	54.8
290. CLIFTON ROAD	Dwelling	62.9	66.7	64.1	1.2	Minor Adverse	67.2	4.3	Minor Adverse	50.3	53.8	54.2
291. CLIFTON ROAD	Dwelling	63.3	67.0	64.8	1.5	Minor Adverse	67.9	4.6	Minor Adverse	50.7	54.0	54.8
292. CLIFTON ROAD	Dwelling	63.0	66.8	64.4	1.4	Minor Adverse	67.6	4.6	Minor Adverse	50.4	53.9	54.8
293. CLIFTON ROAD	Dwelling	63.3	67.0	64.8	1.5	Minor Adverse	67.9	4.6	Minor Adverse	50.7	54.0	54.8
294. CLIFTON ROAD	Dwelling	63.0	66.8	64.4	1.4	Minor Adverse	67.6	4.6	Minor Adverse	50.4	53.9	54.6
295. CLIFTON ROAD	Dwelling	63.4	67.1	64.9	1.5	Minor Adverse	68.0	4.6	Minor Adverse	50.8	54.1	54.9
296. CLIFTON ROAD	Dwelling	62.9	66.8	64.2	1.3	Minor Adverse	67.4	4.5	Minor Adverse	50.3	53.9	54.4
297. CLIFTON ROAD	Dwelling	63.4	67.1	64.9	1.5	Minor Adverse	68.0	4.6	Minor Adverse	50.8	54.1	54.9
298. CLIFTON ROAD	Dwelling	62.9	66.8	64.2	1.3	Minor Adverse	67.4	4.5	Minor Adverse	50.3	53.9	54.4
299. CLIFTON ROAD	Dwelling	63.6	67.2	65.1	1.5	Minor Adverse	68.1	4.5	Minor Adverse	51.0	54.2	55.0
300. CLIFTON ROAD	Dwelling	63.1	66.8	64.6	1.5	Minor Adverse	67.6	4.5	Minor Adverse	50.5	53.9	54.6
300. CLIFTON ROAD	Dwelling	63.1	66.8	64.6	1.5	Minor Adverse	67.6	4.5	Minor Adverse	50.5	53.9	54.6
301. CLIFTON ROAD	Dwelling	63.6	67.2	65.1	1.5	Minor Adverse	68.1	4.5	Minor Adverse	51.0	54.2	55.0
303. CLIFTON ROAD	Dwelling	63.7	67.4	65.2	1.5	Minor Adverse	68.2	4.5	Minor Adverse	51.1	54.4	55.1
305. CLIFTON ROAD	Dwelling	63.7	67.4	65.2	1.5	Minor Adverse	68.2	4.5	Minor Adverse	51.1	54.4	55.1
309. CLIFTON ROAD	Dwelling	61.9	65.3	63.2	1.3	Minor Adverse	66.1	4.2	Minor Adverse	49.4	52.5	53.2
309. CLIFTON ROAD	Dwelling	61.9	65.3	63.2	1.3	Minor Adverse	66.1	4.2	Minor Adverse	49.4	52.5	53.2
309. CLIFTON ROAD	Dwelling	61.9	65.3	63.2	1.3	Minor Adverse	66.1	4.2	Minor Adverse	49.4	52.5	53.2
309. CLIFTON ROAD	Dwelling	61.9	65.3	63.2	1.3	Minor Adverse	66.1	4.2	Minor Adverse	49.4	52.5	53.2
309. CLIFTON ROAD	Dwelling	61.9	65.3	63.2	1.3	Minor Adverse	66.1	4.2	Minor Adverse	49.4	52.5	53.2
309. CLIFTON ROAD	Dwelling	61.9	65.3	63.2	1.3	Minor Adverse	66.1	4.2	Minor Adverse	49.4	52.5	53.2
309. CLIFTON ROAD	Dwelling	61.9	65.3	63.2	1.3	Minor Adverse	66.1	4.2	Minor Adverse	49.4	52.5	53.2
311. CLIFTON ROAD	Dwelling	60.3	63.7	61.6	1.3	Minor Adverse	64.5	4.2	Minor Adverse	48.0	51.1	51.8
313. CLIFTON ROAD	Dwelling	60.3	63.6	61.5	1.2	Minor Adverse	64.4	4.1	Minor Adverse	48.0	51.0	51.7
314. CLIFTON ROAD	Community Services	61.1	64.6	62.5	1.4	Minor Adverse	65.5	4.4	Minor Adverse	48.7	51.9	52.7
315. CLIFTON ROAD	Dwelling	59.4	62.7	60.5	1.1	Minor Adverse	63.3	3.9	Minor Adverse	47.2	50.2	50.7
316. CLIFTON ROAD	Dwelling	62.6	66.2	64.0	1.4	Minor Adverse	67.0	4.4	Minor Adverse	50.1	53.3	54.0
319. CLIFTON ROAD	Dwelling	62.1	66.9	62.9	0.8	Negligible Adverse	66.6	4.5	Minor Adverse	49.6	53.9	53.7
319. CLIFTON ROAD	Dwelling	58.8	63.8	59.2	0.4	Negligible Adverse	63.3	4.5	Minor Adverse	46.7	51.2	50.7
319. CLIFTON ROAD	Dwelling	58.8	63.8	59.2	0.4	Negligible Adverse	63.3	4.5	Minor Adverse	46.7	51.2	50.7
321. CLIFTON ROAD	Dwelling	58.8	63.8	59.2	0.4	Negligible Adverse	63.3	4.5	Minor Adverse	46.7	51.2	50.7
322. CLIFTON ROAD	Dwelling	61.3	64.8	62.6	1.3	Minor Adverse	65.5	4.2	Minor Adverse	48.9	52.1	52.7
323. CLIFTON ROAD	Dwelling	58.8	63.8	59.2	0.4	Negligible Adverse	63.3	4.5	Minor Adverse	46.7	51.2	50.7
324. CLIFTON ROAD	Dwelling	61.0	64.5	62.3	1.3	Minor Adverse	65.3	4.3	Minor Adverse	48.6	51.8	52.5
324. CLIFTON ROAD	Dwelling	61.0	64.5	62.3	1.3	Minor Adverse	65.3	4.3	Minor Adverse	48.6	51.8	52.5
324. CLIFTON ROAD	Dwelling	61.0	64.5	62.3	1.3	Minor Adverse	65.3	4.3	Minor Adverse	48.6	51.8	52.5
326. CLIFTON ROAD	Dwelling	61.5	65.1	62.8	1.3	Minor Adverse	65.8	4.3	Minor Adverse	49.1	52.3	53.0
326. CLIFTON ROAD	Dwelling	61.5	65.1	62.8	1.3	Minor Adverse	65.8	4.3	Minor Adverse	49.1	52.3	53.0
326. CLIFTON ROAD	Dwelling	61.5	65.1	62.8	1.3	Minor Adverse	65.8	4.3	Minor Adverse	49.1	52.3	53.0
326. CLIFTON ROAD	Dwelling	61.5	65.1	62.8	1.3	Minor Adverse	65.8	4.3	Minor Adverse	49.1	52.3	53.0
326. CLIFTON ROAD	Dwelling	61.5	65.1	62.8	1.3	Minor Adverse	65.8	4.3	Minor Adverse	49.1	52.3	53.0
327. CLIFTON ROAD	Dwelling	62.2	66.2	63.0	0.8	Negligible Adverse	66.1	3.9	Minor Adverse	49.7	53.3	53.2
328. CLIFTON ROAD	Dwelling	61.5	65.1	62.7	1.2	Minor Adverse	65.8	4.3	Minor Adverse	49.1	52.3	53.0
329. CLIFTON ROAD	Dwelling	62.2	66.2	63.0	0.8	Negligible Adverse	66.1	3.9	Minor Adverse	49.7	53.3	53.2
331. CLIFTON ROAD	Dwelling	62.2	66.2	63.0	0.8	Negligible Adverse	66.1	3.9	Minor Adverse	49.7	53.3	53.2
333. CLIFTON ROAD	Dwelling	49.5	53.0	49.8	0.3	Negligible Adverse	52.7	3.2	Minor Adverse	38.3	41.4	41.2
335. CLIFTON ROAD	Dwelling	62.1	66.3	63.0	0.9	Negligible Adverse	66.2	4.1	Minor Adverse	49.6	53.4	53.3
336. CLIFTON ROAD	Dwelling	60.7	66.6	61.1	0.4	Negligible Adverse	64.9	4.2	Minor Adverse	48.4	53.7	52.1
337. CLIFTON ROAD	Dwelling	62.1	66.3	63.0	0.9	Negligible Adverse	66.2	4.1	Minor Adverse	49.6	53.4	53.3
339. CLIFTON ROAD	Dwelling	61.3	65.8	62.1	0.8	Negligible Adverse	65.5	4.2	Minor Adverse	48.9	53.0	52.7
339. CLIFTON ROAD	Dwelling	61.3	65.9	62.1	0.8	Negligible Adverse	65.5	4.2	Minor Adverse	48.9	53.0	52.7
340. CLIFTON ROAD	Dwelling	58.9	62.6	59.7	0.8	Negligible Adverse	62.5	3.6	Minor Adverse	46.7	50.1	50.0
340. CLIFTON ROAD	Dwelling	58.9	62.6	59.7	0.8	Negligible Adverse	62.5	3.6	Minor Adverse	46.7	50.1	50.0
340. CLIFTON ROAD	Dwelling	58.9	62.6	59.7	0.8	Negligible Adverse	62.5	3.6	Minor Adverse	46.7	50.1	50.0
340. CLIFTON ROAD	Dwelling	58.9	62.6	59.7	0.8	Negligible Adverse	62.5	3.6	Minor Adverse	46.7	50.1	50.0
340. CLIFTON ROAD	Dwelling	58.9	62.6	59.7	0.8	Negligible Adverse	62.5	3.6	Minor Adverse	46.7	50.1	50.0
340. CLIFTON ROAD	Dwelling	58.9	62.6	59.7	0.8	Negligible Adverse	62.5	3.6	Minor Adverse	46.7	50.1	50.0
340. CLIFTON ROAD	Dwelling	58.9	62.6	59.7	0.8	Negligible Adverse	62.5	3.6	Minor Adverse	46.7	50.1	50.0
340. CLIFTON ROAD	Dwelling	58.9	62.6	59.7	0.8	Negligible Adverse	62.5	3.6	Minor Adverse	46.7	50.1	50.0
340. CLIFTON ROAD	Dwelling	58.9	62.6	59.7	0.8	Negligible Adverse	62.5	3.6	Minor Adverse	46.7	50.1	50.0
344. CLIFTON ROAD	Dwelling	61.3	65.8	62.1	0.8	Negligible Adverse	65.5	4.2	Minor Adverse	48.9	53.0	52.7
345. CLIFTON ROAD	Dwelling	61.3	65.8	62.1	0.8	Negligible Adverse	65.5	4.2	Minor Adverse	48.9	53.0	52.7
346. CLIFTON ROAD	Dwelling	46.5	48.2	46.7	0.2	Negligible Adverse	48.0	1.5	Negligible Adverse	35.6	37.1	36.9
347. CLIFTON ROAD	Dwelling	61.3	66.0	62.1	0.8	Negligible Adverse	65.7	4.4	Minor Adverse	48.9	53.1	52.9
348. CLIFTON ROAD	Dwelling	54.7	58.0	55.3	0.6	Negligible Adverse	57.8	3.1	Minor Adverse	43.0	45.9	45.8
348. CLIFTON ROAD	Dwelling	54.8	58.1	55.4	0.6	Negligible Adverse	57.9	3.1	Minor Adverse	43.1	46.0	45.8
348. CLIFTON ROAD	Dwelling	54.8	58.1	55.4	0.6	Negligible Adverse	57.9	3.1	Minor Adverse	43.1	46.0	45.8
349. CLIFTON ROAD	Dwelling	61.3	66.0	62.1	0.8	Negligible Adverse	65.7	4.4	Minor Adverse	48.9	53.1	52.9
351. CLIFTON ROAD	Dwelling	61.4	66.1	62.1	0.7	Negligible Adverse	65.7	4.3	Minor Adverse	49.0	53.2	52.9
352. CLIFTON ROAD	Dwelling	62.7	68.1	63.6	0.9	Negligible Adverse	67.7	5.0	Moderate Adverse	50.2	55.0	54.7
352. CLIFTON ROAD	Dwelling	62.7	68.1	63.6	0.9	Negligible Adverse	67.7	5.0	Moderate Adverse	50.2	55.0	54.7
353. CLIFTON ROAD	Dwelling	61.4	66.1	62.1	0.7	Negligible Adverse	65.7	4.3	Minor Adverse	49.0	53.2	52.9
355. CLIFTON ROAD	Dwelling	61.4	66.2	62.1	0.7	Negligible Adverse	65.8	4.4	Minor Adverse	49.0	53.3	53.0
357. CLIFTON ROAD	Dwelling	61.4	66.1	62.1	0.7	Negligible Adverse	65.7	4.3	Minor Adverse	49.0	53.2	52.9
359. CLIFTON ROAD	Dwelling	61.1	65.9	61.8	0.7	Negligible Adverse	65.7	4.6	Minor Adverse	48.7	53.0	52.9

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
387. CLIFTON ROAD	Dwelling	57.1	61.1	57.6	0.5	Negligible Adverse	60.6	3.5	Minor Adverse	45.1	48.7	48.3
389. CLIFTON ROAD	Dwelling	63.0	68.1	63.8	0.8	Negligible Adverse	67.5	4.5	Minor Adverse	50.4	55.0	54.5
397. CLIFTON ROAD	Dwelling	62.7	67.4	63.4	0.7	Negligible Adverse	66.9	4.2	Minor Adverse	50.2	54.4	53.9
397. CLIFTON ROAD	Dwelling	62.7	67.4	63.4	0.7	Negligible Adverse	66.9	4.2	Minor Adverse	50.2	54.4	53.9
397. CLIFTON ROAD	Dwelling	62.7	67.4	63.4	0.7	Negligible Adverse	66.8	4.1	Minor Adverse	50.2	54.4	53.9
398. CLIFTON ROAD	Dwelling	62.5	67.5	63.2	0.7	Negligible Adverse	66.9	4.4	Minor Adverse	50.0	54.5	53.9
399. CLIFTON ROAD	Dwelling	62.7	67.4	63.4	0.7	Negligible Adverse	66.8	4.1	Minor Adverse	50.2	54.4	53.9
400. CLIFTON ROAD	Dwelling	62.5	67.5	63.2	0.7	Negligible Adverse	66.9	4.4	Minor Adverse	50.0	54.5	53.9
401. CLIFTON ROAD	Dwelling	62.7	67.4	63.4	0.7	Negligible Adverse	66.8	4.1	Minor Adverse	50.2	54.4	53.9
403. CLIFTON ROAD	Dwelling	61.5	66.2	62.2	0.7	Negligible Adverse	65.6	4.1	Minor Adverse	49.1	53.3	52.8
404. CLIFTON ROAD	Dwelling	62.6	67.6	63.3	0.7	Negligible Adverse	67.0	4.4	Minor Adverse	50.1	54.6	54.0
405. CLIFTON ROAD	Dwelling	61.5	66.2	62.2	0.7	Negligible Adverse	65.6	4.1	Minor Adverse	49.1	53.3	52.8
406. CLIFTON ROAD	Dwelling	62.4	67.4	63.1	0.7	Negligible Adverse	66.8	4.4	Minor Adverse	49.9	54.4	53.9
407. CLIFTON ROAD	Dwelling	61.5	66.1	62.1	0.6	Negligible Adverse	65.6	4.1	Minor Adverse	49.1	53.2	52.8
407. CLIFTON ROAD	Dwelling	61.4	66.1	62.1	0.7	Negligible Adverse	65.5	4.1	Minor Adverse	49.0	53.2	52.7
409. CLIFTON ROAD	Dwelling	62.7	67.6	63.4	0.7	Negligible Adverse	67.0	4.3	Minor Adverse	50.2	54.6	54.0
411. CLIFTON ROAD	Dwelling	62.4	67.1	63.0	0.6	Negligible Adverse	66.5	4.1	Minor Adverse	49.9	54.1	53.6
415. CLIFTON ROAD	Dwelling	61.6	66.2	62.2	0.6	Negligible Adverse	65.5	3.9	Minor Adverse	49.2	53.3	52.7
415. CLIFTON ROAD	Dwelling	61.6	66.2	62.2	0.6	Negligible Adverse	65.5	3.9	Minor Adverse	49.2	53.3	52.7
417. CLIFTON ROAD	Dwelling	61.1	65.7	61.6	0.5	Negligible Adverse	64.9	3.8	Minor Adverse	48.7	52.9	52.1
417. CLIFTON ROAD	Dwelling	61.1	65.7	61.6	0.5	Negligible Adverse	64.9	3.8	Minor Adverse	48.7	52.9	52.1
419. CLIFTON ROAD	Dwelling	61.0	65.6	61.5	0.5	Negligible Adverse	64.7	3.7	Minor Adverse	48.6	52.8	52.0
421. CLIFTON ROAD	Dwelling	60.9	65.6	61.4	0.5	Negligible Adverse	64.7	3.8	Minor Adverse	48.5	52.8	52.0
423. CLIFTON ROAD	Dwelling	60.9	65.6	61.4	0.5	Negligible Adverse	64.7	3.8	Minor Adverse	48.5	52.8	52.0
425. CLIFTON ROAD	Dwelling	60.9	65.6	61.4	0.5	Negligible Adverse	64.7	3.8	Minor Adverse	48.5	52.8	52.0
426. CLIFTON ROAD	Dwelling	59.6	64.4	59.6	0.5	Negligible Adverse	62.7	3.6	Minor Adverse	46.9	51.0	49.2
427. CLIFTON ROAD	Dwelling	61.0	65.8	61.5	0.5	Negligible Adverse	64.9	3.9	Minor Adverse	48.6	53.0	52.1
428. CLIFTON ROAD	Dwelling	58.9	63.4	59.4	0.5	Negligible Adverse	62.5	3.6	Minor Adverse	46.7	50.8	50.0
429. CLIFTON ROAD	Dwelling	61.1	65.9	61.6	0.5	Negligible Adverse	64.9	3.8	Minor Adverse	48.7	53.0	52.1
431. CLIFTON ROAD	Children's Nursery / Crèche	60.2	65.1	60.7	0.5	Negligible Adverse	64.1	3.9	Minor Adverse	47.9	52.3	51.4
432. CLIFTON ROAD	Dwelling	61.7	67.0	62.3	0.6	Negligible Adverse	66.0	4.3	Minor Adverse	49.3	54.0	53.1
433. CLIFTON ROAD	Dwelling	61.6	66.1	62.1	0.5	Negligible Adverse	65.2	3.6	Minor Adverse	49.2	53.2	52.4
434. CLIFTON ROAD	Dwelling	62.9	66.5	63.4	0.5	Negligible Adverse	66.1	3.2	Minor Adverse	50.3	53.6	53.2
435. CLIFTON ROAD	Dwelling	59.3	64.4	59.5	0.2	Negligible Adverse	62.3	3.0	Minor Adverse	47.1	51.7	49.8
436. CLIFTON ROAD	Dwelling	58.6	64.2	58.8	0.2	Negligible Adverse	61.9	3.3	Minor Adverse	46.5	51.5	49.4
437. CLIFTON ROAD	Dwelling	59.3	64.4	59.5	0.2	Negligible Adverse	62.3	3.0	Minor Adverse	47.1	51.7	49.8
438. CLIFTON ROAD	Dwelling	58.6	64.2	58.8	0.2	Negligible Adverse	61.9	3.3	Minor Adverse	46.5	51.5	49.4
439. CLIFTON ROAD	Dwelling	59.3	64.4	59.5	0.2	Negligible Adverse	62.3	3.0	Minor Adverse	47.1	51.7	49.8
440. CLIFTON ROAD	Dwelling	58.6	64.2	58.8	0.2	Negligible Adverse	61.9	3.3	Minor Adverse	46.5	51.5	49.4
441. CLIFTON ROAD	Dwelling	59.3	64.4	59.5	0.2	Negligible Adverse	62.3	3.0	Minor Adverse	47.1	51.7	49.8
442. CLIFTON ROAD	Dwelling	58.6	64.2	58.8	0.2	Negligible Adverse	61.9	3.3	Minor Adverse	46.5	51.5	49.4
443. CLIFTON ROAD	Dwelling	59.4	64.4	59.6	0.2	Negligible Adverse	62.3	2.9	Negligible Adverse	47.2	51.7	49.8
444. CLIFTON ROAD	Dwelling	58.5	64.2	58.7	0.2	Negligible Adverse	61.7	3.2	Minor Adverse	46.4	51.5	49.3
445. CLIFTON ROAD	Dwelling	59.4	64.4	59.6	0.2	Negligible Adverse	62.3	2.9	Negligible Adverse	47.2	51.7	49.8
446. CLIFTON ROAD	Dwelling	58.5	64.2	58.7	0.2	Negligible Adverse	61.7	3.2	Minor Adverse	46.4	51.5	49.3
447. CLIFTON ROAD	Dwelling	59.4	64.4	59.6	0.2	Negligible Adverse	62.3	2.9	Negligible Adverse	47.2	51.7	49.8
448. CLIFTON ROAD	Dwelling	58.5	64.2	58.7	0.2	Negligible Adverse	61.7	3.2	Minor Adverse	46.4	51.5	49.3
449. CLIFTON ROAD	Dwelling	59.4	64.4	59.6	0.2	Negligible Adverse	62.3	2.9	Negligible Adverse	47.2	51.7	49.8
450. CLIFTON ROAD	Dwelling	58.5	64.2	58.7	0.2	Negligible Adverse	61.7	3.2	Minor Adverse	46.4	51.5	49.3
451. CLIFTON ROAD	Dwelling	59.1	64.3	59.3	0.2	Negligible Adverse	62.1	3.0	Minor Adverse	46.9	51.6	49.6
452. CLIFTON ROAD	Dwelling	58.4	64.2	58.6	0.2	Negligible Adverse	61.7	3.3	Minor Adverse	46.3	51.5	49.3
453. CLIFTON ROAD	Dwelling	59.1	64.3	59.3	0.2	Negligible Adverse	62.1	3.0	Minor Adverse	46.9	51.6	49.6
454. CLIFTON ROAD	Dwelling	58.4	64.2	58.6	0.2	Negligible Adverse	61.7	3.3	Minor Adverse	46.3	51.5	49.3
455. CLIFTON ROAD	Dwelling	59.1	64.3	59.3	0.2	Negligible Adverse	62.1	3.0	Minor Adverse	46.9	51.6	49.6
456. CLIFTON ROAD	Dwelling	58.4	64.2	58.6	0.2	Negligible Adverse	61.7	3.3	Minor Adverse	46.3	51.5	49.3
457. CLIFTON ROAD	Dwelling	59.1	64.3	59.3	0.2	Negligible Adverse	62.1	3.0	Minor Adverse	46.9	51.6	49.6
458. CLIFTON ROAD	Dwelling	58.4	64.2	58.6	0.2	Negligible Adverse	61.7	3.3	Minor Adverse	46.3	51.5	49.3
459. CLIFTON ROAD	Dwelling	59.1	64.3	59.3	0.2	Negligible Adverse	62.1	3.0	Minor Adverse	46.9	51.6	49.6
460. CLIFTON ROAD	Dwelling	58.3	64.1	58.5	0.2	Negligible Adverse	61.6	3.3	Minor Adverse	46.2	51.4	49.2
461. CLIFTON ROAD	Dwelling	59.1	64.3	59.3	0.2	Negligible Adverse	62.1	3.0	Minor Adverse	46.9	51.6	49.6
462. CLIFTON ROAD	Dwelling	58.3	64.1	58.5	0.2	Negligible Adverse	61.6	3.3	Minor Adverse	46.2	51.4	49.2
463. CLIFTON ROAD	Dwelling	59.1	64.3	59.3	0.2	Negligible Adverse	62.1	3.0	Minor Adverse	46.9	51.6	49.6
464. CLIFTON ROAD	Dwelling	58.3	64.1	58.5	0.2	Negligible Adverse	61.6	3.3	Minor Adverse	46.2	51.4	49.2
465. CLIFTON ROAD	Dwelling	59.1	64.3	59.3	0.2	Negligible Adverse	62.1	3.0	Minor Adverse	46.9	51.6	49.6
466. CLIFTON ROAD	Dwelling	58.3	64.1	58.5	0.2	Negligible Adverse	61.6	3.3	Minor Adverse	46.2	51.4	49.2
467. CLIFTON ROAD	Dwelling	59.4	64.4	59.6	0.2	Negligible Adverse	62.3	2.9	Negligible Adverse	47.2	51.7	49.8
468. CLIFTON ROAD	Dwelling	58.2	63.9	58.3	0.1	Negligible Beneficial	61.4	3.2	Minor Adverse	46.1	51.2	49.0
469. CLIFTON ROAD	Dwelling	58.4	64.4	59.6	0.2	Negligible Adverse	62.3	2.9	Negligible Adverse	47.2	51.7	49.8
470. CLIFTON ROAD	Dwelling	58.2	63.9	58.3	0.1	Negligible Beneficial	61.4	3.2	Minor Adverse	46.1	51.2	49.0
471. CLIFTON ROAD	Dwelling	59.4	64.4	59.6	0.2	Negligible Adverse	62.3	2.9	Negligible Adverse	47.2	51.7	49.8
472. CLIFTON ROAD	Dwelling	58.2	63.9	58.3	0.1	Negligible Beneficial	61.4	3.2	Minor Adverse	46.1	51.2	49.0
473. CLIFTON ROAD	Dwelling	59.4	64.4	59.6	0.2	Negligible Adverse	62.3	2.9	Negligible Adverse	47.2	51.7	49.8
474. CLIFTON ROAD	Dwelling	58.2	63.9	58.3	0.1	Negligible Beneficial	61.4	3.2	Minor Adverse	46.1	51.2	49.0
475. CLIFTON ROAD	Dwelling	56.1	59.5	56.1	0.0	No Change	58.1	2.0	Negligible Adverse	44.2	47.3	46.0
476. CLIFTON ROAD	Dwelling	58.1	63.7	58.2	0.1	Negligible Adverse	61.3	3.2	Minor Adverse	46.0	51.1	48.9
477. CLIFTON ROAD	Dwelling	56.1	59.5	56.1	0.0	No Change	58.1	2.0	Negligible Adverse	44.2	47.3	46.0
478. CLIFTON ROAD	Dwelling	58.1	63.7	58.2	0.1	Negligible Adverse	61.3	3.2	Minor Adverse	46.0	51.1	48.9
479. CLIFTON ROAD	Dwelling	56.1	59.5	56.1	0.0	No Change	58.1	2.0	Negligible Adverse	44.2	47.3	46.0
480. CLIFTON ROAD	Dwelling	58.1	63.7	58.2	0.1	Negligible Adverse	61.3	3.2	Minor Adverse	46.0	51.1	48.9
481. CLIFTON ROAD	Dwelling	56.1	59.5	56.1	0.0	No Change	58.1	2.0	Negligible Adverse	44.2	47.3	46.0
482. CLIFTON ROAD	Dwelling	58.1	63.7	58.2	0.1	Negligible Adverse	61.3	3.2	Minor Adverse	46.0	51.1	48.9
483. CLIFTON ROAD	Dwelling	55.0	57.4	55.0	0.1	Negligible Adverse	56.5	1.6	Negligible Adverse	43.1	45.4	44.6
484. CLIFTON ROAD	Dwelling	58.0	63.5	58.1	0.1	Negligible Adverse	61.1	3.1	Minor Adverse	45.9	50.9	48.7

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
576. CLIFTON ROAD	Dwelling	60.6	64.6	59.3	-1.3	Minor Beneficial	61.0	0.4	Negligible Adverse	48.3	51.9	48.6
577. CLIFTON ROAD	Dwelling	55.8	57.7	55.1	-0.7	Negligible Beneficial	56.2	0.4	Negligible Adverse	44.0	45.7	44.3
578. CLIFTON ROAD	Dwelling	60.6	64.6	59.3	-1.3	Minor Beneficial	61.0	0.4	Negligible Adverse	48.3	51.9	48.6
579. CLIFTON ROAD	Dwelling	55.5	58.7	55.2	-0.3	Negligible Beneficial	56.3	0.8	Negligible Adverse	43.7	46.6	44.4
580. CLIFTON ROAD	Dwelling	61.5	65.1	59.9	-1.6	Minor Beneficial	61.5	0.0	No Change	49.1	52.3	49.1
581. CLIFTON ROAD	Dwelling	55.5	58.7	55.2	-0.3	Negligible Beneficial	56.3	0.8	Negligible Adverse	43.7	46.6	44.4
582. CLIFTON ROAD	Dwelling	61.5	65.1	59.9	-1.6	Minor Beneficial	61.5	0.0	No Change	49.1	52.3	49.1
583. CLIFTON ROAD	Dwelling	55.5	58.7	55.2	-0.3	Negligible Beneficial	56.3	0.8	Negligible Adverse	43.7	46.6	44.4
584. CLIFTON ROAD	Dwelling	61.5	65.1	59.9	-1.6	Minor Beneficial	61.5	0.0	No Change	49.1	52.3	49.1
585. CLIFTON ROAD	Dwelling	55.5	58.7	55.2	-0.3	Negligible Beneficial	56.3	0.8	Negligible Adverse	43.7	46.6	44.4
586. CLIFTON ROAD	Dwelling	61.5	65.1	59.9	-1.6	Minor Beneficial	61.5	0.0	No Change	49.1	52.3	49.1
587. CLIFTON ROAD	Dwelling	60.4	64.5	59.4	-1.0	Minor Beneficial	61.0	0.6	Negligible Adverse	48.1	51.8	48.6
588. CLIFTON ROAD	Dwelling	63.2	66.1	61.2	-2.0	Minor Beneficial	62.9	-0.3	Negligible Beneficial	50.6	53.2	50.3
589. CLIFTON ROAD	Dwelling	60.4	64.5	59.4	-1.0	Minor Beneficial	61.0	0.6	Negligible Adverse	48.1	51.8	48.6
590. CLIFTON ROAD	Dwelling	63.2	66.1	61.2	-2.0	Minor Beneficial	62.9	-0.3	Negligible Beneficial	50.6	53.2	50.3
591. CLIFTON ROAD	Dwelling	60.4	64.5	59.4	-1.0	Minor Beneficial	61.0	0.6	Negligible Adverse	48.1	51.8	48.6
592. CLIFTON ROAD	Dwelling	63.2	66.1	61.2	-2.0	Minor Beneficial	62.9	-0.3	Negligible Beneficial	50.6	53.2	50.3
593. CLIFTON ROAD	Dwelling	60.4	64.5	59.4	-1.0	Minor Beneficial	61.0	0.6	Negligible Adverse	48.1	51.8	48.6
594. CLIFTON ROAD	Dwelling	63.2	66.1	61.2	-2.0	Minor Beneficial	62.9	-0.3	Negligible Beneficial	50.6	53.2	50.3
595. CLIFTON ROAD	Dwelling	61.2	65.0	59.9	-1.3	Minor Beneficial	61.4	0.2	Negligible Adverse	48.8	52.2	49.0
596. CLIFTON ROAD	Dwelling	64.9	67.4	62.2	-2.7	Minor Beneficial	63.7	-1.2	Negligible Beneficial	52.1	54.4	51.1
597. CLIFTON ROAD	Dwelling	61.2	65.0	59.9	-1.3	Minor Beneficial	61.4	0.2	Negligible Adverse	48.8	52.2	49.0
598. CLIFTON ROAD	Dwelling	64.9	67.4	62.2	-2.7	Minor Beneficial	63.7	-1.2	Negligible Beneficial	52.1	54.4	51.1
599. CLIFTON ROAD	Dwelling	61.2	65.0	59.9	-1.3	Minor Beneficial	61.4	0.2	Negligible Adverse	48.8	52.2	49.0
600. CLIFTON ROAD	Dwelling	64.9	67.4	62.2	-2.7	Minor Beneficial	63.7	-1.2	Negligible Beneficial	52.1	54.4	51.1
601. CLIFTON ROAD	Dwelling	61.2	65.0	59.9	-1.3	Minor Beneficial	61.4	0.2	Negligible Adverse	48.8	52.2	49.0
602. CLIFTON ROAD	Dwelling	64.9	67.4	62.2	-2.7	Minor Beneficial	63.7	-1.2	Negligible Beneficial	52.1	54.4	51.1
603. CLIFTON ROAD	Dwelling	62.3	65.6	60.7	-1.6	Minor Beneficial	62.1	-0.2	Negligible Beneficial	49.8	52.8	49.6
605. CLIFTON ROAD	Dwelling	62.3	65.6	60.7	-1.6	Minor Beneficial	62.1	-0.2	Negligible Beneficial	49.8	52.8	49.6
607. CLIFTON ROAD	Dwelling	62.3	65.6	60.7	-1.6	Minor Beneficial	62.1	-0.2	Negligible Beneficial	49.8	52.8	49.6
609. CLIFTON ROAD	Dwelling	62.3	65.6	60.7	-1.6	Minor Beneficial	62.1	-0.2	Negligible Beneficial	49.8	52.8	49.6
633. CLIFTON ROAD	Dwelling	55.8	57.7	55.1	-0.7	Negligible Beneficial	56.2	0.4	Negligible Adverse	44.0	45.7	44.3
96. CLIFTON ROAD	Dwelling	66.8	68.8	67.2	0.4	Negligible Adverse	68.6	1.8	Negligible Adverse	53.9	55.7	55.5
98. CLIFTON ROAD	Dwelling	66.8	68.8	67.2	0.4	Negligible Adverse	68.6	1.8	Negligible Adverse	53.9	55.7	55.5
WOODSIDE BURGH HALL, WOODSIDE BURGH HALL, 360, CLIFTON ROAD	Public / Village Hall / Other Community Facility	50.6	54.2	51.0	0.4	Negligible Adverse	54.0	3.4	Minor Adverse	39.3	42.5	42.3
WOODSIDE BURGH HALL STORE, CLIFTON ROAD	Hall Store	50.6	54.2	51.0	0.4	Negligible Adverse	54.0	3.4	Minor Adverse	39.3	42.5	42.3
WOODSIDE PRIMARY SCHOOL, WOODSIDE PRIMARY SCHOOL, CLIFTON ROAD	Primary School	61.6	66.3	62.2	0.6	Negligible Adverse	65.8	4.2	Minor Adverse	49.2	53.4	53.0
611. CLIFTON ROAD	Dwelling	69.2	70.5	65.6	-3.4	Moderate Beneficial	67.6	-1.6	Negligible Beneficial	56.0	57.2	54.6
627. CLIFTON ROAD	Dwelling	72.9	74.1	69.3	-3.6	Moderate Beneficial	71.0	-1.9	Negligible Beneficial	59.3	60.4	57.6
619. CLIFTON ROAD	Dwelling	72.0	73.2	68.5	-3.5	Moderate Beneficial	70.2	-1.8	Negligible Beneficial	58.5	59.6	56.9
CLUNY, CLUNY COTTAGE, LAUREL LANE, BRIDGE OF DON	Dwelling	59.5	59.4	59.4	-0.1	Negligible Beneficial	60.1	0.6	Negligible Adverse	47.3	47.2	47.8
COACH HOUSE COTTAGE, COACH HOUSE COTTAGE, MUGIEMOSS ROAD	Dwelling	54.6	54.6	54.5	-0.1	Negligible Beneficial	55.1	0.5	Negligible Adverse	42.9	42.9	43.3
1. COOPER LANE	Dwelling	46.8	47.5	46.8	0.0	No Change	47.5	0.7	Negligible Adverse	35.9	36.5	36.5
11. COOPER LANE	Dwelling	49.4	52.5	49.4	0.0	No Change	51.9	2.5	Negligible Adverse	38.2	41.0	40.4
15. COOPER LANE	Dwelling	49.4	52.5	49.4	0.0	No Change	51.9	2.5	Negligible Adverse	38.2	41.0	40.4
17. COOPER LANE	Dwelling	49.4	52.5	49.4	0.0	No Change	51.9	2.5	Negligible Adverse	38.2	41.0	40.4
19. COOPER LANE	Dwelling	49.4	52.5	49.4	0.0	No Change	51.9	2.5	Negligible Adverse	38.2	41.0	40.4
2. COOPER LANE	Dwelling	46.4	47.2	46.4	0.0	No Change	47.1	0.7	Negligible Adverse	35.5	36.2	36.1
21. COOPER LANE	Dwelling	49.4	52.5	49.4	0.0	No Change	51.9	2.5	Negligible Adverse	38.2	41.0	40.4
23. COOPER LANE	Dwelling	49.4	52.5	49.4	0.0	No Change	51.9	2.5	Negligible Adverse	38.2	41.0	40.4
25. COOPER LANE	Dwelling	49.4	52.5	49.4	0.0	No Change	51.9	2.5	Negligible Adverse	38.2	41.0	40.4
27. COOPER LANE	Dwelling	49.4	52.5	49.4	0.0	No Change	51.9	2.5	Negligible Adverse	38.2	41.0	40.4
29. COOPER LANE	Dwelling	49.4	52.5	49.4	0.0	No Change	51.9	2.5	Negligible Adverse	38.2	41.0	40.4
3. COOPER LANE	Dwelling	46.8	47.5	46.8	0.0	No Change	47.5	0.7	Negligible Adverse	35.9	36.5	36.5
31. COOPER LANE	Dwelling	49.4	52.5	49.4	0.0	No Change	51.9	2.5	Negligible Adverse	38.2	41.0	40.4
33. COOPER LANE	Dwelling	49.4	52.5	49.4	0.0	No Change	51.9	2.5	Negligible Adverse	38.2	41.0	40.4
35. COOPER LANE	Dwelling	49.4	52.5	49.4	0.0	No Change	51.9	2.5	Negligible Adverse	38.2	41.0	40.4
4. COOPER LANE	Dwelling	46.4	47.2	46.4	0.0	No Change	47.1	0.7	Negligible Adverse	35.5	36.2	36.1
5. COOPER LANE	Dwelling	46.8	47.5	46.8	0.0	No Change	47.5	0.7	Negligible Adverse	35.9	36.5	36.5
6. COOPER LANE	Dwelling	46.4	47.2	46.4	0.0	No Change	47.1	0.7	Negligible Adverse	35.5	36.2	36.1
7. COOPER LANE	Dwelling	49.4	52.5	49.4	0.0	No Change	51.9	2.5	Negligible Adverse	38.2	41.0	40.4
9. COOPER LANE	Dwelling	49.4	52.5	49.4	0.0	No Change	51.9	2.5	Negligible Adverse	38.2	41.0	40.4
101. CORDINER AVENUE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
103. CORDINER AVENUE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
105. CORDINER AVENUE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
107. CORDINER AVENUE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
109. CORDINER AVENUE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
40. CORDINER AVENUE	Dwelling	46.4	47.1	46.4	0.0	No Change	47.1	0.7	Negligible Adverse	35.5	36.1	36.1
42. CORDINER AVENUE	Dwelling	46.4	47.1	46.4	0.0	No Change	47.1	0.7	Negligible Adverse	35.5	36.1	36.1
44. CORDINER AVENUE	Dwelling	46.4	47.1	46.4	0.0	No Change	47.1	0.7	Negligible Adverse	35.5	36.1	36.1
46. CORDINER AVENUE	Dwelling	46.4	47.1	46.4	0.0	No Change	47.1	0.7	Negligible Adverse	35.5	36.1	36.1
48. CORDINER AVENUE	Dwelling	46.4	47.1	46.4	0.0	No Change	47.1	0.7	Negligible Adverse	35.5	36.1	36.1
50. CORDINER AVENUE	Dwelling	46.4	47.1	46.4	0.0	No Change	47.1	0.7	Negligible Adverse	35.5	36.1	36.1
79. CORDINER AVENUE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
81. CORDINER AVENUE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
83. CORDINER AVENUE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
85. CORDINER AVENUE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
87. CORDINER AVENUE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
89. CORDINER AVENUE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
91. CORDINER AVENUE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
7. COWAN PLACE, HAYTON	Dwelling	53.2	56.0	51.5	-1.7	Minor Beneficial	55.2	2.0	Negligible Adverse	41.6	44.1	43.4
9. COWAN PLACE, HAYTON	Dwelling	56.0	59.2	54.1	-1.9	Minor Beneficial	58.2	2.2	Negligible Adverse	44.1	47.0	46.1
COA Playing Field at Laurel Drive	COA	58.8	58.8	58.7	-0.1	Negligible Beneficial	59.4	0.6	Negligible Adverse	46.7	46.7	47.2
CROMBIE COTTAGE, 2, GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	48.3	48.8	48.1	-0.2	Negligible Beneficial	49.4	1.1	Negligible Adverse	37.2	37.7	38.2
CROMBIE COTTAGE, 4, GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	48.3	48.8	48.1	-0.2	Negligible Beneficial	49.4	1.1	Negligible Adverse	37.2	37.7	38.2
CROMBIE HOUSE, 2, GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
CROMBIE HOUSE, 4, GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
CROMBIE HOUSE, 5, GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
CROMBIE HOUSE, 6, GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
CROMBIE HOUSE, 7, GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
CROMBIE HOUSE, 8, GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
CROMBIE HOUSE, 9, GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
CROMBIE HOUSE, 10, GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
CROMBIE HOUSE, 11, GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
CROMBIE HOUSE, 12, GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
CROMBIE HOUSE, 14, GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
CROMBIE HOUSE, 15, GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
CROMBIE HOUSE, 16, GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
1. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	54.7	55.1	54.7	0.0	No Change	55.2	0.5	Negligible Adverse	43.0	43.3	43.4
10. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	57.6	58.1	57.6	0.0	No Change	58.1	0.5	Negligible Adverse	45.6	46.0	46.0
100. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	45.5	46.4	45.5	0.0	No Change	46.4	0.9	Negligible Adverse	34.7	35.5	35.5
102. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	45.4	46.3	45.4	0.0	No Change	46.3	0.9	Negligible Adverse	34.6	35.4	35.4
104. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	45.4	46.3	45.4	0.0	No Change	46.3	0.9	Negligible Adverse	34.6	35.4	35.4
106. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.0	47.9	47.0	0.0	No Change	47.9	0.9	Negligible Adverse	36.0	36.8	36.8
108. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.1	48.0	47.0	-0.1	Negligible Beneficial	48.0	0.9	Negligible Adverse	36.1	36.9	36.9
11. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	54.8	55.7	54.8	0.0	No Change	55.6	0.8	Negligible Adverse	43.1	43.9	43.8
110. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.3	48.1	47.2	-0.1	Negligible Beneficial	48.1	0.8	Negligible Adverse	36.3	37.0	37.0
111. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.5	48.3	47.4	-0.1	Negligible Beneficial	48.3	0.8	Negligible Adverse	36.5	37.2	37.2
112. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.5	48.3	47.4	-0.1	Negligible Beneficial	48.4	0.9	Negligible Adverse	36.5	37.2	37.3
113. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.7	48.6	47.7	0.0	No Change	48.5	0.8	Negligible Adverse	36.7	37.5	37.4
114. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.7	48.6	47.7	0.0	No Change	48.6	0.9	Negligible Adverse	36.7	37.5	37.5
115. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.9	48.7	47.8	-0.1	Negligible Beneficial	48.6	0.7	Negligible Adverse	36.8	37.6	37.5
116. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.7	48.6	47.7	0.0	No Change	48.6	0.9	Negligible Adverse	36.7	37.5	37.5
117. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.9	48.7	47.9	0.0	No Change	48.7	0.8	Negligible Adverse	36.8	37.6	37.6
118. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.5	48.3	47.4	-0.1	Negligible Beneficial	48.3	0.8	Negligible Adverse	36.5	37.2	37.2
119. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	48.0	48.8	47.9	-0.1	Negligible Beneficial	48.7	0.7	Negligible Adverse	36.9	37.7	37.6
12. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	57.5	58.1	57.5	0.0	No Change	58.1	0.6	Negligible Adverse	45.5	46.0	46.0
120. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.4	48.2	47.4	0.0	No Change	48.2	0.8	Negligible Adverse	36.4	37.1	37.1
121. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	48.1	48.9	48.1	0.0	No Change	48.9	0.8	Negligible Adverse	37.0	37.7	37.7
123. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	48.1	48.9	48.0	-0.1	Negligible Beneficial	48.8	0.7	Negligible Adverse	37.0	37.7	37.7
125. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	48.2	49.0	48.2	0.0	No Change	49.0	0.8	Negligible Adverse	37.1	37.8	37.8
126. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.1	53.7	53.0	-0.1	Negligible Beneficial	53.7	0.6	Negligible Adverse	41.5	42.1	42.1
127. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	48.6	49.4	48.5	-0.1	Negligible Beneficial	49.3	0.7	Negligible Adverse	37.5	38.2	38.1
128. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.1	53.7	53.0	-0.1	Negligible Beneficial	53.7	0.6	Negligible Adverse	41.5	42.1	42.1
129. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	48.3	49.1	48.3	0.0	No Change	49.0	0.7	Negligible Adverse	37.2	37.9	37.8
130. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	54.1	54.9	54.1	0.0	No Change	54.9	0.8	Negligible Adverse	42.4	43.1	43.1
131. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.1	53.7	53.0	-0.1	Negligible Beneficial	53.7	0.6	Negligible Adverse	41.5	42.1	42.1
131. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.9	48.7	47.9	0.0	No Change	48.7	0.8	Negligible Adverse	36.8	37.6	37.5
132. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.1	53.7	53.0	-0.1	Negligible Beneficial	53.7	0.6	Negligible Adverse	41.5	42.1	42.1
133. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	52.7	53.5	52.7	0.0	No Change	53.5	0.8	Negligible Adverse	41.2	41.9	41.9
134. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.1	53.7	53.0	-0.1	Negligible Beneficial	53.7	0.6	Negligible Adverse	41.5	42.1	42.1
135. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	52.2	52.9	52.2	0.0	No Change	53.0	0.8	Negligible Adverse	40.7	41.3	41.4
136. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.1	53.7	53.0	-0.1	Negligible Beneficial	53.7	0.6	Negligible Adverse	41.5	42.1	42.1
137. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	51.7	52.3	51.7	0.0	No Change	52.3	0.6	Negligible Adverse	40.3	40.8	40.8
138. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	51.7	52.4	51.7	0.0	No Change	52.4	0.7	Negligible Adverse	40.3	40.9	40.9
139. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	51.9	52.5	51.9	0.0	No Change	52.5	0.6	Negligible Adverse	40.4	41.0	41.0
14. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	57.7	58.4	57.7	0.0	No Change	58.4	0.7	Negligible Adverse	45.7	46.3	46.3
140. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	50.6	51.2	50.6	0.0	No Change	51.2	0.6	Negligible Adverse	39.3	39.8	39.8
141. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	51.6	52.2	51.5	-0.1	Negligible Beneficial	52.2	0.6	Negligible Adverse	40.2	40.7	40.7
142. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	52.8	53.4	52.7	-0.1	Negligible Beneficial	53.4	0.6	Negligible Adverse	41.3	41.8	41.8
143. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	51.6	52.3	51.6	0.0	No Change	52.2	0.6	Negligible Adverse	40.2	40.7	40.7
144. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.1	53.7	53.0	-0.1	Negligible Beneficial	53.7	0.6	Negligible Adverse	41.5	42.1	42.1
146. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	55.3	55.9	55.3	0.0	No Change	55.9	0.6	Negligible Adverse	43.5	44.0	44.0
148. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	55.9	56.4	55.8	-0.1	Negligible Beneficial	56.5	0.6	Negligible Adverse	44.0	44.5	44.6
15. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	54.0	54.8	53.9	-0.1	Negligible Beneficial	54.7	0.7	Negligible Adverse	42.3	43.1	43.0
150. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	55.7	56.2	55.6	-0.1	Negligible Beneficial	56.2	0.5	Negligible Adverse	43.9	44.3	44.3
152. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	56.9	57.4	56.9	0.0	No Change	57.4	0.5	Negligible Adverse	44.9	45.4	45.4
154. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	58.1	58.5	58.1	0.0	No Change	58.5	0.4	Negligible Adverse	46.0	46.4	46.4

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
156. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	57.9	58.3	57.9	0.0	No Change	58.4	0.5	Negligible Adverse	45.8	46.2	46.3
158. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	57.5	57.9	57.5	0.0	No Change	57.9	0.4	Negligible Adverse	45.5	45.8	45.8
16. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	57.7	58.5	57.8	0.1	Negligible Beneficial	58.5	0.8	Negligible Adverse	45.7	46.4	46.4
160. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	58.2	58.5	58.2	0.0	No Change	58.5	0.3	Negligible Adverse	46.1	46.4	46.4
162. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	58.7	59.0	58.7	0.0	No Change	59.0	0.3	Negligible Adverse	46.6	46.8	46.8
164. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	58.8	59.1	58.8	0.0	No Change	59.2	0.4	Negligible Adverse	46.7	46.9	47.0
166. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	56.4	56.8	56.5	0.1	Negligible Adverse	56.8	0.4	Negligible Adverse	44.5	44.9	44.9
168. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	54.9	55.2	54.9	0.0	No Change	55.2	0.3	Negligible Adverse	43.1	43.4	43.4
170. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.2	54.2	53.1	-0.1	Negligible Beneficial	54.1	0.9	Negligible Adverse	41.6	42.5	42.4
170. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	54.0	54.4	54.1	0.1	Negligible Adverse	54.4	0.4	Negligible Adverse	42.3	42.7	42.7
172. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.4	53.8	53.5	0.1	Negligible Adverse	53.8	0.4	Negligible Adverse	41.8	42.2	42.2
174. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	52.9	53.3	52.9	0.0	No Change	53.3	0.4	Negligible Adverse	41.3	41.7	41.7
176. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	52.4	52.9	52.5	0.1	Negligible Adverse	52.9	0.5	Negligible Adverse	40.9	41.3	41.3
178. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	52.4	52.8	52.4	0.0	No Change	52.8	0.4	Negligible Adverse	40.9	41.3	41.3
18. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	56.4	57.3	56.4	0.0	No Change	57.2	0.8	Negligible Adverse	44.5	45.3	45.2
180. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	52.5	52.9	52.5	0.0	No Change	52.9	0.4	Negligible Adverse	41.0	41.3	41.3
19. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	52.3	53.3	52.3	0.0	No Change	53.2	0.9	Negligible Adverse	40.8	41.7	41.6
2. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	56.8	57.3	56.9	0.1	Negligible Adverse	57.3	0.5	Negligible Adverse	44.9	45.3	45.3
20. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	55.4	56.3	55.5	0.1	Negligible Adverse	56.2	0.8	Negligible Adverse	43.6	44.4	44.3
21. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	51.7	52.9	51.6	-0.1	Negligible Beneficial	52.7	1.0	Negligible Adverse	40.3	41.3	41.2
22. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.4	54.4	53.3	-0.1	Negligible Beneficial	54.4	1.0	Negligible Adverse	41.8	42.7	42.7
23. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	51.3	52.4	51.2	-0.1	Negligible Beneficial	52.3	1.0	Negligible Adverse	39.9	40.9	40.8
24. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.9	55.1	53.8	-0.1	Negligible Beneficial	55.0	1.1	Negligible Adverse	42.2	43.3	43.2
25. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	51.1	52.2	51.0	-0.1	Negligible Beneficial	52.1	1.0	Negligible Adverse	39.7	40.7	40.6
26. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.8	54.9	53.7	-0.1	Negligible Beneficial	54.9	1.1	Negligible Adverse	42.1	43.1	43.1
27. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	51.0	52.1	50.9	-0.1	Negligible Beneficial	52.0	1.0	Negligible Adverse	39.6	40.6	40.6
28. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	54.1	55.2	54.0	-0.1	Negligible Beneficial	55.2	1.1	Negligible Adverse	42.4	43.4	43.4
29. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	51.1	52.2	51.0	-0.1	Negligible Beneficial	52.1	1.0	Negligible Adverse	39.7	40.7	40.6
3. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.8	54.3	53.9	0.1	Negligible Adverse	54.3	0.5	Negligible Adverse	42.2	42.6	42.6
30. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.7	55.0	53.6	-0.1	Negligible Beneficial	54.9	1.2	Negligible Adverse	42.1	43.2	43.1
31. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	50.8	51.9	50.7	-0.1	Negligible Beneficial	51.8	1.0	Negligible Adverse	39.5	40.4	40.4
32. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.6	54.8	53.5	-0.1	Negligible Beneficial	54.7	1.1	Negligible Adverse	42.0	43.1	43.0
33. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	50.4	51.6	50.3	-0.1	Negligible Beneficial	51.5	1.1	Negligible Adverse	39.1	40.2	40.1
34. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.3	54.5	53.2	-0.1	Negligible Beneficial	54.4	1.1	Negligible Adverse	41.7	42.8	42.7
35. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	50.3	51.3	50.2	-0.1	Negligible Beneficial	51.3	1.0	Negligible Adverse	39.0	39.9	39.9
36. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.5	54.6	53.4	-0.1	Negligible Beneficial	54.6	1.1	Negligible Adverse	41.9	42.9	42.9
37. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	49.5	50.6	49.4	-0.1	Negligible Beneficial	50.5	1.0	Negligible Adverse	38.3	39.3	39.2
38. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.4	54.5	53.3	-0.1	Negligible Beneficial	54.5	1.1	Negligible Adverse	41.8	42.8	42.8
39. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	49.7	50.6	49.6	-0.1	Negligible Beneficial	50.7	1.0	Negligible Adverse	38.5	39.3	39.4
4. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	57.1	57.6	57.2	0.0	Negligible Adverse	57.6	0.5	Negligible Adverse	45.1	45.6	45.6
40. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.6	54.8	53.5	-0.1	Negligible Beneficial	54.7	1.1	Negligible Adverse	42.0	43.1	43.0
41. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	49.7	50.7	49.6	-0.1	Negligible Beneficial	50.7	1.0	Negligible Adverse	38.5	39.4	39.4
42. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.3	54.5	53.2	-0.1	Negligible Beneficial	54.4	1.1	Negligible Adverse	41.7	42.8	42.7
43. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	49.9	50.5	49.8	-0.1	Negligible Beneficial	50.7	0.8	Negligible Adverse	38.6	39.2	39.4
44. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.4	54.6	53.3	-0.1	Negligible Beneficial	54.6	1.2	Negligible Adverse	41.8	42.9	42.9
45. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	48.9	49.9	48.8	-0.1	Negligible Beneficial	49.9	1.0	Negligible Adverse	37.7	38.6	38.6
46. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.5	54.7	53.4	-0.1	Negligible Beneficial	54.6	1.1	Negligible Adverse	41.9	43.0	42.9
47. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	49.2	50.0	49.1	-0.1	Negligible Beneficial	50.1	0.9	Negligible Adverse	38.0	38.7	38.8
48. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.4	54.5	53.3	-0.1	Negligible Beneficial	54.5	1.1	Negligible Adverse	41.8	42.8	42.8
49. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	49.5	50.0	49.4	-0.1	Negligible Beneficial	50.2	0.7	Negligible Adverse	38.3	38.7	38.9
5. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	52.9	53.5	52.9	0.0	No Change	53.5	0.6	Negligible Adverse	41.3	41.9	41.9
50. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	52.7	53.8	52.6	-0.1	Negligible Beneficial	53.9	1.2	Negligible Adverse	41.2	42.2	42.2
51. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	49.6	50.2	49.5	-0.1	Negligible Beneficial	50.4	0.8	Negligible Adverse	38.4	38.9	39.1
52. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	52.6	53.7	52.6	0.0	No Change	53.8	1.2	Negligible Adverse	41.1	42.1	42.2
53. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.7	48.6	47.6	-0.1	Negligible Beneficial	48.5	0.8	Negligible Adverse	36.7	37.5	37.4
54. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	52.4	53.4	52.3	-0.1	Negligible Beneficial	53.5	1.1	Negligible Adverse	40.9	41.8	41.9
55. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.5	48.5	47.5	0.0	No Change	48.4	0.9	Negligible Adverse	36.5	37.4	37.3
56. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	52.3	53.2	52.2	-0.1	Negligible Beneficial	53.4	1.1	Negligible Adverse	40.8	41.6	41.8
57. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.6	48.5	47.5	-0.1	Negligible Beneficial	48.5	0.9	Negligible Adverse	36.6	37.4	37.4
58. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	51.9	52.9	51.8	-0.1	Negligible Beneficial	52.9	1.0	Negligible Adverse	40.4	41.3	41.3
59. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.6	48.6	47.5	-0.1	Negligible Beneficial	48.5	0.9	Negligible Adverse	36.6	37.5	37.4
6. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	57.4	58.0	57.5	0.1	Negligible Adverse	58.0	0.6	Negligible Adverse	45.4	45.9	45.9
60. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	52.0	53.1	51.9	-0.1	Negligible Beneficial	53.1	1.1	Negligible Adverse	40.5	41.5	41.5
61. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.5	48.5	47.4	-0.1	Negligible Beneficial	48.4	0.9	Negligible Adverse	36.5	37.4	37.3
62. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	50.6	51.2	50.5	-0.1	Negligible Beneficial	51.5	0.9	Negligible Adverse	39.3	39.8	40.1
63. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.4	48.4	47.3	-0.1	Negligible Beneficial	48.3	0.9	Negligible Adverse	36.4	37.3	37.2
64. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	50.3	51.1	50.3	0.0	No Change	51.3	1.0	Negligible Adverse	39.0	39.7	39.9
65. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.3	48.3	47.2	-0.1	Negligible Beneficial	48.2	0.9	Negligible Adverse	36.3	37.2	37.1
66. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	49.6	50.4	49.5	-0.1	Negligible Beneficial	50.5	0.9	Negligible Adverse	39.1	39.1	39.2
67. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.2	48.2	47.1	-0.1	Negligible Beneficial	48.1	0.9	Negligible Adverse	36.2	37.1	37.0
68. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.7	48.7	47.5	-0.2	Negligible Beneficial	48.6	0.9	Negligible Adverse	36.7	37.6	37.5
69. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.8	48.6	47.7	-0.1	Negligible Beneficial	48.6	0.8	Negligible Adverse	36.8	37.5	37.5
7. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	53.1	53.8	53.1	0.0	No Change	53.7	0.6	Negligible Adverse	41.5	42.2	42.1
70. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.5	48.5	47.4	-0.1	Negligible Beneficial	48.4	0.9	Negligible Adverse	36.5	37.4	37.3
71. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	46.6	47.5	46.5	-0.1	Negligible Beneficial	47.4	0.8	Negligible Adverse	35.7	36.5	36.4
72. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.5	48.6	47.4	-0.1	Negligible Beneficial	48.5	1.0	Negligible Adverse	36.5	37.5	37.4
73. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	46.6	47.6	46.6	0.0	No Change	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
74. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.7	48.7	47.6	-0.1	Negligible Beneficial	48.6	0.9	Negligible Adverse	36.7	37.6	37.5
75. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	46.6	47.6	46.6	0.0	No Change	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
76. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.4	48.4	47.3	-0.1	Negligible Beneficial	48.3	0.9	Negligible Adverse	36.4	37.3	37.2
77. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.1	48.0	47.0	-0.1	Negligible Beneficial	47.9	0.8	Negligible Adverse	36.1	36.9	36.8
78. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.0	48.0	46.9	-0.1	Negligible Beneficial	48.0	1.0	Negligible Adverse	36.0	36.9	36.9
79. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.2	48.1	47.1	-0.1	Negligible Beneficial	48.0	0.8	Negligible Adverse	36.2	37.0	36.9

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
8. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	57.3	57.9	57.4	0.1	Negligible Adverse	57.9	0.6	Negligible Adverse	45.3	45.8	45.8
80. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.0	47.9	46.9	-0.1	Negligible Beneficial	47.9	0.9	Negligible Adverse	36.0	36.8	36.8
81. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.2	48.1	47.2	0.0	No Change	48.1	0.9	Negligible Adverse	36.2	37.0	37.0
82. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.2	48.2	47.1	-0.1	Negligible Beneficial	48.1	0.9	Negligible Adverse	36.2	37.1	37.0
83. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.2	48.1	47.1	-0.1	Negligible Beneficial	48.0	0.8	Negligible Adverse	36.2	37.0	36.9
84. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	46.9	47.9	46.9	0.0	No Change	47.8	0.9	Negligible Adverse	35.9	36.8	36.8
85. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.8	48.7	47.7	-0.1	Negligible Beneficial	48.6	0.8	Negligible Adverse	36.8	37.6	37.5
86. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.0	47.9	46.9	-0.1	Negligible Beneficial	47.9	0.9	Negligible Adverse	36.0	36.8	36.8
87. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.8	48.6	47.7	-0.1	Negligible Beneficial	48.6	0.8	Negligible Adverse	36.8	37.5	37.5
88. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.0	47.9	46.9	-0.1	Negligible Beneficial	47.9	0.9	Negligible Adverse	36.0	36.8	36.8
89. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.6	48.4	47.5	-0.1	Negligible Beneficial	48.4	0.8	Negligible Adverse	36.6	37.3	37.3
9. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	54.2	55.0	54.1	-0.1	Negligible Beneficial	54.9	0.7	Negligible Adverse	42.5	43.2	43.1
90. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	46.2	47.1	46.1	-0.1	Negligible Beneficial	47.0	0.8	Negligible Adverse	35.3	36.1	36.0
91. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	47.7	48.5	47.6	-0.1	Negligible Beneficial	48.5	0.8	Negligible Adverse	36.7	37.4	37.4
92. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	45.8	46.7	45.8	0.0	No Change	46.7	0.9	Negligible Adverse	35.0	35.8	35.8
93. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	48.0	48.9	47.9	-0.1	Negligible Beneficial	48.8	0.8	Negligible Adverse	36.9	37.7	37.7
94. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	45.8	46.7	45.7	-0.1	Negligible Beneficial	46.6	0.8	Negligible Adverse	35.0	35.8	35.7
96. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	45.8	46.7	45.7	-0.1	Negligible Beneficial	46.6	0.8	Negligible Adverse	35.0	35.8	35.7
98. CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	45.7	46.6	45.6	-0.1	Negligible Beneficial	46.5	0.8	Negligible Adverse	34.9	35.7	35.6
1. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.3	50.1	49.3	0.0	No Change	50.2	0.9	Negligible Adverse	38.1	38.8	38.9
10. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.8	50.6	49.8	0.0	No Change	50.7	0.9	Negligible Adverse	38.6	39.3	39.4
100. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	47.2	47.8	47.2	0.0	No Change	48.1	0.9	Negligible Adverse	36.2	36.8	37.0
102. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	47.7	48.1	47.7	0.0	No Change	48.6	0.9	Negligible Adverse	36.7	37.0	37.5
104. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	47.7	48.1	47.7	0.0	No Change	48.6	0.9	Negligible Adverse	36.7	37.0	37.5
106. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.8	49.1	49.8	0.1	Negligible Beneficial	50.3	0.4	Negligible Adverse	38.6	37.9	38.0
108. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.1	49.8	49.1	-0.1	Negligible Beneficial	49.8	0.4	Negligible Adverse	38.6	37.9	38.0
11. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	48.7	49.6	48.6	-0.1	Negligible Beneficial	49.6	0.9	Negligible Adverse	37.6	38.4	38.4
12. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.8	50.6	49.7	-0.1	Negligible Beneficial	50.7	0.9	Negligible Adverse	38.6	39.3	39.4
13. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	48.8	49.6	48.7	-0.1	Negligible Beneficial	49.7	0.9	Negligible Adverse	37.7	38.4	38.5
14. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.6	51.1	50.6	0.0	No Change	51.5	0.9	Negligible Adverse	39.3	39.7	40.1
15. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	48.8	49.6	48.7	-0.1	Negligible Beneficial	49.7	0.9	Negligible Adverse	37.7	38.4	38.5
16. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.6	51.1	50.6	0.0	No Change	51.5	0.9	Negligible Adverse	39.3	39.7	40.1
17. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.3	49.7	49.2	-0.1	Negligible Beneficial	50.1	0.8	Negligible Adverse	38.1	38.5	38.8
18. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.8	51.3	50.8	0.0	No Change	51.7	0.9	Negligible Adverse	39.5	39.9	40.3
19. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.3	49.7	49.2	-0.1	Negligible Beneficial	50.1	0.8	Negligible Adverse	38.1	38.5	38.8
2. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.9	50.8	49.8	-0.1	Negligible Beneficial	50.8	0.9	Negligible Adverse	38.6	39.5	39.5
20. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.8	51.3	50.8	0.0	No Change	51.7	0.9	Negligible Adverse	39.5	39.9	40.3
21. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	48.6	49.5	48.6	0.0	No Change	49.6	1.0	Negligible Adverse	37.5	38.3	38.4
22. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.9	51.4	50.9	0.0	No Change	51.8	0.9	Negligible Adverse	39.5	40.0	40.4
23. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	48.6	49.5	48.6	0.0	No Change	49.6	1.0	Negligible Adverse	37.5	38.3	38.4
24. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.9	51.4	50.9	0.0	No Change	51.8	0.9	Negligible Adverse	39.5	40.0	40.4
25. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	48.4	49.2	48.4	0.0	No Change	49.3	0.9	Negligible Adverse	37.3	38.0	38.1
26. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	51.0	51.4	51.0	0.0	No Change	51.8	0.8	Negligible Adverse	39.6	40.0	40.4
27. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	48.4	49.2	48.4	0.0	No Change	49.3	0.9	Negligible Adverse	37.3	38.0	38.1
28. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	51.0	51.5	51.1	0.1	Negligible Adverse	51.9	0.9	Negligible Adverse	39.6	40.1	40.4
29. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.0	49.7	48.9	-0.1	Negligible Beneficial	49.8	0.8	Negligible Adverse	37.8	38.5	38.6
3. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.1	49.9	49.0	-0.1	Negligible Beneficial	49.9	0.8	Negligible Adverse	37.9	38.6	38.6
30. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	51.0	51.4	51.0	0.0	No Change	51.8	0.8	Negligible Adverse	39.6	40.0	40.4
31. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.0	49.7	48.9	-0.1	Negligible Beneficial	49.8	0.8	Negligible Adverse	37.8	38.5	38.6
32. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	51.0	51.5	51.1	0.1	Negligible Adverse	51.9	0.9	Negligible Adverse	39.6	40.1	40.4
34. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	51.0	51.5	51.0	0.0	No Change	51.9	0.9	Negligible Adverse	39.6	40.1	40.4
35. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	47.2	48.0	47.2	0.0	No Change	48.2	1.0	Negligible Adverse	36.2	36.9	37.1
36. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.9	51.4	51.0	0.1	Negligible Adverse	51.8	0.9	Negligible Adverse	39.5	40.0	40.4
37. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	46.8	47.7	46.8	-0.1	Negligible Beneficial	47.6	0.9	Negligible Adverse	35.9	36.7	36.8
38. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.8	51.3	50.9	0.1	Negligible Adverse	51.7	0.9	Negligible Adverse	39.5	39.9	40.3
39. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	46.8	47.6	46.8	0.0	No Change	47.8	1.0	Negligible Adverse	35.9	36.6	36.8
4. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.1	50.8	50.0	-0.1	Negligible Beneficial	50.9	0.8	Negligible Adverse	38.8	39.5	39.5
40. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.9	51.4	50.9	0.0	No Change	51.8	0.9	Negligible Adverse	39.5	40.0	40.4
41. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	47.0	47.7	47.0	0.0	No Change	48.0	1.0	Negligible Adverse	36.0	36.7	36.9
42. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.9	51.3	50.8	-0.1	Negligible Beneficial	51.7	0.8	Negligible Adverse	39.5	39.9	40.3
43. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	47.0	47.7	47.0	0.0	No Change	48.0	1.0	Negligible Adverse	36.0	36.7	36.9
44. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.9	51.3	50.8	-0.1	Negligible Beneficial	51.7	0.8	Negligible Adverse	39.5	39.9	40.3
45. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	48.4	48.3	48.4	0.0	No Change	49.0	0.6	Negligible Adverse	37.3	37.2	37.8
46. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	51.1	51.6	51.1	0.0	No Change	52.0	0.9	Negligible Adverse	39.7	40.2	40.5
47. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	48.4	48.3	48.4	0.0	No Change	49.0	0.6	Negligible Adverse	37.3	37.2	37.8
48. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	51.1	51.6	51.1	0.0	No Change	52.0	0.9	Negligible Adverse	39.7	40.2	40.5
49. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	46.7	47.5	46.7	0.0	No Change	47.7	1.0	Negligible Adverse	35.8	36.5	36.7
5. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.1	49.9	49.0	-0.1	Negligible Beneficial	49.9	0.8	Negligible Adverse	37.9	38.6	38.6
50. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	51.3	51.7	51.2	-0.1	Negligible Beneficial	52.1	0.8	Negligible Adverse	39.9	40.3	40.6
51. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	46.7	47.5	46.7	0.0	No Change	47.7	1.0	Negligible Adverse	35.8	36.5	36.7
52. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	51.3	51.8	51.3	0.0	No Change	52.1	0.8	Negligible Adverse	39.9	40.4	40.6
53. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	46.9	47.5	46.8	-0.1	Negligible Beneficial	47.8	0.9	Negligible Adverse	35.9	36.5	36.8
54. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.9	51.2	50.9	0.0	No Change	51.7	0.8	Negligible Adverse	39.5	39.8	40.3
55. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	46.9	47.5	46.8	-0.1	Negligible Beneficial	47.8	0.9	Negligible Adverse	35.9	36.5	36.8
56. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.9	51.2	50.9	0.0	No Change	51.7	0.8	Negligible Adverse	39.5	39.8	40.3
57. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.3	48.7	49.2	-0.1	Negligible Beneficial	49.7	0.4	Negligible Adverse	38.1	37.6	38.5
58. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.7	51.0	50.7	0.0	No Change	51.5	0.8	Negligible Adverse	39.4	39.6	40.1
59. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	48.8	48.6	48.8	0.0	No Change	49.4	0.6	Negligible Adverse	37.7	37.5	38.2
6. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.5	50.4	49.4	-0.1	Negligible Beneficial	50.4	0.9	Negligible Adverse	38.3	39.1	39.1
60. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.7	51.0	50.7	0.0	No Change	51.5	0.8	Negligible Adverse	39.4	39.6	40.1
61. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	46.2	46.9	46.2	-0.1	Negligible Beneficial	47.2	0.9	Negligible Adverse	35.4	35.9	36.2
62. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.8	50.5	50.8	0.0	No Change	51.3	0.8	Negligible Adverse	39.2	39.5	39.9
63. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	46.3	46.9	46.2	-0.1	Negligible Beneficial	47.2	0.9	Negligible Adverse	35.4	35.9	36.2

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
64. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.1	50.5	50.1	0.0	No Change	50.9	0.8	Negligible Adverse	38.8	39.2	39.5
65. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	46.3	46.9	46.2	-0.1	Negligible Beneficial	47.2	0.9	Negligible Adverse	35.4	35.9	36.2
66. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.4	50.6	50.3	-0.1	Negligible Beneficial	51.1	0.7	Negligible Adverse	39.1	39.3	39.7
67. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	46.3	46.9	46.2	-0.1	Negligible Beneficial	47.2	0.9	Negligible Adverse	35.4	35.9	36.2
68. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.4	50.6	50.4	0.0	No Change	51.2	0.8	Negligible Adverse	39.1	39.3	39.8
69. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	46.1	46.7	46.0	-0.1	Negligible Beneficial	47.0	0.9	Negligible Adverse	35.2	35.8	36.0
7. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.2	50.0	49.2	0.0	No Change	50.0	0.8	Negligible Adverse	38.0	38.7	38.7
70. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.3	50.4	50.2	-0.1	Negligible Beneficial	51.0	0.7	Negligible Adverse	39.0	39.1	39.6
71. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	46.1	46.7	46.0	-0.1	Negligible Beneficial	47.0	0.9	Negligible Adverse	35.2	35.8	36.0
72. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.2	50.4	50.2	0.0	No Change	51.0	0.8	Negligible Adverse	38.9	39.1	39.6
73. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	46.0	46.7	46.0	0.0	No Change	46.9	0.9	Negligible Adverse	35.1	35.8	35.9
74. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.1	50.3	50.1	0.0	No Change	50.9	0.8	Negligible Adverse	38.8	39.0	39.5
75. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	46.0	46.7	46.0	0.0	No Change	46.9	0.9	Negligible Adverse	35.1	35.8	35.9
76. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	50.1	50.3	50.1	0.0	No Change	50.9	0.8	Negligible Adverse	38.8	39.0	39.5
78. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.2	49.6	49.1	-0.1	Negligible Beneficial	50.0	0.8	Negligible Adverse	38.0	38.4	38.7
8. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.4	50.3	49.3	-0.1	Negligible Beneficial	50.3	0.9	Negligible Adverse	38.2	39.0	39.0
80. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.4	49.7	49.4	0.0	No Change	50.2	0.8	Negligible Adverse	38.2	38.5	38.9
82. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.1	49.5	49.1	0.0	No Change	50.0	0.9	Negligible Adverse	37.9	38.3	38.7
84. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	48.7	49.2	48.7	0.0	No Change	49.6	0.9	Negligible Adverse	37.6	38.0	38.4
86. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	48.7	49.2	48.7	0.0	No Change	49.6	0.9	Negligible Adverse	37.6	38.0	38.4
88. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	47.9	48.5	47.9	0.0	No Change	48.9	1.0	Negligible Adverse	36.8	37.4	37.7
9. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	48.7	49.6	48.6	-0.1	Negligible Beneficial	49.6	0.9	Negligible Adverse	37.6	38.4	38.4
90. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	47.8	48.4	47.7	-0.1	Negligible Beneficial	48.7	0.9	Negligible Adverse	36.8	37.3	37.6
92. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	47.4	48.1	47.4	0.0	No Change	48.4	1.0	Negligible Adverse	36.4	37.0	37.3
94. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	47.6	48.1	47.5	-0.1	Negligible Beneficial	48.5	0.9	Negligible Adverse	36.6	37.0	37.4
96. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	47.3	47.9	47.2	-0.1	Negligible Beneficial	48.2	0.9	Negligible Adverse	36.3	36.8	37.1
98. CUMMINGS PARK CRESCENT, NORTHFIELD	Dwelling	49.6	49.1	49.6	0.0	No Change	50.1	0.5	Negligible Adverse	38.4	37.9	38.8
CUMMINGS PARK COMMUNITY CENTRE, CUMMINGS PARK CRESCENT, NORTHFIELD	Community Centre	49.3	49.2	49.3	0.0	No Change	49.9	0.6	Negligible Adverse	38.1	38.0	38.6
SHANDOR COTTAGE, 19, CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.6	53.9	52.7	0.1	Negligible Adverse	54.0	1.4	Negligible Adverse	41.1	42.2	42.3
CUMMINGS PARK COMMUNITY FLAT, 122, CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.6	52.5	51.6	0.0	No Change	52.7	1.1	Negligible Adverse	40.2	41.0	41.2
1. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.1	50.1	48.9	-0.2	Negligible Beneficial	50.0	0.9	Negligible Adverse	37.9	38.8	38.7
10. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.6	52.8	51.6	0.0	No Change	52.8	1.2	Negligible Adverse	40.2	41.3	41.3
100. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.1	52.0	51.1	0.1	Negligible Adverse	53.2	1.3	Negligible Adverse	40.4	41.5	41.6
102. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.2	52.2	51.2	0.0	No Change	52.4	1.2	Negligible Adverse	39.8	40.7	40.9
104. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.4	52.5	51.5	0.1	Negligible Adverse	52.7	1.3	Negligible Adverse	40.0	41.0	41.2
106. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.2	52.2	51.2	0.0	No Change	52.4	1.2	Negligible Adverse	39.8	40.7	40.9
108. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.2	52.3	51.3	0.1	Negligible Beneficial	52.5	1.3	Negligible Adverse	39.8	40.8	41.0
11. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	50.7	51.5	50.7	0.0	No Change	51.7	1.0	Negligible Adverse	39.4	40.1	40.3
110. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.5	52.5	51.6	0.1	Negligible Adverse	52.8	1.3	Negligible Adverse	40.1	41.0	41.3
112. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.5	52.5	51.6	0.1	Negligible Adverse	52.8	1.3	Negligible Adverse	40.1	41.0	41.3
114. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.8	52.8	51.8	0.0	No Change	53.0	1.2	Negligible Adverse	40.4	41.3	41.4
116. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.8	52.8	51.8	0.0	No Change	53.0	1.2	Negligible Adverse	40.4	41.3	41.4
118. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.8	52.7	51.8	0.0	No Change	53.0	1.2	Negligible Adverse	40.4	41.2	41.4
12. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.8	53.0	51.7	-0.1	Negligible Beneficial	52.9	1.1	Negligible Adverse	40.4	41.4	41.3
120. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.8	52.8	51.8	0.0	No Change	53.0	1.2	Negligible Adverse	40.4	41.3	41.4
124. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	48.2	48.6	48.2	0.0	No Change	49.1	0.9	Negligible Adverse	37.1	37.5	37.9
13. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	50.8	51.6	50.8	0.0	No Change	51.7	0.9	Negligible Adverse	39.5	40.2	40.3
14. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.3	52.5	51.2	-0.1	Negligible Beneficial	52.5	1.2	Negligible Adverse	39.9	41.0	41.0
15. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	50.7	51.4	50.6	-0.1	Negligible Beneficial	51.6	0.9	Negligible Adverse	39.4	40.0	40.2
16. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.4	52.6	51.3	-0.1	Negligible Beneficial	52.5	1.1	Negligible Adverse	40.0	41.1	41.0
18. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.9	55.0	53.9	0.0	No Change	55.1	1.2	Negligible Adverse	42.2	43.2	43.3
2. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.0	51.7	50.9	-0.1	Negligible Beneficial	51.9	0.9	Negligible Adverse	39.6	40.3	40.4
20. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.1	54.2	53.1	0.0	No Change	54.3	1.2	Negligible Adverse	41.5	42.5	42.6
21. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.3	54.6	53.3	0.0	No Change	54.6	1.3	Negligible Adverse	41.7	42.9	42.9
22. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.1	54.2	53.1	0.0	No Change	54.3	1.2	Negligible Adverse	41.5	42.5	42.6
23. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.4	53.6	52.4	0.0	No Change	53.7	1.3	Negligible Adverse	40.9	42.0	42.1
24. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.4	54.4	53.4	0.0	No Change	54.6	1.2	Negligible Adverse	41.8	42.7	42.9
25. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.5	52.6	51.5	0.0	No Change	52.7	1.2	Negligible Adverse	40.1	41.1	41.2
26. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.6	54.5	53.5	-0.1	Negligible Beneficial	54.7	1.1	Negligible Adverse	42.0	42.8	43.0
27. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	50.7	51.8	50.7	0.0	No Change	51.9	1.2	Negligible Adverse	39.4	40.4	40.4
28. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.5	54.5	53.5	0.0	No Change	54.6	1.1	Negligible Adverse	41.9	42.8	42.9
29. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	50.1	51.0	50.1	0.0	No Change	51.2	1.1	Negligible Adverse	38.8	39.6	39.8
3. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.9	50.5	49.8	-0.1	Negligible Beneficial	50.7	0.8	Negligible Adverse	38.6	39.2	39.4
30. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	54.1	55.1	53.1	0.0	No Change	55.1	1.1	Negligible Adverse	41.5	42.4	42.5
31. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.9	50.9	49.9	0.0	No Change	51.1	1.1	Negligible Adverse	38.6	39.5	39.6
32. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.0	54.0	53.0	0.0	No Change	54.0	1.1	Negligible Adverse	41.4	42.3	42.4
33. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.9	50.8	49.9	0.0	No Change	51.0	1.1	Negligible Adverse	38.6	39.5	39.6
34. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.9	53.9	52.9	0.0	No Change	54.1	1.2	Negligible Adverse	41.3	42.2	42.4
35. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	50.4	51.1	50.4	0.0	No Change	51.5	1.1	Negligible Adverse	39.1	39.7	40.1
36. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.0	54.0	53.0	0.0	No Change	54.2	1.2	Negligible Adverse	41.4	42.3	42.5
37. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.6	50.5	49.6	0.0	No Change	50.7	1.1	Negligible Adverse	38.4	39.2	39.4
38. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.1	54.1	53.1	0.0	No Change	54.3	1.2	Negligible Adverse	41.5	42.4	42.6
39. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.5	50.4	49.5	0.0	No Change	50.6	1.1	Negligible Adverse	38.3	39.1	39.3
4. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.4	52.1	51.3	-0.1	Negligible Beneficial	52.3	0.9	Negligible Adverse	40.0	40.6	40.8
40. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.1	54.1	53.1	0.0	No Change	54.3	1.2	Negligible Adverse	41.5	42.4	42.6
41. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.5	50.4	49.5	0.0	No Change	50.6	1.1	Negligible Adverse	38.3	39.1	39.3
42. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.1	54.1	53.1	0.0	No Change	54.3	1.2	Negligible Adverse	41.5	42.4	42.6
43. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	50.1	50.7	50.1	0.0	No Change	51.0	0.9	Negligible Adverse	38.8	39.4	39.6
44. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.1	54.2	53.1	0.0	No Change	54.4	1.3	Negligible Adverse	41.5	42.5	42.7
45. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.2	50.1	49.2	0.0	No Change	50.3	1.1	Negligible Adverse	38.0	38.8	39.0

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
46. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.4	54.5	53.4	0.0	No Change	54.6	1.2	Negligible Adverse	41.8	42.8	42.9
47. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.5	50.4	49.5	0.0	No Change	50.6	1.1	Negligible Adverse	38.3	39.1	39.3
48. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.5	54.6	53.5	0.0	No Change	54.7	1.2	Negligible Adverse	41.9	42.9	43.0
49. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.0	50.0	49.0	0.0	No Change	50.2	1.2	Negligible Adverse	37.8	38.7	38.9
5. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	50.4	51.1	50.4	0.0	No Change	51.3	0.9	Negligible Adverse	39.1	39.7	39.9
50. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.9	54.1	52.9	0.0	No Change	54.2	1.3	Negligible Adverse	41.3	42.4	42.5
51. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.0	50.0	49.0	0.0	No Change	50.2	1.2	Negligible Adverse	37.8	38.7	38.9
52. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.7	54.0	52.8	0.1	Negligible Beneficial	54.0	1.3	Negligible Adverse	41.2	42.3	42.3
53. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.6	50.6	49.7	0.1	Negligible Adverse	50.8	1.2	Negligible Adverse	38.4	39.3	39.5
54. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.6	53.6	52.6	0.0	No Change	53.8	1.2	Negligible Adverse	41.1	42.0	42.2
55. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.7	50.7	49.7	0.0	No Change	50.8	1.1	Negligible Adverse	38.5	39.4	39.5
56. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.6	53.6	52.6	0.0	No Change	53.8	1.2	Negligible Adverse	41.1	42.0	42.2
57. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.2	50.1	49.2	0.0	No Change	50.3	1.1	Negligible Adverse	38.0	38.8	39.0
58. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.2	54.3	53.3	0.1	Negligible Beneficial	54.5	1.3	Negligible Adverse	41.6	42.6	42.8
59. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.2	50.1	49.2	0.0	No Change	50.3	1.1	Negligible Adverse	38.0	38.8	39.0
6. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.8	52.6	51.7	-0.1	Negligible Beneficial	52.7	0.9	Negligible Adverse	40.4	41.1	41.2
60. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.3	54.4	53.4	0.1	Negligible Adverse	54.6	1.3	Negligible Adverse	41.7	42.7	42.9
61. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.2	50.2	49.2	0.0	No Change	50.4	1.2	Negligible Adverse	38.0	38.9	39.1
62. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.1	54.0	53.1	0.0	No Change	54.2	1.1	Negligible Adverse	41.5	42.3	42.5
63. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.2	50.1	49.2	0.0	No Change	50.4	1.2	Negligible Adverse	38.0	38.8	39.1
64. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.1	54.0	53.1	0.0	No Change	54.2	1.1	Negligible Adverse	41.5	42.3	42.5
65. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.6	50.0	49.6	0.0	No Change	50.5	0.9	Negligible Adverse	38.4	38.7	39.2
66. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.8	53.9	52.8	0.0	No Change	54.0	1.2	Negligible Adverse	41.3	42.2	42.3
67. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	48.7	49.7	48.7	0.0	No Change	49.8	1.1	Negligible Adverse	37.6	38.5	38.6
68. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.7	53.8	52.7	0.0	No Change	53.9	1.2	Negligible Adverse	41.2	42.2	42.2
69. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	49.1	49.2	49.1	0.0	No Change	49.3	1.1	Negligible Adverse	37.1	37.9	38.1
7. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	50.4	51.0	50.3	-0.1	Negligible Beneficial	51.2	0.8	Negligible Adverse	39.1	39.6	39.8
70. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.1	54.1	53.1	0.0	No Change	54.3	1.2	Negligible Adverse	41.5	42.4	42.6
71. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	48.5	49.5	48.5	0.0	No Change	49.7	1.2	Negligible Adverse	37.4	38.3	38.5
72. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	53.2	54.3	53.2	0.0	No Change	54.4	1.2	Negligible Adverse	41.6	42.6	42.7
74. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.6	53.7	52.7	0.1	Negligible Adverse	53.9	1.3	Negligible Adverse	41.1	42.1	42.2
76. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.5	53.6	52.5	0.0	No Change	53.7	1.2	Negligible Adverse	41.0	42.0	42.1
78. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.7	53.9	52.8	0.1	Negligible Beneficial	54.0	1.3	Negligible Adverse	41.2	42.2	42.3
8. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.3	52.2	51.3	0.0	No Change	52.3	1.0	Negligible Adverse	39.9	40.7	40.8
80. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.6	53.8	52.7	0.1	Negligible Adverse	53.9	1.3	Negligible Adverse	41.1	42.2	42.2
82. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.3	53.5	52.4	0.1	Negligible Adverse	53.6	1.3	Negligible Adverse	40.8	41.9	42.0
84. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.5	53.3	52.5	0.0	No Change	53.6	1.1	Negligible Adverse	41.0	41.7	42.0
86. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	52.0	53.2	52.1	0.1	Negligible Adverse	53.3	1.3	Negligible Adverse	40.5	41.6	41.7
88. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.6	52.7	51.7	0.1	Negligible Adverse	52.9	1.3	Negligible Adverse	40.2	41.2	41.3
9. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	50.4	51.2	50.4	0.0	No Change	51.3	0.9	Negligible Adverse	39.1	39.8	39.9
90. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.9	52.8	51.9	0.0	No Change	53.1	1.2	Negligible Adverse	40.4	41.3	41.5
92. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.8	52.9	51.9	0.1	Negligible Adverse	53.1	1.3	Negligible Adverse	40.4	41.3	41.5
94. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.5	52.5	51.5	0.0	No Change	52.7	1.2	Negligible Adverse	40.1	41.0	41.2
96. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.3	52.3	51.4	0.1	Negligible Adverse	52.5	1.2	Negligible Adverse	39.9	40.8	41.0
98. CUMMINGS PARK DRIVE, NORTHFIELD	Dwelling	51.6	52.7	51.7	0.1	Negligible Adverse	52.9	1.3	Negligible Adverse	40.2	41.2	41.3
BRAMBLE BRAE PRIMARY SCHOOL, CUMMINGS PARK DRIVE, NORTHFIELD	Primary School	49.3	50.2	49.3	0.0	No Change	50.4	1.1	Negligible Adverse	38.1	38.9	39.1
1. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	59.2	60.7	59.3	0.1	Negligible Beneficial	60.7	1.5	Negligible Adverse	47.0	48.4	48.4
10. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	49.4	50.2	49.4	0.0	No Change	50.5	1.1	Negligible Adverse	38.2	38.9	39.2
11. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	53.7	55.0	53.8	0.1	Negligible Beneficial	55.1	1.4	Negligible Adverse	42.1	43.2	43.3
12. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	49.4	50.2	49.4	0.0	No Change	50.5	1.1	Negligible Adverse	38.2	38.9	39.2
13. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	53.7	55.0	53.8	0.1	Negligible Beneficial	55.1	1.4	Negligible Adverse	42.1	43.2	43.3
14. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	47.9	48.5	48.0	0.1	Negligible Adverse	48.9	1.0	Negligible Adverse	36.8	37.4	37.7
15. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	53.7	55.0	53.8	0.1	Negligible Beneficial	55.1	1.4	Negligible Adverse	42.1	43.2	43.3
16. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	47.9	48.5	48.0	0.1	Negligible Adverse	48.9	1.0	Negligible Adverse	36.8	37.4	37.7
17. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	52.6	53.7	52.6	0.0	No Change	53.9	1.3	Negligible Adverse	41.1	42.1	42.2
18. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	48.8	49.4	48.9	0.1	Negligible Adverse	49.9	1.1	Negligible Adverse	37.7	38.2	38.6
19. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	52.6	53.8	52.6	0.0	No Change	53.9	1.3	Negligible Adverse	41.1	42.2	42.2
2. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	51.9	53.2	51.9	0.0	No Change	53.2	1.3	Negligible Adverse	40.4	41.6	41.6
20. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	48.8	49.4	48.9	0.1	Negligible Adverse	49.9	1.1	Negligible Adverse	37.7	38.2	38.6
21. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	51.9	52.9	52.0	0.1	Negligible Adverse	53.2	1.3	Negligible Adverse	40.4	41.3	41.6
22. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	48.8	49.4	48.9	0.1	Negligible Adverse	49.9	1.1	Negligible Adverse	37.7	38.2	38.6
23. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	51.9	52.9	52.0	0.1	Negligible Adverse	53.2	1.3	Negligible Adverse	40.4	41.3	41.6
24. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	48.8	49.4	48.9	0.1	Negligible Adverse	49.9	1.1	Negligible Adverse	37.7	38.2	38.6
25. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	51.1	51.7	51.2	0.1	Negligible Adverse	52.2	1.1	Negligible Adverse	39.7	40.3	40.7
26. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	47.8	48.7	47.8	0.0	No Change	48.9	1.1	Negligible Adverse	36.8	37.6	37.7
27. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	51.7	51.7	51.2	0.1	Negligible Adverse	52.2	1.1	Negligible Adverse	39.7	40.3	40.7
28. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	47.8	47.8	47.8	0.0	No Change	48.9	1.1	Negligible Adverse	36.8	37.6	37.7
29. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	51.1	51.7	51.2	0.1	Negligible Adverse	52.2	1.1	Negligible Adverse	39.7	40.3	40.7
3. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	59.1	60.6	59.2	0.1	Negligible Adverse	60.6	1.5	Negligible Adverse	46.9	48.3	48.3
30. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	50.6	50.4	51.0	0.4	Negligible Adverse	51.6	1.0	Negligible Adverse	39.3	39.1	40.2
31. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	51.1	51.7	51.2	0.1	Negligible Adverse	52.2	1.1	Negligible Adverse	39.7	40.3	40.7
32. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	50.6	50.4	51.0	0.4	Negligible Adverse	51.6	1.0	Negligible Adverse	39.3	39.1	40.2
33. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	49.7	50.2	49.9	0.2	Negligible Adverse	50.9	1.2	Negligible Adverse	38.5	38.9	39.5
35. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	49.7	50.2	49.9	0.2	Negligible Adverse	50.9	1.2	Negligible Adverse	38.5	38.9	39.5
37. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	51.1	51.1	51.3	0.2	Negligible Adverse	52.0	0.9	Negligible Adverse	39.7	39.7	40.5
39. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	51.1	51.1	51.3	0.2	Negligible Adverse	52.0	0.9	Negligible Adverse	39.7	39.7	40.5
4. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	51.9	53.2	51.9	0.0	No Change	53.2	1.3	Negligible Adverse	40.4	41.6	41.6
5. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	48.8	49.5	48.7	-0.1	Negligible Beneficial	49.8	1.0	Negligible Adverse	37.7	38.3	38.6
6. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	50.3	51.5	50.3	0.0	No Change	51.5	1.2	Negligible Adverse	39.0	40.1	40.1
7. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	49.0	49.5	48.7	-0.1	Negligible Beneficial	49.8	1.0	Negligible Adverse	37.7	38.3	38.6
8. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	50.3	51.5	50.3	0.0	No Change	51.5	1.2	Negligible Adverse	39.0	40.1	40.1
9. CUMMINGS PARK ROAD, NORTHFIELD	Dwelling	53.7	55.0	53.8	0.1	Negligible Beneficial	55.1	1.4	Negligible Adverse	42.1	43.2	43.3

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
1. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	48.1	48.5	48.1	0.0	No Change	49.0	0.9	Negligible Adverse	37.0	37.4	37.8
10. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	47.6	47.8	47.6	0.0	No Change	48.4	0.8	Negligible Adverse	36.6	36.8	37.3
11. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	46.9	47.4	46.9	0.0	No Change	47.7	0.8	Negligible Adverse	35.9	36.4	36.7
12. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	46.9	47.4	46.9	0.0	No Change	47.7	0.8	Negligible Adverse	35.9	36.4	36.7
13. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	49.1	48.3	49.1	0.0	No Change	49.5	0.4	Negligible Adverse	37.9	37.2	38.3
14. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	49.1	48.3	49.1	0.0	No Change	49.5	0.4	Negligible Adverse	37.9	37.2	38.3
15. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	46.5	46.9	46.5	0.0	No Change	47.3	0.8	Negligible Adverse	35.6	35.9	36.3
16. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	46.5	46.9	46.5	0.0	No Change	47.3	0.8	Negligible Adverse	35.6	35.9	36.3
2. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	48.2	48.6	48.2	0.0	No Change	49.0	0.8	Negligible Adverse	37.1	37.5	37.8
3. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	47.7	48.1	47.6	-0.1	Negligible Beneficial	48.5	0.8	Negligible Adverse	36.7	37.0	37.4
4. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	47.7	48.1	47.6	-0.1	Negligible Beneficial	48.5	0.8	Negligible Adverse	36.7	37.0	37.4
5. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	47.7	48.1	47.7	0.0	No Change	48.5	0.8	Negligible Adverse	36.7	37.0	37.4
6. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	47.7	48.1	47.7	0.0	No Change	48.5	0.8	Negligible Adverse	36.7	37.0	37.4
7. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	47.2	47.7	47.2	0.0	No Change	48.1	0.9	Negligible Adverse	36.2	36.7	37.0
8. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	47.2	47.7	47.2	0.0	No Change	48.1	0.9	Negligible Adverse	36.2	36.7	37.0
9. CUMMINGS PARK TERRACE, NORTHFIELD	Dwelling	47.6	47.8	47.6	0.0	No Change	48.4	0.8	Negligible Adverse	36.6	36.8	37.3
1. DANCING CAIRNS CRESCENT, HEATHRYFOLD	Dwelling	45.6	45.6	45.5	-0.1	Negligible Beneficial	46.2	0.6	Negligible Adverse	34.8	34.8	35.3
10. DANCING CAIRNS CRESCENT, HEATHRYFOLD	Dwelling	44.8	45.1	44.7	-0.1	Negligible Beneficial	45.5	0.7	Negligible Adverse	34.1	34.3	34.7
11. DANCING CAIRNS CRESCENT, HEATHRYFOLD	Dwelling	45.6	45.6	45.5	-0.1	Negligible Beneficial	46.2	0.6	Negligible Adverse	34.8	34.8	35.3
12. DANCING CAIRNS CRESCENT, HEATHRYFOLD	Dwelling	44.8	45.1	44.7	-0.1	Negligible Beneficial	45.5	0.7	Negligible Adverse	34.1	34.3	34.7
2. DANCING CAIRNS CRESCENT, HEATHRYFOLD	Dwelling	44.8	45.1	44.7	-0.1	Negligible Beneficial	45.5	0.7	Negligible Adverse	34.1	34.3	34.7
3. DANCING CAIRNS CRESCENT, HEATHRYFOLD	Dwelling	45.6	45.6	45.5	-0.1	Negligible Beneficial	46.2	0.6	Negligible Adverse	34.8	34.8	35.3
4. DANCING CAIRNS CRESCENT, HEATHRYFOLD	Dwelling	44.8	45.1	44.7	-0.1	Negligible Beneficial	45.5	0.7	Negligible Adverse	34.1	34.3	34.7
5. DANCING CAIRNS CRESCENT, HEATHRYFOLD	Dwelling	45.6	45.6	45.5	-0.1	Negligible Beneficial	46.2	0.6	Negligible Adverse	34.8	34.8	35.3
6. DANCING CAIRNS CRESCENT, HEATHRYFOLD	Dwelling	44.8	45.1	44.7	-0.1	Negligible Beneficial	45.5	0.7	Negligible Adverse	34.1	34.3	34.7
7. DANCING CAIRNS CRESCENT, HEATHRYFOLD	Dwelling	45.6	45.6	45.5	-0.1	Negligible Beneficial	46.2	0.6	Negligible Adverse	34.8	34.8	35.3
8. DANCING CAIRNS CRESCENT, HEATHRYFOLD	Dwelling	44.8	45.1	44.7	-0.1	Negligible Beneficial	45.5	0.7	Negligible Adverse	34.1	34.3	34.7
9. DANCING CAIRNS CRESCENT, HEATHRYFOLD	Dwelling	45.6	45.6	45.5	-0.1	Negligible Beneficial	46.2	0.6	Negligible Adverse	34.8	34.8	35.3
1. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	51.4	52.1	51.5	0.1	Negligible Adverse	52.5	1.1	Negligible Adverse	40.0	40.6	41.0
10. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	54.3	53.3	54.3	0.0	No Change	54.6	0.3	Negligible Adverse	42.6	41.7	42.9
11. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	51.4	52.1	51.5	0.1	Negligible Adverse	52.5	1.1	Negligible Adverse	40.0	40.6	41.0
12. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	53.9	53.0	53.9	0.0	No Change	54.2	0.3	Negligible Adverse	42.2	41.4	42.5
13. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	45.6	45.7	45.4	-0.2	Negligible Beneficial	46.1	0.5	Negligible Adverse	34.8	34.9	35.2
14. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	49.9	50.3	50.0	0.1	Negligible Adverse	50.8	0.9	Negligible Adverse	38.6	39.0	39.5
15. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	46.1	46.2	45.9	-0.2	Negligible Beneficial	46.6	0.5	Negligible Adverse	35.2	35.3	35.7
16. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	49.0	49.1	48.9	0.1	Negligible Adverse	49.6	0.6	Negligible Adverse	37.8	37.9	38.4
17. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	46.0	46.0	45.8	-0.2	Negligible Beneficial	46.4	0.4	Negligible Adverse	35.1	35.1	35.5
19. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	51.0	50.9	50.8	-0.2	Negligible Beneficial	51.5	0.5	Negligible Adverse	39.6	39.5	40.1
2. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	52.5	52.0	52.4	-0.1	Negligible Beneficial	53.0	0.5	Negligible Adverse	41.0	40.5	41.4
3. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	51.4	52.1	51.5	0.1	Negligible Adverse	52.5	1.1	Negligible Adverse	40.0	40.6	41.0
4. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	53.5	53.6	53.5	0.0	No Change	53.8	0.3	Negligible Adverse	41.9	41.1	42.2
5. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	51.4	52.1	51.5	0.1	Negligible Adverse	52.5	1.1	Negligible Adverse	40.0	40.6	41.0
6. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	52.3	51.9	52.3	0.0	No Change	52.9	0.6	Negligible Adverse	40.8	40.4	41.3
7. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	51.4	52.1	51.5	0.1	Negligible Adverse	52.5	1.1	Negligible Adverse	40.0	40.6	41.0
8. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	52.2	51.8	52.2	0.0	No Change	52.8	0.6	Negligible Adverse	40.7	40.4	41.3
9. DANCING CAIRNS PLACE, HEATHRYFOLD	Dwelling	51.4	52.1	51.5	0.1	Negligible Adverse	52.5	1.1	Negligible Adverse	40.0	40.6	41.0
1. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	51.7	52.1	51.6	-0.1	Negligible Beneficial	52.4	0.7	Negligible Adverse	40.3	40.6	40.9
10. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	50.2	50.4	50.2	0.0	No Change	51.1	0.9	Negligible Adverse	38.9	39.1	39.7
11. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	50.0	50.5	49.9	-0.1	Negligible Beneficial	50.7	0.7	Negligible Adverse	38.7	39.2	39.4
13. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	51.1	51.1	51.0	-0.1	Negligible Beneficial	51.6	0.5	Negligible Adverse	39.7	39.7	40.2
15. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	51.1	51.1	51.0	-0.1	Negligible Beneficial	51.7	0.6	Negligible Adverse	39.7	39.7	40.3
17. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	49.4	50.0	49.3	-0.1	Negligible Beneficial	50.1	0.7	Negligible Adverse	38.2	38.7	38.8
19. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	49.4	50.0	49.3	-0.1	Negligible Beneficial	50.1	0.7	Negligible Adverse	38.2	38.7	38.8
21. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	49.4	50.0	49.3	-0.1	Negligible Beneficial	50.1	0.7	Negligible Adverse	38.2	38.7	38.8
23. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	49.4	50.0	49.3	-0.1	Negligible Beneficial	50.1	0.7	Negligible Adverse	38.2	38.7	38.8
25. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	49.0	50.0	48.9	-0.1	Negligible Beneficial	49.9	0.9	Negligible Adverse	37.8	38.7	38.6
27. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	49.0	50.0	48.9	-0.1	Negligible Beneficial	49.9	0.9	Negligible Adverse	37.8	38.7	38.6
29. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	49.6	50.2	49.5	-0.1	Negligible Beneficial	50.3	0.7	Negligible Adverse	38.4	38.9	39.0
3. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	51.7	52.1	51.6	-0.1	Negligible Beneficial	52.4	0.7	Negligible Adverse	40.3	40.6	40.9
31. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	49.6	50.2	49.5	-0.1	Negligible Beneficial	50.3	0.7	Negligible Adverse	38.4	38.9	39.0
33. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	49.2	49.9	49.2	0.0	No Change	50.0	0.8	Negligible Adverse	38.0	38.6	38.7
35. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	48.7	49.3	48.6	-0.1	Negligible Beneficial	49.5	0.8	Negligible Adverse	37.6	38.1	38.3
37. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	48.8	49.3	48.7	-0.1	Negligible Beneficial	49.6	0.8	Negligible Adverse	37.7	38.1	38.4
39. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	48.9	49.4	48.9	0.0	No Change	49.8	0.9	Negligible Adverse	37.7	38.2	38.6
4. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	50.2	50.4	50.2	0.0	No Change	51.1	0.9	Negligible Adverse	38.9	39.1	39.7
41. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	50.1	50.1	50.2	0.1	Negligible Adverse	50.9	0.8	Negligible Adverse	38.8	38.8	39.5
43. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	50.2	50.1	50.3	0.1	Negligible Beneficial	51.0	0.8	Negligible Adverse	38.9	38.8	39.6
45. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	49.7	49.7	49.2	0.0	No Change	50.1	0.9	Negligible Adverse	38.0	38.5	38.8
47. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	49.2	49.2	49.2	0.0	No Change	50.1	0.9	Negligible Adverse	38.0	38.5	38.8
49. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	49.3	49.8	49.4	0.1	Negligible Adverse	50.3	1.0	Negligible Adverse	38.1	38.6	39.0
5. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	51.7	52.1	51.6	-0.1	Negligible Beneficial	52.4	0.7	Negligible Adverse	40.3	40.6	40.9
51. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	49.9	50.4	49.9	0.0	No Change	50.8	0.9	Negligible Adverse	38.6	39.1	39.5
6. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	50.2	50.4	50.2	0.0	No Change	51.1	0.9	Negligible Adverse	38.9	39.1	39.7
7. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	51.7	52.1	51.6	-0.1	Negligible Beneficial	52.4	0.7	Negligible Adverse	40.3	40.6	40.9
8. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	50.2	50.4	50.2	0.0	No Change	51.1	0.9	Negligible Adverse	38.9	39.1	39.7
9. DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	50.0	50.5	49.9	-0.1	Negligible Beneficial	50.7	0.7	Negligible Adverse	38.7	39.2	39.4
MANOR PARK SCHOOL, DANESTONE CIRCLE, MIDDLEFIELD	School	50.6	50.7	50.3	-0.3	Negligible Beneficial	51.0	0.4	Negligible Adverse	39.3	39.4	39.6
DANESTONE CIRCLE, MIDDLEFIELD	Dwelling	52.9	53.4	52.7	-0.2	Negligible Beneficial	53.3	0.4	Negligible Adverse	41.3	41.8	41.7
DANESTONE COTTAGE WEST, DANESTONE COTTAGE WEST, SCOTSTOWN ROAD	Dwelling	72.2	70.3	72.1	-0.1	Negligible Beneficial	73.1	0.9	Negligible Adverse	58.7	57.0	59.5
DANESTONE FARM COTTAGE, DANESTONE FARM COTTAGE, FAIRVIEW ROAD, DANESTONE	Dwelling	66.2	64.1	66.2	0.0	No Change	66.2	0.0	No Change	53.3	51.4	53.3

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
DANESTONE FARM, DANESTONE FARM, PARKWAY	Dwelling	66.4	66.2	66.6	0.2	Negligible Adverse	67.4	1.0	Negligible Adverse	53.5	53.3	54.4
DANESTONE MEDICAL PRACTICE, DANESTONE SURGERY, FAIRVIEW STREET, DANESTONE	Health Centre	55.9	58.6	55.8	-0.1	Negligible Beneficial	57.6	1.7	Negligible Adverse	44.0	46.5	45.6
10, DEANSLOCH CRESCENT	Dwelling	45.2	45.1	45.1	-0.1	Negligible Beneficial	45.6	0.4	Negligible Adverse	34.4	34.0	34.8
12, DEANSLOCH CRESCENT	Dwelling	45.2	44.7	45.1	-0.1	Negligible Beneficial	45.6	0.4	Negligible Adverse	34.4	34.0	34.8
14, DEANSLOCH CRESCENT	Dwelling	43.1	43.6	43.0	-0.1	Negligible Beneficial	43.8	0.7	Negligible Adverse	32.5	33.0	33.2
16, DEANSLOCH CRESCENT	Dwelling	43.1	43.6	43.0	-0.1	Negligible Beneficial	43.8	0.7	Negligible Adverse	32.5	33.0	33.2
18, DEANSLOCH CRESCENT	Dwelling	43.1	43.6	43.0	-0.1	Negligible Beneficial	43.8	0.7	Negligible Adverse	32.5	33.0	33.2
2, DEANSLOCH CRESCENT	Dwelling	45.2	44.7	45.1	-0.1	Negligible Beneficial	45.6	0.4	Negligible Adverse	34.4	34.0	34.8
20, DEANSLOCH CRESCENT	Dwelling	43.1	43.6	43.0	-0.1	Negligible Beneficial	43.8	0.7	Negligible Adverse	32.5	33.0	33.2
22, DEANSLOCH CRESCENT	Dwelling	43.1	43.6	43.0	-0.1	Negligible Beneficial	43.8	0.7	Negligible Adverse	32.5	33.0	33.2
24, DEANSLOCH CRESCENT	Dwelling	43.1	43.6	43.0	-0.1	Negligible Beneficial	43.8	0.7	Negligible Adverse	32.5	33.0	33.2
4, DEANSLOCH CRESCENT	Dwelling	45.2	44.7	45.1	-0.1	Negligible Beneficial	45.6	0.4	Negligible Adverse	34.4	34.0	34.8
6, DEANSLOCH CRESCENT	Dwelling	45.2	44.7	45.1	-0.1	Negligible Beneficial	45.6	0.4	Negligible Adverse	34.4	34.0	34.8
8, DEANSLOCH CRESCENT	Dwelling	45.2	44.7	45.1	-0.1	Negligible Beneficial	45.6	0.4	Negligible Adverse	34.4	34.0	34.8
26, DEANSLOCH PLACE	Dwelling	41.9	42.6	41.8	-0.1	Negligible Beneficial	42.7	0.8	Negligible Adverse	31.4	32.1	32.2
28, DEANSLOCH PLACE	Dwelling	41.9	42.6	41.8	-0.1	Negligible Beneficial	42.7	0.8	Negligible Adverse	31.4	32.1	32.2
30, DEANSLOCH PLACE	Dwelling	41.9	42.6	41.8	-0.1	Negligible Beneficial	42.7	0.8	Negligible Adverse	31.4	32.1	32.2
32, DEANSLOCH PLACE	Dwelling	41.9	42.6	41.8	-0.1	Negligible Beneficial	42.7	0.8	Negligible Adverse	31.4	32.1	32.2
34, DEANSLOCH PLACE	Dwelling	41.9	42.6	41.8	-0.1	Negligible Beneficial	42.7	0.8	Negligible Adverse	31.4	32.1	32.2
36, DEANSLOCH PLACE	Dwelling	41.9	42.6	41.8	-0.1	Negligible Beneficial	42.7	0.8	Negligible Adverse	31.4	32.1	32.2
FLAT 1, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 10, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 11, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 12, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 13, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 14, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 15, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 16, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 17, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 18, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 19, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 2, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 20, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 21, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 22, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 23, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 24, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 25, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 26, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 27, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 28, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 29, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 3, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 4, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 5, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 6, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 7, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 8, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
FLAT 9, 2, DEER ROAD	Dwelling	54.3	58.1	54.8	0.5	Negligible Adverse	57.8	3.5	Minor Adverse	42.6	46.0	45.8
SALVATION ARMY HALL, 12, DEER ROAD	Hall	64.3	65.2	64.5	0.2	Negligible Adverse	65.2	0.9	Negligible Adverse	51.6	52.4	52.4
1, DEER ROAD	Dwelling	73.0	73.8	73.4	0.4	Negligible Adverse	74.0	1.0	Negligible Adverse	59.4	60.2	60.3
1, DEER ROAD	Dwelling	73.0	73.8	73.4	0.4	Negligible Adverse	74.0	1.0	Negligible Adverse	59.4	60.2	60.3
1, DEER ROAD	Dwelling	73.0	73.8	73.4	0.4	Negligible Adverse	74.0	1.0	Negligible Adverse	59.4	60.2	60.3
51, DEER ROAD	Dwelling	62.9	63.7	63.1	0.2	Negligible Adverse	63.8	0.9	Negligible Adverse	50.3	51.1	51.2
53, DEER ROAD	Dwelling	62.9	63.7	63.1	0.2	Negligible Adverse	63.8	0.9	Negligible Adverse	50.3	51.1	51.2
55, DEER ROAD	Dwelling	63.0	63.8	63.2	0.2	Negligible Adverse	63.9	0.9	Negligible Adverse	50.4	51.2	51.2
57, DEER ROAD	Dwelling	63.0	63.8	63.2	0.2	Negligible Adverse	63.9	0.9	Negligible Adverse	50.4	51.2	51.2
59, DEER ROAD	Dwelling	61.7	62.5	61.9	0.2	Negligible Adverse	62.6	0.9	Negligible Adverse	49.3	50.0	50.1
61, DEER ROAD	Dwelling	61.6	62.5	61.9	0.3	Negligible Adverse	62.6	1.0	Negligible Adverse	49.2	50.0	50.1
63, DEER ROAD	Dwelling	58.8	59.4	58.9	0.1	Negligible Adverse	59.7	0.9	Negligible Adverse	46.7	47.2	47.5
65, DEER ROAD	Dwelling	58.8	59.4	58.9	0.1	Negligible Adverse	59.7	0.9	Negligible Adverse	46.7	47.2	47.5
67, DEER ROAD	Dwelling	57.8	58.4	57.9	0.1	Negligible Adverse	58.7	0.9	Negligible Adverse	45.8	46.3	46.6
69, DEER ROAD	Dwelling	57.8	58.5	58.0	0.2	Negligible Adverse	58.7	0.9	Negligible Adverse	45.8	46.3	46.6
71, DEER ROAD	Dwelling	56.7	57.3	56.8	0.1	Negligible Beneficial	57.5	0.8	Negligible Adverse	44.8	45.3	45.5
73, DEER ROAD	Dwelling	56.7	57.3	56.8	0.1	Negligible Beneficial	57.5	0.9	Negligible Adverse	44.8	45.3	45.5
75, DEER ROAD	Dwelling	54.1	54.3	54.0	0.2	Negligible Adverse	55.1	1.0	Negligible Adverse	42.4	43.2	43.3
77, DEER ROAD	Dwelling	54.1	55.0	54.3	0.2	Negligible Adverse	55.1	1.0	Negligible Adverse	42.4	43.2	43.3
79, DEER ROAD	Dwelling	54.9	55.7	55.1	0.2	Negligible Adverse	55.8	0.9	Negligible Adverse	43.1	43.9	44.0
81, DEER ROAD	Dwelling	54.9	55.8	55.1	0.2	Negligible Adverse	55.9	1.0	Negligible Adverse	43.1	44.0	44.0
DENEND COTTAGES, 2, GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	48.0	48.3	47.8	-0.2	Negligible Beneficial	48.8	0.8	Negligible Adverse	36.9	37.2	37.7
DENEND COTTAGES, 3, GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	47.9	48.2	47.8	-0.1	Negligible Beneficial	48.8	0.9	Negligible Adverse	36.8	37.1	37.7
DENEND COTTAGES, 4, GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	47.9	48.2	47.8	-0.1	Negligible Beneficial	48.8	0.9	Negligible Adverse	36.8	37.1	37.7
10, DILL PLACE, HAYTON	Dwelling	44.5	45.7	44.4	-0.1	Negligible Beneficial	45.5	1.0	Negligible Adverse	33.8	34.9	34.7
12, DILL PLACE, HAYTON	Dwelling	44.3	45.5	44.3	0.0	No Change	45.4	1.1	Negligible Adverse	33.5	34.7	34.6
14, DILL PLACE, HAYTON	Dwelling	44.2	45.4	44.1	-0.1	Negligible Beneficial	45.2	1.0	Negligible Adverse	33.6	34.6	34.4
16, DILL PLACE, HAYTON	Dwelling	44.1	45.3	44.0	-0.1	Negligible Beneficial	45.2	1.1	Negligible Adverse	33.4	34.5	34.4
18, DILL PLACE, HAYTON	Dwelling	44.0	45.2	43.9	-0.1	Negligible Beneficial	45.0	1.0	Negligible Adverse	33.3	34.4	34.2
2, DILL PLACE, HAYTON	Dwelling	47.1	47.9	47.1	0.0	No Change	48.1	1.0	Negligible Adverse	36.1	36.8	37.0
20, DILL PLACE, HAYTON	Dwelling	43.9	45.1	43.8	-0.1	Negligible Beneficial	44.9	1.0	Negligible Adverse	33.2	34.3	34.1

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
22, DILL PLACE, HAYTON	Dwelling	43.6	44.9	43.6	0.0	No Change	44.7	1.1	Negligible Adverse	33.0	34.1	34.0
24, DILL PLACE, HAYTON	Dwelling	45.1	45.5	45.1	0.0	No Change	46.0	0.9	Negligible Adverse	34.3	34.7	35.1
4, DILL PLACE, HAYTON	Dwelling	44.7	45.9	44.6	-0.1	Negligible Beneficial	45.7	1.0	Negligible Adverse	34.0	35.0	34.9
6, DILL PLACE, HAYTON	Dwelling	44.6	45.8	44.5	-0.1	Negligible Beneficial	45.6	1.0	Negligible Adverse	33.9	35.0	34.8
8, DILL PLACE, HAYTON	Dwelling	44.6	45.8	44.5	-0.1	Negligible Beneficial	45.6	1.0	Negligible Adverse	33.9	35.0	34.8
1, DILL ROAD, HAYTON	Dwelling	44.8	45.8	44.7	-0.1	Negligible Beneficial	45.9	1.1	Negligible Adverse	34.1	35.0	35.0
3, DILL ROAD, HAYTON	Dwelling	45.3	46.3	45.3	0.0	No Change	46.4	1.1	Negligible Adverse	34.5	35.4	35.5
5, DILL ROAD, HAYTON	Dwelling	45.7	46.7	45.7	0.0	No Change	46.9	1.2	Negligible Adverse	34.9	35.8	35.9
7, DILL ROAD, HAYTON	Dwelling	46.3	47.2	46.2	-0.1	Negligible Beneficial	47.5	1.2	Negligible Adverse	35.4	36.2	36.5
9, DILL ROAD, HAYTON	Dwelling	46.8	47.6	46.7	-0.1	Negligible Beneficial	48.0	1.2	Negligible Adverse	35.9	36.6	36.9
DOMINIES COURT, 1, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 2, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 3, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 4, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 5, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 6, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 7, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 8, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 9, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 10, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 11, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 12, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 13, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 15, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 16, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 17, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 18, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 19, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 20, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 21, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 22, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 23, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 24, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 25, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 26, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 27, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 28, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 29, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 30, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 31, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
DOMINIES COURT, 32, DOMINIES ROAD	Dwelling	64.1	64.8	64.2	0.1	Negligible Adverse	64.7	0.6	Negligible Adverse	51.4	52.1	52.0
1, DOMINIES ROAD	Dwelling	48.8	49.6	48.7	-0.1	Negligible Beneficial	49.5	0.7	Negligible Adverse	37.7	38.4	38.3
1, DOMINIES ROAD	Dwelling	48.8	49.6	48.7	-0.1	Negligible Beneficial	49.5	0.7	Negligible Adverse	37.7	38.4	38.3
10, DOMINIES ROAD	Dwelling	52.2	53.5	52.1	-0.1	Negligible Beneficial	53.4	1.2	Negligible Adverse	40.7	41.9	41.8
12, DOMINIES ROAD	Dwelling	51.9	53.1	51.7	-0.2	Negligible Beneficial	53.0	1.1	Negligible Adverse	40.4	41.5	41.4
14, DOMINIES ROAD	Dwelling	52.6	53.8	52.4	-0.2	Negligible Beneficial	53.6	1.0	Negligible Adverse	41.1	42.2	42.0
16, DOMINIES ROAD	Dwelling	55.2	56.4	55.0	-0.2	Negligible Beneficial	56.2	1.0	Negligible Adverse	43.4	44.5	44.3
18, DOMINIES ROAD	Dwelling	56.2	57.4	56.0	-0.2	Negligible Beneficial	57.2	1.0	Negligible Adverse	44.3	45.4	45.2
2, DOMINIES ROAD	Dwelling	47.5	48.5	47.4	-0.1	Negligible Beneficial	48.4	0.9	Negligible Adverse	36.5	37.4	37.3
20, DOMINIES ROAD	Dwelling	52.6	53.7	52.5	-0.1	Negligible Beneficial	53.6	1.0	Negligible Adverse	41.1	42.1	42.0
3, DOMINIES ROAD	Dwelling	51.8	52.3	51.8	0.0	No Change	52.3	0.5	Negligible Adverse	40.4	40.8	40.8
4, DOMINIES ROAD	Dwelling	49.1	50.0	48.9	-0.2	Negligible Beneficial	50.0	0.9	Negligible Adverse	37.9	38.7	38.7
6, DOMINIES ROAD	Dwelling	50.4	51.5	50.3	-0.1	Negligible Beneficial	51.4	1.0	Negligible Adverse	39.1	40.1	40.0
8, DOMINIES ROAD	Dwelling	50.7	51.9	50.6	-0.1	Negligible Beneficial	51.7	1.0	Negligible Adverse	39.4	40.4	40.3
1, DON COURT	Dwelling	57.8	58.2	58.0	0.2	Negligible Adverse	58.6	0.8	Negligible Adverse	45.8	46.1	46.5
2, DON COURT	Dwelling	57.6	58.0	57.8	0.2	Negligible Adverse	58.4	0.8	Negligible Adverse	45.6	45.9	46.3
3, DON COURT	Dwelling	53.3	53.6	53.4	0.1	Negligible Adverse	54.1	0.8	Negligible Adverse	41.7	42.0	42.4
4, DON COURT	Dwelling	52.0	52.3	52.0	0.0	No Change	52.7	0.7	Negligible Adverse	40.5	40.8	41.2
5, DON COURT	Dwelling	55.0	55.5	55.2	0.2	Negligible Adverse	55.9	0.9	Negligible Adverse	43.2	43.7	44.0
1, DON GARDENS	Dwelling	48.6	49.5	48.7	0.1	Negligible Adverse	49.6	1.0	Negligible Adverse	37.5	38.3	38.4
10, DON GARDENS	Dwelling	48.8	49.7	48.9	0.1	Negligible Adverse	49.8	1.0	Negligible Adverse	37.7	38.5	38.6
11, DON GARDENS	Dwelling	48.9	49.8	49.1	0.2	Negligible Adverse	49.9	1.0	Negligible Adverse	37.7	38.6	38.6
2, DON GARDENS	Dwelling	48.3	49.1	48.4	0.1	Negligible Adverse	49.2	0.9	Negligible Adverse	37.2	37.9	38.0
3, DON GARDENS	Dwelling	48.3	49.1	48.3	0.0	No Change	49.2	0.9	Negligible Adverse	37.2	37.9	38.0
4, DON GARDENS	Dwelling	47.4	48.4	47.5	0.1	Negligible Adverse	48.4	1.0	Negligible Adverse	36.4	37.3	37.3
5, DON GARDENS	Dwelling	48.6	49.6	48.7	0.1	Negligible Adverse	49.6	1.0	Negligible Adverse	37.5	38.4	38.4
6, DON GARDENS	Dwelling	48.8	49.7	48.9	0.1	Negligible Adverse	49.8	1.0	Negligible Adverse	37.7	38.5	38.6
7, DON GARDENS	Dwelling	50.6	51.1	50.6	0.0	No Change	51.3	0.7	Negligible Adverse	39.7	39.7	39.9
8, DON GARDENS	Dwelling	48.7	49.6	48.9	0.2	Negligible Adverse	49.7	1.0	Negligible Adverse	37.6	38.4	38.5
9, DON GARDENS	Dwelling	49.7	50.4	49.8	0.1	Negligible Beneficial	50.6	0.9	Negligible Adverse	38.5	39.1	39.3
FLAT A, 21, DON PLACE, WOODSIDE	Dwelling	58.8	60.3	58.4	-0.4	Negligible Beneficial	59.8	1.0	Negligible Adverse	46.7	48.0	47.6
FLAT B, 21, DON PLACE, WOODSIDE	Dwelling	58.8	60.3	58.4	-0.4	Negligible Beneficial	59.8	1.0	Negligible Adverse	46.7	48.0	47.6
FLAT C, 21, DON PLACE, WOODSIDE	Dwelling	58.8	60.3	58.4	-0.4	Negligible Beneficial	59.8	1.0	Negligible Adverse	46.7	48.0	47.6
FLAT D, 21, DON PLACE, WOODSIDE	Dwelling	58.8	60.3	58.4	-0.4	Negligible Beneficial	59.8	1.0	Negligible Adverse	46.7	48.0	47.6
FLAT E, 21, DON PLACE, WOODSIDE	Dwelling	58.8	60.3	58.4	-0.4	Negligible Beneficial	59.8	1.0	Negligible Adverse	46.7	48.0	47.6
FLAT A, 23, DON PLACE, WOODSIDE	Dwelling	56.6	58.1	56.3	-0.3	Negligible Beneficial	57.6	1.0	Negligible Adverse	44.7	46.0	45.6
FLAT B, 23, DON PLACE, WOODSIDE	Dwelling	56.6	58.1	56.3	-0.3	Negligible Beneficial	57.6	1.0	Negligible Adverse	44.7	46.0	45.6
FLAT C, 23, DON PLACE, WOODSIDE	Dwelling	56.6	58.1	56.3	-0.3	Negligible Beneficial	57.6	1.0	Negligible Adverse	44.7	46.0	45.6
FLAT D, 23, DON PLACE, WOODSIDE	Dwelling	56.6	58.1	56.3	-0.3	Negligible Beneficial	57.6	1.0	Negligible Adverse	44.7	46.0	45.6
FLAT E, 23, DON PLACE, WOODSIDE	Dwelling	56.6	58.1	56.3	-0.3	Negligible Beneficial	57.6	1.0	Negligible Adverse	44.7	46.0	45.6
FLAT F, 23, DON PLACE, WOODSIDE	Dwelling	56.6	58.1	56.3	-0.3	Negligible Beneficial	57.6	1.0	Negligible Adverse	44.7	46.0	45.6
FLAT A, 25, DON PLACE, WOODSIDE	Dwelling	54.5	55.8	54.2	-0.3	Negligible Beneficial	55.4	0.9	Negligible Adverse	42.8	44.0	43.6

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
FLAT B, 25, DON PLACE, WOODSIDE	Dwelling	54.5	55.8	54.2	-0.3	Negligible Beneficial	55.4	0.9	Negligible Adverse	42.8	44.0	43.6
FLAT C, 25, DON PLACE, WOODSIDE	Dwelling	54.5	55.8	54.2	-0.3	Negligible Beneficial	55.4	0.9	Negligible Adverse	42.8	44.0	43.6
FLAT D, 25, DON PLACE, WOODSIDE	Dwelling	54.5	55.8	54.2	-0.3	Negligible Beneficial	55.4	0.9	Negligible Adverse	42.8	44.0	43.6
FLAT E, 25, DON PLACE, WOODSIDE	Dwelling	54.5	55.8	54.2	-0.3	Negligible Beneficial	55.4	0.9	Negligible Adverse	42.8	44.0	43.6
FLAT F, 25, DON PLACE, WOODSIDE	Dwelling	54.5	55.8	54.2	-0.3	Negligible Beneficial	55.4	0.9	Negligible Adverse	42.8	44.0	43.6
FLAT 1, 29, DON PLACE, WOODSIDE	Dwelling	46.3	47.1	46.4	0.1	Negligible Adverse	47.3	1.0	Negligible Adverse	35.4	36.1	36.3
FLAT 2, 29, DON PLACE, WOODSIDE	Dwelling	46.1	47.0	46.1	0.0	No Change	47.0	0.9	Negligible Adverse	35.2	36.0	36.0
FLAT 3, 29, DON PLACE, WOODSIDE	Dwelling	48.2	49.2	48.2	0.0	No Change	49.2	1.0	Negligible Adverse	37.1	38.0	38.0
FLAT 4, 29, DON PLACE, WOODSIDE	Dwelling	54.2	56.1	54.0	-0.2	Negligible Beneficial	55.2	1.0	Negligible Adverse	42.5	44.2	43.4
FLAT 5, 29, DON PLACE, WOODSIDE	Dwelling	48.3	49.5	48.3	0.0	No Change	49.3	1.0	Negligible Adverse	37.2	38.3	38.1
30, DON PLACE, WOODSIDE	Dwelling	51.2	52.8	50.8	-0.4	Negligible Beneficial	52.3	1.1	Negligible Adverse	39.8	41.3	40.8
32, DON PLACE, WOODSIDE	Dwelling	54.7	56.6	54.2	-0.5	Negligible Beneficial	55.8	1.1	Negligible Adverse	43.0	44.7	44.0
DON STREET, OLD ABERDEEN	Dwelling	55.0	55.5	55.2	0.2	Negligible Adverse	55.9	0.9	Negligible Adverse	43.2	43.7	44.0
FERNBANK, 78, DON STREET, WOODSIDE	Dwelling	57.2	60.3	56.9	-0.3	Negligible Beneficial	58.4	1.2	Negligible Adverse	45.2	48.0	46.3
10, DON STREET, WOODSIDE	Dwelling	67.1	68.7	66.7	-0.4	Negligible Beneficial	68.1	1.0	Negligible Adverse	54.1	55.6	55.0
100, DON STREET, WOODSIDE	Dwelling	57.1	62.3	56.7	-0.4	Negligible Beneficial	58.9	1.8	Negligible Adverse	45.1	49.8	46.7
101, DON STREET, WOODSIDE	Dwelling	56.8	63.7	56.3	-0.5	Negligible Beneficial	59.7	2.9	Negligible Adverse	44.9	51.1	47.5
102, DON STREET, WOODSIDE	Dwelling	56.6	63.0	56.1	-0.5	Negligible Beneficial	59.1	2.5	Negligible Adverse	44.7	50.4	46.9
103, DON STREET, WOODSIDE	Dwelling	56.8	63.7	56.2	-0.6	Negligible Beneficial	59.7	2.9	Negligible Adverse	44.9	51.1	47.5
104, DON STREET, WOODSIDE	Dwelling	56.3	62.9	55.7	-0.6	Negligible Beneficial	59.0	2.7	Negligible Adverse	44.4	50.3	46.8
105, DON STREET, WOODSIDE	Dwelling	56.9	63.9	56.3	-0.6	Negligible Beneficial	59.8	2.9	Negligible Adverse	44.9	51.2	47.6
106, DON STREET, WOODSIDE	Dwelling	56.2	62.9	55.6	-0.6	Negligible Beneficial	58.9	2.7	Negligible Adverse	44.3	50.3	46.7
107, DON STREET, WOODSIDE	Dwelling	56.8	63.8	56.2	-0.6	Negligible Beneficial	59.7	2.9	Negligible Adverse	44.9	51.2	47.5
108, DON STREET, WOODSIDE	Dwelling	56.1	63.1	55.5	-0.6	Negligible Beneficial	59.0	2.9	Negligible Adverse	44.2	50.5	46.8
109, DON STREET, WOODSIDE	Dwelling	56.9	63.9	56.3	-0.6	Negligible Beneficial	59.8	2.9	Negligible Adverse	44.9	51.2	47.6
110, DON STREET, WOODSIDE	Dwelling	56.0	63.0	55.5	-0.6	Negligible Beneficial	58.5	2.5	Negligible Adverse	44.2	50.4	46.7
111, DON STREET, WOODSIDE	Dwelling	56.8	63.8	56.2	-0.6	Negligible Beneficial	59.7	2.9	Negligible Adverse	44.9	51.2	47.5
112, DON STREET, WOODSIDE	Dwelling	56.1	63.2	55.5	-0.6	Negligible Beneficial	59.0	2.9	Negligible Adverse	44.2	50.6	46.8
113, DON STREET, WOODSIDE	Dwelling	56.9	63.9	56.3	-0.6	Negligible Beneficial	59.8	2.9	Negligible Adverse	44.9	51.2	47.6
114, DON STREET, WOODSIDE	Dwelling	56.1	63.2	55.5	-0.6	Negligible Beneficial	59.0	2.9	Negligible Adverse	44.2	50.6	46.8
115, DON STREET, WOODSIDE	Dwelling	57.0	63.9	56.4	-0.6	Negligible Beneficial	59.8	2.8	Negligible Adverse	45.0	51.2	47.6
116, DON STREET, WOODSIDE	Dwelling	56.3	63.6	55.7	-0.6	Negligible Beneficial	59.3	3.0	Minor Adverse	44.4	51.0	47.1
117, DON STREET, WOODSIDE	Dwelling	57.0	63.8	56.4	-0.6	Negligible Beneficial	59.8	2.8	Negligible Adverse	45.0	51.2	47.6
118, DON STREET, WOODSIDE	Dwelling	56.3	63.6	55.7	-0.6	Negligible Beneficial	59.3	3.0	Minor Adverse	44.4	51.0	47.1
119, DON STREET, WOODSIDE	Dwelling	54.9	58.9	54.5	-0.4	Negligible Beneficial	56.6	1.7	Negligible Adverse	43.1	46.7	44.7
12, DON STREET, WOODSIDE	Dwelling	67.1	68.7	66.7	-0.4	Negligible Beneficial	68.1	1.0	Negligible Adverse	54.1	55.6	55.0
120, DON STREET, WOODSIDE	Dwelling	56.3	63.6	55.7	-0.6	Negligible Beneficial	59.3	3.0	Minor Adverse	44.4	51.0	47.1
121, DON STREET, WOODSIDE	Dwelling	54.0	56.8	53.7	-0.3	Negligible Beneficial	55.4	1.4	Negligible Adverse	42.3	44.9	43.6
122, DON STREET, WOODSIDE	Dwelling	56.3	63.6	55.7	-0.6	Negligible Beneficial	59.3	3.0	Minor Adverse	44.4	51.0	47.1
123, DON STREET, WOODSIDE	Dwelling	53.5	55.8	53.3	-0.2	Negligible Beneficial	54.9	1.4	Negligible Adverse	41.9	44.0	43.1
124, DON STREET, WOODSIDE	Dwelling	56.3	63.6	55.7	-0.6	Negligible Beneficial	59.3	3.0	Minor Adverse	44.4	51.0	47.1
125, DON STREET, WOODSIDE	Dwelling	53.3	55.3	53.1	-0.2	Negligible Beneficial	54.6	1.3	Negligible Adverse	41.7	43.5	42.9
126, DON STREET, WOODSIDE	Dwelling	56.3	63.6	55.7	-0.6	Negligible Beneficial	59.3	3.0	Minor Adverse	44.4	51.0	47.1
127, DON STREET, WOODSIDE	Dwelling	53.2	54.9	53.0	-0.2	Negligible Beneficial	54.4	1.2	Negligible Adverse	41.6	43.1	42.7
128, DON STREET, WOODSIDE	Dwelling	56.2	63.5	55.6	-0.6	Negligible Beneficial	59.2	3.0	Minor Adverse	44.3	50.9	47.0
130, DON STREET, WOODSIDE	Dwelling	56.2	63.5	55.6	-0.6	Negligible Beneficial	59.2	3.0	Minor Adverse	44.3	50.9	47.0
132, DON STREET, WOODSIDE	Dwelling	56.2	63.4	55.6	-0.6	Negligible Beneficial	59.2	3.0	Minor Adverse	44.3	50.8	47.0
134, DON STREET, WOODSIDE	Dwelling	56.2	63.2	55.5	-0.7	Negligible Beneficial	59.0	2.8	Negligible Adverse	44.3	50.6	46.8
136, DON STREET, WOODSIDE	Dwelling	56.2	63.1	55.6	-0.6	Negligible Beneficial	59.0	2.8	Negligible Adverse	44.3	50.5	46.8
138, DON STREET, WOODSIDE	Dwelling	55.2	61.6	54.5	-0.7	Negligible Beneficial	57.8	2.6	Negligible Adverse	43.4	49.2	45.8
14, DON STREET, WOODSIDE	Dwelling	67.1	68.7	66.7	-0.4	Negligible Beneficial	68.1	1.0	Negligible Adverse	54.1	55.6	55.0
140, DON STREET, WOODSIDE	Dwelling	55.9	61.1	55.4	-0.5	Negligible Beneficial	57.9	2.0	Negligible Adverse	44.0	48.7	45.8
142, DON STREET, WOODSIDE	Dwelling	55.1	61.4	54.7	-0.7	Negligible Beneficial	57.6	2.5	Negligible Adverse	43.3	49.0	46.6
16, DON STREET, WOODSIDE	Dwelling	67.1	68.7	66.7	-0.4	Negligible Beneficial	68.1	1.0	Negligible Adverse	54.1	55.6	55.0
18, DON STREET, WOODSIDE	Dwelling	67.3	69.0	66.9	-0.4	Negligible Beneficial	68.3	1.0	Negligible Adverse	54.3	55.8	55.2
2, DON STREET, WOODSIDE	Dwelling	68.3	69.8	68.0	-0.3	Negligible Beneficial	69.3	1.0	Negligible Adverse	55.2	56.6	56.1
20, DON STREET, WOODSIDE	Dwelling	67.3	69.0	66.9	-0.4	Negligible Beneficial	68.3	1.0	Negligible Adverse	54.3	55.8	55.2
22, DON STREET, WOODSIDE	Dwelling	67.3	69.0	66.9	-0.4	Negligible Beneficial	68.3	1.0	Negligible Adverse	54.3	55.8	55.2
24, DON STREET, WOODSIDE	Dwelling	67.3	69.0	66.9	-0.4	Negligible Beneficial	68.3	1.0	Negligible Adverse	54.3	55.8	55.2
26, DON STREET, WOODSIDE	Dwelling	67.3	68.9	66.8	-0.5	Negligible Beneficial	68.2	0.9	Negligible Adverse	54.3	55.7	55.1
28, DON STREET, WOODSIDE	Dwelling	67.3	68.9	66.8	-0.5	Negligible Beneficial	68.2	0.9	Negligible Adverse	54.3	55.7	55.1
30, DON STREET, WOODSIDE	Dwelling	67.3	68.9	66.8	-0.5	Negligible Beneficial	68.2	0.9	Negligible Adverse	54.3	55.7	55.1
32, DON STREET, WOODSIDE	Dwelling	67.3	68.9	66.8	-0.5	Negligible Beneficial	68.2	0.9	Negligible Adverse	54.3	55.7	55.1
34, DON STREET, WOODSIDE	Dwelling	67.4	69.0	66.9	-0.5	Negligible Beneficial	68.4	1.0	Negligible Adverse	54.4	55.8	55.3
36, DON STREET, WOODSIDE	Dwelling	67.4	69.0	66.9	-0.5	Negligible Beneficial	68.4	1.0	Negligible Adverse	54.4	55.8	55.3
4, DON STREET, WOODSIDE	Dwelling	57.3	57.2	56.7	-0.6	Negligible Beneficial	57.2	-0.1	Negligible Beneficial	45.3	46.2	45.2
40, DON STREET, WOODSIDE	Dwelling	67.4	69.0	66.9	-0.5	Negligible Beneficial	68.4	1.0	Negligible Adverse	54.4	55.8	55.3
42, DON STREET, WOODSIDE	Dwelling	67.4	69.0	66.9	-0.5	Negligible Beneficial	68.4	1.0	Negligible Adverse	54.4	55.8	55.3
6, DON STREET, WOODSIDE	Dwelling	67.4	69.0	67.1	-0.3	Negligible Beneficial	68.4	1.0	Negligible Adverse	54.4	55.8	55.3
60, DON STREET, WOODSIDE	Dwelling	61.8	65.4	61.2	-0.6	Negligible Beneficial	63.8	2.0	Negligible Adverse	49.4	52.6	51.2
61, DON STREET, WOODSIDE	Dwelling	57.5	60.4	57.2	-0.3	Negligible Beneficial	58.7	1.2	Negligible Adverse	45.5	48.1	46.6
62, DON STREET, WOODSIDE	Dwelling	59.7	62.2	59.2	-0.5	Negligible Beneficial	60.8	1.1	Negligible Adverse	47.5	49.7	48.5
63, DON STREET, WOODSIDE	Dwelling	57.6	60.5	57.3	-0.3	Negligible Beneficial	58.8	1.2	Negligible Adverse	45.6	48.2	46.7
64, DON STREET, WOODSIDE	Dwelling	58.0	60.7	57.6	-0.4	Negligible Beneficial	59.0	1.0	Negligible Adverse	45.9	48.4	46.8
65, DON STREET, WOODSIDE	Dwelling	57.6	60.6	57.3	-0.3	Negligible Beneficial	58.8	1.2	Negligible Adverse	45.6	48.3	46.7
66, DON STREET, WOODSIDE	Dwelling	57.2	60.1	56.9	-0.3	Negligible Beneficial	58.3	1.1	Negligible Adverse	45.2	47.8	46.2
67, DON STREET, WOODSIDE	Dwelling	57.6	60.6	57.3	-0.3	Negligible Beneficial	58.8	1.2	Negligible Adverse	45.6	48.3	46.7
68, DON STREET, WOODSIDE	Dwelling	56.5	59.7	56.2	-0.3	Negligible Beneficial	57.5	1.0	Negligible Adverse	44.6	47.5	45.5
69, DON STREET, WOODSIDE	Dwelling	57.6	60.6	57.3	-0.3	Negligible Beneficial	58.8	1.2	Negligible Adverse	45.6	48.3	46.7
70, DON STREET, WOODSIDE	Dwelling	56.5	59.7	56.2	-0.3	Negligible Beneficial	57.5	1.0	Negligible Adverse	44.6	47.5	45.5
71, DON STREET, WOODSIDE	Dwelling	60.7	60.7	57.3	-0.3	Negligible Beneficial	58.8	1.2	Negligible Adverse	45.6	48.4	46.7
72, DON STREET, WOODSIDE	Dwelling	56.5	59.7	56.2	-0.3	Negligible Beneficial	57.5	1.0	Negligible Adverse	44.6	47.5	45.5
73, DON STREET, WOODSIDE	Dwelling	57.6	60.7	57.3	-0.3	Negligible Beneficial	58.9	1.3	Negligible Adverse	45.6	48.4	46.7

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
74. DON STREET, WOODSIDE	Dwelling	56.5	59.7	56.3	-0.2	Negligible Beneficial	57.6	1.1	Negligible Adverse	44.6	47.5	45.6
75. DON STREET, WOODSIDE	Dwelling	57.7	60.8	57.4	-0.3	Negligible Beneficial	59.0	1.3	Negligible Adverse	45.7	48.5	46.8
77. DON STREET, WOODSIDE	Dwelling	57.8	61.0	57.5	-0.3	Negligible Beneficial	59.1	1.3	Negligible Adverse	45.8	48.6	46.9
79. DON STREET, WOODSIDE	Dwelling	57.8	61.0	57.5	-0.3	Negligible Beneficial	59.1	1.3	Negligible Adverse	45.8	48.6	46.9
8. DON STREET, WOODSIDE	Dwelling	67.1	68.7	66.7	-0.4	Negligible Beneficial	68.1	1.0	Negligible Adverse	54.1	55.6	55.0
80. DON STREET, WOODSIDE	Dwelling	57.2	60.5	57.0	-0.2	Negligible Beneficial	58.5	1.3	Negligible Adverse	45.2	48.2	46.4
81. DON STREET, WOODSIDE	Dwelling	57.8	61.1	57.5	-0.3	Negligible Beneficial	59.1	1.3	Negligible Adverse	45.8	48.7	46.9
82. DON STREET, WOODSIDE	Dwelling	55.0	58.2	54.7	-0.3	Negligible Beneficial	56.2	1.2	Negligible Adverse	43.2	46.1	44.3
83. DON STREET, WOODSIDE	Dwelling	57.8	61.2	57.5	-0.3	Negligible Beneficial	59.2	1.4	Negligible Adverse	45.8	48.8	47.0
84. DON STREET, WOODSIDE	Dwelling	55.4	58.7	55.2	-0.2	Negligible Beneficial	56.7	1.3	Negligible Adverse	43.6	46.6	44.8
85. DON STREET, WOODSIDE	Dwelling	57.9	61.3	57.6	-0.3	Negligible Beneficial	59.3	1.4	Negligible Adverse	45.8	48.9	47.1
86. DON STREET, WOODSIDE	Dwelling	55.5	58.7	55.2	-0.3	Negligible Beneficial	56.7	1.2	Negligible Adverse	43.7	46.6	44.8
87. DON STREET, WOODSIDE	Dwelling	57.9	61.5	57.6	-0.3	Negligible Beneficial	59.4	1.5	Negligible Adverse	45.8	49.1	47.2
88. DON STREET, WOODSIDE	Dwelling	55.5	58.8	55.2	-0.3	Negligible Beneficial	56.8	1.3	Negligible Adverse	43.7	46.7	44.9
89. DON STREET, WOODSIDE	Dwelling	57.9	61.6	57.6	-0.3	Negligible Beneficial	59.4	1.5	Negligible Adverse	45.8	49.2	47.2
90. DON STREET, WOODSIDE	Dwelling	55.4	58.7	55.1	-0.3	Negligible Beneficial	56.7	1.3	Negligible Adverse	43.6	46.6	44.8
91. DON STREET, WOODSIDE	Dwelling	57.9	61.9	57.6	-0.3	Negligible Beneficial	59.5	1.6	Negligible Adverse	45.8	49.4	47.3
92. DON STREET, WOODSIDE	Dwelling	55.7	59.1	55.4	-0.3	Negligible Beneficial	57.0	1.3	Negligible Adverse	43.9	46.9	45.0
94. DON STREET, WOODSIDE	Dwelling	56.0	59.5	55.7	-0.3	Negligible Beneficial	57.4	1.4	Negligible Adverse	44.1	47.3	45.4
95. DON STREET, WOODSIDE	Children's Nursery / Crèche	53.3	57.3	53.0	-0.3	Negligible Beneficial	54.9	1.6	Negligible Adverse	41.7	45.3	43.1
96. DON STREET, WOODSIDE	Dwelling	56.1	60.0	55.7	-0.4	Negligible Beneficial	57.6	1.5	Negligible Adverse	44.2	47.7	45.6
97. DON STREET, WOODSIDE	Dwelling	56.9	63.3	56.4	-0.5	Negligible Beneficial	59.5	2.6	Negligible Adverse	44.9	50.7	47.3
98. DON STREET, WOODSIDE	Dwelling	56.3	60.7	55.9	-0.4	Negligible Beneficial	58.0	1.7	Negligible Adverse	44.4	48.4	45.9
99. DON STREET, WOODSIDE	Dwelling	56.8	63.6	56.3	-0.5	Negligible Beneficial	59.6	2.8	Negligible Adverse	44.9	51.0	47.4
11. DON TERRACE	Dwelling	50.7	51.5	50.9	0.2	Negligible Adverse	51.7	1.0	Negligible Adverse	39.4	40.1	40.3
11. DON TERRACE	Dwelling	50.6	51.4	50.7	0.1	Negligible Adverse	51.1	0.9	Negligible Adverse	39.3	40.0	40.1
12. DON TERRACE	Dwelling	52.7	53.2	52.6	-0.1	Negligible Beneficial	53.6	0.9	Negligible Adverse	41.2	41.6	42.0
13. DON TERRACE	Dwelling	47.9	48.7	48.0	0.1	Negligible Adverse	48.8	0.9	Negligible Adverse	36.8	37.6	37.7
13. DON TERRACE	Dwelling	49.5	50.1	49.5	0.0	No Change	50.4	0.9	Negligible Adverse	38.3	38.8	39.1
14. DON TERRACE	Dwelling	45.0	45.9	45.1	0.1	Negligible Adverse	46.0	1.0	Negligible Adverse	34.2	35.0	35.1
14. DON TERRACE	Dwelling	45.0	45.9	45.1	0.1	Negligible Adverse	46.0	1.0	Negligible Adverse	34.2	35.0	35.1
15. DON TERRACE	Dwelling	51.3	51.6	51.2	-0.1	Negligible Beneficial	52.2	0.9	Negligible Adverse	39.9	40.2	40.7
15. DON TERRACE	Dwelling	46.2	47.1	46.2	0.0	No Change	47.2	1.0	Negligible Adverse	35.3	36.1	36.2
15. DON TERRACE	Dwelling	46.2	47.1	46.2	0.0	No Change	47.2	1.0	Negligible Adverse	35.3	36.1	36.2
16. DON TERRACE	Dwelling	52.7	53.8	52.6	-0.1	Negligible Beneficial	53.8	1.1	Negligible Adverse	41.2	42.2	42.2
16. DON TERRACE	Dwelling	52.7	53.8	52.6	-0.1	Negligible Beneficial	53.8	1.1	Negligible Adverse	41.2	42.2	42.2
16. DON TERRACE	Dwelling	52.7	53.8	52.6	-0.1	Negligible Beneficial	53.8	1.1	Negligible Adverse	41.2	42.2	42.2
20. DON TERRACE	Dwelling	51.8	52.6	52.0	0.2	Negligible Adverse	52.7	0.9	Negligible Adverse	40.4	41.1	41.2
21. DON TERRACE	Dwelling	51.6	52.3	51.7	0.1	Negligible Adverse	52.5	0.9	Negligible Adverse	40.2	40.8	41.0
22. DON TERRACE	Dwelling	52.4	53.2	52.6	0.2	Negligible Adverse	53.2	0.9	Negligible Adverse	40.9	41.6	41.7
23. DON TERRACE	Dwelling	52.8	53.6	53.0	0.2	Negligible Adverse	53.7	0.9	Negligible Adverse	41.3	42.0	42.1
24. DON TERRACE	Dwelling	53.2	54.0	53.3	0.1	Negligible Beneficial	54.1	0.9	Negligible Adverse	41.6	42.3	42.4
25. DON TERRACE	Dwelling	53.7	54.5	53.9	0.2	Negligible Adverse	54.7	1.0	Negligible Adverse	42.1	42.8	43.0
26. DON TERRACE	Dwelling	54.2	55.0	54.4	0.2	Negligible Adverse	55.1	0.9	Negligible Adverse	42.5	43.2	43.3
27. DON TERRACE	Dwelling	54.4	55.2	54.6	0.2	Negligible Adverse	55.3	0.9	Negligible Adverse	42.7	43.4	43.5
28. DON TERRACE	Dwelling	54.3	55.1	54.5	0.2	Negligible Adverse	55.2	0.9	Negligible Adverse	42.6	43.3	43.4
29. DON TERRACE	Dwelling	54.2	55.0	54.4	0.2	Negligible Adverse	55.1	0.9	Negligible Adverse	42.5	43.2	43.3
30. DON TERRACE	Dwelling	54.1	54.9	54.3	0.2	Negligible Adverse	55.0	0.9	Negligible Adverse	42.4	43.1	43.2
31. DON TERRACE	Dwelling	53.9	54.7	54.1	0.2	Negligible Adverse	54.9	1.0	Negligible Adverse	42.2	43.0	43.1
32. DON TERRACE	Dwelling	53.8	54.5	54.0	0.2	Negligible Adverse	54.7	0.9	Negligible Adverse	42.2	42.8	43.0
33. DON TERRACE	Dwelling	55.1	55.8	55.3	0.2	Negligible Adverse	56.0	0.9	Negligible Adverse	43.3	44.0	44.1
34. DON TERRACE	Dwelling	55.1	55.8	55.3	0.2	Negligible Adverse	56.0	0.9	Negligible Adverse	43.3	44.0	44.1
35. DON TERRACE	Dwelling	54.3	55.0	54.4	0.1	Negligible Adverse	55.2	0.9	Negligible Adverse	42.6	43.2	43.4
36. DON TERRACE	Dwelling	52.9	53.0	53.0	0.1	Negligible Adverse	53.7	0.8	Negligible Adverse	41.3	41.9	42.1
8. DON TERRACE	Dwelling	49.9	50.4	50.0	0.1	Negligible Adverse	50.7	0.8	Negligible Adverse	38.6	39.1	39.4
9. DON TERRACE	Dwelling	49.3	50.0	49.4	0.1	Negligible Adverse	50.2	0.9	Negligible Adverse	38.1	38.7	38.9
1. DONBANK TERRACE	Dwelling	56.7	60.9	56.3	-0.4	Negligible Beneficial	59.1	2.4	Negligible Adverse	44.8	48.5	46.9
10. DONBANK TERRACE	Dwelling	58.3	61.9	57.9	-0.4	Negligible Beneficial	60.3	2.0	Negligible Adverse	46.2	49.4	48.0
100. DONBANK TERRACE	Dwelling	57.6	62.7	57.1	-0.5	Negligible Beneficial	60.4	2.8	Negligible Adverse	45.6	50.2	48.1
11. DONBANK TERRACE	Dwelling	57.0	61.5	56.6	-0.4	Negligible Beneficial	59.6	2.6	Negligible Adverse	45.0	49.1	47.4
12. DONBANK TERRACE	Dwelling	58.2	61.9	57.8	-0.4	Negligible Beneficial	60.2	2.0	Negligible Adverse	46.1	49.4	47.9
13. DONBANK TERRACE	Dwelling	57.1	61.6	56.6	-0.5	Negligible Beneficial	59.6	2.5	Negligible Adverse	45.1	49.2	47.4
14. DONBANK TERRACE	Dwelling	57.8	61.7	57.3	-0.5	Negligible Beneficial	59.9	2.1	Negligible Adverse	45.8	49.3	47.6
15. DONBANK TERRACE	Dwelling	57.1	61.6	56.6	-0.5	Negligible Beneficial	59.6	2.5	Negligible Adverse	45.1	49.2	47.4
16. DONBANK TERRACE	Dwelling	58.2	62.0	57.7	-0.5	Negligible Beneficial	60.3	2.1	Negligible Adverse	46.1	49.5	48.0
17. DONBANK TERRACE	Dwelling	57.1	61.8	56.7	-0.4	Negligible Beneficial	59.6	2.5	Negligible Adverse	45.1	49.2	47.4
18. DONBANK TERRACE	Dwelling	57.6	61.8	57.2	-0.4	Negligible Beneficial	59.9	2.3	Negligible Adverse	45.6	49.4	47.6
18. DONBANK TERRACE	Dwelling	57.1	61.6	56.7	-0.4	Negligible Beneficial	59.5	2.5	Negligible Adverse	45.1	49.2	47.4
2. DONBANK TERRACE	Dwelling	59.8	62.7	59.2	-0.6	Negligible Beneficial	61.4	1.6	Negligible Adverse	47.6	50.2	49.0
20. DONBANK TERRACE	Dwelling	57.3	61.6	56.8	-0.5	Negligible Beneficial	59.7	2.4	Negligible Adverse	45.3	49.2	47.5
21. DONBANK TERRACE	Dwelling	56.9	61.4	56.5	-0.4	Negligible Beneficial	59.5	2.6	Negligible Adverse	44.9	49.0	47.3
22. DONBANK TERRACE	Dwelling	56.8	61.3	56.3	-0.5	Negligible Beneficial	59.3	2.5	Negligible Adverse	44.9	48.9	47.1
23. DONBANK TERRACE	Dwelling	56.9	61.4	56.5	-0.4	Negligible Beneficial	59.4	2.5	Negligible Adverse	44.9	49.0	47.2
24. DONBANK TERRACE	Dwelling	56.7	61.3	56.3	-0.4	Negligible Beneficial	59.3	2.6	Negligible Adverse	44.8	48.9	47.1
25. DONBANK TERRACE	Dwelling	57.0	61.5	56.6	-0.4	Negligible Beneficial	59.5	2.5	Negligible Adverse	45.0	49.1	47.3
26. DONBANK TERRACE	Dwelling	56.8	61.4	56.3	-0.5	Negligible Beneficial	59.4	2.6	Negligible Adverse	44.9	49.0	47.2
27. DONBANK TERRACE	Dwelling	57.0	61.5	56.6	-0.4	Negligible Beneficial	59.5	2.5	Negligible Adverse	45.0	49.1	47.3
28. DONBANK TERRACE	Dwelling	56.7	61.4	56.3	-0.4	Negligible Beneficial	59.3	2.6	Negligible Adverse	44.8	49.0	47.1
29. DONBANK TERRACE	Dwelling	57.0	61.5	56.6	-0.4	Negligible Beneficial	59.5	2.5	Negligible Adverse	45.0	49.1	47.3
3. DONBANK TERRACE	Dwelling	57.0	61.4	56.6	-0.4	Negligible Beneficial	59.5	2.5	Negligible Adverse	45.0	49.0	47.3
30. DONBANK TERRACE	Dwelling	56.7	61.4	56.2	-0.5	Negligible Beneficial	59.3	2.6	Negligible Adverse	44.8	49.0	47.1
31. DONBANK TERRACE	Dwelling	57.0	61.4	56.6	-0.4	Negligible Beneficial	59.5	2.5	Negligible Adverse	45.0	49.0	47.3
32. DONBANK TERRACE	Dwelling	56.7	61.4	56.2	-0.5	Negligible Beneficial	59.3	2.6	Negligible Adverse	44.8	49.0	47.1

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
33. DONBANK TERRACE	Dwelling	56.9	61.3	56.5	-0.4	Negligible Beneficial	59.4	2.5	Negligible Adverse	44.9	48.9	47.2
34. DONBANK TERRACE	Dwelling	56.7	61.4	56.2	-0.5	Negligible Beneficial	59.3	2.6	Negligible Adverse	44.8	49.0	47.1
35. DONBANK TERRACE	Dwelling	56.9	61.3	56.5	-0.4	Negligible Beneficial	59.4	2.5	Negligible Adverse	44.9	48.9	47.2
36. DONBANK TERRACE	Dwelling	56.6	61.4	56.2	-0.4	Negligible Beneficial	59.3	2.7	Negligible Adverse	44.7	49.0	47.1
37. DONBANK TERRACE	Dwelling	57.0	61.5	56.6	-0.4	Negligible Beneficial	59.6	2.6	Negligible Adverse	45.0	49.1	47.4
38. DONBANK TERRACE	Dwelling	56.6	61.4	56.2	-0.4	Negligible Beneficial	59.3	2.7	Negligible Adverse	44.7	49.0	47.1
39. DONBANK TERRACE	Dwelling	57.2	61.7	56.8	-0.4	Negligible Beneficial	59.7	2.5	Negligible Adverse	45.2	49.3	47.5
4. DONBANK TERRACE	Dwelling	61.5	64.8	60.0	-1.5	Minor Beneficial	63.6	2.1	Negligible Adverse	49.1	52.1	51.0
40. DONBANK TERRACE	Dwelling	56.7	61.5	56.3	-0.4	Negligible Beneficial	59.4	2.7	Negligible Adverse	44.8	49.1	47.2
41. DONBANK TERRACE	Dwelling	56.2	61.0	55.7	-0.5	Negligible Beneficial	58.2	2.0	Negligible Adverse	44.3	48.6	46.1
42. DONBANK TERRACE	Dwelling	56.6	61.4	56.2	-0.4	Negligible Beneficial	59.3	2.7	Negligible Adverse	44.7	49.0	47.1
43. DONBANK TERRACE	Dwelling	55.8	59.4	55.5	-0.3	Negligible Beneficial	58.4	2.6	Negligible Adverse	44.0	47.2	46.3
44. DONBANK TERRACE	Dwelling	56.6	61.4	56.2	-0.4	Negligible Beneficial	59.3	2.7	Negligible Adverse	44.7	49.0	47.1
45. DONBANK TERRACE	Dwelling	55.5	58.9	55.2	-0.3	Negligible Beneficial	58.2	2.7	Negligible Adverse	43.7	46.7	46.1
46. DONBANK TERRACE	Dwelling	56.6	61.4	56.2	-0.4	Negligible Beneficial	59.3	2.7	Negligible Adverse	44.7	49.0	47.1
47. DONBANK TERRACE	Dwelling	55.4	58.7	55.1	-0.3	Negligible Beneficial	58.1	2.7	Negligible Adverse	43.6	46.6	46.0
48. DONBANK TERRACE	Dwelling	56.6	61.4	56.2	-0.4	Negligible Beneficial	59.3	2.7	Negligible Adverse	44.7	49.0	47.1
49. DONBANK TERRACE	Dwelling	55.2	58.5	54.9	-0.3	Negligible Beneficial	58.0	2.8	Negligible Adverse	43.4	46.4	45.9
5. DONBANK TERRACE	Dwelling	57.1	61.5	56.6	-0.5	Negligible Beneficial	59.6	2.5	Negligible Adverse	45.1	49.1	47.4
50. DONBANK TERRACE	Dwelling	56.7	61.5	56.2	-0.5	Negligible Beneficial	59.4	2.7	Negligible Adverse	44.8	49.1	47.2
51. DONBANK TERRACE	Dwelling	55.1	58.4	54.9	-0.2	Negligible Beneficial	57.9	2.8	Negligible Adverse	43.3	46.3	45.8
52. DONBANK TERRACE	Dwelling	56.8	61.6	56.3	-0.5	Negligible Beneficial	59.5	2.7	Negligible Adverse	44.9	49.2	47.3
53. DONBANK TERRACE	Dwelling	55.2	58.4	54.9	-0.3	Negligible Beneficial	58.0	2.8	Negligible Adverse	43.4	46.3	45.9
54. DONBANK TERRACE	Dwelling	56.9	61.7	56.5	-0.4	Negligible Beneficial	59.6	2.7	Negligible Adverse	44.9	49.3	47.4
55. DONBANK TERRACE	Dwelling	55.0	58.5	55.0	-0.2	Negligible Beneficial	58.0	2.8	Negligible Adverse	43.4	46.4	45.9
56. DONBANK TERRACE	Dwelling	57.0	61.7	56.6	-0.4	Negligible Beneficial	59.7	2.6	Negligible Adverse	45.0	49.3	47.4
57. DONBANK TERRACE	Dwelling	55.3	58.6	55.1	-0.2	Negligible Beneficial	58.1	2.8	Negligible Adverse	43.5	46.5	46.0
58. DONBANK TERRACE	Dwelling	55.7	59.7	55.3	-0.4	Negligible Beneficial	58.4	2.7	Negligible Adverse	43.9	47.5	46.3
59. DONBANK TERRACE	Dwelling	55.4	58.7	55.3	-0.1	Negligible Beneficial	58.2	2.8	Negligible Adverse	43.6	46.6	46.1
6. DONBANK TERRACE	Dwelling	59.3	62.4	58.8	-0.5	Negligible Beneficial	61.0	1.7	Negligible Adverse	47.1	49.9	48.6
60. DONBANK TERRACE	Dwelling	55.4	59.3	55.0	-0.4	Negligible Beneficial	58.1	2.7	Negligible Adverse	43.6	47.1	46.0
61. DONBANK TERRACE	Dwelling	55.5	58.7	55.5	0.0	No Change	58.3	2.8	Negligible Adverse	43.7	46.6	46.2
62. DONBANK TERRACE	Dwelling	54.8	58.7	54.5	-0.3	Negligible Beneficial	57.8	3.0	Minor Adverse	43.1	46.6	45.8
63. DONBANK TERRACE	Dwelling	55.6	58.8	55.7	0.1	Negligible Adverse	58.3	2.7	Negligible Adverse	43.8	46.7	46.2
64. DONBANK TERRACE	Dwelling	54.7	58.5	54.3	-0.4	Negligible Beneficial	57.7	3.0	Minor Adverse	43.0	46.4	45.7
65. DONBANK TERRACE	Dwelling	55.7	58.9	55.9	0.2	Negligible Adverse	58.4	2.7	Negligible Adverse	43.9	46.7	46.3
66. DONBANK TERRACE	Dwelling	54.5	58.3	54.2	-0.3	Negligible Beneficial	57.6	3.1	Minor Adverse	42.8	46.2	45.6
67. DONBANK TERRACE	Dwelling	55.8	58.9	55.9	0.1	Negligible Adverse	58.5	2.7	Negligible Adverse	44.0	46.7	46.4
68. DONBANK TERRACE	Dwelling	54.4	58.2	54.1	-0.3	Negligible Beneficial	57.5	3.1	Minor Adverse	42.7	46.1	45.5
69. DONBANK TERRACE	Dwelling	55.9	59.0	56.0	0.1	Negligible Adverse	58.5	2.6	Negligible Adverse	44.0	46.8	46.4
7. DONBANK TERRACE	Dwelling	57.1	61.6	56.7	-0.4	Negligible Beneficial	59.7	2.6	Negligible Adverse	45.1	49.2	47.5
70. DONBANK TERRACE	Dwelling	54.4	58.1	54.1	-0.3	Negligible Beneficial	57.5	3.1	Minor Adverse	42.7	46.0	45.5
71. DONBANK TERRACE	Dwelling	56.0	59.1	56.1	0.1	Negligible Adverse	58.6	2.6	Negligible Adverse	44.1	46.9	46.5
72. DONBANK TERRACE	Dwelling	54.4	58.2	54.1	-0.3	Negligible Beneficial	57.6	3.2	Minor Adverse	42.7	46.1	45.6
73. DONBANK TERRACE	Dwelling	56.0	59.1	56.1	0.1	Negligible Adverse	58.6	2.6	Negligible Adverse	44.1	46.9	46.5
74. DONBANK TERRACE	Dwelling	54.5	58.3	54.3	-0.2	Negligible Beneficial	57.7	3.2	Minor Adverse	42.8	46.2	45.7
75. DONBANK TERRACE	Dwelling	56.0	59.2	56.1	0.1	Negligible Adverse	58.6	2.6	Negligible Adverse	44.1	47.0	46.5
76. DONBANK TERRACE	Dwelling	54.5	58.2	54.4	-0.1	Negligible Beneficial	57.6	3.1	Minor Adverse	42.8	46.1	45.6
77. DONBANK TERRACE	Dwelling	57.4	63.2	56.8	-0.6	Negligible Beneficial	59.6	2.2	Negligible Adverse	45.4	50.6	47.4
78. DONBANK TERRACE	Dwelling	54.6	58.3	54.6	0.0	No Change	57.7	3.1	Minor Adverse	42.9	46.2	45.7
79. DONBANK TERRACE	Dwelling	56.3	59.7	56.3	0.0	No Change	58.8	2.5	Negligible Adverse	44.4	47.5	46.7
8. DONBANK TERRACE	Dwelling	59.4	62.4	58.9	-0.5	Negligible Beneficial	61.1	1.7	Negligible Adverse	47.2	49.9	48.7
80. DONBANK TERRACE	Dwelling	55.0	58.5	55.2	0.2	Negligible Adverse	57.9	2.9	Negligible Adverse	43.2	46.4	45.8
82. DONBANK TERRACE	Dwelling	54.7	58.3	54.7	0.0	No Change	57.7	3.0	Minor Adverse	43.0	46.2	45.7
84. DONBANK TERRACE	Dwelling	54.8	58.4	54.9	0.1	Negligible Adverse	57.8	3.0	Minor Adverse	43.1	46.3	45.8
86. DONBANK TERRACE	Dwelling	55.0	58.6	55.2	0.2	Negligible Adverse	57.9	2.9	Negligible Adverse	43.2	46.5	45.8
88. DONBANK TERRACE	Dwelling	55.0	58.6	55.3	0.3	Negligible Adverse	58.0	3.0	Minor Adverse	43.2	46.5	45.9
9. DONBANK TERRACE	Dwelling	57.0	61.6	56.6	-0.4	Negligible Beneficial	59.6	2.6	Negligible Adverse	45.0	49.2	47.4
90. DONBANK TERRACE	Dwelling	55.0	58.7	55.3	0.3	Negligible Adverse	57.9	2.9	Negligible Adverse	43.2	46.6	45.8
92. DONBANK TERRACE	Dwelling	55.0	58.6	55.2	0.2	Negligible Adverse	57.9	2.9	Negligible Adverse	43.2	46.5	45.8
94. DONBANK TERRACE	Dwelling	55.0	58.7	55.2	0.2	Negligible Adverse	57.9	2.9	Negligible Adverse	43.2	46.6	45.8
96. DONBANK TERRACE	Dwelling	55.1	58.9	55.3	0.2	Negligible Adverse	58.0	2.9	Negligible Adverse	43.3	46.7	45.9
98. DONBANK TERRACE	Dwelling	55.4	59.5	55.5	0.1	Negligible Adverse	58.2	2.8	Negligible Adverse	43.6	47.3	46.1
1. DONVIEW PLAGE	Dwelling	53.8	57.6	53.5	-0.3	Negligible Beneficial	55.3	1.5	Negligible Adverse	42.2	45.6	43.5
2. DONVIEW PLAGE	Dwelling	49.2	50.2	49.1	-0.1	Negligible Beneficial	50.3	1.1	Negligible Adverse	38.0	38.9	39.0
10. DONVIEW ROAD	Dwelling	50.6	51.1	50.6	0.0	No Change	51.5	0.9	Negligible Adverse	39.3	39.7	40.1
11. DONVIEW ROAD	Dwelling	50.0	50.5	50.0	0.0	No Change	50.9	0.9	Negligible Adverse	38.7	39.2	39.5
12. DONVIEW ROAD	Dwelling	50.8	50.6	50.8	-0.1	Negligible Beneficial	51.7	1.0	Negligible Adverse	39.4	40.4	40.3
13. DONVIEW ROAD	Dwelling	50.1	50.0	50.0	0.0	No Change	51.0	0.9	Negligible Adverse	38.8	39.2	39.6
14. DONVIEW ROAD	Dwelling	50.7	51.7	50.6	-0.1	Negligible Beneficial	51.7	1.0	Negligible Adverse	39.4	40.3	40.3
15. DONVIEW ROAD	Dwelling	50.1	50.8	50.0	-0.1	Negligible Beneficial	51.0	0.9	Negligible Adverse	38.8	39.5	39.6
16. DONVIEW ROAD	Dwelling	50.7	51.7	50.6	-0.1	Negligible Beneficial	51.7	1.0	Negligible Adverse	39.4	40.3	40.3
17. DONVIEW ROAD	Dwelling	50.2	51.3	50.1	-0.1	Negligible Beneficial	51.3	1.1	Negligible Adverse	38.9	39.9	39.9
18. DONVIEW ROAD	Dwelling	50.8	51.7	50.7	-0.1	Negligible Beneficial	51.8	1.0	Negligible Adverse	39.5	40.3	40.4
19. DONVIEW ROAD	Dwelling	50.6	52.0	50.5	-0.1	Negligible Beneficial	51.7	1.1	Negligible Adverse	39.3	40.5	40.3
2. DONVIEW ROAD	Dwelling	50.7	51.4	50.6	-0.1	Negligible Beneficial	51.7	1.0	Negligible Adverse	39.4	40.0	40.3
20. DONVIEW ROAD	Dwelling	50.5	51.1	50.5	0.0	No Change	51.5	1.0	Negligible Adverse	39.2	39.7	40.1
21. DONVIEW ROAD	Dwelling	52.0	53.5	51.9	-0.1	Negligible Beneficial	53.1	1.1	Negligible Adverse	40.5	41.9	41.5
23. DONVIEW ROAD	Dwelling	50.5	51.0	50.5	0.0	No Change	51.5	1.0	Negligible Adverse	39.2	39.6	40.1
25. DONVIEW ROAD	Dwelling	50.7	51.1	50.6	-0.1	Negligible Beneficial	51.6	0.9	Negligible Adverse	39.4	39.7	40.2
26. DONVIEW ROAD	Dwelling	50.6	51.1	50.6	0.0	No Change	51.6	1.0	Negligible Adverse	39.3	39.7	40.2
27. DONVIEW ROAD	Dwelling	50.8	51.3	50.7	-0.1	Negligible Beneficial	51.8	1.0	Negligible Adverse	39.5	39.9	40.4
28. DONVIEW ROAD	Dwelling	51.0	52.0	50.9	-0.1	Negligible Beneficial	52.1	1.1	Negligible Adverse	39.6	40.5	40.6

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
29. DONVIEW ROAD	Dwelling	50.9	51.4	50.8	-0.1	Negligible Beneficial	51.9	1.0	Negligible Adverse	39.5	40.0	40.4
3. DONVIEW ROAD	Dwelling	50.4	50.8	50.4	0.0	No Change	51.3	0.9	Negligible Adverse	39.1	39.5	39.9
30. DONVIEW ROAD	Dwelling	51.2	52.3	51.1	-0.1	Negligible Beneficial	52.3	1.1	Negligible Adverse	39.8	40.8	40.8
31. DONVIEW ROAD	Dwelling	51.0	51.5	50.9	-0.1	Negligible Beneficial	52.0	1.0	Negligible Adverse	39.6	40.1	40.5
32. DONVIEW ROAD	Dwelling	50.9	51.7	50.8	-0.1	Negligible Beneficial	51.9	1.0	Negligible Adverse	39.5	40.3	40.4
33. DONVIEW ROAD	Dwelling	51.2	51.8	51.2	0.0	No Change	52.3	1.1	Negligible Adverse	39.8	40.4	40.8
35. DONVIEW ROAD	Dwelling	51.5	52.2	51.4	-0.1	Negligible Beneficial	52.6	1.1	Negligible Adverse	40.1	40.7	41.1
37. DONVIEW ROAD	Dwelling	51.4	52.1	51.3	-0.1	Negligible Beneficial	52.4	1.0	Negligible Adverse	40.0	40.6	40.9
4. DONVIEW ROAD	Dwelling	50.1	50.6	50.0	-0.1	Negligible Beneficial	51.0	0.9	Negligible Adverse	38.8	39.3	39.6
5. DONVIEW ROAD	Dwelling	50.3	50.7	50.3	0.0	No Change	51.2	0.9	Negligible Adverse	39.0	39.4	39.8
6. DONVIEW ROAD	Dwelling	50.1	50.6	50.0	-0.1	Negligible Beneficial	51.0	0.9	Negligible Adverse	38.8	39.3	39.6
7. DONVIEW ROAD	Dwelling	50.4	51.3	50.4	0.0	No Change	51.4	1.0	Negligible Adverse	39.1	39.9	40.0
8. DONVIEW ROAD	Dwelling	50.1	50.5	50.0	-0.1	Negligible Beneficial	51.0	0.9	Negligible Adverse	38.8	39.2	39.6
9. DONVIEW ROAD	Dwelling	50.3	50.8	50.3	0.0	No Change	51.2	0.9	Negligible Adverse	39.0	39.5	39.8
EASTER PERSLEY, EASTER PERSLEY FARM STEADING, PARKWAY	Dwelling	65.1	62.3	65.0	-0.1	Negligible Beneficial	65.1	0.0	No Change	52.3	49.8	52.3
1. FAIRLIE STREET	Dwelling	58.0	58.4	57.5	-0.5	Negligible Beneficial	57.7	-0.3	Negligible Beneficial	45.9	46.3	45.7
11. FAIRLIE STREET	Dwelling	55.8	56.4	55.5	-0.3	Negligible Beneficial	55.9	0.1	Negligible Adverse	44.0	44.5	44.0
3. FAIRLIE STREET	Dwelling	57.7	58.1	57.1	-0.6	Negligible Beneficial	57.4	-0.3	Negligible Beneficial	45.7	46.0	45.4
5. FAIRLIE STREET	Dwelling	57.2	57.7	56.9	-0.3	Negligible Beneficial	57.1	-0.1	Negligible Beneficial	45.2	45.7	45.1
7. FAIRLIE STREET	Dwelling	56.4	57.0	56.2	-0.2	Negligible Beneficial	56.4	0.0	No Change	44.5	45.0	44.5
9. FAIRLIE STREET	Dwelling	56.0	56.6	55.6	-0.4	Negligible Beneficial	56.0	0.0	No Change	44.1	44.7	44.1
1. FAIRVIEW AVENUE	Dwelling	53.9	56.3	53.7	-0.2	Negligible Beneficial	55.4	1.5	Negligible Adverse	42.2	44.4	43.6
10. FAIRVIEW AVENUE	Dwelling	51.3	51.5	51.1	-0.2	Negligible Beneficial	52.1	0.8	Negligible Adverse	39.9	40.1	40.6
11. FAIRVIEW AVENUE	Dwelling	54.4	56.6	54.2	-0.2	Negligible Beneficial	55.8	1.4	Negligible Adverse	42.7	44.7	44.0
12. FAIRVIEW AVENUE	Dwelling	53.5	53.8	53.3	-0.2	Negligible Beneficial	54.2	0.7	Negligible Adverse	41.9	42.2	42.5
14. FAIRVIEW AVENUE	Dwelling	53.6	53.7	53.4	-0.2	Negligible Beneficial	54.3	0.7	Negligible Adverse	42.0	42.1	42.6
15. FAIRVIEW AVENUE	Dwelling	53.8	55.6	53.6	-0.2	Negligible Beneficial	55.0	1.2	Negligible Adverse	42.2	43.8	43.2
16. FAIRVIEW AVENUE	Dwelling	51.5	51.1	51.4	-0.1	Negligible Beneficial	52.2	0.7	Negligible Adverse	40.1	39.7	40.7
17. FAIRVIEW AVENUE	Dwelling	54.1	55.9	53.8	-0.3	Negligible Beneficial	55.3	1.2	Negligible Adverse	42.4	44.0	43.5
18. FAIRVIEW AVENUE	Dwelling	52.2	51.8	52.0	-0.2	Negligible Beneficial	52.7	0.5	Negligible Adverse	40.7	40.4	41.2
19. FAIRVIEW AVENUE	Dwelling	55.6	57.6	55.4	-0.2	Negligible Beneficial	56.9	1.3	Negligible Adverse	43.8	45.6	44.9
2. FAIRVIEW AVENUE	Dwelling	52.1	52.9	52.1	0.0	No Change	53.1	1.0	Negligible Adverse	40.6	41.3	41.5
20. FAIRVIEW AVENUE	Dwelling	51.8	51.4	51.6	-0.2	Negligible Beneficial	52.4	0.6	Negligible Adverse	40.4	40.0	40.9
21. FAIRVIEW AVENUE	Dwelling	55.5	57.2	55.2	-0.3	Negligible Beneficial	56.7	1.2	Negligible Adverse	43.7	45.2	44.8
22. FAIRVIEW AVENUE	Dwelling	52.0	51.5	51.9	-0.1	Negligible Beneficial	52.6	0.6	Negligible Adverse	40.5	40.1	41.1
23. FAIRVIEW AVENUE	Dwelling	54.1	56.0	53.9	-0.2	Negligible Beneficial	55.4	1.3	Negligible Adverse	42.4	44.1	43.6
24. FAIRVIEW AVENUE	Dwelling	52.1	51.8	51.9	-0.2	Negligible Beneficial	52.7	0.6	Negligible Adverse	40.6	40.4	41.2
25. FAIRVIEW AVENUE	Dwelling	54.0	55.9	53.8	-0.2	Negligible Beneficial	55.4	1.4	Negligible Adverse	42.3	44.0	43.6
26. FAIRVIEW AVENUE	Dwelling	52.0	51.7	51.9	-0.1	Negligible Beneficial	52.7	0.7	Negligible Adverse	40.5	40.3	41.2
27. FAIRVIEW AVENUE	Dwelling	54.5	56.6	54.3	-0.2	Negligible Beneficial	55.9	1.4	Negligible Adverse	42.8	44.7	44.0
28. FAIRVIEW AVENUE	Dwelling	52.1	51.7	51.9	-0.2	Negligible Beneficial	52.7	0.6	Negligible Adverse	40.6	40.3	41.2
29. FAIRVIEW AVENUE	Dwelling	54.3	56.3	54.1	-0.2	Negligible Beneficial	55.7	1.4	Negligible Adverse	42.6	44.4	43.9
3. FAIRVIEW AVENUE	Dwelling	54.4	56.8	54.2	-0.2	Negligible Beneficial	55.9	1.5	Negligible Adverse	42.7	44.9	44.0
30. FAIRVIEW AVENUE	Dwelling	51.9	51.4	51.7	-0.2	Negligible Beneficial	52.5	0.6	Negligible Adverse	40.4	40.0	41.0
31. FAIRVIEW AVENUE	Dwelling	53.5	55.2	53.4	-0.1	Negligible Beneficial	54.8	1.3	Negligible Adverse	41.9	43.4	43.1
32. FAIRVIEW AVENUE	Dwelling	52.1	51.7	52.0	-0.1	Negligible Beneficial	52.7	0.6	Negligible Adverse	40.6	40.3	41.2
33. FAIRVIEW AVENUE	Dwelling	53.7	55.2	53.5	-0.2	Negligible Beneficial	54.9	1.2	Negligible Adverse	42.1	43.4	43.1
34. FAIRVIEW AVENUE	Dwelling	52.4	52.1	52.3	-0.1	Negligible Beneficial	53.0	0.6	Negligible Adverse	40.9	40.6	41.4
35. FAIRVIEW AVENUE	Dwelling	53.7	55.1	53.6	-0.1	Negligible Beneficial	54.8	1.1	Negligible Adverse	42.1	43.3	43.1
37. FAIRVIEW AVENUE	Dwelling	54.3	55.7	54.1	-0.2	Negligible Beneficial	55.4	1.1	Negligible Adverse	42.6	43.9	43.6
4. FAIRVIEW AVENUE	Dwelling	53.8	54.4	53.6	-0.2	Negligible Beneficial	54.6	0.8	Negligible Adverse	42.2	42.7	42.9
5. FAIRVIEW AVENUE	Dwelling	54.0	56.2	53.8	-0.2	Negligible Beneficial	55.4	1.4	Negligible Adverse	42.3	44.3	43.6
6. FAIRVIEW AVENUE	Dwelling	53.8	54.4	53.7	-0.1	Negligible Beneficial	54.6	0.8	Negligible Adverse	42.2	42.7	42.9
7. FAIRVIEW AVENUE	Dwelling	54.3	56.4	54.0	-0.3	Negligible Beneficial	55.7	1.4	Negligible Adverse	42.6	44.5	43.9
8. FAIRVIEW AVENUE	Dwelling	51.5	51.6	51.3	-0.2	Negligible Beneficial	52.3	0.8	Negligible Adverse	40.1	40.2	40.8
9. FAIRVIEW AVENUE	Dwelling	54.4	56.6	54.2	-0.2	Negligible Beneficial	55.8	1.4	Negligible Adverse	42.7	44.7	44.0
DANESTONE PRIMARY SCHOOL, FAIRVIEW BRAE, DANESTONE	Primary School	56.6	59.8	57.2	0.6	Negligible Adverse	58.9	2.3	Negligible Adverse	44.7	47.6	46.7
1. FAIRVIEW CIRCLE, DANESTONE	Dwelling	58.0	56.1	58.0	0.0	No Change	58.5	0.5	Negligible Adverse	45.9	44.2	46.4
10. FAIRVIEW CIRCLE, DANESTONE	Dwelling	53.1	51.8	53.0	-0.1	Negligible Beneficial	53.7	0.6	Negligible Adverse	41.5	40.4	42.1
100. FAIRVIEW CIRCLE, DANESTONE	Dwelling	74.6	71.5	74.5	-0.1	Negligible Beneficial	74.7	0.1	Negligible Adverse	60.9	58.1	61.0
101. FAIRVIEW CIRCLE, DANESTONE	Dwelling	54.5	54.0	54.4	-0.1	Negligible Beneficial	55.0	0.5	Negligible Adverse	42.8	42.3	43.2
102. FAIRVIEW CIRCLE, DANESTONE	Dwelling	74.1	71.1	74.1	0.0	No Change	74.3	0.2	Negligible Adverse	60.4	57.7	60.6
103. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.7	55.7	57.7	0.0	No Change	58.2	0.5	Negligible Adverse	45.7	43.9	46.1
104. FAIRVIEW CIRCLE, DANESTONE	Dwelling	63.3	63.3	63.3	0.0	No Change	66.4	0.1	Negligible Adverse	53.4	50.9	53.5
105. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.7	57.7	57.7	0.0	No Change	58.2	0.5	Negligible Adverse	45.7	43.9	46.1
106. FAIRVIEW CIRCLE, DANESTONE	Dwelling	61.9	58.9	61.8	-0.1	Negligible Beneficial	62.0	0.1	Negligible Adverse	49.4	46.7	49.5
107. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.7	55.7	57.7	0.0	No Change	58.2	0.5	Negligible Adverse	45.7	43.9	46.1
108. FAIRVIEW CIRCLE, DANESTONE	Dwelling	64.1	61.1	64.0	-0.1	Negligible Beneficial	64.2	0.1	Negligible Adverse	51.4	48.7	51.5
109. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.7	55.7	57.7	0.0	No Change	58.2	0.5	Negligible Adverse	45.7	43.9	46.1
11. FAIRVIEW CIRCLE, DANESTONE	Dwelling	58.0	56.1	58.0	0.0	No Change	58.5	0.5	Negligible Adverse	45.9	44.2	46.4
110. FAIRVIEW CIRCLE, DANESTONE	Dwelling	60.8	57.9	60.8	0.0	No Change	61.0	0.2	Negligible Adverse	48.5	45.8	48.6
111. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.7	55.7	57.7	0.0	No Change	58.2	0.5	Negligible Adverse	45.7	43.9	46.1
112. FAIRVIEW CIRCLE, DANESTONE	Dwelling	61.7	59.0	61.6	-0.1	Negligible Beneficial	61.8	0.1	Negligible Adverse	49.3	46.8	49.4
113. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.7	55.7	57.7	0.0	No Change	58.2	0.5	Negligible Adverse	45.7	43.9	46.1
114. FAIRVIEW CIRCLE, DANESTONE	Dwelling	62.3	59.5	62.3	0.0	No Change	62.4	0.1	Negligible Adverse	49.8	47.3	49.9
115. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.7	55.7	57.7	0.0	No Change	58.2	0.5	Negligible Adverse	45.7	43.9	46.1
116. FAIRVIEW CIRCLE, DANESTONE	Dwelling	61.6	59.2	61.5	-0.1	Negligible Beneficial	61.7	0.1	Negligible Adverse	49.2	47.0	49.3
117. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.7	55.7	57.7	0.0	No Change	58.2	0.5	Negligible Adverse	45.7	43.9	46.1
118. FAIRVIEW CIRCLE, DANESTONE	Dwelling	58.2	56.1	58.1	-0.1	Negligible Beneficial	58.3	0.1	Negligible Beneficial	46.1	44.2	46.2
119. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.7	55.7	57.7	0.0	No Change	58.2	0.5	Negligible Adverse	45.7	43.9	46.1
12. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.3	55.5	57.2	-0.1	Negligible Beneficial	57.8	0.5	Negligible Adverse	45.3	43.7	45.8

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
120. FAIRVIEW CIRCLE, DANESTONE	Dwelling	58.0	55.9	57.9	-0.1	Negligible Beneficial	58.1	0.1	Negligible Adverse	45.9	44.0	46.0
121. FAIRVIEW CIRCLE, DANESTONE	Dwelling	54.7	53.7	54.5	-0.2	Negligible Beneficial	55.0	0.3	Negligible Adverse	43.0	42.1	43.2
122. FAIRVIEW CIRCLE, DANESTONE	Dwelling	56.7	55.1	56.6	-0.1	Negligible Beneficial	56.9	0.2	Negligible Adverse	44.8	43.3	44.9
123. FAIRVIEW CIRCLE, DANESTONE	Dwelling	55.5	54.9	55.6	-0.1	Negligible Beneficial	55.9	0.4	Negligible Adverse	43.7	43.1	44.0
124. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.1	55.3	57.0	-0.1	Negligible Beneficial	57.3	0.2	Negligible Adverse	45.1	43.5	45.3
125. FAIRVIEW CIRCLE, DANESTONE	Dwelling	55.6	55.3	55.5	-0.1	Negligible Beneficial	56.3	0.7	Negligible Adverse	43.8	43.5	44.4
126. FAIRVIEW CIRCLE, DANESTONE	Dwelling	55.6	53.6	55.5	-0.1	Negligible Beneficial	55.8	0.2	Negligible Adverse	43.8	42.0	44.0
127. FAIRVIEW CIRCLE, DANESTONE	Dwelling	55.6	55.2	55.5	-0.1	Negligible Beneficial	56.2	0.6	Negligible Adverse	43.8	43.4	44.3
128. FAIRVIEW CIRCLE, DANESTONE	Dwelling	56.6	54.8	56.5	-0.1	Negligible Beneficial	56.8	0.2	Negligible Adverse	44.7	43.1	44.9
130. FAIRVIEW CIRCLE, DANESTONE	Dwelling	55.3	58.2	55.2	-0.1	Negligible Beneficial	57.0	1.7	Negligible Adverse	43.5	46.1	45.0
132. FAIRVIEW CIRCLE, DANESTONE	Dwelling	56.4	59.7	56.3	-0.1	Negligible Beneficial	56.3	1.9	Negligible Adverse	44.5	47.5	46.2
134. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.1	61.0	57.0	-0.1	Negligible Beneficial	59.3	2.2	Negligible Adverse	45.1	48.6	47.1
136. FAIRVIEW CIRCLE, DANESTONE	Dwelling	55.2	54.3	55.1	-0.1	Negligible Beneficial	55.6	0.4	Negligible Adverse	43.4	42.6	43.8
138. FAIRVIEW CIRCLE, DANESTONE	Dwelling	54.8	53.5	54.7	-0.1	Negligible Beneficial	55.1	0.3	Negligible Adverse	43.1	41.9	43.3
14. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.4	55.6	57.3	-0.1	Negligible Beneficial	57.9	0.5	Negligible Adverse	45.4	43.8	45.8
140. FAIRVIEW CIRCLE, DANESTONE	Dwelling	55.1	53.6	55.0	-0.1	Negligible Beneficial	55.4	0.3	Negligible Adverse	43.3	42.0	43.6
142. FAIRVIEW CIRCLE, DANESTONE	Dwelling	52.6	51.7	52.5	-0.1	Negligible Beneficial	53.2	0.6	Negligible Adverse	41.1	40.3	41.6
144. FAIRVIEW CIRCLE, DANESTONE	Dwelling	52.9	51.7	52.8	-0.1	Negligible Beneficial	53.4	0.5	Negligible Adverse	41.3	40.3	41.8
146. FAIRVIEW CIRCLE, DANESTONE	Dwelling	53.6	54.7	53.5	-0.1	Negligible Beneficial	54.6	1.0	Negligible Adverse	42.0	43.0	42.9
148. FAIRVIEW CIRCLE, DANESTONE	Dwelling	54.9	56.7	54.7	-0.2	Negligible Beneficial	56.1	1.2	Negligible Adverse	43.1	44.8	44.2
15. FAIRVIEW CIRCLE, DANESTONE	Dwelling	58.0	56.1	58.0	0.0	No Change	58.5	0.5	Negligible Adverse	45.9	44.2	46.4
150. FAIRVIEW CIRCLE, DANESTONE	Dwelling	54.9	56.8	54.7	-0.2	Negligible Beneficial	56.1	1.2	Negligible Adverse	43.1	44.9	44.2
152. FAIRVIEW CIRCLE, DANESTONE	Dwelling	55.1	57.0	54.9	-0.2	Negligible Beneficial	56.4	1.3	Negligible Adverse	43.3	45.0	44.5
154. FAIRVIEW CIRCLE, DANESTONE	Dwelling	55.1	57.1	55.0	-0.1	Negligible Beneficial	56.4	1.3	Negligible Adverse	43.3	45.1	44.5
156. FAIRVIEW CIRCLE, DANESTONE	Dwelling	55.0	57.1	55.0	-0.1	Negligible Beneficial	56.4	1.3	Negligible Adverse	43.3	45.1	44.5
158. FAIRVIEW CIRCLE, DANESTONE	Dwelling	54.3	56.2	54.2	-0.1	Negligible Beneficial	55.8	1.5	Negligible Adverse	42.6	44.3	43.8
16. FAIRVIEW CIRCLE, DANESTONE	Dwelling	58.3	56.5	58.3	0.0	No Change	58.8	0.5	Negligible Adverse	46.2	44.6	46.7
160. FAIRVIEW CIRCLE, DANESTONE	Dwelling	54.9	57.0	54.8	-0.1	Negligible Beneficial	56.2	1.3	Negligible Adverse	43.1	45.0	44.3
162. FAIRVIEW CIRCLE, DANESTONE	Dwelling	56.6	58.9	56.5	-0.1	Negligible Beneficial	58.0	1.4	Negligible Adverse	44.7	46.7	45.9
17. FAIRVIEW CIRCLE, DANESTONE	Dwelling	58.0	56.1	58.0	0.0	No Change	58.5	0.5	Negligible Adverse	45.9	44.2	46.4
18. FAIRVIEW CIRCLE, DANESTONE	Dwelling	61.1	59.3	61.0	-0.1	Negligible Beneficial	61.6	0.5	Negligible Adverse	48.7	47.1	49.2
19. FAIRVIEW CIRCLE, DANESTONE	Dwelling	58.0	56.1	58.0	0.0	No Change	58.5	0.5	Negligible Adverse	45.9	44.2	46.4
2. FAIRVIEW CIRCLE, DANESTONE	Dwelling	56.3	58.1	56.3	0.0	No Change	57.5	1.2	Negligible Adverse	44.4	46.0	45.5
20. FAIRVIEW CIRCLE, DANESTONE	Dwelling	61.2	59.5	61.2	0.0	No Change	61.8	0.6	Negligible Adverse	48.8	47.3	49.4
21. FAIRVIEW CIRCLE, DANESTONE	Dwelling	60.1	58.3	60.0	-0.1	Negligible Beneficial	60.6	0.5	Negligible Adverse	47.8	46.2	48.3
22. FAIRVIEW CIRCLE, DANESTONE	Dwelling	64.9	63.1	64.8	-0.1	Negligible Beneficial	65.4	0.5	Negligible Adverse	52.1	50.5	52.6
23. FAIRVIEW CIRCLE, DANESTONE	Dwelling	60.1	58.3	60.1	0.0	No Change	60.6	0.5	Negligible Adverse	47.8	46.2	48.3
24. FAIRVIEW CIRCLE, DANESTONE	Dwelling	66.9	65.1	66.9	0.0	No Change	67.4	0.5	Negligible Adverse	53.9	52.3	54.4
25. FAIRVIEW CIRCLE, DANESTONE	Dwelling	60.3	58.5	60.2	-0.1	Negligible Beneficial	60.8	0.5	Negligible Adverse	48.0	46.4	48.5
26. FAIRVIEW CIRCLE, DANESTONE	Dwelling	67.4	65.6	67.3	-0.1	Negligible Beneficial	67.9	0.5	Negligible Adverse	54.4	52.8	54.8
27. FAIRVIEW CIRCLE, DANESTONE	Dwelling	61.2	59.3	61.1	-0.1	Negligible Beneficial	61.7	0.5	Negligible Adverse	48.8	47.1	49.3
28. FAIRVIEW CIRCLE, DANESTONE	Dwelling	67.4	65.6	67.3	-0.1	Negligible Beneficial	67.9	0.5	Negligible Adverse	54.4	52.8	54.8
29. FAIRVIEW CIRCLE, DANESTONE	Dwelling	59.6	57.8	59.5	-0.1	Negligible Beneficial	60.1	0.5	Negligible Adverse	47.4	45.8	47.8
3. FAIRVIEW CIRCLE, DANESTONE	Dwelling	58.0	56.1	58.0	0.0	No Change	58.5	0.5	Negligible Adverse	45.9	44.2	46.4
30. FAIRVIEW CIRCLE, DANESTONE	Dwelling	69.9	68.2	69.8	-0.1	Negligible Beneficial	70.5	0.6	Negligible Adverse	56.6	55.1	57.2
31. FAIRVIEW CIRCLE, DANESTONE	Dwelling	61.5	59.7	61.5	0.0	No Change	62.0	0.5	Negligible Adverse	49.1	47.5	49.5
32. FAIRVIEW CIRCLE, DANESTONE	Dwelling	69.9	68.1	69.8	-0.1	Negligible Beneficial	70.5	0.6	Negligible Adverse	56.6	55.0	57.2
33. FAIRVIEW CIRCLE, DANESTONE	Dwelling	61.9	60.0	61.8	-0.1	Negligible Beneficial	62.4	0.5	Negligible Adverse	49.4	47.7	49.9
34. FAIRVIEW CIRCLE, DANESTONE	Dwelling	74.5	72.7	74.4	-0.1	Negligible Beneficial	75.0	0.5	Negligible Adverse	60.8	59.2	61.2
35. FAIRVIEW CIRCLE, DANESTONE	Dwelling	62.3	60.3	62.2	-0.1	Negligible Beneficial	62.7	0.4	Negligible Adverse	49.8	48.0	50.2
36. FAIRVIEW CIRCLE, DANESTONE	Dwelling	74.5	72.7	74.4	-0.1	Negligible Beneficial	75.0	0.5	Negligible Adverse	60.8	59.2	61.2
37. FAIRVIEW CIRCLE, DANESTONE	Dwelling	61.6	59.6	61.5	-0.1	Negligible Beneficial	62.0	0.4	Negligible Adverse	49.2	47.4	49.5
38. FAIRVIEW CIRCLE, DANESTONE	Dwelling	72.7	70.9	72.6	-0.1	Negligible Beneficial	73.2	0.5	Negligible Adverse	59.2	57.5	59.6
39. FAIRVIEW CIRCLE, DANESTONE	Dwelling	61.6	59.6	61.5	-0.1	Negligible Beneficial	62.0	0.4	Negligible Adverse	49.2	47.4	49.5
4. FAIRVIEW CIRCLE, DANESTONE	Dwelling	53.8	52.9	53.7	-0.1	Negligible Beneficial	54.5	0.7	Negligible Adverse	42.2	41.3	42.8
40. FAIRVIEW CIRCLE, DANESTONE	Dwelling	72.7	70.9	72.6	-0.1	Negligible Beneficial	73.2	0.5	Negligible Adverse	59.2	57.5	59.6
41. FAIRVIEW CIRCLE, DANESTONE	Dwelling	61.2	59.1	61.1	-0.1	Negligible Beneficial	61.5	0.3	Negligible Adverse	48.8	46.9	49.1
42. FAIRVIEW CIRCLE, DANESTONE	Dwelling	72.7	70.9	72.7	0.0	No Change	73.2	0.5	Negligible Adverse	59.2	57.5	59.6
43. FAIRVIEW CIRCLE, DANESTONE	Dwelling	60.9	58.8	60.9	0.0	No Change	61.3	0.4	Negligible Adverse	48.5	46.7	48.9
44. FAIRVIEW CIRCLE, DANESTONE	Dwelling	72.7	70.9	72.7	0.0	No Change	73.2	0.5	Negligible Adverse	59.2	57.5	59.6
45. FAIRVIEW CIRCLE, DANESTONE	Dwelling	62.1	59.9	62.1	0.0	No Change	62.5	0.4	Negligible Adverse	49.6	47.6	50.0
46. FAIRVIEW CIRCLE, DANESTONE	Dwelling	69.7	67.9	69.6	-0.1	Negligible Beneficial	70.2	0.5	Negligible Adverse	56.5	54.8	56.9
47. FAIRVIEW CIRCLE, DANESTONE	Dwelling	62.7	60.4	62.7	0.0	No Change	63.1	0.4	Negligible Adverse	50.2	48.1	50.5
48. FAIRVIEW CIRCLE, DANESTONE	Dwelling	70.0	68.2	70.0	0.0	No Change	70.5	0.5	Negligible Adverse	56.7	55.1	57.2
49. FAIRVIEW CIRCLE, DANESTONE	Dwelling	62.6	60.3	62.6	0.0	No Change	62.9	0.3	Negligible Adverse	50.1	48.0	50.3
5. FAIRVIEW CIRCLE, DANESTONE	Dwelling	58.0	56.0	58.0	0.0	No Change	58.5	0.5	Negligible Adverse	45.9	44.2	46.4
50. FAIRVIEW CIRCLE, DANESTONE	Dwelling	70.3	68.5	70.2	-0.1	Negligible Beneficial	70.8	0.5	Negligible Adverse	57.0	55.4	57.5
51. FAIRVIEW CIRCLE, DANESTONE	Dwelling	63.0	60.6	63.0	0.0	No Change	63.3	0.3	Negligible Adverse	50.4	48.3	50.7
52. FAIRVIEW CIRCLE, DANESTONE	Dwelling	70.9	69.1	70.9	0.0	No Change	71.4	0.5	Negligible Adverse	57.5	55.9	58.0
53. FAIRVIEW CIRCLE, DANESTONE	Dwelling	62.2	59.8	62.1	-0.1	Negligible Beneficial	62.5	0.3	Negligible Adverse	49.7	47.6	50.0
54. FAIRVIEW CIRCLE, DANESTONE	Dwelling	73.4	71.6	73.4	0.0	No Change	73.9	0.5	Negligible Adverse	59.8	58.2	60.2
55. FAIRVIEW CIRCLE, DANESTONE	Dwelling	63.5	61.1	63.5	0.0	No Change	63.8	0.3	Negligible Adverse	50.9	48.7	51.2
56. FAIRVIEW CIRCLE, DANESTONE	Dwelling	74.0	72.1	74.0	0.0	No Change	74.5	0.5	Negligible Adverse	60.3	58.6	60.8
57. FAIRVIEW CIRCLE, DANESTONE	Dwelling	62.8	60.3	62.8	0.0	No Change	63.1	0.3	Negligible Adverse	50.3	48.0	50.5
58. FAIRVIEW CIRCLE, DANESTONE	Dwelling	72.5	70.5	72.4	-0.1	Negligible Beneficial	72.9	0.4	Negligible Adverse	59.0	57.2	59.3
59. FAIRVIEW CIRCLE, DANESTONE	Dwelling	61.1	58.7	61.1	0.0	No Change	61.3	0.2	Negligible Adverse	48.7	46.6	48.9
6. FAIRVIEW CIRCLE, DANESTONE	Dwelling	54.3	53.3	54.3	0.0	No Change	55.0	0.7	Negligible Adverse	42.6	41.7	43.2
60. FAIRVIEW CIRCLE, DANESTONE	Dwelling	73.1	71.2	73.1	0.0	No Change	73.6	0.5	Negligible Adverse	59.5	57.8	60.0
61. FAIRVIEW CIRCLE, DANESTONE	Dwelling	60.3	57.7	60.2	-0.1	Negligible Beneficial	60.5	0.2	Negligible Adverse	48.0	45.7	48.2
62. FAIRVIEW CIRCLE, DANESTONE	Dwelling	72.7	70.7	72.6	-0.1	Negligible Beneficial	73.1	0.4	Negligible Adverse	59.2	57.4	59.5
63. FAIRVIEW CIRCLE, DANESTONE	Dwelling	69.9	68.5	69.8	-0.1	Negligible Beneficial	70.1	0.2	Negligible Adverse	48.5	46.4	48.7
64. FAIRVIEW CIRCLE, DANESTONE	Dwelling	72.2	70.3	72.1	-0.1	Negligible Beneficial	72.6	0.4	Negligible Adverse	58.7	57.0	59.1
65. FAIRVIEW CIRCLE, DANESTONE	Dwelling	61.1	58.7	61.0	-0.1	Negligible Beneficial	61.3	0.2	Negligible Adverse	48.7	46.6	48.9

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
66. FAIRVIEW CIRCLE, DANESTONE	Dwelling	70.1	67.6	70.1	0.0	No Change	70.4	0.3	Negligible Adverse	56.8	54.6	57.1
67. FAIRVIEW CIRCLE, DANESTONE	Dwelling	60.9	58.6	60.8	-0.1	Negligible Beneficial	61.1	0.2	Negligible Adverse	48.5	46.5	48.7
68. FAIRVIEW CIRCLE, DANESTONE	Dwelling	71.1	68.7	71.1	0.0	No Change	71.5	0.4	Negligible Adverse	57.7	55.6	58.1
69. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.4	55.0	57.4	0.0	No Change	57.7	0.3	Negligible Adverse	45.4	43.2	45.7
7. FAIRVIEW CIRCLE, DANESTONE	Dwelling	58.0	56.1	58.0	0.0	No Change	58.5	0.5	Negligible Adverse	45.9	44.2	46.4
70. FAIRVIEW CIRCLE, DANESTONE	Dwelling	71.2	68.8	71.2	-0.1	Negligible Beneficial	71.6	0.3	Negligible Adverse	57.9	55.7	58.2
71. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.4	55.0	57.4	0.0	No Change	57.7	0.3	Negligible Adverse	45.4	43.2	45.7
72. FAIRVIEW CIRCLE, DANESTONE	Dwelling	70.8	68.3	70.8	0.0	No Change	71.1	0.3	Negligible Adverse	57.5	55.2	57.7
73. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.7	55.2	57.6	-0.1	Negligible Beneficial	58.0	0.3	Negligible Adverse	45.7	43.4	45.9
74. FAIRVIEW CIRCLE, DANESTONE	Dwelling	76.1	73.4	76.1	0.0	No Change	76.4	0.3	Negligible Adverse	62.2	59.8	62.5
75. FAIRVIEW CIRCLE, DANESTONE	Dwelling	54.1	53.4	53.9	-0.2	Negligible Beneficial	54.6	0.5	Negligible Adverse	42.4	41.8	42.9
76. FAIRVIEW CIRCLE, DANESTONE	Dwelling	76.2	73.4	76.2	0.0	No Change	76.4	0.2	Negligible Adverse	62.3	59.8	62.5
77. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.6	55.4	57.6	0.0	No Change	58.0	0.4	Negligible Adverse	45.6	43.6	45.9
78. FAIRVIEW CIRCLE, DANESTONE	Dwelling	76.3	73.5	76.3	0.0	No Change	76.5	0.2	Negligible Adverse	62.4	59.9	62.6
79. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.6	55.4	57.6	0.0	No Change	58.0	0.4	Negligible Adverse	45.6	43.6	45.9
8. FAIRVIEW CIRCLE, DANESTONE	Dwelling	53.6	52.4	53.5	-0.1	Negligible Beneficial	54.2	0.6	Negligible Adverse	42.0	40.9	42.5
80. FAIRVIEW CIRCLE, DANESTONE	Dwelling	73.1	70.0	73.0	-0.1	Negligible Beneficial	73.2	0.1	Negligible Adverse	59.5	56.7	59.6
81. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.6	55.4	57.6	0.0	No Change	58.0	0.4	Negligible Adverse	45.6	43.6	45.9
82. FAIRVIEW CIRCLE, DANESTONE	Dwelling	73.1	70.0	73.0	-0.1	Negligible Beneficial	73.2	0.1	Negligible Adverse	59.5	56.7	59.6
83. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.6	55.4	57.6	0.0	No Change	58.0	0.4	Negligible Adverse	45.6	43.6	45.9
84. FAIRVIEW CIRCLE, DANESTONE	Dwelling	73.1	70.0	73.0	-0.1	Negligible Beneficial	73.2	0.1	Negligible Adverse	59.5	56.7	59.6
85. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.6	55.4	57.6	0.0	No Change	58.0	0.4	Negligible Adverse	45.6	43.6	45.9
86. FAIRVIEW CIRCLE, DANESTONE	Dwelling	73.1	70.0	73.0	-0.1	Negligible Beneficial	73.2	0.1	Negligible Adverse	59.5	56.7	59.6
87. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.6	55.4	57.6	0.0	No Change	58.0	0.4	Negligible Adverse	45.6	43.6	45.9
88. FAIRVIEW CIRCLE, DANESTONE	Dwelling	73.1	70.0	73.0	-0.1	Negligible Beneficial	73.2	0.1	Negligible Adverse	59.5	56.7	59.6
89. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.6	55.4	57.6	0.0	No Change	58.0	0.4	Negligible Adverse	45.6	43.6	45.9
9. FAIRVIEW CIRCLE, DANESTONE	Dwelling	58.0	56.1	58.0	0.0	No Change	58.5	0.5	Negligible Adverse	45.9	44.2	46.4
90. FAIRVIEW CIRCLE, DANESTONE	Dwelling	73.1	70.0	73.0	-0.1	Negligible Beneficial	73.2	0.1	Negligible Adverse	59.5	56.7	59.6
91. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.6	55.4	57.6	0.0	No Change	58.0	0.4	Negligible Adverse	45.6	43.6	45.9
92. FAIRVIEW CIRCLE, DANESTONE	Dwelling	59.3	56.7	59.2	-0.1	Negligible Beneficial	59.6	0.3	Negligible Adverse	47.1	44.8	47.4
93. FAIRVIEW CIRCLE, DANESTONE	Dwelling	57.6	55.4	57.6	0.0	No Change	58.0	0.4	Negligible Adverse	45.6	43.6	45.9
94. FAIRVIEW CIRCLE, DANESTONE	Dwelling	64.1	61.2	64.1	0.0	No Change	64.3	0.2	Negligible Adverse	51.4	48.8	51.6
95. FAIRVIEW CIRCLE, DANESTONE	Dwelling	55.8	54.4	55.6	-0.2	Negligible Beneficial	56.0	0.2	Negligible Adverse	44.0	42.7	44.1
96. FAIRVIEW CIRCLE, DANESTONE	Dwelling	64.3	61.3	64.3	0.0	No Change	64.5	0.2	Negligible Adverse	51.6	48.9	51.8
97. FAIRVIEW CIRCLE, DANESTONE	Dwelling	56.0	55.0	55.9	-0.1	Negligible Beneficial	56.3	0.3	Negligible Adverse	44.1	43.2	44.4
98. FAIRVIEW CIRCLE, DANESTONE	Dwelling	74.4	71.4	74.4	0.0	No Change	74.6	0.2	Negligible Adverse	60.7	58.0	60.9
99. FAIRVIEW CIRCLE, DANESTONE	Dwelling	54.9	54.6	54.7	-0.2	Negligible Beneficial	55.5	0.6	Negligible Adverse	43.1	42.9	43.7
EAST COTTAGE, 122 FAIRVIEW CRESCENT, DANESTONE	Dwelling	72.2	72.9	72.5	0.3	Negligible Adverse	74.4	2.2	Negligible Adverse	58.7	59.3	60.7
WESTDYKE, 124 FAIRVIEW CRESCENT, DANESTONE	Dwelling	71.1	71.8	71.4	0.3	Negligible Adverse	73.4	2.3	Negligible Adverse	57.7	58.4	59.8
1. FAIRVIEW CRESCENT, DANESTONE	Dwelling	62.9	66.1	63.1	0.2	Negligible Adverse	65.2	2.3	Negligible Adverse	50.3	53.2	52.4
10. FAIRVIEW CRESCENT, DANESTONE	Dwelling	59.7	60.2	59.6	0.0	Negligible Beneficial	60.5	0.8	Negligible Adverse	47.9	47.9	48.2
100. FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.0	67.4	67.3	0.3	Negligible Adverse	68.8	1.8	Negligible Adverse	54.0	54.4	55.7
101. FAIRVIEW CRESCENT, DANESTONE	Dwelling	53.1	53.5	53.1	0.0	No Change	53.7	0.6	Negligible Adverse	41.5	41.9	42.1
102. FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.0	67.4	67.3	0.3	Negligible Adverse	68.8	1.8	Negligible Adverse	54.0	54.4	55.7
103. FAIRVIEW CRESCENT, DANESTONE	Dwelling	56.4	57.2	56.5	0.1	Negligible Adverse	57.2	0.8	Negligible Adverse	44.5	45.2	45.2
104. FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.0	67.3	67.3	0.3	Negligible Adverse	68.7	1.7	Negligible Adverse	54.0	54.3	55.6
105. FAIRVIEW CRESCENT, DANESTONE	Dwelling	58.3	60.1	58.2	-0.1	Negligible Beneficial	59.3	1.0	Negligible Adverse	46.2	47.8	47.1
106. FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.0	67.3	67.3	0.3	Negligible Adverse	68.7	1.7	Negligible Adverse	54.0	54.3	55.6
108. FAIRVIEW CRESCENT, DANESTONE	Dwelling	68.5	69.0	68.8	0.3	Negligible Adverse	70.4	1.9	Negligible Adverse	55.4	55.8	57.1
11. FAIRVIEW CRESCENT, DANESTONE	Dwelling	56.0	56.4	55.9	0.1	Negligible Beneficial	56.4	0.4	Negligible Adverse	44.1	44.5	44.5
110. FAIRVIEW CRESCENT, DANESTONE	Dwelling	68.1	68.6	68.4	0.3	Negligible Adverse	70.1	2.0	Negligible Adverse	55.0	55.5	56.8
112. FAIRVIEW CRESCENT, DANESTONE	Dwelling	68.9	69.4	69.2	0.3	Negligible Adverse	70.9	2.0	Negligible Adverse	55.7	56.2	57.5
114. FAIRVIEW CRESCENT, DANESTONE	Dwelling	68.7	69.3	69.0	0.3	Negligible Adverse	70.8	2.1	Negligible Adverse	55.6	56.1	57.5
116. FAIRVIEW CRESCENT, DANESTONE	Dwelling	68.5	69.1	68.8	0.3	Negligible Adverse	70.5	2.0	Negligible Adverse	55.4	55.9	57.2
118. FAIRVIEW CRESCENT, DANESTONE	Dwelling	68.3	68.9	68.6	0.3	Negligible Adverse	70.3	2.0	Negligible Adverse	55.2	55.7	57.0
12. FAIRVIEW CRESCENT, DANESTONE	Dwelling	62.2	64.3	62.3	0.1	Negligible Beneficial	63.8	1.6	Negligible Adverse	49.7	51.6	51.2
120. FAIRVIEW CRESCENT, DANESTONE	Dwelling	68.4	68.9	68.7	0.3	Negligible Adverse	70.4	2.0	Negligible Adverse	55.3	55.7	57.1
126. FAIRVIEW CRESCENT, DANESTONE	Dwelling	71.8	72.5	72.1	0.3	Negligible Adverse	74.0	2.2	Negligible Adverse	58.4	59.0	60.3
14. FAIRVIEW CRESCENT, DANESTONE	Dwelling	62.6	64.6	62.6	0.0	No Change	64.2	1.6	Negligible Adverse	50.1	51.9	51.5
142. FAIRVIEW CRESCENT, DANESTONE	Dwelling	60.5	61.1	60.8	0.3	Negligible Adverse	62.6	2.1	Negligible Adverse	48.2	48.7	50.1
144. FAIRVIEW CRESCENT, DANESTONE	Dwelling	60.5	61.1	60.8	0.3	Negligible Adverse	62.6	2.1	Negligible Adverse	48.2	48.7	50.1
146. FAIRVIEW CRESCENT, DANESTONE	Dwelling	60.5	61.1	60.8	0.3	Negligible Adverse	62.6	2.1	Negligible Adverse	48.2	48.7	50.1
148. FAIRVIEW CRESCENT, DANESTONE	Dwelling	60.5	61.1	60.8	0.3	Negligible Adverse	62.6	2.1	Negligible Adverse	48.2	48.7	50.1
15. FAIRVIEW CRESCENT, DANESTONE	Dwelling	58.7	58.9	58.8	0.1	Negligible Beneficial	59.6	0.9	Negligible Adverse	46.6	46.7	47.4
150. FAIRVIEW CRESCENT, DANESTONE	Dwelling	60.5	61.1	60.8	0.3	Negligible Adverse	62.6	2.1	Negligible Adverse	48.2	48.7	50.1
152. FAIRVIEW CRESCENT, DANESTONE	Dwelling	60.5	61.1	60.8	0.3	Negligible Adverse	62.6	2.1	Negligible Adverse	48.2	48.7	50.1
154. FAIRVIEW CRESCENT, DANESTONE	Dwelling	60.5	61.1	60.8	0.3	Negligible Adverse	62.6	2.1	Negligible Adverse	48.2	48.7	50.1
156. FAIRVIEW CRESCENT, DANESTONE	Dwelling	60.5	61.1	60.8	0.3	Negligible Adverse	62.6	2.1	Negligible Adverse	48.2	48.7	50.1
158. FAIRVIEW CRESCENT, DANESTONE	Dwelling	60.5	61.1	60.8	0.3	Negligible Adverse	62.6	2.1	Negligible Adverse	48.2	48.7	50.1
16. FAIRVIEW CRESCENT, DANESTONE	Dwelling	60.9	62.7	60.8	0.1	Negligible Beneficial	62.3	1.4	Negligible Adverse	48.5	50.2	49.8
160. FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.1	57.4	57.3	-0.2	Negligible Adverse	58.9	1.8	Negligible Adverse	45.1	45.4	46.7
162. FAIRVIEW CRESCENT, DANESTONE	Dwelling	56.7	57.0	56.9	0.2	Negligible Adverse	58.5	1.8	Negligible Adverse	44.8	45.0	46.4
164. FAIRVIEW CRESCENT, DANESTONE	Dwelling	53.5	54.0	53.8	0.3	Negligible Adverse	55.4	1.9	Negligible Adverse	41.9	42.3	43.6
166. FAIRVIEW CRESCENT, DANESTONE	Dwelling	53.1	53.5	53.3	0.2	Negligible Adverse	54.5	1.4	Negligible Adverse	41.5	41.9	42.8
168. FAIRVIEW CRESCENT, DANESTONE	Dwelling	52.8	53.2	52.9	0.1	Negligible Adverse	54.1	1.3	Negligible Adverse	41.3	41.6	42.4
17. FAIRVIEW CRESCENT, DANESTONE	Dwelling	56.7	56.6	56.7	0.0	No Change	56.8	0.1	Negligible Beneficial	44.8	44.7	44.9
170. FAIRVIEW CRESCENT, DANESTONE	Dwelling	52.7	53.1	52.8	0.1	Negligible Beneficial	54.0	1.3	Negligible Adverse	41.2	41.5	42.3
172. FAIRVIEW CRESCENT, DANESTONE	Dwelling	52.8	53.3	52.9	0.1	Negligible Adverse	54.1	1.3	Negligible Adverse	41.3	41.7	42.4
174. FAIRVIEW CRESCENT, DANESTONE	Dwelling	51.3	51.7	51.3	0.0	No Change	52.4	1.1	Negligible Adverse	39.9	40.3	40.9
176. FAIRVIEW CRESCENT, DANESTONE	Dwelling	51.3	51.2	51.4	0.1	Negligible Adverse	52.7	1.4	Negligible Adverse	39.9	39.8	41.2
178. FAIRVIEW CRESCENT, DANESTONE	Dwelling	51.9	52.3	51.9	0.1	Negligible Adverse	52.5	0.6	Negligible Adverse	40.4	40.8	41.0
18. FAIRVIEW CRESCENT, DANESTONE	Dwelling	62.8	62.7	62.7	-0.1	Negligible Beneficial	63.7	0.9	Negligible Adverse	50.3	51.2	51.1
180. FAIRVIEW CRESCENT, DANESTONE	Dwelling	54.2	54.8	54.4	0.2	Negligible Adverse	54.8	0.6	Negligible Adverse	42.5	43.1	43.1

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
182 FAIRVIEW CRESCENT, DANESTONE	Dwelling	54.6	55.4	54.8	0.2	Negligible Adverse	55.2	0.6	Negligible Adverse	42.9	43.6	43.4
184 FAIRVIEW CRESCENT, DANESTONE	Dwelling	58.4	61.0	58.5	0.1	Negligible Adverse	59.9	1.5	Negligible Adverse	46.3	48.6	47.6
19 FAIRVIEW CRESCENT, DANESTONE	Dwelling	55.3	55.2	55.4	0.1	Negligible Adverse	55.4	0.1	Negligible Adverse	43.5	43.4	43.6
2 FAIRVIEW CRESCENT, DANESTONE	Dwelling	60.4	62.0	60.5	0.1	Negligible Adverse	61.7	1.3	Negligible Adverse	48.1	49.5	49.3
20 FAIRVIEW CRESCENT, DANESTONE	Dwelling	63.2	64.0	63.0	-0.2	Negligible Beneficial	63.9	0.7	Negligible Adverse	50.6	51.3	51.2
21 FAIRVIEW CRESCENT, DANESTONE	Dwelling	55.1	54.5	55.2	0.1	Negligible Adverse	54.9	-0.2	Negligible Beneficial	43.3	42.8	43.1
22 FAIRVIEW CRESCENT, DANESTONE	Dwelling	66.6	67.5	66.4	-0.2	Negligible Beneficial	67.2	0.6	Negligible Adverse	53.7	54.5	54.2
23 FAIRVIEW CRESCENT, DANESTONE	Dwelling	61.6	61.1	61.7	0.1	Negligible Adverse	61.8	0.2	Negligible Adverse	49.2	48.7	49.4
24 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.4	68.2	67.2	-0.2	Negligible Beneficial	67.9	0.5	Negligible Adverse	54.4	55.1	54.8
25 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.4	57.1	57.5	0.1	Negligible Adverse	57.8	0.4	Negligible Adverse	45.4	45.1	45.8
26 FAIRVIEW CRESCENT, DANESTONE	Dwelling	66.7	67.5	66.5	-0.2	Negligible Beneficial	67.2	0.5	Negligible Adverse	53.8	54.5	54.2
27 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.7	57.2	57.9	0.2	Negligible Adverse	57.9	0.2	Negligible Adverse	45.7	45.2	45.8
28 FAIRVIEW CRESCENT, DANESTONE	Dwelling	66.0	66.9	65.9	-0.1	Negligible Beneficial	66.8	0.6	Negligible Adverse	53.1	53.9	53.7
29 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.5	56.8	57.7	0.2	Negligible Adverse	57.6	0.1	Negligible Adverse	45.5	44.9	45.6
3 FAIRVIEW CRESCENT, DANESTONE	Dwelling	59.8	61.2	59.8	0.0	No Change	60.9	1.1	Negligible Adverse	47.6	48.8	48.5
30 FAIRVIEW CRESCENT, DANESTONE	Dwelling	66.6	67.4	66.5	-0.1	Negligible Beneficial	67.2	0.6	Negligible Adverse	53.7	54.4	54.2
31 FAIRVIEW CRESCENT, DANESTONE	Dwelling	56.7	55.8	56.9	0.2	Negligible Adverse	56.5	-0.2	Negligible Beneficial	44.8	44.0	44.6
32 FAIRVIEW CRESCENT, DANESTONE	Dwelling	54.9	55.7	54.8	-0.1	Negligible Beneficial	55.5	0.6	Negligible Adverse	43.1	43.9	43.7
33 FAIRVIEW CRESCENT, DANESTONE	Dwelling	55.6	55.6	55.7	0.1	Negligible Adverse	56.6	1.0	Negligible Adverse	43.8	43.8	44.7
34 FAIRVIEW CRESCENT, DANESTONE	Dwelling	56.3	56.9	56.2	-0.1	Negligible Beneficial	56.9	0.6	Negligible Adverse	44.4	44.9	44.9
35 FAIRVIEW CRESCENT, DANESTONE	Dwelling	55.7	55.8	55.9	0.2	Negligible Adverse	56.9	1.2	Negligible Adverse	43.9	44.0	44.9
36 FAIRVIEW CRESCENT, DANESTONE	Dwelling	56.5	56.6	56.4	-0.1	Negligible Beneficial	56.4	-0.1	Negligible Beneficial	44.6	44.7	44.5
37 FAIRVIEW CRESCENT, DANESTONE	Dwelling	56.4	56.7	56.7	0.3	Negligible Adverse	58.0	1.6	Negligible Adverse	44.5	44.8	45.9
38 FAIRVIEW CRESCENT, DANESTONE	Dwelling	63.2	62.8	63.3	0.1	Negligible Beneficial	63.3	0.1	Negligible Beneficial	50.6	50.3	50.7
39 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.3	57.5	57.5	0.2	Negligible Adverse	59.0	1.7	Negligible Adverse	45.3	46.8	46.8
4 FAIRVIEW CRESCENT, DANESTONE	Dwelling	62.0	62.0	62.0	0.0	No Change	62.0	0.0	Negligible Adverse	49.0	50.6	50.6
40 FAIRVIEW CRESCENT, DANESTONE	Dwelling	62.9	62.4	62.9	0.0	No Change	62.8	-0.1	Negligible Beneficial	50.3	49.9	50.3
41 FAIRVIEW CRESCENT, DANESTONE	Dwelling	58.6	58.6	58.8	0.2	Negligible Adverse	59.8	1.2	Negligible Adverse	46.5	46.5	47.6
42 FAIRVIEW CRESCENT, DANESTONE	Dwelling	64.0	63.6	64.0	0.0	No Change	63.9	-0.1	Negligible Beneficial	51.3	51.0	51.2
43 FAIRVIEW CRESCENT, DANESTONE	Dwelling	58.6	58.6	58.8	0.2	Negligible Adverse	59.8	1.2	Negligible Adverse	46.5	46.5	47.6
44 FAIRVIEW CRESCENT, DANESTONE	Dwelling	66.0	65.6	65.9	-0.1	Negligible Beneficial	65.7	-0.3	Negligible Beneficial	53.1	52.8	52.9
45 FAIRVIEW CRESCENT, DANESTONE	Dwelling	56.3	56.0	56.5	0.2	Negligible Adverse	57.1	0.8	Negligible Adverse	44.4	44.1	45.1
46 FAIRVIEW CRESCENT, DANESTONE	Dwelling	69.6	70.2	69.4	-0.2	Negligible Beneficial	69.9	0.3	Negligible Adverse	56.4	56.9	56.6
47 FAIRVIEW CRESCENT, DANESTONE	Dwelling	58.7	58.3	58.9	0.2	Negligible Adverse	59.4	0.7	Negligible Adverse	46.6	46.2	47.2
48 FAIRVIEW CRESCENT, DANESTONE	Dwelling	70.5	69.6	70.7	0.2	Negligible Adverse	69.9	-0.6	Negligible Beneficial	57.2	56.4	56.6
49 FAIRVIEW CRESCENT, DANESTONE	Dwelling	55.4	55.3	55.6	0.2	Negligible Adverse	56.4	1.0	Negligible Adverse	43.6	43.5	44.5
5 FAIRVIEW CRESCENT, DANESTONE	Dwelling	60.8	61.9	60.8	0.0	No Change	61.7	0.9	Negligible Adverse	48.5	49.4	49.3
50 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.5	66.7	67.7	0.2	Negligible Adverse	66.9	-0.6	Negligible Beneficial	54.5	53.8	53.9
51 FAIRVIEW CRESCENT, DANESTONE	Dwelling	55.4	55.3	55.6	0.2	Negligible Adverse	56.4	1.0	Negligible Adverse	43.6	43.5	44.5
52 FAIRVIEW CRESCENT, DANESTONE	Dwelling	66.9	66.1	67.1	0.2	Negligible Adverse	66.4	-0.5	Negligible Beneficial	53.9	53.2	53.5
53 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.4	57.6	57.6	0.2	Negligible Adverse	59.3	1.9	Negligible Adverse	45.4	45.8	47.1
54 FAIRVIEW CRESCENT, DANESTONE	Dwelling	65.7	64.6	65.9	0.2	Negligible Adverse	65.1	-0.6	Negligible Beneficial	52.9	51.9	52.3
55 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.4	57.9	57.6	0.2	Negligible Adverse	59.3	1.9	Negligible Adverse	45.4	45.8	47.1
56 FAIRVIEW CRESCENT, DANESTONE	Dwelling	65.2	64.5	65.4	0.2	Negligible Adverse	64.9	-0.3	Negligible Beneficial	52.4	51.8	52.1
57 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.4	57.9	57.6	0.2	Negligible Adverse	59.3	1.9	Negligible Adverse	45.4	45.8	47.1
58 FAIRVIEW CRESCENT, DANESTONE	Dwelling	65.1	64.0	65.3	0.2	Negligible Adverse	64.6	-0.5	Negligible Beneficial	52.3	51.3	51.9
59 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.4	57.9	57.6	0.2	Negligible Adverse	59.3	1.9	Negligible Adverse	45.4	45.8	47.1
6 FAIRVIEW CRESCENT, DANESTONE	Dwelling	59.4	59.8	59.3	-0.1	Negligible Beneficial	59.7	0.3	Negligible Adverse	47.2	47.6	47.5
6 FAIRVIEW CRESCENT, DANESTONE	Dwelling	59.3	59.9	59.2	-0.1	Negligible Beneficial	59.8	0.5	Negligible Adverse	47.1	47.6	47.6
60 FAIRVIEW CRESCENT, DANESTONE	Dwelling	66.0	65.3	66.2	0.2	Negligible Adverse	66.2	0.2	Negligible Adverse	53.1	52.5	53.3
61 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.4	57.9	57.6	0.2	Negligible Adverse	59.3	1.9	Negligible Adverse	45.4	45.8	47.1
62 FAIRVIEW CRESCENT, DANESTONE	Dwelling	64.9	64.2	65.2	0.3	Negligible Adverse	65.1	0.2	Negligible Adverse	52.1	51.5	52.3
63 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.4	57.9	57.6	0.2	Negligible Adverse	59.3	1.9	Negligible Adverse	45.4	45.8	47.1
64 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.5	67.1	67.8	0.3	Negligible Adverse	68.1	0.6	Negligible Adverse	54.5	54.1	55.0
65 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.4	57.9	57.6	0.2	Negligible Adverse	59.3	1.9	Negligible Adverse	45.4	45.8	47.1
66 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.5	67.1	67.8	0.3	Negligible Adverse	68.1	0.6	Negligible Adverse	54.5	54.1	55.0
67 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.4	57.9	57.6	0.2	Negligible Adverse	59.3	1.9	Negligible Adverse	45.4	45.8	47.1
68 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.6	67.3	67.9	0.3	Negligible Adverse	68.4	0.8	Negligible Adverse	54.6	54.3	55.3
69 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.4	57.9	57.6	0.2	Negligible Adverse	59.3	1.9	Negligible Adverse	45.4	45.8	47.1
7 FAIRVIEW CRESCENT, DANESTONE	Dwelling	56.5	56.6	56.6	0.1	Negligible Adverse	57.5	1.0	Negligible Adverse	44.6	45.7	45.5
70 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.6	67.3	67.9	0.3	Negligible Adverse	68.4	0.8	Negligible Adverse	54.6	54.3	55.3
71 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.3	57.8	57.6	0.3	Negligible Adverse	59.1	1.8	Negligible Adverse	45.3	45.8	46.9
72 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.7	67.2	68.0	0.3	Negligible Adverse	68.3	0.6	Negligible Adverse	54.7	54.2	55.2
73 FAIRVIEW CRESCENT, DANESTONE	Dwelling	58.4	58.7	58.6	0.2	Negligible Adverse	60.1	1.7	Negligible Adverse	46.3	46.6	47.8
74 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.7	67.2	68.0	0.3	Negligible Adverse	68.3	0.6	Negligible Adverse	54.7	54.2	55.2
75 FAIRVIEW CRESCENT, DANESTONE	Dwelling	57.5	57.6	57.8	0.3	Negligible Adverse	58.9	1.4	Negligible Adverse	45.5	45.6	46.8
76 FAIRVIEW CRESCENT, DANESTONE	Dwelling	69.9	66.7	67.2	0.3	Negligible Adverse	67.9	1.0	Negligible Adverse	53.9	53.8	54.8
77 FAIRVIEW CRESCENT, DANESTONE	Dwelling	54.2	54.4	54.4	0.2	Negligible Adverse	55.7	1.5	Negligible Adverse	42.5	42.9	43.9
78 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.0	67.3	67.3	0.3	Negligible Adverse	68.0	1.0	Negligible Adverse	54.0	53.9	54.9
79 FAIRVIEW CRESCENT, DANESTONE	Dwelling	56.3	56.7	56.5	0.2	Negligible Adverse	57.9	1.6	Negligible Adverse	44.4	44.8	45.8
8 FAIRVIEW CRESCENT, DANESTONE	Dwelling	60.1	60.5	60.0	-0.1	Negligible Beneficial	60.8	0.7	Negligible Adverse	47.8	48.2	48.5
80 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.2	67.1	67.5	0.3	Negligible Adverse	68.4	1.2	Negligible Adverse	54.2	54.1	55.3
81 FAIRVIEW CRESCENT, DANESTONE	Dwelling	58.8	59.3	59.1	0.3	Negligible Adverse	60.7	1.9	Negligible Adverse	46.7	47.1	48.4
82 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.2	67.1	67.5	0.3	Negligible Adverse	68.4	1.2	Negligible Adverse	54.2	54.1	55.3
83 FAIRVIEW CRESCENT, DANESTONE	Dwelling	59.4	59.9	59.6	0.2	Negligible Adverse	61.4	2.0	Negligible Adverse	47.2	47.6	49.0
84 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.5	67.5	67.8	0.3	Negligible Adverse	68.8	1.3	Negligible Adverse	54.5	54.5	55.7
85 FAIRVIEW CRESCENT, DANESTONE	Dwelling	55.8	56.3	56.0	0.2	Negligible Adverse	57.8	2.0	Negligible Adverse	44.0	44.4	45.8
86 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.5	67.5	67.8	0.3	Negligible Adverse	68.7	1.2	Negligible Adverse	54.5	54.5	55.6
87 FAIRVIEW CRESCENT, DANESTONE	Dwelling	56.4	56.8	56.6	0.2	Negligible Adverse	58.2	1.8	Negligible Adverse	44.5	44.9	46.1
88 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.1	67.2	67.4	0.3	Negligible Adverse	68.5	1.4	Negligible Adverse	54.1	54.2	55.4
89 FAIRVIEW CRESCENT, DANESTONE	Dwelling	56.2	56.5	56.5	0.1	Negligible Adverse	57.8	1.7	Negligible Adverse	44.2	44.6	45.8
9 FAIRVIEW CRESCENT, DANESTONE	Dwelling	54.2	55.0	54.2	0.0	No Change	55.2	1.0	Negligible Adverse	42.5	43.2	43.4
90 FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.1	67.2	67.4	0.3	Negligible Adverse	68.5	1.4	Negligible Adverse	54.1	54.2	55.4

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DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
91. FAIRVIEW CRESCENT, DANESTONE	Dwelling	56.8	57.3	57.0	0.2	Negligible Adverse	58.7	1.9	Negligible Adverse	44.9	45.3	46.6
92. FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.0	67.3	67.3	0.3	Negligible Adverse	68.4	1.4	Negligible Adverse	54.0	54.1	55.3
93. FAIRVIEW CRESCENT, DANESTONE	Dwelling	55.9	56.4	56.1	0.2	Negligible Adverse	57.7	1.8	Negligible Adverse	44.0	44.5	45.7
94. FAIRVIEW CRESCENT, DANESTONE	Dwelling	67.0	67.3	67.3	0.3	Negligible Adverse	68.4	1.4	Negligible Adverse	54.0	54.1	55.3
95. FAIRVIEW CRESCENT, DANESTONE	Dwelling	53.4	53.7	53.4	0.3	No Change	54.7	1.3	Negligible Adverse	41.8	42.1	43.0
96. FAIRVIEW CRESCENT, DANESTONE	Dwelling	66.9	67.1	67.2	0.0	Negligible Adverse	68.4	1.5	Negligible Adverse	53.9	54.1	55.3
97. FAIRVIEW CRESCENT, DANESTONE	Dwelling	54.3	54.6	54.4	0.3	Negligible Adverse	55.8	1.5	Negligible Adverse	42.6	42.9	44.0
98. FAIRVIEW CRESCENT, DANESTONE	Dwelling	66.9	67.1	67.2	0.1	Negligible Adverse	68.4	1.5	Negligible Adverse	53.9	54.1	55.3
99. FAIRVIEW CRESCENT, DANESTONE	Dwelling	53.0	53.0	52.9	-0.1	Negligible Beneficial	53.9	0.9	Negligible Adverse	41.4	41.4	42.2
1. FAIRVIEW DRIVE, DANESTONE	Dwelling	60.3	63.9	61.0	0.7	Negligible Adverse	63.0	2.7	Negligible Adverse	48.0	51.2	50.4
10. FAIRVIEW DRIVE, DANESTONE	Dwelling	50.4	50.8	50.4	0.0	No Change	51.2	0.8	Negligible Adverse	39.1	39.5	39.8
101. FAIRVIEW DRIVE, DANESTONE	Dwelling	51.0	51.9	50.9	-0.1	Negligible Beneficial	52.0	1.0	Negligible Adverse	39.6	40.4	40.5
103. FAIRVIEW DRIVE, DANESTONE	Dwelling	50.8	51.6	50.9	-0.1	Negligible Beneficial	51.8	1.0	Negligible Adverse	39.5	40.2	40.4
105. FAIRVIEW DRIVE, DANESTONE	Dwelling	50.5	51.1	50.5	0.0	No Change	51.5	1.0	Negligible Adverse	39.2	39.7	40.1
107. FAIRVIEW DRIVE, DANESTONE	Dwelling	53.0	52.7	52.9	-0.1	Negligible Beneficial	53.6	0.6	Negligible Adverse	41.4	41.2	42.0
109. FAIRVIEW DRIVE, DANESTONE	Dwelling	52.0	52.2	51.8	-0.2	Negligible Beneficial	52.6	0.6	Negligible Adverse	40.5	40.7	41.1
11. FAIRVIEW DRIVE, DANESTONE	Dwelling	58.8	62.6	59.6	0.8	Negligible Adverse	61.7	2.9	Negligible Adverse	46.7	50.1	49.3
111. FAIRVIEW DRIVE, DANESTONE	Dwelling	51.3	51.3	51.3	0.0	No Change	51.9	0.6	Negligible Adverse	39.9	39.9	40.4
113. FAIRVIEW DRIVE, DANESTONE	Dwelling	52.5	52.7	52.4	-0.1	Negligible Beneficial	53.2	0.7	Negligible Adverse	41.0	41.2	41.6
115. FAIRVIEW DRIVE, DANESTONE	Dwelling	52.2	52.5	52.5	-0.1	Negligible Beneficial	53.0	0.8	Negligible Adverse	40.7	41.0	41.4
117. FAIRVIEW DRIVE, DANESTONE	Dwelling	49.6	49.9	49.5	-0.1	Negligible Beneficial	50.4	0.8	Negligible Adverse	38.4	38.6	39.1
119. FAIRVIEW DRIVE, DANESTONE	Dwelling	52.0	52.2	51.9	-0.1	Negligible Beneficial	52.7	0.7	Negligible Adverse	40.5	40.7	41.2
12. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.1	56.2	54.5	0.4	Negligible Adverse	55.8	1.7	Negligible Adverse	42.4	44.3	44.0
121. FAIRVIEW DRIVE, DANESTONE	Dwelling	50.0	50.2	49.9	-0.1	Negligible Beneficial	50.8	0.8	Negligible Adverse	38.7	38.9	39.5
123. FAIRVIEW DRIVE, DANESTONE	Dwelling	50.3	50.3	49.9	-0.2	Negligible Beneficial	50.7	0.6	Negligible Adverse	38.8	39.0	39.4
125. FAIRVIEW DRIVE, DANESTONE	Dwelling	50.6	50.9	50.4	-0.2	Negligible Beneficial	51.2	0.7	Negligible Adverse	39.3	39.5	39.9
127. FAIRVIEW DRIVE, DANESTONE	Dwelling	51.5	51.6	51.4	-0.1	Negligible Beneficial	52.2	0.7	Negligible Adverse	40.1	40.2	40.7
129. FAIRVIEW DRIVE, DANESTONE	Dwelling	51.4	51.4	51.3	-0.1	Negligible Beneficial	52.0	0.6	Negligible Adverse	40.0	40.0	40.5
131. FAIRVIEW DRIVE, DANESTONE	Dwelling	52.9	53.3	53.0	0.1	Negligible Adverse	53.8	0.9	Negligible Adverse	41.3	41.7	42.2
133. FAIRVIEW DRIVE, DANESTONE	Dwelling	53.5	54.1	53.5	0.0	No Change	54.4	0.9	Negligible Adverse	41.9	42.4	42.7
135. FAIRVIEW DRIVE, DANESTONE	Dwelling	52.6	53.4	52.7	0.1	Negligible Adverse	53.6	1.0	Negligible Adverse	41.1	41.8	42.0
137. FAIRVIEW DRIVE, DANESTONE	Dwelling	52.1	53.2	52.1	0.0	No Change	53.2	1.1	Negligible Adverse	40.6	41.6	41.6
139. FAIRVIEW DRIVE, DANESTONE	Dwelling	50.7	51.1	50.7	0.0	No Change	51.6	0.9	Negligible Adverse	39.4	39.7	40.2
14. FAIRVIEW DRIVE, DANESTONE	Dwelling	53.6	55.6	54.0	0.4	Negligible Adverse	55.3	1.7	Negligible Adverse	42.0	43.8	43.5
141. FAIRVIEW DRIVE, DANESTONE	Dwelling	50.9	51.7	50.5	-0.4	Negligible Beneficial	51.6	0.7	Negligible Adverse	39.5	40.3	40.2
143. FAIRVIEW DRIVE, DANESTONE	Dwelling	51.4	52.0	51.0	-0.4	Negligible Beneficial	52.0	0.6	Negligible Adverse	40.0	40.5	40.5
145. FAIRVIEW DRIVE, DANESTONE	Dwelling	50.7	51.0	50.7	0.0	No Change	51.5	0.8	Negligible Adverse	39.4	39.6	40.1
147. FAIRVIEW DRIVE, DANESTONE	Dwelling	50.2	50.9	49.7	-0.5	Negligible Beneficial	50.8	0.6	Negligible Adverse	38.9	39.5	39.5
149. FAIRVIEW DRIVE, DANESTONE	Dwelling	50.9	51.1	50.8	-0.1	Negligible Beneficial	51.6	0.7	Negligible Adverse	39.5	39.7	40.2
15. FAIRVIEW DRIVE, DANESTONE	Dwelling	60.8	64.4	61.4	0.6	Negligible Adverse	63.5	2.7	Negligible Adverse	48.5	51.7	50.9
151. FAIRVIEW DRIVE, DANESTONE	Dwelling	49.9	50.5	49.4	-0.5	Negligible Beneficial	50.4	0.5	Negligible Adverse	38.6	39.1	39.1
153. FAIRVIEW DRIVE, DANESTONE	Dwelling	50.8	50.8	50.7	-0.1	Negligible Beneficial	51.5	0.7	Negligible Adverse	39.5	39.5	40.1
155. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.9	55.1	54.6	-0.3	Negligible Beneficial	55.6	0.7	Negligible Adverse	43.1	43.3	43.8
157. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.9	55.1	54.6	-0.3	Negligible Beneficial	55.6	0.7	Negligible Adverse	43.1	43.3	43.8
159. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.9	55.1	54.6	-0.3	Negligible Beneficial	55.6	0.7	Negligible Adverse	43.1	43.3	43.8
16. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.8	57.3	55.2	0.4	Negligible Adverse	56.7	1.9	Negligible Adverse	43.1	45.3	44.8
161. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.9	55.1	54.6	-0.3	Negligible Beneficial	55.6	0.7	Negligible Adverse	43.1	43.3	43.8
163. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.9	55.1	54.6	-0.3	Negligible Beneficial	55.6	0.7	Negligible Adverse	43.1	43.3	43.8
165. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.9	55.1	54.6	-0.3	Negligible Beneficial	55.6	0.7	Negligible Adverse	43.1	43.3	43.8
167. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.9	55.1	54.6	-0.3	Negligible Beneficial	55.6	0.7	Negligible Adverse	43.1	43.3	43.8
169. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.9	55.1	54.6	-0.3	Negligible Beneficial	55.6	0.7	Negligible Adverse	43.1	43.3	43.8
17. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.0	65.3	62.3	0.3	Negligible Adverse	64.4	2.4	Negligible Adverse	49.5	52.5	51.7
171. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.9	55.1	54.6	-0.3	Negligible Beneficial	55.6	0.7	Negligible Adverse	43.1	43.3	43.8
173. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.9	55.1	54.6	-0.3	Negligible Beneficial	55.6	0.7	Negligible Adverse	43.1	43.3	43.8
175. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.9	55.1	54.6	-0.3	Negligible Beneficial	55.6	0.7	Negligible Adverse	43.1	43.3	43.8
177. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.9	55.1	54.6	-0.3	Negligible Beneficial	55.6	0.7	Negligible Adverse	43.1	43.3	43.8
179. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.1	54.9	53.6	-0.5	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.1	43.1
18. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.0	57.6	55.4	0.4	Negligible Adverse	56.9	1.9	Negligible Adverse	43.2	45.6	44.9
181. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.1	54.9	53.6	-0.5	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.1	43.1
183. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.1	54.9	53.6	-0.5	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.1	43.1
185. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.1	54.9	53.6	-0.5	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.1	43.1
187. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.1	54.9	53.6	-0.5	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.1	43.1
189. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.1	54.9	53.6	-0.5	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.1	43.1
19. FAIRVIEW DRIVE, DANESTONE	Dwelling	58.8	61.8	59.0	0.2	Negligible Adverse	61.0	2.2	Negligible Adverse	46.7	49.4	48.6
191. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.1	54.9	53.6	-0.5	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.1	43.1
193. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.1	54.9	53.6	-0.5	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.1	43.1
195. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.1	54.9	53.6	-0.5	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.1	43.1
197. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.1	54.9	53.6	-0.5	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.1	43.1
199. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.1	54.9	53.6	-0.5	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.1	43.1
2. FAIRVIEW DRIVE, DANESTONE	Dwelling	60.3	64.2	61.1	0.8	Negligible Adverse	63.2	2.9	Negligible Adverse	48.0	51.5	50.6
20. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.4	59.8	57.0	0.6	Negligible Adverse	58.8	2.4	Negligible Adverse	44.5	47.6	46.7
201. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.1	54.9	53.6	-0.5	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.1	43.1
203. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.9	58.0	55.7	-1.2	Minor Beneficial	57.3	0.4	Negligible Adverse	44.9	45.9	45.3
205. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.9	58.0	55.7	-1.2	Minor Beneficial	57.3	0.4	Negligible Adverse	44.9	45.9	45.3
207. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.9	58.0	55.7	-1.2	Minor Beneficial	57.3	0.4	Negligible Adverse	44.9	45.9	45.3
209. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.9	58.0	55.7	-1.2	Minor Beneficial	57.3	0.4	Negligible Adverse	44.9	45.9	45.3
21. FAIRVIEW DRIVE, DANESTONE	Dwelling	58.3	61.1	58.5	0.2	Negligible Adverse	60.3	2.0	Negligible Adverse	46.2	47.7	48.0
211. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.9	58.0	55.7	-1.2	Minor Beneficial	57.3	0.4	Negligible Adverse	44.9	45.9	45.3
213. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.9	58.0	55.7	-1.2	Minor Beneficial	57.3	0.4	Negligible Adverse	44.9	45.9	45.3
215. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.9	58.0	55.7	-1.2	Minor Beneficial	57.3	0.4	Negligible Adverse	44.9	45.9	45.3
217. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.9	58.0	55.7	-1.2	Minor Beneficial	57.3	0.4	Negligible Adverse	44.9	45.9	45.3
219. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.9	58.0	55.7	-1.2	Minor Beneficial	57.3	0.4	Negligible Adverse	44.9	45.9	45.3
22. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.7	60.0	57.3	0.6	Negligible Adverse	59.1	2.4	Negligible Adverse	44.8	47.7	46.9

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
221. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.9	58.0	55.7	-1.2	Minor Beneficial	57.3	0.4	Negligible Adverse	44.9	45.9	45.3
223. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.9	58.0	55.7	-1.2	Minor Beneficial	57.3	0.4	Negligible Adverse	44.9	45.9	45.3
225. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.9	58.0	55.7	-1.2	Minor Beneficial	57.3	0.4	Negligible Adverse	44.9	45.9	45.3
227. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.8	56.9	54.7	-1.1	Minor Beneficial	56.2	0.4	Negligible Adverse	44.0	44.9	44.3
229. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.8	56.9	54.7	-1.1	Minor Beneficial	56.2	0.4	Negligible Adverse	44.0	44.9	44.3
23. FAIRVIEW DRIVE, DANESTONE	Dwelling	59.7	62.5	59.9	0.2	Negligible Adverse	61.7	2.0	Negligible Adverse	47.5	50.0	49.3
231. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.8	56.9	54.7	-1.1	Minor Beneficial	56.2	0.4	Negligible Adverse	44.0	44.9	44.3
233. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.8	56.9	54.7	-1.1	Minor Beneficial	56.2	0.4	Negligible Adverse	44.0	44.9	44.3
235. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.8	56.9	54.7	-1.1	Minor Beneficial	56.2	0.4	Negligible Adverse	44.0	44.9	44.3
237. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.8	56.9	54.7	-1.1	Minor Beneficial	56.2	0.4	Negligible Adverse	44.0	44.9	44.3
239. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.8	56.9	54.7	-1.1	Minor Beneficial	56.2	0.4	Negligible Adverse	44.0	44.9	44.3
24. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.3	56.9	55.9	0.6	Negligible Adverse	57.6	2.3	Negligible Adverse	43.5	46.5	45.6
241. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.8	56.9	54.7	-1.1	Minor Beneficial	56.2	0.4	Negligible Adverse	44.0	44.9	44.3
243. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.8	56.9	54.7	-1.1	Minor Beneficial	56.2	0.4	Negligible Adverse	44.0	44.9	44.3
245. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.8	56.9	54.7	-1.1	Minor Beneficial	56.2	0.4	Negligible Adverse	44.0	44.9	44.3
247. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.8	56.9	54.7	-1.1	Minor Beneficial	56.2	0.4	Negligible Adverse	44.0	44.9	44.3
249. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.8	56.9	54.7	-1.1	Minor Beneficial	56.2	0.4	Negligible Adverse	44.0	44.9	44.3
25. FAIRVIEW DRIVE, DANESTONE	Dwelling	59.8	62.4	59.9	0.1	Negligible Adverse	61.7	1.9	Negligible Adverse	47.6	49.9	49.3
26. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.0	59.4	56.6	0.6	Negligible Adverse	58.4	2.4	Negligible Adverse	44.1	47.2	46.3
261. FAIRVIEW DRIVE, DANESTONE	Dwelling	53.8	54.9	52.9	-0.9	Negligible Beneficial	54.4	0.6	Negligible Adverse	42.2	43.1	42.7
263. FAIRVIEW DRIVE, DANESTONE	Dwelling	53.3	54.4	52.4	-0.9	Negligible Beneficial	53.8	0.5	Negligible Adverse	41.7	42.7	42.2
265. FAIRVIEW DRIVE, DANESTONE	Dwelling	53.9	55.0	52.9	-1.0	Minor Beneficial	54.4	0.5	Negligible Adverse	42.2	43.2	42.7
267. FAIRVIEW DRIVE, DANESTONE	Dwelling	53.6	54.8	52.7	-0.9	Negligible Beneficial	54.2	0.6	Negligible Adverse	42.0	43.1	42.5
269. FAIRVIEW DRIVE, DANESTONE	Dwelling	53.7	54.9	52.8	-0.9	Negligible Beneficial	54.3	0.6	Negligible Adverse	42.1	43.1	42.6
27. FAIRVIEW DRIVE, DANESTONE	Dwelling	61.0	63.3	61.1	0.1	Negligible Adverse	62.7	1.7	Negligible Adverse	46.6	50.7	50.2
271. FAIRVIEW DRIVE, DANESTONE	Dwelling	53.8	55.1	52.9	-0.9	Negligible Beneficial	53.9	0.7	Negligible Adverse	42.2	43.3	42.8
273. FAIRVIEW DRIVE, DANESTONE	Dwelling	53.8	55.1	52.9	-0.9	Negligible Beneficial	54.4	0.6	Negligible Adverse	42.2	43.3	42.7
275. FAIRVIEW DRIVE, DANESTONE	Dwelling	52.9	54.2	52.0	-0.9	Negligible Beneficial	53.5	0.6	Negligible Adverse	41.3	42.5	41.9
277. FAIRVIEW DRIVE, DANESTONE	Dwelling	52.6	54.0	51.7	-0.9	Negligible Beneficial	53.3	0.7	Negligible Adverse	41.1	42.3	41.7
279. FAIRVIEW DRIVE, DANESTONE	Dwelling	58.3	62.7	57.7	-0.6	Negligible Beneficial	60.8	2.5	Negligible Adverse	46.2	50.2	48.5
28. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.5	56.7	54.8	0.3	Negligible Adverse	56.1	1.6	Negligible Adverse	42.8	44.8	44.2
29. FAIRVIEW DRIVE, DANESTONE	Dwelling	61.2	63.4	61.3	0.1	Negligible Beneficial	63.0	1.8	Negligible Adverse	48.8	50.8	50.4
3. FAIRVIEW DRIVE, DANESTONE	Dwelling	53.1	55.4	53.3	0.2	Negligible Adverse	54.8	1.7	Negligible Adverse	41.5	43.6	43.1
30. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.3	56.4	54.5	0.2	Negligible Adverse	55.8	1.5	Negligible Adverse	42.6	44.5	44.0
31. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.0	63.9	62.0	0.0	No Change	63.6	1.6	Negligible Adverse	49.5	51.2	51.0
32. FAIRVIEW DRIVE, DANESTONE	Dwelling	51.0	50.6	50.6	-0.4	Negligible Beneficial	51.7	0.7	Negligible Adverse	39.6	40.3	40.3
33. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.2	64.1	62.3	0.1	Negligible Beneficial	63.8	1.6	Negligible Adverse	49.7	51.4	51.2
34. FAIRVIEW DRIVE, DANESTONE	Dwelling	51.3	52.4	51.3	0.0	No Change	52.4	1.1	Negligible Adverse	39.9	40.9	40.9
35. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.7	64.5	62.7	0.0	No Change	64.1	1.4	Negligible Adverse	50.2	51.8	51.4
36. FAIRVIEW DRIVE, DANESTONE	Dwelling	51.0	52.4	50.8	-0.2	Negligible Beneficial	52.1	1.1	Negligible Adverse	39.6	40.9	40.6
37. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.7	64.5	62.7	0.0	No Change	64.1	1.4	Negligible Adverse	50.2	51.8	51.4
38. FAIRVIEW DRIVE, DANESTONE	Dwelling	51.3	52.8	51.4	0.1	Negligible Adverse	52.7	1.4	Negligible Adverse	39.9	41.3	41.2
39. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.7	64.5	62.7	0.0	No Change	64.1	1.4	Negligible Adverse	50.2	51.8	51.4
4. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.4	57.0	54.8	0.4	Negligible Adverse	56.4	2.0	Negligible Adverse	42.7	45.0	44.5
40. FAIRVIEW DRIVE, DANESTONE	Dwelling	53.4	57.0	53.7	0.3	Negligible Adverse	55.7	2.3	Negligible Adverse	41.8	45.0	43.9
41. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.7	64.5	62.7	0.0	No Change	64.1	1.4	Negligible Adverse	50.2	51.8	51.4
42. FAIRVIEW DRIVE, DANESTONE	Dwelling	52.8	55.8	53.3	0.5	Negligible Adverse	54.9	2.1	Negligible Adverse	41.3	44.0	43.1
43. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.7	64.5	62.7	0.0	No Change	64.1	1.4	Negligible Adverse	50.2	51.8	51.4
44. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.6	61.5	57.1	0.5	Negligible Adverse	59.8	3.2	Minor Adverse	44.7	49.1	47.6
45. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.7	64.5	62.7	0.0	No Change	64.1	1.4	Negligible Adverse	50.2	51.8	51.4
46. FAIRVIEW DRIVE, DANESTONE	Dwelling	59.1	63.9	59.8	0.7	Negligible Adverse	62.3	3.2	Minor Adverse	46.9	51.2	49.8
47. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.7	64.5	62.7	0.0	No Change	64.1	1.4	Negligible Adverse	50.2	51.8	51.4
48. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.5	61.3	56.9	0.4	Negligible Adverse	59.6	3.1	Minor Adverse	44.6	48.9	47.4
49. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.7	64.5	62.7	0.0	No Change	64.1	1.4	Negligible Adverse	50.2	51.8	51.4
5. FAIRVIEW DRIVE, DANESTONE	Dwelling	51.6	53.4	51.7	0.1	Negligible Adverse	53.0	1.4	Negligible Adverse	40.2	41.8	41.4
50. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.3	59.7	55.6	0.3	Negligible Adverse	58.1	2.8	Negligible Adverse	43.5	47.5	46.0
51. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.7	64.5	62.7	0.0	No Change	64.1	1.4	Negligible Adverse	50.2	51.8	51.4
52. FAIRVIEW DRIVE, DANESTONE	Dwelling	51.3	53.1	51.0	-0.3	Negligible Beneficial	52.5	1.2	Negligible Adverse	39.9	41.5	41.0
53. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.7	64.5	62.7	0.0	No Change	64.1	1.4	Negligible Adverse	50.2	51.8	51.4
54. FAIRVIEW DRIVE, DANESTONE	Dwelling	50.6	52.8	50.5	-0.1	Negligible Beneficial	52.1	1.5	Negligible Adverse	39.3	41.3	40.6
55. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.7	64.5	62.7	0.0	No Change	64.1	1.4	Negligible Adverse	50.2	51.8	51.4
56. FAIRVIEW DRIVE, DANESTONE	Dwelling	54.2	58.3	54.5	0.3	Negligible Adverse	56.9	2.7	Negligible Adverse	42.5	46.2	44.9
57. FAIRVIEW DRIVE, DANESTONE	Dwelling	62.7	64.5	62.7	0.0	No Change	64.1	1.4	Negligible Adverse	50.2	51.8	51.4
58. FAIRVIEW DRIVE, DANESTONE	Dwelling	55.5	59.8	55.5	0.0	No Change	58.1	2.6	Negligible Adverse	43.7	47.6	46.0
59. FAIRVIEW DRIVE, DANESTONE	Dwelling	66.3	67.3	66.2	-0.1	Negligible Beneficial	67.2	0.9	Negligible Adverse	53.4	54.3	54.2
6. FAIRVIEW DRIVE, DANESTONE	Dwelling	52.3	54.1	52.4	0.1	Negligible Adverse	53.8	1.5	Negligible Adverse	40.8	42.4	42.2
61. FAIRVIEW DRIVE, DANESTONE	Dwelling	66.3	67.3	66.2	-0.1	Negligible Beneficial	67.2	0.9	Negligible Adverse	53.4	54.3	54.2
63. FAIRVIEW DRIVE, DANESTONE	Dwelling	66.3	67.3	66.2	-0.1	Negligible Beneficial	67.2	0.9	Negligible Adverse	53.4	54.3	54.2
65. FAIRVIEW DRIVE, DANESTONE	Dwelling	66.3	67.3	66.2	-0.1	Negligible Beneficial	67.2	0.9	Negligible Adverse	53.4	54.3	54.2
67. FAIRVIEW DRIVE, DANESTONE	Dwelling	66.3	67.3	66.2	-0.1	Negligible Beneficial	67.2	0.9	Negligible Adverse	53.4	54.3	54.2
69. FAIRVIEW DRIVE, DANESTONE	Dwelling	66.3	67.3	66.2	-0.1	Negligible Beneficial	67.2	0.9	Negligible Adverse	53.4	54.3	54.2
7. FAIRVIEW DRIVE, DANESTONE	Dwelling	52.2	53.2	52.1	-0.1	Negligible Beneficial	53.2	1.0	Negligible Adverse	40.7	41.6	41.6
71. FAIRVIEW DRIVE, DANESTONE	Dwelling	66.3	67.3	66.2	-0.1	Negligible Beneficial	67.2	0.9	Negligible Adverse	53.4	54.3	54.2
73. FAIRVIEW DRIVE, DANESTONE	Dwelling	66.3	67.3	66.2	-0.1	Negligible Beneficial	67.2	0.9	Negligible Adverse	53.4	54.3	54.2
75. FAIRVIEW DRIVE, DANESTONE	Dwelling	66.3	67.3	66.2	-0.1	Negligible Beneficial	67.2	0.9	Negligible Adverse	53.4	54.3	54.2
77. FAIRVIEW DRIVE, DANESTONE	Dwelling	66.3	67.3	66.2	-0.1	Negligible Beneficial	67.2	0.9	Negligible Adverse	53.4	54.3	54.2
79. FAIRVIEW DRIVE, DANESTONE	Dwelling	66.3	67.3	66.2	-0.1	Negligible Beneficial	67.2	0.9	Negligible Adverse	53.4	54.3	54.2
8. FAIRVIEW DRIVE, DANESTONE	Dwelling	51.1	52.8	51.4	0.3	Negligible Adverse	52.7	1.6	Negligible Adverse	39.7	41.3	41.2
81. FAIRVIEW DRIVE, DANESTONE	Dwelling	66.3	67.3	66.2	-0.1	Negligible Beneficial	67.2	0.9	Negligible Adverse	53.4	54.3	54.2
83. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.0	56.6	56.0	0.0	No Change	56.9	0.9	Negligible Adverse	44.1	44.7	44.9
85. FAIRVIEW DRIVE, DANESTONE	Dwelling	56.5	56.7	56.4	-0.1	Negligible Beneficial	57.2	0.7	Negligible Adverse	44.6	44.8	44.8
87. FAIRVIEW DRIVE, DANESTONE	Dwelling	57.1	57.6	57.0	-0.1	Negligible Beneficial	57.9	0.8	Negligible Adverse	45.1	45.6	45.8
89. FAIRVIEW DRIVE, DANESTONE	Dwelling	51.4	51.9	51.4	0.0	No Change	52.2	0.8	Negligible Adverse	40.0	40.4	40.7

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
9, FAIRVIEW DRIVE, DANESTONE	Dwelling	53.2	54.6	53.4	0.2	Negligible Adverse	54.6	1.4	Negligible Adverse	41.6	42.9	42.9
91, FAIRVIEW DRIVE, DANESTONE	Dwelling	56.3	56.9	56.3	0.0	No Change	57.1	0.8	Negligible Adverse	44.4	44.9	45.1
93, FAIRVIEW DRIVE, DANESTONE	Dwelling	51.6	52.2	51.6	0.0	No Change	52.5	0.9	Negligible Adverse	40.2	40.7	41.0
95, FAIRVIEW DRIVE, DANESTONE	Dwelling	52.6	53.3	52.5	-0.1	Negligible Beneficial	53.5	0.9	Negligible Adverse	41.1	41.7	41.9
97, FAIRVIEW DRIVE, DANESTONE	Dwelling	52.4	53.3	52.4	0.0	No Change	53.5	1.1	Negligible Adverse	40.9	41.7	41.9
99, FAIRVIEW DRIVE, DANESTONE	Dwelling	51.4	52.6	51.4	0.0	No Change	52.6	1.2	Negligible Adverse	40.0	41.1	41.1
1, FAIRVIEW GARDENS, DANESTONE	Dwelling	52.3	51.4	52.2	-0.1	Negligible Beneficial	52.9	0.6	Negligible Adverse	40.8	40.0	41.3
10, FAIRVIEW GARDENS, DANESTONE	Dwelling	59.2	57.5	59.2	0.0	No Change	59.8	0.6	Negligible Adverse	47.0	45.5	47.6
11, FAIRVIEW GARDENS, DANESTONE	Dwelling	57.5	55.8	57.4	-0.1	Negligible Beneficial	58.1	0.6	Negligible Adverse	45.5	44.0	46.0
12, FAIRVIEW GARDENS, DANESTONE	Dwelling	61.0	59.3	61.0	0.0	No Change	61.7	0.7	Negligible Adverse	48.6	47.1	49.3
14, FAIRVIEW GARDENS, DANESTONE	Dwelling	61.3	59.6	61.3	0.0	No Change	61.9	0.6	Negligible Adverse	48.9	47.4	49.4
15, FAIRVIEW GARDENS, DANESTONE	Dwelling	57.7	56.1	57.7	0.0	No Change	58.3	0.6	Negligible Adverse	45.7	44.2	46.2
16, FAIRVIEW GARDENS, DANESTONE	Dwelling	61.2	59.5	61.1	-0.1	Negligible Beneficial	61.9	0.7	Negligible Adverse	48.8	47.3	49.4
17, FAIRVIEW GARDENS, DANESTONE	Dwelling	59.2	57.6	59.2	0.0	No Change	59.8	0.6	Negligible Adverse	47.0	45.6	47.6
18, FAIRVIEW GARDENS, DANESTONE	Dwelling	61.1	59.4	61.0	-0.1	Negligible Beneficial	61.7	0.6	Negligible Adverse	48.7	47.2	49.3
19, FAIRVIEW GARDENS, DANESTONE	Dwelling	60.2	58.5	60.1	-0.1	Negligible Beneficial	60.7	0.5	Negligible Adverse	47.9	46.4	48.4
2, FAIRVIEW GARDENS, DANESTONE	Dwelling	58.1	56.5	58.1	0.0	No Change	58.8	0.7	Negligible Adverse	46.0	44.6	46.7
20, FAIRVIEW GARDENS, DANESTONE	Dwelling	60.7	59.0	60.7	0.0	No Change	61.4	0.7	Negligible Adverse	48.4	46.8	49.0
21, FAIRVIEW GARDENS, DANESTONE	Dwelling	62.9	61.2	62.8	-0.1	Negligible Beneficial	63.4	0.5	Negligible Adverse	50.3	48.8	50.8
23, FAIRVIEW GARDENS, DANESTONE	Dwelling	62.4	60.7	62.3	-0.1	Negligible Beneficial	62.9	0.5	Negligible Adverse	49.9	48.4	50.3
25, FAIRVIEW GARDENS, DANESTONE	Dwelling	68.3	66.5	68.2	-0.1	Negligible Beneficial	68.8	0.5	Negligible Adverse	55.2	53.6	55.7
27, FAIRVIEW GARDENS, DANESTONE	Dwelling	70.2	68.5	70.2	0.0	No Change	70.8	0.6	Negligible Adverse	56.9	55.4	57.5
29, FAIRVIEW GARDENS, DANESTONE	Dwelling	71.5	69.9	71.5	0.0	No Change	72.2	0.7	Negligible Adverse	58.1	56.6	58.7
3, FAIRVIEW GARDENS, DANESTONE	Dwelling	52.2	51.3	52.0	-0.2	Negligible Beneficial	52.7	0.5	Negligible Adverse	40.7	39.9	41.2
31, FAIRVIEW GARDENS, DANESTONE	Dwelling	71.6	69.9	71.6	0.0	No Change	72.3	0.7	Negligible Adverse	58.2	56.6	58.8
33, FAIRVIEW GARDENS, DANESTONE	Dwelling	69.8	71.4	69.8	-0.1	Negligible Beneficial	70.4	0.6	Negligible Adverse	58.1	56.6	58.1
35, FAIRVIEW GARDENS, DANESTONE	Dwelling	71.5	69.8	71.5	0.0	No Change	72.1	0.6	Negligible Adverse	58.1	56.6	58.6
37, FAIRVIEW GARDENS, DANESTONE	Dwelling	70.7	69.1	70.7	0.0	No Change	71.4	0.7	Negligible Adverse	57.4	55.9	58.0
39, FAIRVIEW GARDENS, DANESTONE	Dwelling	70.5	68.8	70.5	0.0	No Change	71.2	0.7	Negligible Adverse	57.2	55.7	57.8
4, FAIRVIEW GARDENS, DANESTONE	Dwelling	57.7	56.0	57.7	0.0	No Change	58.4	0.7	Negligible Adverse	45.7	44.1	46.3
41, FAIRVIEW GARDENS, DANESTONE	Dwelling	69.3	67.6	69.2	-0.1	Negligible Beneficial	69.9	0.6	Negligible Adverse	56.1	54.6	56.6
5, FAIRVIEW GARDENS, DANESTONE	Dwelling	52.4	51.4	52.3	-0.1	Negligible Beneficial	53.0	0.6	Negligible Adverse	40.9	40.0	41.4
6, FAIRVIEW GARDENS, DANESTONE	Dwelling	58.2	56.6	58.2	0.0	No Change	58.9	0.7	Negligible Adverse	46.1	44.7	46.7
7, FAIRVIEW GARDENS, DANESTONE	Dwelling	52.3	51.2	52.2	-0.1	Negligible Beneficial	52.8	0.5	Negligible Adverse	40.8	39.8	41.3
8, FAIRVIEW GARDENS, DANESTONE	Dwelling	58.1	56.4	58.1	0.0	No Change	58.8	0.7	Negligible Adverse	46.0	44.5	46.7
9, FAIRVIEW GARDENS, DANESTONE	Dwelling	52.6	51.3	52.6	0.0	No Change	53.2	0.6	Negligible Adverse	41.1	39.9	41.6
1, FAIRVIEW GRANGE, DANESTONE	Dwelling	58.9	58.8	58.8	-0.1	Negligible Beneficial	59.0	0.1	Negligible Adverse	46.7	46.7	46.8
10, FAIRVIEW GRANGE, DANESTONE	Dwelling	56.0	53.9	56.0	0.0	No Change	56.3	0.3	Negligible Adverse	44.1	42.2	44.4
11, FAIRVIEW GRANGE, DANESTONE	Dwelling	57.4	55.7	57.3	-0.1	Negligible Beneficial	57.3	-0.1	Negligible Beneficial	45.4	43.9	45.3
12, FAIRVIEW GRANGE, DANESTONE	Dwelling	62.4	59.6	62.3	-0.1	Negligible Beneficial	62.3	-0.1	Negligible Beneficial	49.9	47.4	49.8
14, FAIRVIEW GRANGE, DANESTONE	Dwelling	57.8	56.3	57.8	-0.3	Negligible Beneficial	57.5	-0.3	Negligible Beneficial	45.8	44.7	45.5
15, FAIRVIEW GRANGE, DANESTONE	Dwelling	61.7	59.2	61.7	0.0	No Change	61.4	-0.3	Negligible Beneficial	49.3	47.0	49.0
16, FAIRVIEW GRANGE, DANESTONE	Dwelling	63.5	60.5	63.4	-0.1	Negligible Beneficial	63.4	-0.1	Negligible Beneficial	50.9	48.2	50.8
17, FAIRVIEW GRANGE, DANESTONE	Dwelling	64.5	61.5	64.4	-0.1	Negligible Beneficial	64.5	0.0	No Change	51.8	49.1	51.8
18, FAIRVIEW GRANGE, DANESTONE	Dwelling	71.6	68.5	71.5	-0.1	Negligible Beneficial	70.9	-0.7	Negligible Beneficial	58.2	55.4	57.5
19, FAIRVIEW GRANGE, DANESTONE	Dwelling	71.1	68.0	71.0	-0.1	Negligible Beneficial	70.2	-0.9	Negligible Beneficial	57.7	54.9	56.9
2, FAIRVIEW GRANGE, DANESTONE	Dwelling	56.4	56.0	56.2	-0.2	Negligible Beneficial	56.4	0.0	No Change	44.5	44.1	44.5
20, FAIRVIEW GRANGE, DANESTONE	Dwelling	66.2	63.3	66.1	-0.1	Negligible Beneficial	65.2	-1.0	Negligible Beneficial	53.3	50.7	52.4
21, FAIRVIEW GRANGE, DANESTONE	Dwelling	62.7	60.0	62.7	0.0	No Change	61.8	-0.9	Negligible Beneficial	50.2	47.7	49.4
22, FAIRVIEW GRANGE, DANESTONE	Dwelling	58.2	55.9	58.0	-0.2	Negligible Beneficial	57.6	-0.6	Negligible Beneficial	46.1	44.0	45.6
23, FAIRVIEW GRANGE, DANESTONE	Dwelling	55.5	54.2	55.3	-0.2	Negligible Beneficial	55.2	-0.3	Negligible Beneficial	43.7	42.5	43.4
24, FAIRVIEW GRANGE, DANESTONE	Dwelling	57.8	55.7	57.6	-0.2	Negligible Beneficial	57.3	-0.5	Negligible Beneficial	45.8	43.9	45.3
25, FAIRVIEW GRANGE, DANESTONE	Dwelling	62.7	59.9	62.7	-0.1	Negligible Beneficial	61.7	-1.1	Negligible Beneficial	50.3	47.6	49.3
26, FAIRVIEW GRANGE, DANESTONE	Dwelling	65.5	62.4	65.4	-0.1	Negligible Beneficial	65.3	-1.2	Negligible Beneficial	53.6	50.9	52.5
27, FAIRVIEW GRANGE, DANESTONE	Dwelling	72.9	69.9	72.8	-0.1	Negligible Beneficial	71.8	-1.1	Negligible Beneficial	59.3	56.6	58.4
28, FAIRVIEW GRANGE, DANESTONE	Dwelling	73.4	70.4	73.3	-0.1	Negligible Beneficial	72.3	-1.1	Negligible Beneficial	59.8	57.1	58.8
29, FAIRVIEW GRANGE, DANESTONE	Dwelling	75.2	72.2	75.1	-0.1	Negligible Beneficial	74.1	-1.1	Negligible Beneficial	61.4	58.7	60.4
3, FAIRVIEW GRANGE, DANESTONE	Dwelling	56.4	55.6	56.2	-0.2	Negligible Beneficial	56.3	-0.1	Negligible Beneficial	44.5	43.8	44.4
30, FAIRVIEW GRANGE, DANESTONE	Dwelling	65.5	63.9	65.4	-0.1	Negligible Beneficial	65.1	-0.4	Negligible Beneficial	52.7	51.2	52.3
31, FAIRVIEW GRANGE, DANESTONE	Dwelling	62.4	61.5	62.3	-0.1	Negligible Beneficial	62.5	0.1	Negligible Adverse	49.9	49.1	50.0
32, FAIRVIEW GRANGE, DANESTONE	Dwelling	60.0	57.5	59.9	-0.1	Negligible Beneficial	59.1	-0.9	Negligible Beneficial	47.7	45.5	46.9
33, FAIRVIEW GRANGE, DANESTONE	Dwelling	57.7	57.6	57.5	-0.2	Negligible Beneficial	58.0	0.3	Negligible Adverse	45.7	45.6	45.9
34, FAIRVIEW GRANGE, DANESTONE	Dwelling	58.6	58.2	58.4	-0.2	Negligible Beneficial	58.8	0.2	Negligible Adverse	46.5	46.1	46.7
35, FAIRVIEW GRANGE, DANESTONE	Dwelling	57.2	55.1	57.1	-0.1	Negligible Beneficial	56.6	-0.6	Negligible Beneficial	45.2	43.3	44.7
36, FAIRVIEW GRANGE, DANESTONE	Dwelling	55.5	53.0	55.5	0.0	No Change	55.1	-0.4	Negligible Beneficial	43.7	41.4	43.3
37, FAIRVIEW GRANGE, DANESTONE	Dwelling	59.4	58.7	59.2	-0.2	Negligible Beneficial	59.5	0.1	Negligible Adverse	47.2	46.6	47.3
4, FAIRVIEW GRANGE, DANESTONE	Dwelling	56.6	55.3	56.4	-0.2	Negligible Beneficial	56.4	-0.2	Negligible Beneficial	44.7	43.5	44.5
5, FAIRVIEW GRANGE, DANESTONE	Dwelling	59.3	57.9	59.2	-0.1	Negligible Beneficial	59.1	-0.2	Negligible Beneficial	47.1	45.8	46.9
6, FAIRVIEW GRANGE, DANESTONE	Dwelling	56.4	56.1	56.1	0.0	Negligible Beneficial	56.6	0.2	Negligible Adverse	44.5	44.2	44.7
7, FAIRVIEW GRANGE, DANESTONE	Dwelling	56.1	55.9	55.9	-0.2	Negligible Beneficial	56.4	0.3	Negligible Adverse	44.2	44.0	44.5
8, FAIRVIEW GRANGE, DANESTONE	Dwelling	55.6	54.8	55.3	-0.3	Negligible Beneficial	55.8	0.2	Negligible Adverse	43.8	43.1	44.0
9, FAIRVIEW GRANGE, DANESTONE	Dwelling	54.5	53.0	54.4	-0.1	Negligible Beneficial	54.8	0.3	Negligible Adverse	42.8	41.4	43.1
1, FAIRVIEW GROVE	Dwelling	53.9	53.5	53.8	-0.1	Negligible Beneficial	54.5	0.6	Negligible Adverse	42.2	41.9	42.8
10, FAIRVIEW GROVE	Dwelling	56.1	54.4	56.0	-0.1	Negligible Beneficial	56.9	0.8	Negligible Adverse	44.2	42.7	44.9
11, FAIRVIEW GROVE	Dwelling	52.0	51.3	51.9	-0.1	Negligible Beneficial	52.6	0.6	Negligible Adverse	40.5	39.9	41.1
12, FAIRVIEW GROVE	Dwelling	51.5	50.9	51.4	-0.1	Negligible Beneficial	52.2	0.7	Negligible Adverse	40.1	39.5	40.7
14, FAIRVIEW GROVE	Dwelling	51.7	51.1	51.6	-0.1	Negligible Beneficial	52.4	0.7	Negligible Adverse	40.3	39.7	40.9
15, FAIRVIEW GROVE	Dwelling	51.9	51.3	51.8	-0.1	Negligible Beneficial	52.6	0.7	Negligible Adverse	40.4	39.9	41.1
2, FAIRVIEW GROVE	Dwelling	55.2	53.8	55.1	-0.1	Negligible Adverse	56.1	0.9	Negligible Adverse	43.4	42.2	44.2
3, FAIRVIEW GROVE	Dwelling	55.1	53.6	55.1	0.0	No Change	56.1	1.0	Negligible Adverse	43.3	42.0	44.2
4, FAIRVIEW GROVE	Dwelling	54.1	53.5	54.1	-0.1	Negligible Beneficial	55.6	1.0	Negligible Adverse	43.1	42.4	44.7
5, FAIRVIEW GROVE	Dwelling	55.6	54.0	55.5	-0.1	Negligible Beneficial	56.5	0.9	Negligible Adverse	43.8	42.3	44.6
6, FAIRVIEW GROVE	Dwelling	57.7	55.9	57.6	-0.1	Negligible Beneficial	58.7	1.0	Negligible Adverse	45.7	44.0	46.6

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
7, FAIRVIEW GROVE	Dwelling	56.8	55.0	56.7	-0.1	Negligible Beneficial	57.7	0.9	Negligible Adverse	44.9	43.2	45.7
8, FAIRVIEW GROVE	Dwelling	56.7	54.9	56.7	0.0	No Change	57.5	0.8	Negligible Adverse	44.8	43.1	45.5
9, FAIRVIEW GROVE	Dwelling	56.2	54.5	56.2	0.0	No Change	57.1	0.9	Negligible Adverse	44.3	42.8	45.1
1, FAIRVIEW MANOR, DANESTONE	Dwelling	57.4	61.5	56.7	-0.7	Negligible Beneficial	59.7	2.3	Negligible Adverse	45.4	49.1	47.5
10, FAIRVIEW MANOR, DANESTONE	Dwelling	55.9	59.9	56.0	0.1	Negligible Adverse	58.4	2.5	Negligible Adverse	44.0	47.6	46.3
101, FAIRVIEW MANOR, DANESTONE	Dwelling	53.4	55.6	53.7	0.3	Negligible Adverse	55.0	1.6	Negligible Adverse	41.8	43.8	43.2
103, FAIRVIEW MANOR, DANESTONE	Dwelling	56.0	59.2	56.6	0.6	Negligible Adverse	58.3	2.3	Negligible Adverse	44.1	47.0	46.2
105, FAIRVIEW MANOR, DANESTONE	Dwelling	57.5	61.0	58.1	0.6	Negligible Adverse	60.0	2.5	Negligible Adverse	45.5	48.6	47.7
107, FAIRVIEW MANOR, DANESTONE	Dwelling	56.7	60.3	57.3	0.6	Negligible Adverse	59.2	2.5	Negligible Adverse	44.8	48.0	47.0
109, FAIRVIEW MANOR, DANESTONE	Dwelling	55.9	58.4	56.5	0.6	Negligible Adverse	57.6	1.7	Negligible Adverse	44.0	46.3	45.6
11, FAIRVIEW MANOR, DANESTONE	Dwelling	55.8	57.9	54.7	-1.1	Minor Beneficial	56.6	1.0	Negligible Adverse	44.0	45.8	44.9
111, FAIRVIEW MANOR, DANESTONE	Dwelling	58.4	62.4	59.0	0.6	Negligible Adverse	61.0	2.6	Negligible Adverse	46.3	49.9	48.6
12, FAIRVIEW MANOR, DANESTONE	Dwelling	56.0	60.1	56.2	0.2	Negligible Adverse	58.6	2.6	Negligible Adverse	44.1	47.8	46.5
14, FAIRVIEW MANOR, DANESTONE	Dwelling	55.9	60.0	56.1	0.2	Negligible Adverse	58.5	2.6	Negligible Adverse	44.0	47.7	46.4
15, FAIRVIEW MANOR, DANESTONE	Dwelling	54.8	56.7	53.9	-0.9	Negligible Beneficial	55.7	0.9	Negligible Adverse	43.1	44.8	43.9
16, FAIRVIEW MANOR, DANESTONE	Dwelling	52.1	54.9	52.2	0.1	Negligible Adverse	53.9	1.8	Negligible Adverse	40.6	43.1	42.2
17, FAIRVIEW MANOR, DANESTONE	Dwelling	51.7	53.0	51.1	-0.6	Negligible Beneficial	52.5	0.8	Negligible Adverse	40.3	41.4	41.0
18, FAIRVIEW MANOR, DANESTONE	Dwelling	48.6	49.8	48.5	-0.1	Negligible Beneficial	49.6	1.0	Negligible Adverse	37.5	38.6	38.4
19, FAIRVIEW MANOR, DANESTONE	Dwelling	52.5	53.6	48.5	-0.8	Negligible Beneficial	53.1	0.6	Negligible Adverse	41.0	42.0	41.5
2, FAIRVIEW MANOR, DANESTONE	Dwelling	57.7	62.1	57.6	-0.1	Negligible Beneficial	60.3	2.6	Negligible Adverse	45.7	49.6	48.0
20, FAIRVIEW MANOR, DANESTONE	Dwelling	50.2	51.3	50.0	-0.2	Negligible Beneficial	51.1	0.9	Negligible Adverse	38.9	39.9	39.7
21, FAIRVIEW MANOR, DANESTONE	Dwelling	50.7	51.8	50.2	-0.5	Negligible Beneficial	51.4	0.7	Negligible Adverse	39.4	40.4	40.0
22, FAIRVIEW MANOR, DANESTONE	Dwelling	48.9	49.9	48.6	-0.3	Negligible Beneficial	49.7	0.8	Negligible Adverse	37.7	38.6	38.5
23, FAIRVIEW MANOR, DANESTONE	Dwelling	52.3	53.4	51.8	-0.5	Negligible Beneficial	53.1	0.8	Negligible Adverse	40.8	41.8	41.5
24, FAIRVIEW MANOR, DANESTONE	Dwelling	49.8	50.0	49.8	-0.2	Negligible Beneficial	49.9	0.9	Negligible Adverse	37.8	38.7	38.6
25, FAIRVIEW MANOR, DANESTONE	Dwelling	54.0	56.0	53.1	-0.9	Negligible Adverse	55.9	1.0	Negligible Adverse	42.3	44.1	43.2
26, FAIRVIEW MANOR, DANESTONE	Dwelling	50.3	51.2	49.8	-0.5	Negligible Beneficial	50.9	0.6	Negligible Adverse	39.0	39.8	39.5
27, FAIRVIEW MANOR, DANESTONE	Dwelling	54.5	57.0	53.4	-1.1	Minor Beneficial	55.6	1.1	Negligible Adverse	42.8	45.0	43.8
28, FAIRVIEW MANOR, DANESTONE	Dwelling	48.9	49.6	48.7	-0.2	Negligible Beneficial	49.6	0.7	Negligible Adverse	37.7	38.4	38.4
29, FAIRVIEW MANOR, DANESTONE	Dwelling	58.2	61.0	56.9	-1.3	Minor Beneficial	59.4	1.2	Negligible Adverse	46.1	48.6	47.2
3, FAIRVIEW MANOR, DANESTONE	Dwelling	55.0	57.3	54.4	-0.6	Negligible Beneficial	56.2	1.2	Negligible Adverse	43.2	45.3	44.3
30, FAIRVIEW MANOR, DANESTONE	Dwelling	49.6	50.2	49.4	-0.2	Negligible Beneficial	50.3	0.7	Negligible Adverse	38.4	38.9	39.0
31, FAIRVIEW MANOR, DANESTONE	Dwelling	60.8	63.8	59.3	-1.5	Minor Beneficial	62.1	1.3	Negligible Adverse	48.5	51.2	49.6
32, FAIRVIEW MANOR, DANESTONE	Dwelling	49.2	49.8	49.1	-0.1	Negligible Beneficial	49.9	0.7	Negligible Adverse	38.0	38.6	38.6
33, FAIRVIEW MANOR, DANESTONE	Dwelling	60.6	63.6	59.1	-1.5	Minor Beneficial	61.9	1.3	Negligible Adverse	48.3	51.0	49.4
34, FAIRVIEW MANOR, DANESTONE	Dwelling	49.4	50.0	49.4	0.0	No Change	50.2	0.8	Negligible Adverse	38.2	38.7	38.9
35, FAIRVIEW MANOR, DANESTONE	Dwelling	62.9	66.2	61.2	-1.7	Minor Beneficial	64.4	1.5	Negligible Adverse	50.3	53.3	51.7
36, FAIRVIEW MANOR, DANESTONE	Dwelling	49.6	50.3	49.5	-0.1	Negligible Beneficial	50.4	0.8	Negligible Adverse	38.4	39.0	39.1
37, FAIRVIEW MANOR, DANESTONE	Dwelling	56.5	58.7	55.5	-1.0	Minor Beneficial	57.6	1.1	Negligible Adverse	44.6	46.6	45.6
38, FAIRVIEW MANOR, DANESTONE	Dwelling	49.7	50.5	49.7	-0.1	Negligible Beneficial	50.6	0.8	Negligible Adverse	38.6	39.2	39.3
39, FAIRVIEW MANOR, DANESTONE	Dwelling	54.1	55.4	53.4	-0.7	Negligible Beneficial	54.9	0.8	Negligible Adverse	42.4	43.6	43.1
4, FAIRVIEW MANOR, DANESTONE	Dwelling	55.1	56.6	54.2	-0.9	Negligible Beneficial	55.7	0.6	Negligible Adverse	43.3	44.7	43.9
40, FAIRVIEW MANOR, DANESTONE	Dwelling	48.5	49.2	48.4	-0.1	Negligible Beneficial	49.3	0.8	Negligible Adverse	37.4	38.0	38.1
41, FAIRVIEW MANOR, DANESTONE	Dwelling	51.7	53.3	51.0	-0.7	Negligible Beneficial	52.5	0.8	Negligible Adverse	40.3	41.7	41.0
42, FAIRVIEW MANOR, DANESTONE	Dwelling	48.8	49.6	48.8	0.0	No Change	49.7	0.9	Negligible Adverse	37.7	38.4	38.5
43, FAIRVIEW MANOR, DANESTONE	Dwelling	51.8	53.2	51.1	-0.7	Negligible Beneficial	52.6	0.8	Negligible Adverse	40.4	41.6	41.1
44, FAIRVIEW MANOR, DANESTONE	Dwelling	49.2	50.0	49.1	-0.1	Negligible Beneficial	50.1	0.9	Negligible Adverse	38.0	38.7	38.8
45, FAIRVIEW MANOR, DANESTONE	Dwelling	52.0	53.3	51.4	-0.6	Negligible Beneficial	52.8	0.8	Negligible Adverse	40.5	41.7	41.3
46, FAIRVIEW MANOR, DANESTONE	Dwelling	49.7	50.6	49.6	-0.1	Negligible Beneficial	50.5	0.8	Negligible Adverse	38.5	39.3	39.2
47, FAIRVIEW MANOR, DANESTONE	Dwelling	52.2	52.8	51.8	-0.4	Negligible Beneficial	52.8	0.6	Negligible Adverse	40.7	41.3	41.3
48, FAIRVIEW MANOR, DANESTONE	Dwelling	50.6	51.5	50.5	-0.1	Negligible Beneficial	51.4	0.8	Negligible Adverse	39.3	40.1	40.0
49, FAIRVIEW MANOR, DANESTONE	Dwelling	52.1	52.5	51.8	-0.3	Negligible Beneficial	52.8	0.7	Negligible Adverse	40.6	41.0	41.3
5, FAIRVIEW MANOR, DANESTONE	Dwelling	54.0	56.5	53.0	-0.7	Negligible Beneficial	55.3	1.3	Negligible Adverse	42.3	44.6	43.5
50, FAIRVIEW MANOR, DANESTONE	Dwelling	49.7	50.5	49.7	0.3	Negligible Adverse	50.8	1.1	Negligible Adverse	38.5	39.2	39.5
51, FAIRVIEW MANOR, DANESTONE	Dwelling	53.0	53.4	52.6	0.4	Negligible Beneficial	53.6	0.6	Negligible Adverse	41.4	41.8	42.0
52, FAIRVIEW MANOR, DANESTONE	Dwelling	50.1	50.9	50.4	0.3	Negligible Adverse	51.2	1.1	Negligible Adverse	38.8	39.5	39.8
53, FAIRVIEW MANOR, DANESTONE	Dwelling	53.2	53.7	52.9	-0.3	Negligible Beneficial	53.9	0.7	Negligible Adverse	41.6	42.1	42.2
54, FAIRVIEW MANOR, DANESTONE	Dwelling	54.0	55.3	54.6	0.6	Negligible Adverse	55.2	1.2	Negligible Adverse	42.3	43.5	43.4
55, FAIRVIEW MANOR, DANESTONE	Dwelling	53.3	53.7	53.0	-0.3	Negligible Beneficial	53.9	0.6	Negligible Adverse	41.7	42.1	42.2
56, FAIRVIEW MANOR, DANESTONE	Dwelling	54.5	56.2	55.2	0.7	Negligible Adverse	55.8	1.3	Negligible Adverse	42.8	44.3	44.0
57, FAIRVIEW MANOR, DANESTONE	Dwelling	53.1	53.2	52.7	0.4	Negligible Beneficial	53.6	0.5	Negligible Adverse	41.5	41.6	42.0
58, FAIRVIEW MANOR, DANESTONE	Dwelling	54.9	57.3	55.5	0.6	Negligible Adverse	56.6	1.7	Negligible Adverse	43.1	45.3	44.7
59, FAIRVIEW MANOR, DANESTONE	Dwelling	52.0	52.0	51.6	-0.4	Negligible Beneficial	52.4	0.4	Negligible Adverse	40.5	40.5	40.9
6, FAIRVIEW MANOR, DANESTONE	Dwelling	54.2	55.2	53.3	-0.9	Negligible Beneficial	54.5	0.3	Negligible Adverse	42.5	43.4	42.8
60, FAIRVIEW MANOR, DANESTONE	Dwelling	55.8	60.0	56.2	0.4	Negligible Adverse	58.5	2.7	Negligible Adverse	44.0	47.7	46.4
61, FAIRVIEW MANOR, DANESTONE	Dwelling	49.2	49.8	49.7	-0.2	Negligible Beneficial	49.9	0.7	Negligible Adverse	38.0	38.6	38.6
63, FAIRVIEW MANOR, DANESTONE	Dwelling	49.9	49.4	49.7	-0.2	Negligible Beneficial	49.6	0.7	Negligible Adverse	37.7	38.2	38.4
65, FAIRVIEW MANOR, DANESTONE	Dwelling	49.5	49.5	49.8	0.0	Negligible Beneficial	49.7	0.7	Negligible Adverse	37.8	38.3	38.5
67, FAIRVIEW MANOR, DANESTONE	Dwelling	49.0	49.5	48.9	-0.2	Negligible Beneficial	49.8	0.8	Negligible Adverse	37.8	38.3	38.3
69, FAIRVIEW MANOR, DANESTONE	Dwelling	48.9	49.4	48.9	0.0	No Change	49.7	0.8	Negligible Adverse	37.7	38.2	38.5
7, FAIRVIEW MANOR, DANESTONE	Dwelling	57.0	59.0	55.9	-1.1	Minor Beneficial	57.9	0.9	Negligible Adverse	45.0	46.8	45.8
71, FAIRVIEW MANOR, DANESTONE	Dwelling	49.1	49.6	49.0	-0.1	Negligible Beneficial	49.9	0.8	Negligible Adverse	37.9	38.4	38.6
73, FAIRVIEW MANOR, DANESTONE	Dwelling	48.6	49.1	48.5	-0.1	Negligible Beneficial	49.4	0.8	Negligible Adverse	37.5	37.9	38.2
75, FAIRVIEW MANOR, DANESTONE	Dwelling	47.0	47.5	47.0	0.0	No Change	48.0	1.0	Negligible Adverse	36.0	36.5	36.9
77, FAIRVIEW MANOR, DANESTONE	Dwelling	49.6	50.0	49.4	-0.2	Negligible Beneficial	50.3	0.7	Negligible Adverse	38.4	38.7	39.0
79, FAIRVIEW MANOR, DANESTONE	Dwelling	49.8	50.4	49.6	-0.2	Negligible Beneficial	50.5	0.7	Negligible Adverse	38.6	39.1	39.2
8, FAIRVIEW MANOR, DANESTONE	Dwelling	52.7	56.6	52.8	-0.1	Negligible Beneficial	55.1	2.4	Negligible Adverse	41.2	44.7	43.3
81, FAIRVIEW MANOR, DANESTONE	Dwelling	49.9	50.6	49.8	-0.1	Negligible Beneficial	50.7	0.8	Negligible Adverse	38.6	39.3	39.4
83, FAIRVIEW MANOR, DANESTONE	Dwelling	50.0	50.9	50.0	0.0	No Change	50.9	0.9	Negligible Adverse	38.7	39.5	39.5
85, FAIRVIEW MANOR, DANESTONE	Dwelling	50.1	51.0	50.1	0.0	No Change	51.0	0.9	Negligible Adverse	38.8	39.6	39.6
87, FAIRVIEW MANOR, DANESTONE	Dwelling	50.1	51.0	50.1	0.1	Negligible Adverse	51.0	1.0	Negligible Adverse	38.7	39.6	39.6
89, FAIRVIEW MANOR, DANESTONE	Dwelling	50.2	51.3	50.2	0.0	No Change	51.2	1.0	Negligible Adverse	38.9	39.9	39.8
9, FAIRVIEW MANOR, DANESTONE	Dwelling	54.8	57.0	54.0	-0.8	Negligible Beneficial	56.0	1.2	Negligible Adverse	43.1	45.0	44.1

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
91, FAIRVIEW MANOR, DANESTONE	Dwelling	49.3	50.7	49.5	0.2	Negligible Adverse	50.5	1.2	Negligible Adverse	38.1	39.4	39.2
93, FAIRVIEW MANOR, DANESTONE	Dwelling	53.3	55.1	53.8	0.5	Negligible Adverse	54.6	1.3	Negligible Adverse	41.7	43.3	42.9
95, FAIRVIEW MANOR, DANESTONE	Dwelling	51.8	53.4	52.2	0.4	Negligible Adverse	53.1	1.3	Negligible Adverse	40.4	41.8	41.5
97, FAIRVIEW MANOR, DANESTONE	Dwelling	50.5	51.9	50.7	0.2	Negligible Adverse	51.7	1.2	Negligible Adverse	39.2	40.4	40.3
99, FAIRVIEW MANOR, DANESTONE	Dwelling	49.8	51.4	50.0	0.2	Negligible Adverse	51.1	1.3	Negligible Adverse	38.6	40.0	39.7
1, FAIRVIEW PARADE	Dwelling	56.8	59.1	56.7	-0.1	Negligible Beneficial	58.2	1.4	Negligible Adverse	44.9	46.9	46.1
10, FAIRVIEW PARADE	Dwelling	52.8	52.3	52.6	-0.2	Negligible Beneficial	53.5	0.7	Negligible Adverse	41.3	40.8	41.9
11, FAIRVIEW PARADE	Dwelling	57.2	59.9	57.0	-0.2	Negligible Beneficial	58.8	1.6	Negligible Adverse	45.2	47.6	46.7
12, FAIRVIEW PARADE	Dwelling	53.0	52.6	52.8	-0.2	Negligible Beneficial	53.7	0.7	Negligible Adverse	41.4	41.1	42.1
14, FAIRVIEW PARADE	Dwelling	51.7	51.8	51.9	0.2	Negligible Adverse	52.8	1.1	Negligible Adverse	40.3	40.4	41.3
15, FAIRVIEW PARADE	Dwelling	57.6	60.3	57.4	-0.2	Negligible Beneficial	59.3	1.7	Negligible Adverse	45.6	48.0	47.1
16, FAIRVIEW PARADE	Dwelling	51.9	52.0	52.0	0.1	Negligible Adverse	53.0	1.1	Negligible Adverse	40.4	40.4	41.4
17, FAIRVIEW PARADE	Dwelling	56.9	59.5	56.7	-0.2	Negligible Beneficial	58.4	1.5	Negligible Adverse	44.9	47.3	46.3
18, FAIRVIEW PARADE	Dwelling	52.0	52.0	52.1	0.1	Negligible Adverse	53.1	1.1	Negligible Adverse	40.5	40.5	41.5
19, FAIRVIEW PARADE	Dwelling	56.9	59.5	56.7	-0.2	Negligible Beneficial	58.5	1.6	Negligible Adverse	44.9	47.3	46.4
2, FAIRVIEW PARADE	Dwelling	51.3	52.1	51.1	-0.2	Negligible Beneficial	52.2	0.9	Negligible Adverse	39.9	40.6	40.7
20, FAIRVIEW PARADE	Dwelling	52.5	52.6	52.6	0.1	Negligible Adverse	53.7	1.2	Negligible Adverse	41.0	41.1	42.1
21, FAIRVIEW PARADE	Dwelling	56.9	59.4	56.7	-0.2	Negligible Beneficial	58.4	1.5	Negligible Adverse	44.9	47.2	46.3
22, FAIRVIEW PARADE	Dwelling	55.1	54.3	55.2	0.1	Negligible Adverse	56.0	0.9	Negligible Adverse	43.3	42.6	44.1
23, FAIRVIEW PARADE	Dwelling	57.0	59.5	56.8	-0.2	Negligible Beneficial	58.5	1.5	Negligible Adverse	45.0	47.3	46.4
25, FAIRVIEW PARADE	Dwelling	54.1	55.8	53.9	-0.2	Negligible Beneficial	55.3	1.2	Negligible Adverse	42.4	44.0	43.5
27, FAIRVIEW PARADE	Dwelling	54.2	56.1	53.9	-0.3	Negligible Beneficial	55.4	1.2	Negligible Adverse	42.5	44.2	43.6
29, FAIRVIEW PARADE	Dwelling	54.5	56.3	54.3	-0.2	Negligible Beneficial	55.7	1.2	Negligible Adverse	42.8	44.4	43.9
3, FAIRVIEW PARADE	Dwelling	56.4	58.8	56.3	-0.1	Negligible Beneficial	57.9	1.5	Negligible Adverse	44.5	46.7	45.8
31, FAIRVIEW PARADE	Dwelling	54.0	56.0	54.0	-0.2	Negligible Beneficial	55.4	1.2	Negligible Adverse	42.5	44.1	43.6
33, FAIRVIEW PARADE	Dwelling	54.2	56.0	54.0	-0.2	Negligible Beneficial	55.3	1.2	Negligible Adverse	42.5	44.1	43.6
35, FAIRVIEW PARADE	Dwelling	54.4	56.0	54.3	-0.1	Negligible Beneficial	55.6	1.2	Negligible Adverse	42.7	44.1	43.8
37, FAIRVIEW PARADE	Dwelling	54.9	53.9	54.8	-0.1	Negligible Beneficial	55.4	0.5	Negligible Adverse	43.1	42.2	43.6
39, FAIRVIEW PARADE	Dwelling	55.3	54.2	55.2	-0.1	Negligible Beneficial	55.8	0.5	Negligible Adverse	43.5	42.5	44.0
4, FAIRVIEW PARADE	Dwelling	53.3	52.9	53.2	-0.1	Negligible Beneficial	54.0	0.7	Negligible Adverse	41.7	41.3	42.3
41, FAIRVIEW PARADE	Dwelling	54.7	53.4	54.6	-0.1	Negligible Beneficial	55.0	0.3	Negligible Adverse	43.0	41.8	43.2
43, FAIRVIEW PARADE	Dwelling	55.7	54.4	55.7	0.0	No Change	56.1	0.4	Negligible Adverse	43.9	42.7	44.2
45, FAIRVIEW PARADE	Dwelling	57.6	56.1	57.5	-0.1	Negligible Beneficial	57.9	0.3	Negligible Adverse	45.6	44.2	45.8
47, FAIRVIEW PARADE	Dwelling	58.1	56.7	58.0	-0.1	Negligible Beneficial	58.4	0.3	Negligible Adverse	46.0	44.8	46.3
49, FAIRVIEW PARADE	Dwelling	58.4	57.0	58.3	-0.1	Negligible Beneficial	58.7	0.3	Negligible Adverse	46.3	45.0	46.6
5, FAIRVIEW PARADE	Dwelling	56.0	58.5	55.9	-0.1	Negligible Beneficial	57.5	1.5	Negligible Adverse	44.1	46.4	45.5
6, FAIRVIEW PARADE	Dwelling	52.4	51.6	52.4	0.0	No Change	53.3	0.9	Negligible Adverse	40.9	40.2	41.7
7, FAIRVIEW PARADE	Dwelling	56.1	58.6	56.0	-0.1	Negligible Beneficial	57.6	1.5	Negligible Adverse	44.2	46.5	45.6
8, FAIRVIEW PARADE	Dwelling	52.3	52.2	52.2	-0.1	Negligible Beneficial	53.2	0.9	Negligible Adverse	40.8	40.7	41.6
9, FAIRVIEW PARADE	Dwelling	56.3	58.9	56.2	-0.1	Negligible Beneficial	57.9	1.6	Negligible Adverse	44.4	46.7	45.8
1, FAIRVIEW PARK	Dwelling	54.5	54.5	54.5	0.0	No Change	55.3	0.8	Negligible Adverse	42.8	41.6	43.5
10, FAIRVIEW PARK	Dwelling	59.7	58.6	59.7	0.0	No Change	60.2	0.5	Negligible Adverse	47.5	46.5	47.9
11, FAIRVIEW PARK	Dwelling	59.6	58.3	59.6	0.0	No Change	60.0	0.4	Negligible Adverse	47.4	46.2	47.7
12, FAIRVIEW PARK	Dwelling	58.8	57.5	58.8	0.0	No Change	59.2	0.4	Negligible Adverse	46.7	45.5	47.0
2, FAIRVIEW PARK	Dwelling	54.9	53.5	54.8	-0.1	Negligible Beneficial	55.5	0.6	Negligible Adverse	43.1	41.9	43.7
3, FAIRVIEW PARK	Dwelling	54.8	53.3	54.8	0.0	No Change	55.3	0.5	Negligible Adverse	43.1	41.7	43.5
4, FAIRVIEW PARK	Dwelling	54.5	53.3	54.4	-0.1	Negligible Beneficial	55.2	0.7	Negligible Adverse	42.8	41.7	43.4
5, FAIRVIEW PARK	Dwelling	54.4	53.2	54.4	0.0	No Change	55.1	0.7	Negligible Adverse	42.7	41.6	43.3
6, FAIRVIEW PARK	Dwelling	55.1	53.6	55.1	0.0	No Change	55.5	0.4	Negligible Adverse	43.3	42.0	43.7
7, FAIRVIEW PARK	Dwelling	55.9	56.0	55.9	0.0	No Change	57.1	1.2	Negligible Adverse	44.0	44.1	45.1
8, FAIRVIEW PARK	Dwelling	57.6	57.2	57.5	-0.1	Negligible Beneficial	58.3	0.7	Negligible Adverse	45.6	45.2	46.2
9, FAIRVIEW PARK	Dwelling	55.0	55.5	55.0	0.0	No Change	56.5	1.5	Negligible Adverse	43.2	43.7	44.6
1, FAIRVIEW PLACE, DANESTONE	Dwelling	54.2	54.1	54.1	-0.1	Negligible Beneficial	55.7	1.5	Negligible Adverse	42.5	44.5	43.9
10, FAIRVIEW PLACE, DANESTONE	Dwelling	52.6	52.8	52.4	-0.2	Negligible Beneficial	53.2	0.6	Negligible Adverse	41.1	41.3	41.6
11, FAIRVIEW PLACE, DANESTONE	Dwelling	51.2	51.2	51.1	-0.1	Negligible Beneficial	51.9	0.7	Negligible Adverse	39.8	39.8	40.4
2, FAIRVIEW PLACE, DANESTONE	Dwelling	54.6	57.1	54.4	-0.2	Negligible Beneficial	56.2	1.6	Negligible Adverse	42.9	45.1	44.3
3, FAIRVIEW PLACE, DANESTONE	Dwelling	54.6	57.2	54.4	-0.2	Negligible Beneficial	56.2	1.6	Negligible Adverse	42.9	45.2	44.3
4, FAIRVIEW PLACE, DANESTONE	Dwelling	54.4	56.8	54.3	-0.1	Negligible Beneficial	56.0	1.6	Negligible Adverse	42.7	44.9	44.1
5, FAIRVIEW PLACE, DANESTONE	Dwelling	54.2	56.4	54.0	-0.2	Negligible Beneficial	55.6	1.4	Negligible Adverse	42.5	44.5	43.8
6, FAIRVIEW PLACE, DANESTONE	Dwelling	52.4	52.7	52.2	-0.2	Negligible Beneficial	53.1	0.7	Negligible Adverse	40.9	41.2	41.5
7, FAIRVIEW PLACE, DANESTONE	Dwelling	52.3	52.7	52.1	-0.2	Negligible Beneficial	53.0	0.7	Negligible Adverse	40.8	41.2	41.4
8, FAIRVIEW PLACE, DANESTONE	Dwelling	52.2	52.4	52.0	-0.2	Negligible Beneficial	52.9	0.7	Negligible Adverse	40.7	40.9	41.3
9, FAIRVIEW PLACE, DANESTONE	Dwelling	52.2	52.5	52.0	-0.2	Negligible Beneficial	52.9	0.7	Negligible Adverse	40.7	41.0	41.3
1, FAIRVIEW ROAD, DANESTONE	Dwelling	53.1	52.7	52.9	-0.2	Negligible Beneficial	53.7	0.6	Negligible Adverse	41.5	41.2	42.1
10, FAIRVIEW ROAD, DANESTONE	Dwelling	67.7	65.4	67.6	-0.1	Negligible Beneficial	67.8	0.1	Negligible Beneficial	54.7	52.6	54.8
11, FAIRVIEW ROAD, DANESTONE	Dwelling	59.0	56.8	58.9	-0.1	Negligible Beneficial	59.8	0.8	Negligible Adverse	46.8	45.1	47.6
12, FAIRVIEW ROAD, DANESTONE	Dwelling	69.0	66.8	68.9	-0.1	Negligible Beneficial	70.0	1.0	Negligible Adverse	55.8	53.9	56.7
14, FAIRVIEW ROAD, DANESTONE	Dwelling	66.9	66.9	66.9	0.0	Negligible Adverse	70.9	1.0	Negligible Adverse	55.8	53.9	56.7
15, FAIRVIEW ROAD, DANESTONE	Dwelling	59.4	57.5	59.4	0.0	No Change	60.4	1.0	Negligible Adverse	47.1	45.5	48.1
16, FAIRVIEW ROAD, DANESTONE	Dwelling	69.6	67.4	69.5	-0.1	Negligible Beneficial	70.7	1.1	Negligible Adverse	56.4	54.4	57.4
17, FAIRVIEW ROAD, DANESTONE	Dwelling	58.9	57.0	58.9	0.0	No Change	59.9	1.0	Negligible Adverse	46.7	45.0	47.6
18, FAIRVIEW ROAD, DANESTONE	Dwelling	69.2	67.0	69.1	-0.1	Negligible Beneficial	70.2	1.0	Negligible Adverse	56.0	54.0	56.9
19, FAIRVIEW ROAD, DANESTONE	Dwelling	58.5	56.6	58.4	-0.1	Negligible Beneficial	59.4	0.9	Negligible Adverse	46.4	44.7	47.2
2, FAIRVIEW ROAD, DANESTONE	Dwelling	55.2	54.3	55.1	-0.1	Negligible Beneficial	55.8	0.6	Negligible Adverse	43.4	42.6	44.0
20, FAIRVIEW ROAD, DANESTONE	Dwelling	72.3	70.1	72.2	-0.1	Negligible Beneficial	73.4	1.1	Negligible Adverse	58.8	56.8	59.8
21, FAIRVIEW ROAD, DANESTONE	Dwelling	58.4	56.6	58.4	0.0	No Change	59.3	0.9	Negligible Adverse	46.3	44.7	47.1
22, FAIRVIEW ROAD, DANESTONE	Dwelling	72.3	70.1	72.2	-0.1	Negligible Beneficial	73.4	1.1	Negligible Adverse	58.8	56.8	59.8
23, FAIRVIEW ROAD, DANESTONE	Dwelling	58.7	56.8	58.7	0.0	No Change	59.6	0.9	Negligible Adverse	46.6	44.9	47.4
24, FAIRVIEW ROAD, DANESTONE	Dwelling	69.5	67.3	69.4	-0.1	Negligible Beneficial	70.7	1.2	Negligible Adverse	56.3	54.3	57.4
25, FAIRVIEW ROAD, DANESTONE	Dwelling	58.9	56.9	58.8	-0.1	Negligible Beneficial	59.8	0.9	Negligible Adverse	46.7	44.9	47.6
26, FAIRVIEW ROAD, DANESTONE	Dwelling	69.3	67.2	69.3	-0.1	Negligible Beneficial	70.5	1.1	Negligible Adverse	56.2	54.2	57.2
27, FAIRVIEW ROAD, DANESTONE	Dwelling	59.4	57.5	59.4	0.0	No Change	60.4	1.0	Negligible Adverse	47.2	45.5	48.1
28, FAIRVIEW ROAD, DANESTONE	Dwelling	66.7	66.5	66.6	-0.1	Negligible Beneficial	69.8	1.1	Negligible Adverse	55.6	53.6	56.6

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
29, FAIRVIEW ROAD, DANESTONE	Dwelling	59.6	57.7	59.6	0.0	No Change	60.6	1.0	Negligible Adverse	47.4	45.7	48.3
3, FAIRVIEW ROAD, DANESTONE	Dwelling	55.0	54.0	54.9	-0.1	Negligible Beneficial	55.6	0.6	Negligible Adverse	43.2	42.3	43.8
30, FAIRVIEW ROAD, DANESTONE	Dwelling	68.9	66.7	68.8	-0.1	Negligible Beneficial	70.0	1.1	Negligible Adverse	55.7	53.8	56.7
31, FAIRVIEW ROAD, DANESTONE	Dwelling	59.3	57.4	59.2	-0.1	Negligible Beneficial	60.2	0.9	Negligible Adverse	47.1	45.4	47.9
32, FAIRVIEW ROAD, DANESTONE	Dwelling	69.9	67.9	69.8	-0.1	Negligible Beneficial	70.9	1.0	Negligible Adverse	56.6	54.8	57.5
33, FAIRVIEW ROAD, DANESTONE	Dwelling	60.5	58.6	60.4	-0.1	Negligible Beneficial	61.4	0.9	Negligible Adverse	48.2	46.5	49.0
34, FAIRVIEW ROAD, DANESTONE	Dwelling	70.4	68.4	70.3	-0.1	Negligible Beneficial	71.3	0.9	Negligible Adverse	57.1	55.3	57.9
35, FAIRVIEW ROAD, DANESTONE	Dwelling	60.6	58.8	60.6	0.0	No Change	61.4	0.8	Negligible Adverse	48.3	46.7	49.0
36, FAIRVIEW ROAD, DANESTONE	Dwelling	69.9	67.9	69.8	-0.1	Negligible Beneficial	70.9	1.0	Negligible Adverse	56.6	54.8	57.5
37, FAIRVIEW ROAD, DANESTONE	Dwelling	60.9	59.1	60.9	0.0	No Change	61.8	0.9	Negligible Adverse	48.5	46.9	49.4
38, FAIRVIEW ROAD, DANESTONE	Dwelling	70.0	68.2	70.0	0.0	No Change	70.9	0.9	Negligible Adverse	56.7	55.1	57.5
39, FAIRVIEW ROAD, DANESTONE	Dwelling	60.0	58.2	60.0	0.0	No Change	60.9	0.9	Negligible Adverse	47.7	46.1	48.5
4, FAIRVIEW ROAD, DANESTONE	Dwelling	56.4	55.1	56.4	0.0	No Change	56.9	0.5	Negligible Adverse	44.5	43.3	44.9
40, FAIRVIEW ROAD, DANESTONE	Dwelling	70.2	68.4	70.1	-0.1	Negligible Beneficial	71.0	0.8	Negligible Adverse	56.9	55.3	57.6
41, FAIRVIEW ROAD, DANESTONE	Dwelling	62.0	58.4	60.1	-0.1	Negligible Beneficial	60.9	0.7	Negligible Adverse	47.9	46.3	48.5
42, FAIRVIEW ROAD, DANESTONE	Dwelling	68.8	67.1	68.8	0.0	No Change	69.5	0.7	Negligible Adverse	55.7	54.1	56.3
43, FAIRVIEW ROAD, DANESTONE	Dwelling	60.8	59.1	60.7	-0.1	Negligible Beneficial	61.5	0.7	Negligible Adverse	48.5	46.9	49.1
44, FAIRVIEW ROAD, DANESTONE	Dwelling	69.1	67.4	69.0	-0.1	Negligible Beneficial	69.8	0.7	Negligible Adverse	55.9	54.4	56.6
45, FAIRVIEW ROAD, DANESTONE	Dwelling	60.6	58.9	60.5	-0.1	Negligible Beneficial	61.3	0.7	Negligible Adverse	48.3	46.7	48.9
46, FAIRVIEW ROAD, DANESTONE	Dwelling	69.6	68.0	69.6	0.0	No Change	70.3	0.7	Negligible Adverse	56.4	54.9	57.0
47, FAIRVIEW ROAD, DANESTONE	Dwelling	63.3	61.6	63.3	0.0	No Change	64.0	0.7	Negligible Adverse	50.7	49.2	51.3
48, FAIRVIEW ROAD, DANESTONE	Dwelling	70.5	68.8	70.4	-0.1	Negligible Beneficial	71.1	0.6	Negligible Adverse	57.2	55.7	57.7
49, FAIRVIEW ROAD, DANESTONE	Dwelling	57.9	56.2	57.9	0.0	No Change	58.6	0.7	Negligible Adverse	45.8	44.3	46.5
5, FAIRVIEW ROAD, DANESTONE	Dwelling	56.3	55.0	56.3	0.0	No Change	56.9	0.6	Negligible Adverse	44.4	43.2	44.9
50, FAIRVIEW ROAD, DANESTONE	Dwelling	66.9	65.6	66.9	0.0	No Change	69.3	0.7	Negligible Adverse	55.5	53.9	56.1
51, FAIRVIEW ROAD, DANESTONE	Dwelling	59.1	57.3	59.0	-0.1	Negligible Beneficial	59.7	0.6	Negligible Adverse	46.9	45.3	47.5
53, FAIRVIEW ROAD, DANESTONE	Dwelling	56.2	54.5	56.1	-0.1	Negligible Beneficial	56.8	0.6	Negligible Adverse	44.3	42.8	44.9
55, FAIRVIEW ROAD, DANESTONE	Dwelling	57.8	56.1	57.8	0.0	No Change	58.5	0.7	Negligible Adverse	45.8	44.2	46.4
57, FAIRVIEW ROAD, DANESTONE	Dwelling	55.7	54.9	55.6	-0.1	Negligible Beneficial	56.3	0.6	Negligible Adverse	43.9	43.1	44.4
6, FAIRVIEW ROAD, DANESTONE	Dwelling	57.0	56.3	57.0	0.0	No Change	57.6	0.6	Negligible Adverse	45.0	44.4	45.6
7, FAIRVIEW ROAD, DANESTONE	Dwelling	57.5	56.0	57.4	-0.1	Negligible Beneficial	58.1	0.6	Negligible Adverse	45.5	44.1	46.0
8, FAIRVIEW ROAD, DANESTONE	Dwelling	57.1	56.5	57.1	0.0	No Change	57.9	0.8	Negligible Adverse	45.1	44.6	45.8
9, FAIRVIEW ROAD, DANESTONE	Dwelling	57.8	56.2	57.8	0.0	No Change	58.3	0.5	Negligible Adverse	45.8	44.3	46.2
DANESTONE COMMUNITY CENTRE, FAIRVIEW STREET, DANESTONE	Community Centre	56.6	59.2	56.7	0.1	Negligible Adverse	58.3	1.7	Negligible Adverse	44.7	47.0	46.2
DANESTONE CONGREGATIONAL CHURCH, FAIRVIEW STREET, DANESTONE	Church	51.2	51.4	51.2	0.0	No Change	52.2	1.0	Negligible Adverse	39.8	40.0	40.7
STEP BY STEP PRE-SCHOOL NURSERY, FAIRVIEW STREET, DANESTONE	Pre-School	51.1	51.2	51.1	0.0	No Change	52.0	0.9	Negligible Adverse	39.7	39.8	40.5
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS, FAIRVIEW STREET, DANESTONE	Church	53.2	55.4	53.1	-0.1	Negligible Beneficial	54.7	1.5	Negligible Adverse	41.6	43.6	43.0
FAIRVIEW HOUSE NURSING HOME, FAIRVIEW STREET, DANESTONE	Dwelling	53.5	55.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	43.3	43.0
1, FAIRVIEW TERRACE, DANESTONE	Dwelling	55.0	57.5	54.9	-0.1	Negligible Beneficial	56.6	1.6	Negligible Adverse	43.2	45.5	44.7
10, FAIRVIEW TERRACE, DANESTONE	Dwelling	54.3	54.2	54.1	-0.2	Negligible Beneficial	54.9	0.6	Negligible Adverse	42.6	42.5	43.1
11, FAIRVIEW TERRACE, DANESTONE	Dwelling	52.5	52.2	52.4	-0.1	Negligible Beneficial	53.1	0.6	Negligible Adverse	41.0	40.7	41.5
12, FAIRVIEW TERRACE, DANESTONE	Dwelling	53.0	53.3	52.9	-0.1	Negligible Beneficial	53.8	0.8	Negligible Adverse	41.4	41.7	42.2
2, FAIRVIEW TERRACE, DANESTONE	Dwelling	54.8	57.2	54.7	-0.1	Negligible Beneficial	56.4	1.6	Negligible Adverse	43.1	45.2	44.5
3, FAIRVIEW TERRACE, DANESTONE	Dwelling	55.0	57.2	54.9	-0.1	Negligible Beneficial	56.5	1.5	Negligible Adverse	43.2	45.2	44.6
4, FAIRVIEW TERRACE, DANESTONE	Dwelling	55.2	57.2	55.0	-0.2	Negligible Beneficial	56.5	1.3	Negligible Adverse	43.4	45.2	44.6
5, FAIRVIEW TERRACE, DANESTONE	Dwelling	55.0	56.5	54.8	-0.2	Negligible Beneficial	56.1	1.1	Negligible Adverse	43.2	44.6	44.2
6, FAIRVIEW TERRACE, DANESTONE	Dwelling	54.9	54.3	54.7	-0.2	Negligible Beneficial	55.3	0.4	Negligible Adverse	43.1	42.6	43.5
7, FAIRVIEW TERRACE, DANESTONE	Dwelling	54.4	53.0	54.3	-0.1	Negligible Beneficial	54.8	0.4	Negligible Adverse	42.7	41.4	43.1
8, FAIRVIEW TERRACE, DANESTONE	Dwelling	59.3	57.7	59.3	0.0	No Change	59.9	0.6	Negligible Adverse	47.1	45.7	47.6
9, FAIRVIEW TERRACE, DANESTONE	Dwelling	53.2	52.5	53.1	-0.1	Negligible Beneficial	53.8	0.6	Negligible Adverse	41.6	41.0	42.2
TYNACROY, 21, FAIRVIEW WALK, DANESTONE	Dwelling	56.3	58.2	56.2	-0.1	Negligible Beneficial	57.4	1.1	Negligible Adverse	44.4	46.1	45.4
1, FAIRVIEW WALK, DANESTONE	Dwelling	54.6	57.3	54.8	0.2	Negligible Adverse	56.6	2.0	Negligible Adverse	42.9	45.3	44.7
10, FAIRVIEW WALK, DANESTONE	Dwelling	53.6	54.9	53.7	0.1	Negligible Adverse	54.8	1.2	Negligible Adverse	42.0	43.1	43.1
11, FAIRVIEW WALK, DANESTONE	Dwelling	56.7	59.0	56.8	0.1	Negligible Beneficial	58.2	1.5	Negligible Adverse	44.8	46.8	46.1
12, FAIRVIEW WALK, DANESTONE	Dwelling	51.1	52.4	51.2	0.1	Negligible Adverse	52.3	1.2	Negligible Adverse	39.7	40.9	40.8
14, FAIRVIEW WALK, DANESTONE	Dwelling	50.6	51.3	50.6	0.0	No Change	51.6	1.0	Negligible Adverse	39.3	39.9	40.2
15, FAIRVIEW WALK, DANESTONE	Dwelling	56.8	58.7	56.8	0.0	No Change	58.0	1.2	Negligible Adverse	44.9	46.6	45.9
16, FAIRVIEW WALK, DANESTONE	Dwelling	52.5	52.6	52.4	-0.1	Negligible Beneficial	53.4	0.9	Negligible Adverse	41.0	41.1	41.8
17, FAIRVIEW WALK, DANESTONE	Dwelling	56.6	58.4	56.5	-0.1	Negligible Beneficial	57.7	1.1	Negligible Adverse	44.7	46.3	45.7
19, FAIRVIEW WALK, DANESTONE	Dwelling	57.7	59.6	57.6	-0.1	Negligible Beneficial	58.9	1.2	Negligible Adverse	45.7	47.4	46.7
2, FAIRVIEW WALK, DANESTONE	Dwelling	57.2	58.4	57.2	0.0	No Change	57.2	1.0	Negligible Adverse	45.2	46.3	45.6
23, FAIRVIEW WALK, DANESTONE	Dwelling	58.0	59.2	58.0	-0.1	Negligible Beneficial	59.3	1.2	Negligible Adverse	46.0	47.7	47.1
25, FAIRVIEW WALK, DANESTONE	Dwelling	56.4	58.3	56.3	-0.1	Negligible Beneficial	57.5	1.1	Negligible Adverse	44.5	46.2	45.5
27, FAIRVIEW WALK, DANESTONE	Dwelling	56.0	57.8	56.0	0.0	No Change	57.1	1.1	Negligible Adverse	44.1	45.8	45.1
29, FAIRVIEW WALK, DANESTONE	Dwelling	53.9	54.4	53.8	-0.1	Negligible Beneficial	54.7	0.8	Negligible Adverse	42.2	42.7	43.0
3, FAIRVIEW WALK, DANESTONE	Dwelling	56.3	58.5	56.3	0.2	Negligible Adverse	58.3	2.0	Negligible Adverse	44.4	46.8	46.2
31, FAIRVIEW WALK, DANESTONE	Dwelling	52.4	53.0	52.2	-0.2	Negligible Beneficial	53.1	0.7	Negligible Adverse	40.9	41.4	41.5
33, FAIRVIEW WALK, DANESTONE	Dwelling	49.7	50.1	49.7	0.0	No Change	50.5	0.8	Negligible Adverse	38.5	38.8	39.2
4, FAIRVIEW WALK, DANESTONE	Dwelling	53.5	54.4	53.5	0.0	No Change	54.4	0.9	Negligible Adverse	41.9	42.7	42.7
5, FAIRVIEW WALK, DANESTONE	Dwelling	56.3	59.1	56.5	0.2	Negligible Adverse	58.3	2.0	Negligible Adverse	44.4	46.9	46.2
6, FAIRVIEW WALK, DANESTONE	Dwelling	50.7	51.8	50.7	0.0	No Change	51.8	1.1	Negligible Adverse	39.4	40.4	40.4
6, FAIRVIEW WALK, DANESTONE	Dwelling	53.9	55.6	54.0	0.1	Negligible Adverse	55.3	1.4	Negligible Adverse	42.2	43.8	43.5
7, FAIRVIEW WALK, DANESTONE	Dwelling	52.2	57.5	55.3	0.1	Negligible Beneficial	56.9	1.7	Negligible Adverse	43.4	45.4	44.9
8, FAIRVIEW WALK, DANESTONE	Dwelling	52.4	53.4	52.4	0.0	No Change	53.4	1.0	Negligible Adverse	40.9	41.8	41.8
9, FAIRVIEW WALK, DANESTONE	Dwelling	56.0	58.2	56.0	-0.1	Negligible Beneficial	57.6	1.6	Negligible Adverse	44.1	46.1	45.6
1.1, FAIRVIEW WAY, DANESTONE	Dwelling	53.6	53.7	53.7	0.1	Negligible Adverse	54.7	1.1	Negligible Adverse	42.0	42.1	43.0
10, FAIRVIEW WAY, DANESTONE	Dwelling	52.6	53.4	52.7	0.1	Negligible Adverse	54.0	1.4	Negligible Adverse	41.1	41.8	42.3
11, FAIRVIEW WAY, DANESTONE	Dwelling	54.9	54.7	55.0	0.1	Negligible Adverse	55.8	0.9	Negligible Adverse	43.1	43.0	44.0

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
12, FAIRVIEW WAY, DANESTONE	Dwelling	52.6	53.9	52.8	0.2	Negligible Adverse	54.1	1.5	Negligible Adverse	41.1	42.2	42.4
14, FAIRVIEW WAY, DANESTONE	Dwelling	52.4	53.4	52.5	0.1	Negligible Adverse	53.8	1.4	Negligible Adverse	40.9	41.8	42.2
15, FAIRVIEW WAY, DANESTONE	Dwelling	56.5	56.1	56.7	0.2	Negligible Adverse	57.5	1.0	Negligible Adverse	44.6	44.2	45.5
16, FAIRVIEW WAY, DANESTONE	Dwelling	52.4	53.4	52.5	0.1	Negligible Adverse	53.8	1.4	Negligible Adverse	40.9	41.8	42.2
18, FAIRVIEW WAY, DANESTONE	Dwelling	52.5	53.3	52.6	0.1	Negligible Adverse	54.0	1.5	Negligible Adverse	41.0	41.7	42.3
19, FAIRVIEW WAY, DANESTONE	Dwelling	71.6	71.9	71.9	0.3	Negligible Adverse	73.2	1.6	Negligible Adverse	58.2	58.4	59.6
2, FAIRVIEW WAY, DANESTONE	Dwelling	59.3	62.4	59.4	0.1	Negligible Adverse	61.1	1.8	Negligible Adverse	47.1	49.9	48.7
20, FAIRVIEW WAY, DANESTONE	Dwelling	51.7	52.3	51.9	0.2	Negligible Adverse	53.2	1.5	Negligible Adverse	40.3	40.8	41.6
21, FAIRVIEW WAY, DANESTONE	Dwelling	69.9	70.4	70.2	0.3	Negligible Adverse	71.8	1.9	Negligible Adverse	56.6	57.1	58.4
21, FAIRVIEW WAY, DANESTONE	Dwelling	69.9	70.4	70.2	0.3	Negligible Adverse	71.8	1.9	Negligible Adverse	56.6	57.1	58.4
22, FAIRVIEW WAY, DANESTONE	Dwelling	52.3	52.8	52.4	0.1	Negligible Adverse	53.6	1.5	Negligible Adverse	40.8	41.3	42.2
23, FAIRVIEW WAY, DANESTONE	Dwelling	69.9	70.4	70.2	0.3	Negligible Adverse	71.8	1.9	Negligible Adverse	56.6	57.1	58.4
24, FAIRVIEW WAY, DANESTONE	Dwelling	52.0	52.6	52.2	0.2	Negligible Adverse	53.6	1.6	Negligible Adverse	40.5	41.1	42.0
25, FAIRVIEW WAY, DANESTONE	Dwelling	69.9	70.4	70.2	0.3	Negligible Adverse	71.8	1.9	Negligible Adverse	56.6	57.1	58.4
26, FAIRVIEW WAY, DANESTONE	Dwelling	52.9	53.4	53.0	0.1	Negligible Adverse	54.4	1.5	Negligible Adverse	41.3	41.8	42.7
27, FAIRVIEW WAY, DANESTONE	Dwelling	68.4	69.0	68.7	0.3	Negligible Adverse	70.6	2.2	Negligible Adverse	55.3	55.8	57.3
28, FAIRVIEW WAY, DANESTONE	Dwelling	52.7	53.2	52.9	0.2	Negligible Adverse	54.3	1.6	Negligible Adverse	41.2	41.6	42.6
29, FAIRVIEW WAY, DANESTONE	Dwelling	68.9	69.5	69.2	0.3	Negligible Adverse	71.0	2.1	Negligible Adverse	55.7	56.3	57.6
3, FAIRVIEW WAY, DANESTONE	Dwelling	53.2	53.3	53.4	0.2	Negligible Adverse	54.4	1.2	Negligible Adverse	41.6	41.7	42.7
30, FAIRVIEW WAY, DANESTONE	Dwelling	52.6	53.2	52.8	0.2	Negligible Adverse	54.2	1.6	Negligible Adverse	41.1	41.6	42.5
31, FAIRVIEW WAY, DANESTONE	Dwelling	69.1	69.7	69.4	0.3	Negligible Adverse	71.2	2.1	Negligible Adverse	55.9	56.5	57.8
32, FAIRVIEW WAY, DANESTONE	Dwelling	52.7	53.2	52.9	0.2	Negligible Adverse	54.2	1.5	Negligible Adverse	41.2	41.6	42.5
33, FAIRVIEW WAY, DANESTONE	Dwelling	69.3	69.9	69.6	0.3	Negligible Adverse	71.4	2.1	Negligible Adverse	56.1	56.6	58.0
34, FAIRVIEW WAY, DANESTONE	Dwelling	56.4	57.1	56.6	0.2	Negligible Adverse	58.4	2.0	Negligible Adverse	44.5	45.1	46.3
35, FAIRVIEW WAY, DANESTONE	Dwelling	69.4	69.4	69.0	0.3	Negligible Adverse	70.9	2.2	Negligible Adverse	55.6	56.2	57.5
36, FAIRVIEW WAY, DANESTONE	Dwelling	56.7	57.2	56.8	0.3	Negligible Adverse	58.6	2.1	Negligible Adverse	44.6	45.2	46.5
37, FAIRVIEW WAY, DANESTONE	Dwelling	68.4	69.1	68.7	0.3	Negligible Adverse	70.6	2.2	Negligible Adverse	55.3	55.9	57.3
38, FAIRVIEW WAY, DANESTONE	Dwelling	57.8	58.5	58.1	0.3	Negligible Adverse	60.0	2.2	Negligible Adverse	45.8	46.4	47.7
39, FAIRVIEW WAY, DANESTONE	Dwelling	68.8	69.5	69.1	0.3	Negligible Adverse	71.0	2.2	Negligible Adverse	55.7	56.3	57.6
4, FAIRVIEW WAY, DANESTONE	Dwelling	55.5	58.0	55.7	0.2	Negligible Adverse	57.2	1.7	Negligible Adverse	43.7	45.9	45.2
40, FAIRVIEW WAY, DANESTONE	Dwelling	59.6	60.4	59.9	0.3	Negligible Adverse	61.8	2.2	Negligible Adverse	47.4	48.1	49.4
42, FAIRVIEW WAY, DANESTONE	Dwelling	61.7	62.3	61.9	0.2	Negligible Adverse	63.8	2.1	Negligible Adverse	49.3	49.8	51.2
44, FAIRVIEW WAY, DANESTONE	Dwelling	58.1	58.1	58.3	0.2	Negligible Adverse	59.4	1.3	Negligible Adverse	46.0	46.0	47.2
46, FAIRVIEW WAY, DANESTONE	Dwelling	58.0	57.9	58.2	0.2	Negligible Adverse	59.2	1.2	Negligible Adverse	45.9	45.8	47.0
48, FAIRVIEW WAY, DANESTONE	Dwelling	57.8	57.7	58.0	0.2	Negligible Adverse	59.0	1.2	Negligible Adverse	45.8	45.7	46.8
5, FAIRVIEW WAY, DANESTONE	Dwelling	54.3	54.3	54.5	0.2	Negligible Adverse	55.5	1.2	Negligible Adverse	42.6	42.6	43.7
6, FAIRVIEW WAY, DANESTONE	Dwelling	54.1	56.0	54.3	0.2	Negligible Adverse	55.6	1.5	Negligible Adverse	42.4	44.1	43.8
7, FAIRVIEW WAY, DANESTONE	Dwelling	53.9	53.8	54.1	0.2	Negligible Adverse	55.0	1.1	Negligible Adverse	42.2	42.2	43.2
8, FAIRVIEW WAY, DANESTONE	Dwelling	52.5	54.2	52.6	0.1	Negligible Adverse	53.8	1.3	Negligible Adverse	41.0	42.5	41.6
9, FAIRVIEW WAY, DANESTONE	Dwelling	53.6	53.5	53.8	0.2	Negligible Adverse	54.6	1.0	Negligible Adverse	42.0	41.9	42.9
1, FAIRVIEW WYND, DANESTONE	Dwelling	52.3	52.4	52.8	0.1	Negligible Adverse	53.2	0.9	Negligible Adverse	40.8	41.3	42.2
10, FAIRVIEW WYND, DANESTONE	Dwelling	55.0	54.7	55.1	0.1	Negligible Adverse	55.2	0.2	Negligible Adverse	43.2	43.0	43.4
12, FAIRVIEW WYND, DANESTONE	Dwelling	54.4	53.9	54.5	0.1	Negligible Adverse	54.7	0.3	Negligible Adverse	42.7	42.2	43.0
14, FAIRVIEW WYND, DANESTONE	Dwelling	53.9	53.6	54.0	0.1	Negligible Adverse	54.5	0.6	Negligible Adverse	42.2	42.0	42.8
15, FAIRVIEW WYND, DANESTONE	Dwelling	50.4	50.9	50.3	-0.1	Negligible Beneficial	51.2	0.8	Negligible Adverse	39.1	39.5	39.8
16, FAIRVIEW WYND, DANESTONE	Dwelling	53.9	53.3	54.0	0.1	Negligible Adverse	54.2	0.3	Negligible Adverse	42.2	41.7	42.5
17, FAIRVIEW WYND, DANESTONE	Dwelling	51.4	51.8	51.4	0.0	No Change	52.1	0.7	Negligible Adverse	40.0	40.4	40.6
18, FAIRVIEW WYND, DANESTONE	Dwelling	52.5	52.5	52.6	0.1	Negligible Adverse	53.2	0.7	Negligible Adverse	41.0	41.0	41.6
2, FAIRVIEW WYND, DANESTONE	Dwelling	50.9	51.5	50.9	0.0	No Change	51.8	0.9	Negligible Adverse	39.5	40.1	40.4
20, FAIRVIEW WYND, DANESTONE	Dwelling	52.3	52.1	52.4	0.1	Negligible Adverse	52.9	0.6	Negligible Adverse	40.8	40.6	41.3
22, FAIRVIEW WYND, DANESTONE	Dwelling	52.2	52.0	52.3	0.1	Negligible Beneficial	52.7	0.5	Negligible Adverse	40.7	40.5	41.2
24, FAIRVIEW WYND, DANESTONE	Dwelling	52.2	52.0	52.3	0.1	Negligible Beneficial	52.8	0.6	Negligible Adverse	40.7	40.5	41.3
26, FAIRVIEW WYND, DANESTONE	Dwelling	52.1	51.9	52.2	0.1	Negligible Adverse	52.8	0.7	Negligible Adverse	40.6	40.4	41.3
28, FAIRVIEW WYND, DANESTONE	Dwelling	53.0	52.9	53.1	0.1	Negligible Adverse	54.1	1.1	Negligible Adverse	41.4	41.3	42.4
3, FAIRVIEW WYND, DANESTONE	Dwelling	51.5	51.6	51.6	0.1	Negligible Adverse	52.2	0.7	Negligible Adverse	40.1	40.2	40.7
30, FAIRVIEW WYND, DANESTONE	Dwelling	51.8	51.7	51.9	0.1	Negligible Adverse	52.7	0.9	Negligible Adverse	40.4	40.3	41.2
32, FAIRVIEW WYND, DANESTONE	Dwelling	51.8	51.9	52.0	0.2	Negligible Adverse	53.0	1.2	Negligible Adverse	40.4	40.4	41.4
34, FAIRVIEW WYND, DANESTONE	Dwelling	49.8	50.1	50.0	0.2	Negligible Adverse	51.3	1.5	Negligible Adverse	38.6	38.8	39.9
36, FAIRVIEW WYND, DANESTONE	Dwelling	53.0	53.3	53.2	0.2	Negligible Adverse	54.5	1.5	Negligible Adverse	41.4	41.7	42.8
38, FAIRVIEW WYND, DANESTONE	Dwelling	50.4	50.5	50.5	0.1	Negligible Adverse	51.7	1.3	Negligible Adverse	39.1	39.2	40.3
4, FAIRVIEW WYND, DANESTONE	Dwelling	54.6	54.7	54.7	0.1	Negligible Adverse	55.4	0.8	Negligible Adverse	42.9	43.0	43.6
40, FAIRVIEW WYND, DANESTONE	Dwelling	49.9	50.2	49.9	0.0	No Change	51.0	1.1	Negligible Adverse	38.6	38.9	39.6
42, FAIRVIEW WYND, DANESTONE	Dwelling	49.8	50.2	49.7	-0.1	Negligible Beneficial	50.7	0.9	Negligible Adverse	38.6	38.9	39.4
44, FAIRVIEW WYND, DANESTONE	Dwelling	52.2	52.5	52.2	0.0	No Change	53.0	0.8	Negligible Adverse	40.7	41.0	41.4
46, FAIRVIEW WYND, DANESTONE	Dwelling	52.2	52.6	52.1	-0.1	Negligible Beneficial	53.0	0.8	Negligible Adverse	40.7	41.1	41.4
5, FAIRVIEW WYND, DANESTONE	Dwelling	52.1	51.9	52.2	0.1	Negligible Adverse	53.1	1.0	Negligible Adverse	40.6	40.4	41.5
6, FAIRVIEW WYND, DANESTONE	Dwelling	53.9	53.6	54.0	0.1	Negligible Adverse	54.0	0.1	Negligible Adverse	42.0	42.0	42.3
7, FAIRVIEW WYND, DANESTONE	Dwelling	50.1	49.8	50.2	0.1	Negligible Adverse	50.8	0.8	Negligible Adverse	38.8	38.6	39.5
8, FAIRVIEW WYND, DANESTONE	Dwelling	54.3	54.0	54.4	0.1	Negligible Adverse	54.5	0.2	Negligible Adverse	42.6	42.8	42.8
9, FAIRVIEW WYND, DANESTONE	Dwelling	50.4	51.1	50.4	0.0	No Change	51.2	0.8	Negligible Adverse	39.1	39.7	39.8
FLAT A, 1, FERRIER CRESCENT	Dwelling	48.8	49.2	49.0	0.2	Negligible Adverse	49.2	0.4	Negligible Adverse	37.7	38.0	38.0
FLAT B, 1, FERRIER CRESCENT	Dwelling	48.8	49.2	49.0	0.2	Negligible Adverse	49.2	0.4	Negligible Adverse	37.7	38.0	38.0
FLAT C, 1, FERRIER CRESCENT	Dwelling	48.8	49.2	49.0	0.2	Negligible Adverse	49.2	0.4	Negligible Adverse	37.7	38.0	38.0
FLAT D, 1, FERRIER CRESCENT	Dwelling	48.8	49.2	49.0	0.2	Negligible Adverse	49.2	0.4	Negligible Adverse	37.7	38.0	38.0
FLAT E, 1, FERRIER CRESCENT	Dwelling	48.8	49.2	49.0	0.2	Negligible Adverse	49.2	0.4	Negligible Adverse	37.7	38.0	38.0
FLAT F, 1, FERRIER CRESCENT	Dwelling	48.8	49.2	49.0	0.2	Negligible Adverse	49.2	0.4	Negligible Adverse	37.7	38.0	38.0
FLAT A, 2, FERRIER CRESCENT	Dwelling	48.8	49.4	49.0	0.2	Negligible Adverse	49.5	0.7	Negligible Adverse	37.7	38.2	38.3
FLAT B, 2, FERRIER CRESCENT	Dwelling	48.8	49.4	49.0	0.2	Negligible Adverse	49.5	0.7	Negligible Adverse	37.7	38.2	38.3
FLAT C, 2, FERRIER CRESCENT	Dwelling	48.8	49.4	49.0	0.2	Negligible Adverse	49.5	0.7	Negligible Adverse	37.7	38.2	38.3
FLAT D, 2, FERRIER CRESCENT	Dwelling	48.8	49.4	49.0	0.2	Negligible Adverse	49.5	0.7	Negligible Adverse	37.7	38.2	38.3
FLAT E, 2, FERRIER CRESCENT	Dwelling	48.8	49.4	49.0	0.2	Negligible Adverse	49.5	0.7	Negligible Adverse	37.7	38.2	38.3
FLAT F, 2, FERRIER CRESCENT	Dwelling	48.8	49.4	49.0	0.2	Negligible Adverse	49.5	0.7	Negligible Adverse	37.7	38.2	38.3
FLAT A, 3, FERRIER CRESCENT	Dwelling	47.1	47.7	47.3	0.2	Negligible Adverse	47.7	0.6	Negligible Adverse	36.1	36.7	36.7

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
FLAT C, 8, FERRIER GARDENS	Dwelling	45.1	46.1	44.9	-0.2	Negligible Beneficial	46.4	1.3	Negligible Adverse	34.3	35.2	35.5
FLAT D, 8, FERRIER GARDENS	Dwelling	45.1	46.1	44.9	-0.2	Negligible Beneficial	46.4	1.3	Negligible Adverse	34.3	35.2	35.5
FLAT E, 8, FERRIER GARDENS	Dwelling	45.1	46.1	44.9	-0.2	Negligible Beneficial	46.4	1.3	Negligible Adverse	34.3	35.2	35.5
FLAT F, 8, FERRIER GARDENS	Dwelling	45.1	46.1	44.9	-0.2	Negligible Beneficial	46.4	1.3	Negligible Adverse	34.3	35.2	35.5
FLAT A, 9, FERRIER GARDENS	Dwelling	44.4	45.3	44.2	-0.2	Negligible Beneficial	45.7	1.3	Negligible Adverse	33.7	34.5	34.9
FLAT B, 9, FERRIER GARDENS	Dwelling	44.4	45.3	44.2	-0.2	Negligible Beneficial	45.7	1.3	Negligible Adverse	33.7	34.5	34.9
FLAT C, 9, FERRIER GARDENS	Dwelling	44.4	45.3	44.2	-0.2	Negligible Beneficial	45.7	1.3	Negligible Adverse	33.7	34.5	34.9
FLAT D, 9, FERRIER GARDENS	Dwelling	44.4	45.3	44.2	-0.2	Negligible Beneficial	45.7	1.3	Negligible Adverse	33.7	34.5	34.9
FLAT E, 9, FERRIER GARDENS	Dwelling	44.4	45.3	44.2	-0.2	Negligible Beneficial	45.7	1.3	Negligible Adverse	33.7	34.5	34.9
FLAT F, 9, FERRIER GARDENS	Dwelling	44.4	45.3	44.2	-0.2	Negligible Beneficial	45.7	1.3	Negligible Adverse	33.7	34.5	34.9
FOUNTAIN MISSION HALL, FOUNTAIN MISSION HALL, DON PLACE, WOODSIDE	Hall	61.7	63.3	61.3	-0.4	Negligible Beneficial	62.7	1.0	Negligible Adverse	49.3	50.7	50.2
1. FOUNTVILLE COURT	Dwelling	50.7	51.8	50.9	0.2	Negligible Adverse	51.8	1.1	Negligible Adverse	39.4	40.4	40.4
10. FOUNTVILLE COURT	Dwelling	49.2	51.1	49.6	0.4	Negligible Adverse	51.5	2.3	Negligible Adverse	38.0	39.7	40.1
11. FOUNTVILLE COURT	Dwelling	51.9	54.3	52.7	0.8	Negligible Adverse	55.0	3.1	Minor Adverse	40.4	42.6	43.2
12. FOUNTVILLE COURT	Dwelling	47.7	49.4	48.1	0.4	Negligible Adverse	49.7	2.0	Negligible Adverse	36.7	38.2	38.5
13. FOUNTVILLE COURT	Dwelling	47.5	49.0	47.8	0.3	Negligible Adverse	49.2	1.7	Negligible Adverse	36.5	37.8	38.0
14. FOUNTVILLE COURT	Dwelling	47.0	48.4	47.2	0.2	Negligible Adverse	48.7	1.7	Negligible Adverse	36.0	37.3	37.6
15. FOUNTVILLE COURT	Dwelling	46.8	48.3	47.0	0.2	Negligible Adverse	48.5	1.7	Negligible Adverse	35.9	37.2	37.4
16. FOUNTVILLE COURT	Dwelling	46.1	47.6	46.4	0.3	Negligible Adverse	47.8	1.7	Negligible Adverse	35.2	36.6	36.8
2. FOUNTVILLE COURT	Dwelling	51.0	52.2	51.1	0.1	Negligible Adverse	52.1	1.1	Negligible Adverse	39.6	40.7	40.6
3. FOUNTVILLE COURT	Dwelling	50.8	51.8	50.9	0.1	Negligible Adverse	51.8	1.0	Negligible Adverse	39.5	40.4	40.4
4. FOUNTVILLE COURT	Dwelling	51.0	52.2	51.1	0.1	Negligible Adverse	52.1	1.1	Negligible Adverse	39.6	40.7	40.6
5. FOUNTVILLE COURT	Dwelling	47.8	49.4	48.0	0.2	Negligible Adverse	49.5	1.7	Negligible Adverse	36.8	38.2	38.3
6. FOUNTVILLE COURT	Dwelling	48.1	49.7	48.4	0.3	Negligible Adverse	49.9	1.8	Negligible Adverse	37.0	38.5	38.6
7. FOUNTVILLE COURT	Dwelling	50.0	50.8	48.8	0.3	Negligible Adverse	50.2	1.7	Negligible Adverse	37.4	38.7	38.9
8. FOUNTVILLE COURT	Dwelling	48.9	50.5	49.2	0.3	Negligible Adverse	50.8	1.9	Negligible Adverse	37.7	39.2	39.5
9. FOUNTVILLE COURT	Dwelling	47.9	49.8	48.4	0.5	Negligible Adverse	50.1	2.2	Negligible Adverse	36.8	38.6	38.8
10. FOWLER AVENUE	Dwelling	62.1	62.9	60.9	-1.2	Minor Beneficial	61.8	-0.3	Negligible Beneficial	49.6	50.3	49.4
100. FOWLER AVENUE	Dwelling	51.5	51.5	52.1	0.6	Negligible Adverse	52.8	1.3	Negligible Adverse	40.1	40.1	41.3
102. FOWLER AVENUE	Dwelling	51.9	51.9	52.8	0.9	Negligible Adverse	53.6	1.7	Negligible Adverse	40.4	40.4	42.0
104. FOWLER AVENUE	Dwelling	51.9	51.9	52.8	0.9	Negligible Adverse	53.6	1.7	Negligible Adverse	40.4	40.4	42.0
106. FOWLER AVENUE	Dwelling	51.9	51.9	52.8	0.9	Negligible Adverse	53.6	1.7	Negligible Adverse	40.4	40.4	42.0
108. FOWLER AVENUE	Dwelling	51.9	51.9	52.8	0.9	Negligible Adverse	53.6	1.7	Negligible Adverse	40.4	40.4	42.0
110. FOWLER AVENUE	Dwelling	51.8	51.6	52.6	0.8	Negligible Adverse	53.4	1.6	Negligible Adverse	40.4	40.2	41.8
112. FOWLER AVENUE	Dwelling	51.8	51.6	52.6	0.8	Negligible Adverse	53.4	1.6	Negligible Adverse	40.4	40.2	41.8
114. FOWLER AVENUE	Dwelling	51.9	51.7	52.6	0.7	Negligible Adverse	53.4	1.5	Negligible Adverse	40.4	40.3	41.8
116. FOWLER AVENUE	Dwelling	51.9	51.7	52.6	0.7	Negligible Adverse	53.4	1.5	Negligible Adverse	40.4	40.3	41.8
118. FOWLER AVENUE	Dwelling	51.4	50.8	51.5	0.1	Negligible Adverse	52.0	0.6	Negligible Adverse	40.0	39.5	40.5
12. FOWLER AVENUE	Dwelling	62.1	62.9	60.9	-1.2	Minor Beneficial	61.8	-0.3	Negligible Beneficial	49.6	50.3	49.4
120. FOWLER AVENUE	Dwelling	51.4	50.8	51.5	0.1	Negligible Adverse	52.0	0.6	Negligible Adverse	40.0	39.5	40.5
122. FOWLER AVENUE	Dwelling	51.4	50.8	51.5	0.1	Negligible Adverse	52.0	0.6	Negligible Adverse	40.0	39.5	40.5
124. FOWLER AVENUE	Dwelling	51.4	50.8	51.5	0.1	Negligible Adverse	52.0	0.6	Negligible Adverse	40.0	39.5	40.5
126. FOWLER AVENUE	Dwelling	53.3	53.4	53.4	0.1	Negligible Adverse	54.2	0.9	Negligible Adverse	41.7	41.8	42.5
128. FOWLER AVENUE	Dwelling	53.3	53.4	53.4	0.1	Negligible Adverse	54.2	0.9	Negligible Adverse	41.7	41.8	42.5
130. FOWLER AVENUE	Dwelling	53.3	53.4	53.4	0.1	Negligible Adverse	54.2	0.9	Negligible Adverse	41.7	41.8	42.5
132. FOWLER AVENUE	Dwelling	53.3	53.4	53.4	0.1	Negligible Adverse	54.2	0.9	Negligible Adverse	41.7	41.8	42.5
14. FOWLER AVENUE	Dwelling	58.2	58.7	57.8	-0.4	Negligible Beneficial	59.0	0.8	Negligible Adverse	46.1	46.6	46.8
16. FOWLER AVENUE	Dwelling	57.2	57.7	57.5	0.3	Negligible Adverse	58.6	1.4	Negligible Adverse	45.2	45.7	46.5
18. FOWLER AVENUE	Dwelling	56.2	56.7	56.5	0.3	Negligible Adverse	57.5	1.3	Negligible Adverse	44.3	44.8	45.5
2. FOWLER AVENUE	Dwelling	65.6	65.8	64.7	-0.9	Negligible Beneficial	65.1	-0.5	Negligible Beneficial	52.8	53.0	52.3
20. FOWLER AVENUE	Dwelling	55.7	56.2	56.1	0.4	Negligible Adverse	57.0	1.3	Negligible Adverse	43.9	44.3	45.0
22. FOWLER AVENUE	Dwelling	55.5	55.9	56.2	0.7	Negligible Adverse	57.0	1.5	Negligible Adverse	43.7	44.0	45.0
24. FOWLER AVENUE	Dwelling	55.5	55.9	56.2	0.7	Negligible Adverse	57.0	1.5	Negligible Adverse	43.7	44.0	45.0
26. FOWLER AVENUE	Dwelling	55.1	55.3	55.8	0.7	Negligible Adverse	56.5	1.4	Negligible Adverse	43.3	43.5	44.6
28. FOWLER AVENUE	Dwelling	55.1	55.3	55.8	0.7	Negligible Adverse	56.5	1.4	Negligible Adverse	43.3	43.5	44.6
30. FOWLER AVENUE	Dwelling	54.0	54.4	54.8	0.8	Negligible Adverse	55.6	1.6	Negligible Adverse	42.3	42.7	43.8
32. FOWLER AVENUE	Dwelling	54.1	54.4	54.8	0.7	Negligible Adverse	55.7	1.6	Negligible Adverse	42.4	42.7	43.9
34. FOWLER AVENUE	Dwelling	53.9	54.1	54.3	0.4	Negligible Adverse	55.0	1.1	Negligible Adverse	42.2	42.4	43.2
36. FOWLER AVENUE	Dwelling	53.9	54.1	54.3	0.4	Negligible Adverse	55.0	1.1	Negligible Adverse	42.2	42.4	43.2
38. FOWLER AVENUE	Dwelling	53.6	54.0	53.8	0.2	Negligible Adverse	54.7	1.1	Negligible Adverse	42.0	42.3	43.0
4. FOWLER AVENUE	Dwelling	64.4	64.8	63.6	-0.8	Negligible Beneficial	64.1	-0.3	Negligible Beneficial	51.7	52.1	51.4
40. FOWLER AVENUE	Dwelling	53.6	54.0	53.8	0.2	Negligible Adverse	54.7	1.1	Negligible Adverse	42.0	42.3	43.0
42. FOWLER AVENUE	Dwelling	53.8	54.1	54.2	0.4	Negligible Adverse	55.1	1.3	Negligible Adverse	42.2	42.4	43.3
44. FOWLER AVENUE	Dwelling	53.8	54.1	54.2	0.4	Negligible Adverse	55.1	1.3	Negligible Adverse	42.2	42.4	43.3
46. FOWLER AVENUE	Dwelling	53.4	53.7	53.1	-0.3	Negligible Beneficial	54.0	0.6	Negligible Adverse	41.8	42.1	42.3
47. FOWLER AVENUE	Dwelling	51.9	51.9	51.3	-0.2	Negligible Beneficial	52.2	0.7	Negligible Adverse	40.1	40.7	41.4
48. FOWLER AVENUE	Dwelling	53.3	53.6	52.9	-0.4	Negligible Beneficial	53.5	0.5	Negligible Adverse	41.7	42.0	42.2
49. FOWLER AVENUE	Dwelling	51.6	51.9	51.4	-0.2	Negligible Beneficial	52.2	0.6	Negligible Adverse	40.2	40.4	40.7
50. FOWLER AVENUE	Dwelling	53.3	53.6	52.6	-0.7	Negligible Beneficial	53.5	0.2	Negligible Adverse	41.7	42.0	41.9
51. FOWLER AVENUE	Dwelling	50.4	50.6	50.6	0.2	Negligible Adverse	51.5	1.1	Negligible Adverse	39.1	39.3	40.1
52. FOWLER AVENUE	Dwelling	53.2	53.4	52.5	-0.7	Negligible Beneficial	53.3	0.1	Negligible Beneficial	41.6	41.8	41.7
53. FOWLER AVENUE	Dwelling	50.4	50.6	50.6	0.2	Negligible Adverse	51.5	1.1	Negligible Adverse	39.1	39.3	40.1
54. FOWLER AVENUE	Dwelling	52.9	53.2	52.6	-0.3	Negligible Beneficial	53.5	0.6	Negligible Adverse	41.3	41.6	41.9
55. FOWLER AVENUE	Dwelling	50.4	50.6	50.6	0.2	Negligible Adverse	51.5	1.1	Negligible Adverse	39.1	39.3	40.1
56. FOWLER AVENUE	Dwelling	52.8	53.0	52.5	-0.3	Negligible Beneficial	53.3	0.5	Negligible Adverse	41.3	41.4	41.7
57. FOWLER AVENUE	Dwelling	50.4	50.6	50.6	0.2	Negligible Adverse	51.5	1.1	Negligible Adverse	39.1	39.3	40.1
58. FOWLER AVENUE	Dwelling	51.4	51.6	51.5	0.1	Negligible Adverse	52.4	1.0	Negligible Adverse	40.0	40.2	40.9
59. FOWLER AVENUE	Dwelling	52.0	52.2	51.9	-0.1	Negligible Beneficial	52.7	0.7	Negligible Adverse	40.5	40.7	41.2
6. FOWLER AVENUE	Dwelling	62.1	62.9	60.9	-1.2	Minor Beneficial	61.8	-0.3	Negligible Beneficial	49.6	50.3	49.4
60. FOWLER AVENUE	Dwelling	51.6	51.8	51.7	0.1	Negligible Adverse	52.5	0.9	Negligible Adverse	40.2	40.4	41.0
61. FOWLER AVENUE	Dwelling	52.2	52.2	52.0	-0.1	Negligible Beneficial	52.7	0.6	Negligible Adverse	40.6	40.7	41.2
62. FOWLER AVENUE	Dwelling	51.8	52.0	52.9	1.1	Minor Adverse	53.9	2.1	Negligible Adverse	40.4	40.5	42.2

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
63. FOWLER AVENUE	Dwelling	49.9	50.3	50.2	0.3	Negligible Adverse	51.1	1.2	Negligible Adverse	38.6	39.0	39.7
64. FOWLER AVENUE	Dwelling	51.8	52.0	52.1	0.3	Negligible Adverse	53.0	1.2	Negligible Adverse	40.4	40.5	41.4
65. FOWLER AVENUE	Dwelling	49.9	50.3	50.2	0.3	Negligible Adverse	51.1	1.2	Negligible Adverse	38.6	39.0	39.7
66. FOWLER AVENUE	Dwelling	52.0	52.3	52.4	0.4	Negligible Adverse	53.3	1.3	Negligible Adverse	40.5	40.8	41.7
67. FOWLER AVENUE	Dwelling	49.7	50.0	49.9	0.2	Negligible Adverse	50.8	1.1	Negligible Adverse	38.5	38.7	39.5
68. FOWLER AVENUE	Dwelling	52.9	53.3	53.0	0.1	Negligible Adverse	54.0	1.1	Negligible Adverse	41.3	41.7	42.3
69. FOWLER AVENUE	Dwelling	49.7	50.0	49.9	0.2	Negligible Adverse	50.8	1.1	Negligible Adverse	38.5	38.7	39.5
71. FOWLER AVENUE	Dwelling	49.8	50.1	50.0	0.2	Negligible Adverse	50.9	1.1	Negligible Adverse	38.6	38.8	39.5
73. FOWLER AVENUE	Dwelling	49.8	50.1	50.0	0.2	Negligible Adverse	50.9	1.1	Negligible Adverse	38.6	38.8	39.5
74. FOWLER AVENUE	Dwelling	52.7	53.0	52.9	0.2	Negligible Adverse	53.9	1.2	Negligible Adverse	41.2	41.4	42.2
75. FOWLER AVENUE	Dwelling	51.4	50.9	51.5	0.1	Negligible Adverse	52.1	0.7	Negligible Adverse	40.0	39.5	40.6
76. FOWLER AVENUE	Dwelling	50.9	51.2	51.7	0.8	Negligible Adverse	52.9	2.0	Negligible Adverse	39.5	39.8	41.3
77. FOWLER AVENUE	Dwelling	49.7	50.0	49.9	0.2	Negligible Adverse	50.8	1.1	Negligible Adverse	38.5	38.7	39.5
78. FOWLER AVENUE	Dwelling	51.0	51.1	51.7	0.7	Negligible Adverse	52.7	1.7	Negligible Adverse	39.6	39.7	41.2
79. FOWLER AVENUE	Dwelling	50.7	51.4	50.8	0.1	Negligible Beneficial	51.9	1.2	Negligible Adverse	39.4	40.0	40.4
8. FOWLER AVENUE	Dwelling	62.1	62.9	60.9	-1.2	Minor Beneficial	61.8	-0.3	Negligible Beneficial	49.6	50.3	49.4
80. FOWLER AVENUE	Dwelling	50.7	50.9	51.2	0.5	Negligible Adverse	52.1	1.4	Negligible Adverse	39.4	39.5	40.6
81. FOWLER AVENUE	Dwelling	50.7	51.4	50.8	0.1	Negligible Beneficial	51.9	1.2	Negligible Adverse	39.4	40.0	40.4
82. FOWLER AVENUE	Dwelling	50.7	50.8	51.1	0.4	Negligible Adverse	52.0	1.3	Negligible Adverse	39.4	39.5	40.5
83. FOWLER AVENUE	Dwelling	50.7	51.4	50.8	0.1	Negligible Beneficial	51.9	1.2	Negligible Adverse	39.4	40.0	40.4
84. FOWLER AVENUE	Dwelling	50.7	50.9	51.2	0.5	Negligible Adverse	52.1	1.4	Negligible Adverse	39.4	39.5	40.6
85. FOWLER AVENUE	Dwelling	50.7	51.4	50.8	0.1	Negligible Beneficial	51.9	1.2	Negligible Adverse	39.4	40.0	40.4
86. FOWLER AVENUE	Dwelling	50.6	50.8	51.0	0.4	Negligible Adverse	51.9	1.3	Negligible Adverse	39.3	39.5	40.4
87. FOWLER AVENUE	Dwelling	53.3	54.3	53.5	0.2	Negligible Adverse	54.7	1.4	Negligible Adverse	41.7	42.6	43.0
88. FOWLER AVENUE	Dwelling	50.5	50.7	51.0	0.5	Negligible Adverse	51.9	1.4	Negligible Adverse	39.2	39.4	40.4
89. FOWLER AVENUE	Dwelling	53.3	54.3	53.5	0.2	Negligible Adverse	54.7	1.4	Negligible Adverse	41.7	42.6	43.0
90. FOWLER AVENUE	Dwelling	52.0	51.5	52.4	0.4	Negligible Adverse	52.9	0.9	Negligible Adverse	40.5	40.1	41.3
91. FOWLER AVENUE	Dwelling	53.3	54.3	53.5	0.2	Negligible Adverse	54.7	1.4	Negligible Adverse	41.7	42.6	43.0
92. FOWLER AVENUE	Dwelling	51.2	51.1	51.7	0.5	Negligible Adverse	52.4	1.2	Negligible Adverse	39.8	39.7	40.9
93. FOWLER AVENUE	Dwelling	53.3	54.3	53.5	0.2	Negligible Adverse	54.7	1.4	Negligible Adverse	41.7	42.6	43.0
94. FOWLER AVENUE	Dwelling	51.5	51.5	52.1	0.6	Negligible Adverse	52.8	1.3	Negligible Adverse	40.1	40.1	41.3
95. FOWLER AVENUE	Dwelling	52.7	54.1	52.8	0.1	Negligible Beneficial	54.2	1.5	Negligible Adverse	41.2	42.4	42.5
96. FOWLER AVENUE	Dwelling	51.5	51.5	52.1	0.6	Negligible Adverse	52.8	1.3	Negligible Adverse	40.1	40.1	41.3
97. FOWLER AVENUE	Dwelling	54.9	56.4	55.0	0.1	Negligible Adverse	56.4	1.5	Negligible Adverse	43.1	44.5	44.5
98. FOWLER AVENUE	Dwelling	51.5	51.5	52.1	0.6	Negligible Adverse	52.8	1.3	Negligible Adverse	40.1	40.1	41.3
1. FOWLER AVENUE	Dwelling	56.7	57.2	56.4	-0.3	Negligible Beneficial	56.7	0.0	No Change	44.8	45.2	44.8
17. FOWLER AVENUE	Dwelling	51.9	52.3	51.4	-0.5	Negligible Beneficial	52.2	0.3	Negligible Adverse	40.4	40.8	40.7
33. FOWLER AVENUE	Dwelling	50.9	51.4	50.7	-0.2	Negligible Beneficial	51.5	0.6	Negligible Adverse	39.5	40.0	40.1
25. FOWLER AVENUE	Dwelling	55.3	55.6	55.0	-0.3	Negligible Beneficial	55.8	0.5	Negligible Adverse	43.5	43.8	44.0
41. FOWLER AVENUE	Dwelling	54.7	55.0	54.6	-0.1	Negligible Beneficial	54.4	0.7	Negligible Adverse	43.0	43.2	43.6
5. FOWLER AVENUE	Dwelling	60.3	59.7	59.2	-0.2	Negligible Beneficial	59.8	0.1	Negligible Beneficial	47.5	48.0	47.6
29. FOWLER AVENUE	Dwelling	56.5	57.0	56.5	0.0	No Change	57.4	0.9	Negligible Adverse	44.6	45.0	45.4
43. FOWLER AVENUE	Dwelling	55.9	56.3	56.0	0.1	Negligible Adverse	56.8	0.9	Negligible Adverse	44.0	44.4	44.9
9. FOWLER AVENUE	Dwelling	60.6	61.2	60.3	-0.3	Negligible Beneficial	60.7	0.1	Negligible Adverse	48.3	48.8	48.4
13. FOWLER AVENUE	Dwelling	58.1	58.7	57.7	-0.4	Negligible Beneficial	58.0	-0.1	Negligible Beneficial	46.0	46.6	45.9
21. FOWLER AVENUE	Dwelling	53.6	53.9	53.2	-0.4	Negligible Beneficial	53.9	0.3	Negligible Adverse	42.0	42.2	42.2
37. FOWLER AVENUE	Dwelling	52.7	53.2	52.5	-0.2	Negligible Beneficial	53.3	0.6	Negligible Adverse	41.2	41.6	41.7
ROCKSLEY, 47. GLADSTONE PLACE, WOODSIDE	Dwelling	47.6	48.4	47.7	0.1	Negligible Adverse	48.5	0.9	Negligible Adverse	36.6	37.3	37.4
1. GLADSTONE PLACE, WOODSIDE	Dwelling	48.4	50.0	48.4	0.0	No Change	49.4	1.0	Negligible Adverse	37.3	38.7	38.2
1. GLADSTONE PLACE, WOODSIDE	Dwelling	48.5	49.6	48.5	0.0	No Change	49.5	1.0	Negligible Adverse	37.4	38.4	38.3
1. GLADSTONE PLACE, WOODSIDE	Dwelling	48.6	49.8	48.6	0.0	No Change	49.6	1.0	Negligible Adverse	37.5	38.6	38.4
1. GLADSTONE PLACE, WOODSIDE	Dwelling	50.0	52.0	49.8	-0.2	Negligible Beneficial	51.1	1.1	Negligible Adverse	38.7	40.5	39.7
1. GLADSTONE PLACE, WOODSIDE	Dwelling	50.0	52.0	49.8	-0.2	Negligible Beneficial	51.1	1.1	Negligible Adverse	38.7	40.5	39.7
1. GLADSTONE PLACE, WOODSIDE	Dwelling	50.0	52.0	49.8	-0.2	Negligible Beneficial	51.1	1.1	Negligible Adverse	38.7	40.5	39.7
10. GLADSTONE PLACE, WOODSIDE	Dwelling	49.9	50.8	50.1	0.2	Negligible Adverse	50.9	1.0	Negligible Adverse	38.6	39.5	39.5
11. GLADSTONE PLACE, WOODSIDE	Dwelling	48.1	49.0	48.2	0.1	Negligible Adverse	49.1	1.0	Negligible Adverse	37.0	37.8	37.9
12. GLADSTONE PLACE, WOODSIDE	Dwelling	49.9	50.8	50.1	0.2	Negligible Adverse	50.9	1.0	Negligible Adverse	38.6	39.5	39.5
13. GLADSTONE PLACE, WOODSIDE	Dwelling	48.1	49.0	48.2	0.1	Negligible Adverse	49.1	1.0	Negligible Adverse	37.0	37.8	37.9
14. GLADSTONE PLACE, WOODSIDE	Dwelling	50.4	51.2	50.6	0.2	Negligible Adverse	51.4	1.0	Negligible Adverse	39.1	39.8	40.0
15. GLADSTONE PLACE, WOODSIDE	Dwelling	48.1	49.0	48.2	0.1	Negligible Adverse	49.1	1.0	Negligible Adverse	37.0	37.8	37.9
16. GLADSTONE PLACE, WOODSIDE	Dwelling	50.4	51.2	50.6	0.2	Negligible Adverse	51.4	1.0	Negligible Adverse	39.1	39.8	40.0
17. GLADSTONE PLACE, WOODSIDE	Dwelling	48.1	48.9	48.1	0.0	No Change	49.0	0.9	Negligible Adverse	37.0	37.7	37.8
18. GLADSTONE PLACE, WOODSIDE	Dwelling	50.4	51.2	50.6	0.2	Negligible Adverse	51.4	1.0	Negligible Adverse	39.1	39.8	40.0
19. GLADSTONE PLACE, WOODSIDE	Dwelling	48.1	48.9	48.1	0.0	No Change	49.0	0.9	Negligible Adverse	37.0	37.7	37.8
20. GLADSTONE PLACE, WOODSIDE	Dwelling	50.2	51.3	50.3	0.1	Negligible Beneficial	51.2	1.0	Negligible Adverse	38.9	39.9	39.8
21. GLADSTONE PLACE, WOODSIDE	Dwelling	49.6	50.5	49.8	0.2	Negligible Adverse	50.6	1.0	Negligible Adverse	39.4	39.2	39.3
22. GLADSTONE PLACE, WOODSIDE	Dwelling	48.9	49.9	48.1	0.0	No Change	49.0	0.9	Negligible Adverse	37.0	37.7	37.8
23. GLADSTONE PLACE, WOODSIDE	Dwelling	49.6	50.5	49.8	0.2	Negligible Adverse	50.6	1.0	Negligible Adverse	38.4	39.2	39.3
24. GLADSTONE PLACE, WOODSIDE	Dwelling	48.3	49.2	48.4	0.1	Negligible Adverse	49.3	1.0	Negligible Adverse	37.2	38.0	38.1
24. GLADSTONE PLACE, WOODSIDE	Dwelling	49.6	50.5	49.8	0.2	Negligible Adverse	50.6	1.0	Negligible Adverse	38.4	39.2	39.3
24. GLADSTONE PLACE, WOODSIDE	Dwelling	49.6	50.5	49.8	0.2	Negligible Adverse	50.6	1.0	Negligible Adverse	38.4	39.2	39.3
24. GLADSTONE PLACE, WOODSIDE	Dwelling	49.6	50.5	49.8	0.2	Negligible Adverse	50.6	1.0	Negligible Adverse	38.4	39.2	39.3
26. GLADSTONE PLACE, WOODSIDE	Dwelling	53.3	54.0	53.4	0.1	Negligible Adverse	54.1	0.8	Negligible Adverse	41.7	42.3	42.4
28. GLADSTONE PLACE, WOODSIDE	Dwelling	52.6	53.3	52.7	0.1	Negligible Adverse	53.3	0.7	Negligible Adverse	41.1	41.7	41.7
29. GLADSTONE PLACE, WOODSIDE	Dwelling	48.7	49.6	48.8	0.1	Negligible Beneficial	49.7	1.0	Negligible Adverse	37.6	38.4	38.5
29. GLADSTONE PLACE, WOODSIDE	Dwelling	48.7	49.6	48.8	0.1	Negligible Beneficial	49.7	1.0	Negligible Adverse	37.6	38.4	38.5
3. GLADSTONE PLACE, WOODSIDE	Dwelling	48.3	49.2	48.4	0.1	Negligible Adverse	49.2	0.9	Negligible Adverse	37.2	38.0	38.0
30. GLADSTONE PLACE, WOODSIDE	Dwelling	52.6	53.3	52.7	0.1	Negligible Adverse	53.3	0.7	Negligible Adverse	41.1	41.7	41.7
31. GLADSTONE PLACE, WOODSIDE	Dwelling	48.7	49.6	48.8	0.1	Negligible Beneficial	49.7	1.0	Negligible Adverse	37.6	38.4	38.5
32. GLADSTONE PLACE, WOODSIDE	Dwelling	52.6	53.3	52.7	0.1	Negligible Adverse	53.3	0.7	Negligible Adverse	41.1	41.7	41.7
33. GLADSTONE PLACE, WOODSIDE	Dwelling	48.7	49.6	48.8	0.1	Negligible Beneficial	49.7	1.0	Negligible Adverse	37.6	38.4	38.5
34. GLADSTONE PLACE, WOODSIDE	Dwelling	49.3	50.2	49.5	0.2	Negligible Adverse	50.2	0.9	Negligible Adverse	38.1	38.9	38.9

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
34. GLADSTONE PLACE, WOODSIDE	Dwelling	49.3	50.2	49.5	0.2	Negligible Adverse	50.2	0.9	Negligible Adverse	38.1	38.9	38.9
35. GLADSTONE PLACE, WOODSIDE	Dwelling	51.4	52.2	51.5	0.1	Negligible Adverse	52.3	0.9	Negligible Adverse	40.0	40.7	40.8
35. GLADSTONE PLACE, WOODSIDE	Dwelling	51.4	52.2	51.5	0.1	Negligible Adverse	52.3	0.9	Negligible Adverse	40.0	40.7	40.8
36. GLADSTONE PLACE, WOODSIDE	Dwelling	49.3	50.2	49.5	0.2	Negligible Adverse	50.2	0.9	Negligible Adverse	38.1	38.9	38.9
37. GLADSTONE PLACE, WOODSIDE	Dwelling	51.4	52.2	51.5	0.1	Negligible Adverse	52.3	0.9	Negligible Adverse	40.0	40.7	40.8
38. GLADSTONE PLACE, WOODSIDE	Dwelling	49.3	50.2	49.5	0.2	Negligible Adverse	50.2	0.9	Negligible Adverse	38.1	38.9	38.9
39. GLADSTONE PLACE, WOODSIDE	Dwelling	51.4	52.2	51.5	0.1	Negligible Adverse	52.3	0.9	Negligible Adverse	40.0	40.7	40.8
4. GLADSTONE PLACE, WOODSIDE	Dwelling	48.9	50.0	49.0	0.1	Negligible Adverse	49.9	1.0	Negligible Adverse	37.7	38.7	38.6
40. GLADSTONE PLACE, WOODSIDE	Dwelling	49.6	50.4	49.7	0.1	Negligible Adverse	50.5	0.9	Negligible Adverse	38.4	39.1	39.2
40. GLADSTONE PLACE, WOODSIDE	Dwelling	49.6	50.4	49.7	0.1	Negligible Adverse	50.5	0.9	Negligible Adverse	38.4	39.1	39.2
41. GLADSTONE PLACE, WOODSIDE	Dwelling	49.2	50.0	49.3	0.1	Negligible Beneficial	50.1	0.9	Negligible Adverse	38.0	38.7	38.8
42. GLADSTONE PLACE, WOODSIDE	Dwelling	49.6	50.4	49.7	0.1	Negligible Adverse	50.5	0.9	Negligible Adverse	38.4	39.1	39.2
44. GLADSTONE PLACE, WOODSIDE	Dwelling	49.6	50.4	49.7	0.1	Negligible Adverse	50.5	0.9	Negligible Adverse	38.4	39.1	39.2
45. GLADSTONE PLACE, WOODSIDE	Dwelling	49.2	50.0	49.3	0.1	Negligible Beneficial	50.1	0.9	Negligible Adverse	38.0	38.7	38.8
45. GLADSTONE PLACE, WOODSIDE	Dwelling	49.2	50.0	49.3	0.1	Negligible Beneficial	50.1	0.9	Negligible Adverse	38.0	38.7	38.8
46. GLADSTONE PLACE, WOODSIDE	Dwelling	51.8	52.5	51.8	0.0	No Change	52.6	0.8	Negligible Adverse	40.4	41.0	41.1
46. GLADSTONE PLACE, WOODSIDE	Dwelling	51.8	52.5	51.8	0.0	No Change	52.6	0.8	Negligible Adverse	40.4	41.0	41.1
48. GLADSTONE PLACE, WOODSIDE	Dwelling	51.8	52.5	51.8	0.0	No Change	52.6	0.8	Negligible Adverse	40.4	41.0	41.1
49. GLADSTONE PLACE, WOODSIDE	Dwelling	48.0	48.8	48.2	0.2	Negligible Adverse	49.0	1.0	Negligible Adverse	36.9	37.7	37.8
5. GLADSTONE PLACE, WOODSIDE	Dwelling	48.0	48.9	48.0	0.0	No Change	48.9	0.9	Negligible Adverse	36.9	37.7	37.7
5. GLADSTONE PLACE, WOODSIDE	Dwelling	48.0	48.9	48.0	0.0	No Change	48.9	0.9	Negligible Adverse	36.9	37.7	37.7
50. GLADSTONE PLACE, WOODSIDE	Dwelling	51.8	52.5	51.8	0.0	No Change	52.6	0.8	Negligible Adverse	40.4	41.0	41.1
51. GLADSTONE PLACE, WOODSIDE	Dwelling	48.4	49.2	48.5	0.1	Negligible Adverse	49.3	0.9	Negligible Adverse	37.3	38.0	38.1
52. GLADSTONE PLACE, WOODSIDE	Dwelling	50.0	50.8	50.1	0.1	Negligible Adverse	50.9	0.9	Negligible Adverse	38.7	39.5	39.5
52. GLADSTONE PLACE, WOODSIDE	Dwelling	50.4	51.2	50.5	0.1	Negligible Adverse	51.3	0.9	Negligible Adverse	39.1	39.8	39.9
53. GLADSTONE PLACE, WOODSIDE	Dwelling	49.5	49.8	49.8	0.1	Negligible Beneficial	49.7	1.0	Negligible Adverse	37.6	38.4	38.4
54. GLADSTONE PLACE, WOODSIDE	Dwelling	50.0	50.8	50.2	0.2	Negligible Adverse	51.0	1.0	Negligible Adverse	38.7	39.5	39.6
55. GLADSTONE PLACE, WOODSIDE	Dwelling	48.5	49.3	48.6	0.1	Negligible Adverse	49.5	1.0	Negligible Adverse	37.4	38.1	38.3
56. GLADSTONE PLACE, WOODSIDE	Dwelling	50.2	51.0	50.4	0.2	Negligible Adverse	51.2	1.0	Negligible Adverse	38.9	39.6	39.8
57. GLADSTONE PLACE, WOODSIDE	Dwelling	48.7	49.6	48.9	0.2	Negligible Adverse	49.7	1.0	Negligible Adverse	37.6	38.4	38.5
58. GLADSTONE PLACE, WOODSIDE	Dwelling	52.2	53.1	52.4	0.2	Negligible Adverse	53.2	1.0	Negligible Adverse	40.7	41.5	41.6
58. GLADSTONE PLACE, WOODSIDE	Dwelling	51.7	52.5	51.9	0.2	Negligible Adverse	52.7	1.0	Negligible Adverse	40.3	41.0	41.2
59. GLADSTONE PLACE, WOODSIDE	Dwelling	49.1	49.9	49.2	0.1	Negligible Adverse	50.0	0.9	Negligible Adverse	37.9	38.6	38.7
6. GLADSTONE PLACE, WOODSIDE	Dwelling	50.0	50.9	50.1	0.1	Negligible Adverse	50.9	0.9	Negligible Adverse	38.7	39.5	39.5
60. GLADSTONE PLACE, WOODSIDE	Dwelling	55.7	56.6	55.9	0.2	Negligible Adverse	56.7	1.0	Negligible Adverse	43.9	44.7	44.8
60. GLADSTONE PLACE, WOODSIDE	Dwelling	55.7	56.6	55.9	0.2	Negligible Adverse	56.7	1.0	Negligible Adverse	43.9	44.7	44.8
61. GLADSTONE PLACE, WOODSIDE	Dwelling	48.9	49.8	49.1	0.2	Negligible Adverse	49.9	1.0	Negligible Adverse	37.7	38.6	38.6
62. GLADSTONE PLACE, WOODSIDE	Dwelling	55.7	56.6	55.9	0.2	Negligible Adverse	56.7	1.0	Negligible Adverse	43.9	44.7	44.8
63. GLADSTONE PLACE, WOODSIDE	Dwelling	48.5	49.3	48.7	0.2	Negligible Adverse	49.5	1.0	Negligible Adverse	37.4	38.1	38.3
64. GLADSTONE PLACE, WOODSIDE	Dwelling	55.7	56.6	55.9	0.2	Negligible Adverse	56.7	1.0	Negligible Adverse	43.9	44.7	44.8
65. GLADSTONE PLACE, WOODSIDE	Dwelling	51.1	51.8	51.3	0.2	Negligible Adverse	52.0	0.9	Negligible Adverse	39.7	40.4	40.5
66. GLADSTONE PLACE, WOODSIDE	Dwelling	55.4	56.3	55.6	0.2	Negligible Adverse	56.4	1.0	Negligible Adverse	43.6	44.4	44.5
68. GLADSTONE PLACE, WOODSIDE	Dwelling	55.6	56.5	55.9	0.3	Negligible Adverse	56.6	1.0	Negligible Adverse	43.8	44.6	44.7
7. GLADSTONE PLACE, WOODSIDE	Dwelling	48.0	48.9	48.0	0.0	No Change	48.9	0.9	Negligible Adverse	36.9	37.7	37.7
8. GLADSTONE PLACE, WOODSIDE	Dwelling	50.0	50.9	50.1	0.1	Negligible Adverse	50.9	0.9	Negligible Adverse	38.7	39.5	39.5
9. GLADSTONE PLACE, WOODSIDE	Dwelling	48.0	48.9	48.0	0.0	No Change	48.9	0.9	Negligible Adverse	36.9	37.7	37.7
GLENCRAIG, GLENCRAIG, LAUREL LANE, BRIDGE OF DON	Dwelling	64.0	64.2	63.9	-0.1	Negligible Beneficial	64.6	0.6	Negligible Adverse	51.3	51.5	51.9
FLAT A, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT B, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT C, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT D, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT E, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT F, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT G, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT H, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT J, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT K, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT L, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT M, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT N, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT P, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT R, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
FLAT S, 64, GOODHOPE PARK	Dwelling	56.4	56.1	56.2	-0.2	Negligible Beneficial	56.8	0.4	Negligible Adverse	44.5	44.2	44.9
1. GOODHOPE PARK	Dwelling	71.1	71.6	71.0	-0.1	Negligible Beneficial	72.5	1.4	Negligible Adverse	57.7	58.2	59.0
10. GOODHOPE PARK	Dwelling	71.1	71.6	71.0	-0.1	Negligible Beneficial	72.5	1.4	Negligible Adverse	57.7	58.2	59.0
11. GOODHOPE PARK	Dwelling	71.1	71.6	71.0	-0.1	Negligible Beneficial	72.5	1.4	Negligible Adverse	57.7	58.2	59.0
12. GOODHOPE PARK	Dwelling	71.1	71.6	71.0	-0.1	Negligible Beneficial	72.5	1.4	Negligible Adverse	57.7	58.2	59.0
14. GOODHOPE PARK	Dwelling	71.1	71.6	71.0	-0.1	Negligible Beneficial	72.5	1.4	Negligible Adverse	57.7	58.2	59.0
15. GOODHOPE PARK	Dwelling	71.1	71.6	71.0	-0.1	Negligible Beneficial	72.5	1.4	Negligible Adverse	57.7	58.2	59.0
16. GOODHOPE PARK	Dwelling	71.1	71.6	71.0	-0.1	Negligible Beneficial	72.5	1.4	Negligible Adverse	57.7	58.2	59.0
17. GOODHOPE PARK	Dwelling	71.1	71.6	71.0	-0.1	Negligible Beneficial	72.5	1.4	Negligible Adverse	57.7	58.2	59.0
18. GOODHOPE PARK	Dwelling	57.5	57.6	57.4	-0.1	Negligible Beneficial	58.6	1.1	Negligible Adverse	45.5	45.6	46.5
19. GOODHOPE PARK	Dwelling	57.5	57.6	57.4	-0.1	Negligible Beneficial	58.6	1.1	Negligible Adverse	45.5	45.6	46.5
2. GOODHOPE PARK	Dwelling	71.1	71.6	71.0	-0.1	Negligible Beneficial	72.5	1.4	Negligible Adverse	57.7	58.2	59.0
20. GOODHOPE PARK	Dwelling	57.5	57.6	57.4	-0.1	Negligible Beneficial	58.6	1.1	Negligible Adverse	45.5	45.6	46.5
21. GOODHOPE PARK	Dwelling	57.5	57.6	57.4	-0.1	Negligible Beneficial	58.6	1.1	Negligible Adverse	45.5	45.6	46.5
22. GOODHOPE PARK	Dwelling	57.5	57.6	57.4	-0.1	Negligible Beneficial	58.6	1.1	Negligible Adverse	45.5	45.6	46.5
23. GOODHOPE PARK	Dwelling	57.5	57.6	57.4	-0.1	Negligible Beneficial	58.6	1.1	Negligible Adverse	45.5	45.6	46.5
24. GOODHOPE PARK	Dwelling	57.5	57.6	57.4	-0.1	Negligible Beneficial	58.6	1.1	Negligible Adverse	45.5	45.6	46.5
25. GOODHOPE PARK	Dwelling	57.5	57.6	57.4	-0.1	Negligible Beneficial	58.6	1.1	Negligible Adverse	45.5	45.6	46.5
26. GOODHOPE PARK	Dwelling	55.0	55.0	55.1	-0.1	Negligible Beneficial	55.9	0.7	Negligible Adverse	43.4	43.2	44.0
27. GOODHOPE PARK	Dwelling	55.0	55.0	55.1	-0.1	Negligible Beneficial	55.9	0.7	Negligible Adverse	43.4	43.2	44.0
28. GOODHOPE PARK	Dwelling	55.2	55.0	55.1	-0.1	Negligible Beneficial	55.9	0.7	Negligible Adverse	43.4	43.2	44.0

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DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
204. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	49.6	50.4	49.4	-0.2	Negligible Beneficial	50.8	1.2	Negligible Adverse	38.4	39.1	39.5
53. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	46.3	47.5	46.2	-0.1	Negligible Beneficial	47.4	1.1	Negligible Adverse	35.4	36.5	36.4
55. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	45.9	47.1	45.8	-0.1	Negligible Beneficial	47.0	1.1	Negligible Adverse	35.0	36.1	36.0
57. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	46.1	47.3	46.0	-0.1	Negligible Beneficial	47.2	1.1	Negligible Adverse	35.2	36.3	36.2
59. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	45.8	46.9	45.7	-0.1	Negligible Beneficial	46.9	1.1	Negligible Adverse	35.0	35.9	35.9
61. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	45.2	46.4	45.2	0.0	No Change	46.3	1.1	Negligible Adverse	34.4	35.5	35.4
63. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	45.1	46.4	45.1	0.0	No Change	46.2	1.1	Negligible Adverse	34.3	35.5	35.3
65. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	45.1	46.5	45.0	-0.1	Negligible Beneficial	46.2	1.1	Negligible Adverse	34.3	35.6	35.3
67. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	45.0	46.3	45.0	0.0	No Change	46.1	1.1	Negligible Adverse	34.2	35.4	35.2
69. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	45.0	46.4	44.9	-0.1	Negligible Beneficial	46.1	1.1	Negligible Adverse	34.2	35.5	35.2
71. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	44.9	46.4	44.8	-0.1	Negligible Beneficial	46.0	1.1	Negligible Adverse	34.1	35.5	35.1
73. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	44.8	46.3	44.7	-0.1	Negligible Beneficial	45.9	1.1	Negligible Adverse	34.1	35.4	35.0
75. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	44.7	46.4	44.6	-0.1	Negligible Beneficial	45.9	1.2	Negligible Adverse	34.0	35.5	35.0
77. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	45.2	46.9	45.0	-0.2	Negligible Beneficial	46.4	1.2	Negligible Adverse	34.4	35.9	35.5
78. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	44.9	45.8	44.8	-0.1	Negligible Beneficial	46.0	1.1	Negligible Adverse	34.1	35.0	35.1
79. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	45.4	46.7	45.3	-0.1	Negligible Beneficial	46.4	1.0	Negligible Adverse	34.6	35.8	35.5
80. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	44.9	45.8	44.8	-0.1	Negligible Beneficial	46.0	1.1	Negligible Adverse	34.1	35.0	35.1
81. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	46.0	47.1	46.0	0.0	No Change	47.0	1.0	Negligible Adverse	35.1	36.1	36.0
82. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	44.9	45.8	44.8	-0.1	Negligible Beneficial	46.0	1.1	Negligible Adverse	34.1	35.0	35.1
83. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	46.1	47.2	46.0	-0.1	Negligible Beneficial	47.0	0.9	Negligible Adverse	35.2	36.2	36.0
84. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	44.9	45.8	44.8	-0.1	Negligible Beneficial	46.0	1.1	Negligible Adverse	34.1	35.0	35.1
85. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	46.2	47.3	46.1	-0.1	Negligible Beneficial	47.2	1.0	Negligible Adverse	35.3	36.3	36.2
86. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	44.9	45.8	44.8	-0.1	Negligible Beneficial	46.0	1.1	Negligible Adverse	34.1	35.0	35.1
87. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
88. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	44.9	45.8	44.8	-0.1	Negligible Beneficial	46.0	1.1	Negligible Adverse	34.1	35.0	35.1
89. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	46.3	47.3	46.3	0.0	No Change	46.3	0.9	Negligible Adverse	36.3	36.3	36.3
90. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	44.9	45.8	44.8	-0.1	Negligible Beneficial	46.0	1.1	Negligible Adverse	34.1	35.0	35.1
91. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	46.8	47.6	46.8	0.0	No Change	47.7	0.9	Negligible Adverse	35.9	36.6	36.7
92. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	44.9	45.8	44.8	-0.1	Negligible Beneficial	46.0	1.1	Negligible Adverse	34.1	35.0	35.1
93. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	46.6	47.4	46.6	0.0	No Change	47.5	0.9	Negligible Adverse	35.7	36.4	36.5
94. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	44.9	45.8	44.8	-0.1	Negligible Beneficial	46.0	1.1	Negligible Adverse	34.1	35.0	35.1
95. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	47.1	47.7	47.0	-0.1	Negligible Beneficial	47.9	0.8	Negligible Adverse	36.1	36.7	36.8
96. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	50.8	51.3	50.6	-0.2	Negligible Beneficial	51.9	1.1	Negligible Adverse	39.5	39.9	40.4
97. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	50.8	51.3	50.6	-0.2	Negligible Beneficial	52.0	1.2	Negligible Adverse	39.5	39.9	40.5
98. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	50.8	51.3	50.6	-0.2	Negligible Beneficial	51.9	1.1	Negligible Adverse	39.5	39.9	40.4
99. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	50.8	51.4	50.6	-0.2	Negligible Beneficial	52.0	1.2	Negligible Adverse	39.5	40.0	40.5
GRANDHOLM DENTAL CLINIC, GRANDHOLM CRESCENT, GRANDHOLM	Health Care Services	50.5	50.5	49.8	-0.2	Negligible Beneficial	51.1	1.1	Negligible Adverse	38.7	39.2	39.7
GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.7	44.1	44.1
GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.7	44.1	44.1
GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.7	44.1	44.1
GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.7	44.1	44.1
GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	53.5	54.1	53.4	-0.1	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.4	43.0
121. GRANDHOLM DRIVE	Dwelling	52.7	53.3	52.6	-0.1	Negligible Beneficial	53.9	1.2	Negligible Adverse	41.2	41.7	42.2
123. GRANDHOLM DRIVE	Dwelling	51.8	52.3	51.6	-0.2	Negligible Beneficial	52.8	1.0	Negligible Adverse	40.4	40.8	41.3
125. GRANDHOLM DRIVE	Dwelling	50.1	50.4	49.9	-0.2	Negligible Beneficial	51.1	1.0	Negligible Adverse	38.8	39.1	39.7
127. GRANDHOLM DRIVE	Dwelling	51.4	51.9	51.3	-0.1	Negligible Beneficial	52.5	1.1	Negligible Adverse	40.0	40.4	41.0
129. GRANDHOLM DRIVE	Dwelling	51.0	51.4	50.9	-0.1	Negligible Beneficial	52.1	1.1	Negligible Adverse	39.6	40.0	40.6
131. GRANDHOLM DRIVE	Dwelling	50.3	50.8	50.1	-0.2	Negligible Beneficial	51.4	1.1	Negligible Adverse	39.0	39.5	40.0
GRANDHOLM CARE HOME, GRANDHOLM DRIVE	Dwelling	61.1	61.6	60.8	-0.3	Negligible Beneficial	62.1	1.0	Negligible Adverse	48.7	49.2	49.6
GRANDHOLM DRIVE	Dwelling	50.4	50.7	50.3	-0.1	Negligible Beneficial	51.1	0.7	Negligible Adverse	39.1	39.4	39.7
GRANDHOLM DRIVE	Dwelling	50.4	50.7	50.3	-0.1	Negligible Beneficial	51.1	0.7	Negligible Adverse	39.1	39.4	39.7
PLAYING FIELDS, GRANDHOLM DRIVE	Playing Field	49.0	49.3	48.8	-0.2	Negligible Beneficial	49.7	0.7	Negligible Adverse	37.8	38.1	38.5
1. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	48.2	48.5	48.0	-0.2	Negligible Beneficial	48.9	0.7	Negligible Adverse	37.1	37.4	37.7
10. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	48.4	50.2	48.2	-0.2	Negligible Beneficial	49.5	1.1	Negligible Adverse	37.3	38.9	38.3
11. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	48.1	49.9	47.9	-0.2	Negligible Beneficial	49.2	1.1	Negligible Adverse	37.0	38.6	38.0
12. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	47.0	47.9	46.9	-0.1	Negligible Beneficial	48.1	1.1	Negligible Adverse	36.0	36.8	37.0
14. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	47.2	47.8	47.1	-0.1	Negligible Beneficial	48.3	1.1	Negligible Adverse	36.2	36.8	37.2
15. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	48.2	48.6	48.1	-0.1	Negligible Beneficial	49.2	1.0	Negligible Adverse	37.1	37.5	38.0
16. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	46.4	47.5	46.3	-0.1	Negligible Beneficial	47.4	1.0	Negligible Adverse	35.5	36.5	36.4
17. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	48.7	50.3	48.5	-0.2	Negligible Beneficial	49.8	1.1	Negligible Adverse	37.6	39.0	38.6
18. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	47.7	50.4	47.5	-0.2	Negligible Beneficial	49.2	1.5	Negligible Adverse	36.7	39.1	38.0
19. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	45.9	48.8	45.8	-0.1	Negligible Beneficial	47.5	1.6	Negligible Adverse	35.0	37.7	36.5
20. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	49.0	49.3	48.9	-0.1	Negligible Beneficial	49.8	0.8	Negligible Adverse	37.8	38.1	38.6
21. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	46.1	47.1	46.1	0.0	No Change	47.1	1.0	Negligible Adverse	35.2	36.1	36.1
22. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	45.0	46.1	44.9	-0.1	Negligible Beneficial	46.1	1.1	Negligible Adverse	34.6	35.2	35.2
22. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	45.4	46.5	45.4	0.0	No Change	46.5	1.1	Negligible Adverse	34.6	35.6	35.6
23. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	47.7	48.4	47.6	-0.1	Negligible Beneficial	48.5	0.8	Negligible Adverse	36.7	37.3	37.4
24. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	47.6	48.6	47.5	-0.1	Negligible Beneficial	48.5	0.9	Negligible Adverse	36.6	37.5	37.4
25. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	48.4	48.7	48.3	-0.1	Negligible Beneficial	49.2	0.8	Negligible Adverse	37.3	37.6	38.0
3. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	48.9	49.2	48.8	-0.1	Negligible Beneficial	49.7	0.8	Negligible Adverse	37.7	38.0	38.5
4. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	46.4	47.0	46.3	-0.1	Negligible Beneficial	47.5	1.1	Negligible Adverse	35.5	36.0	36.5
5. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	48.0	48.3	47.9	-0.1	Negligible Beneficial	48.9	0.9	Negligible Adverse	36.9	37.2	37.7
6. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	48.7	49.0	48.6	-0.1	Negligible Beneficial	49.6	0.9	Negligible Adverse	37.6	37.8	38.4
7. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	46.7	47.6	46.6	-0.1	Negligible Beneficial	47.9	1.2	Negligible Adverse	35.8	36.6	36.8
8. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	47.8	48.5	47.7	-0.1	Negligible Beneficial	48.9	1.1	Negligible Adverse	36.8	37.4	37.7
9. GRANDHOLM GARDENS, GRANDHOLM	Dwelling	48.5	50.1	48.4	-0.1	Negligible Beneficial	49.5	1.0	Negligible Adverse	37.4	38.8	38.3
10. GRANDHOLM GROVE, GRANDHOLM	Dwelling	47.4	51.0	47.1	-0.3	Negligible Adverse	49.4	2.0	Negligible Adverse	36.4	39.6	38.2
11. GRANDHOLM GROVE, GRANDHOLM	Dwelling	48.1	51.5	47.7	-0.4	Negligible Beneficial	50.0	1.9	Negligible Adverse	37.0	40.1	38.7
12. GRANDHOLM GROVE, GRANDHOLM	Dwelling	48.1	51.7	48.1	-0.3	Negligible Beneficial	50.3	1.9	Negligible Adverse	37.3	40.3	39.0
14. GRANDHOLM GROVE, GRANDHOLM	Dwelling	49.1	50.4	48.9	-0.2	Negligible Beneficial	50.4	1.3	Negligible Adverse	37.9	39.1	39.1
15. GRANDHOLM GROVE, GRANDHOLM	Dwelling	48.4	51.7	48.1	-0.3	Negligible Beneficial	50.2	1.8	Negligible Adverse	37.3	40.3	38.9

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
425. GREAT NORTHERN ROAD	Dwelling	73.3	74.0	73.6	0.3	Negligible Adverse	74.2	0.9	Negligible Adverse	59.7	60.3	60.5
427. GREAT NORTHERN ROAD	Dwelling	73.5	74.1	73.8	0.3	Negligible Adverse	74.4	0.9	Negligible Adverse	59.9	60.4	60.7
437. GREAT NORTHERN ROAD	Dwelling	72.9	73.5	73.2	0.3	Negligible Adverse	73.8	0.9	Negligible Adverse	59.3	59.9	60.2
443. GREAT NORTHERN ROAD	Dwelling	72.3	73.0	72.6	0.3	Negligible Adverse	73.2	0.9	Negligible Adverse	58.8	59.4	59.6
447. GREAT NORTHERN ROAD	Dwelling	73.1	73.8	73.4	0.3	Negligible Adverse	74.0	0.9	Negligible Adverse	59.5	60.2	60.3
449. GREAT NORTHERN ROAD	Dwelling	49.5	50.4	49.6	0.1	Negligible Adverse	50.3	0.8	Negligible Adverse	38.3	39.1	39.0
449. GREAT NORTHERN ROAD	Dwelling	49.3	50.1	49.3	0.0	No Change	50.1	0.8	Negligible Adverse	38.1	38.8	38.8
461. GREAT NORTHERN ROAD	Dwelling	73.0	73.9	73.3	0.3	Negligible Adverse	74.0	1.0	Negligible Adverse	59.4	60.2	60.3
461. GREAT NORTHERN ROAD	Dwelling	72.9	73.8	73.3	0.4	Negligible Adverse	74.0	1.1	Negligible Adverse	59.3	60.2	60.3
481. GREAT NORTHERN ROAD	Dwelling	72.8	73.7	73.2	0.4	Negligible Adverse	73.9	1.1	Negligible Adverse	59.3	60.1	60.2
483. GREAT NORTHERN ROAD	Dwelling	72.8	73.7	73.2	0.4	Negligible Adverse	73.9	1.1	Negligible Adverse	59.3	60.1	60.2
485. GREAT NORTHERN ROAD	Dwelling	72.8	73.7	73.2	0.4	Negligible Adverse	73.9	1.1	Negligible Adverse	59.3	60.1	60.2
487. GREAT NORTHERN ROAD	Dwelling	72.8	73.7	73.2	0.4	Negligible Adverse	73.9	1.1	Negligible Adverse	59.3	60.1	60.2
491. GREAT NORTHERN ROAD	Dwelling	72.8	73.7	73.1	0.3	Negligible Adverse	73.8	1.0	Negligible Adverse	59.3	60.1	60.2
491. GREAT NORTHERN ROAD	Dwelling	72.8	73.7	73.1	0.3	Negligible Adverse	73.8	1.0	Negligible Adverse	59.3	60.1	60.2
499. GREAT NORTHERN ROAD	Dwelling	72.9	73.8	73.3	0.4	Negligible Adverse	73.9	1.0	Negligible Adverse	59.3	60.2	60.2
503. GREAT NORTHERN ROAD	Dwelling	73.0	73.8	73.4	0.4	Negligible Adverse	74.0	1.0	Negligible Adverse	59.4	60.2	60.3
505. GREAT NORTHERN ROAD	Dwelling	73.0	73.8	73.4	0.4	Negligible Adverse	74.0	1.0	Negligible Adverse	59.4	60.2	60.3
513. GREAT NORTHERN ROAD	Dwelling	66.3	67.0	66.5	0.2	Negligible Adverse	67.2	0.9	Negligible Adverse	53.4	54.0	54.2
513. GREAT NORTHERN ROAD	Dwelling	66.3	67.0	66.5	0.2	Negligible Adverse	67.2	0.9	Negligible Adverse	53.4	54.0	54.2
571. GREAT NORTHERN ROAD	Dwelling	48.9	50.4	49.1	0.2	Negligible Adverse	50.4	1.5	Negligible Adverse	37.7	39.1	39.1
571. GREAT NORTHERN ROAD	Dwelling	48.9	50.4	49.1	0.2	Negligible Adverse	50.4	1.5	Negligible Adverse	37.7	39.1	39.1
571. GREAT NORTHERN ROAD	Dwelling	48.9	50.4	49.1	0.2	Negligible Adverse	50.4	1.5	Negligible Adverse	37.7	39.1	39.1
575. GREAT NORTHERN ROAD	Dwelling	74.4	74.8	74.7	0.3	Negligible Adverse	75.3	0.9	Negligible Adverse	60.7	61.1	61.5
577. GREAT NORTHERN ROAD	Dwelling	74.4	74.8	74.7	0.3	Negligible Adverse	75.3	0.9	Negligible Adverse	60.7	61.1	61.5
577. GREAT NORTHERN ROAD	Dwelling	68.7	69.1	69.1	0.4	Negligible Adverse	69.6	0.9	Negligible Adverse	55.6	55.9	56.4
577. GREAT NORTHERN ROAD	Dwelling	68.7	69.1	69.1	0.4	Negligible Adverse	69.6	0.9	Negligible Adverse	55.6	55.9	56.4
585. GREAT NORTHERN ROAD	Dwelling	71.0	71.2	71.4	0.4	Negligible Adverse	71.9	0.9	Negligible Adverse	57.6	57.8	58.4
587. GREAT NORTHERN ROAD	Dwelling	71.1	71.4	71.4	0.3	Negligible Adverse	72.0	0.9	Negligible Adverse	57.7	58.0	58.5
589. GREAT NORTHERN ROAD	Dwelling	71.1	71.3	71.4	0.3	Negligible Adverse	72.0	0.9	Negligible Adverse	57.7	57.9	58.5
591. GREAT NORTHERN ROAD	Dwelling	71.0	71.3	71.3	0.3	Negligible Adverse	71.9	0.9	Negligible Adverse	57.6	57.9	58.4
593. GREAT NORTHERN ROAD	Dwelling	70.8	71.1	71.2	0.4	Negligible Adverse	71.7	0.9	Negligible Adverse	57.5	57.7	58.3
651. GREAT NORTHERN ROAD	Dwelling	73.0	72.9	73.4	0.4	Negligible Adverse	73.8	0.8	Negligible Adverse	59.4	59.3	60.2
653. GREAT NORTHERN ROAD	Dwelling	73.0	72.9	73.4	0.4	Negligible Adverse	73.8	0.8	Negligible Adverse	59.4	59.3	60.2
653. GREAT NORTHERN ROAD	Dwelling	73.0	72.9	73.4	0.4	Negligible Adverse	73.8	0.8	Negligible Adverse	59.4	59.3	60.2
653. GREAT NORTHERN ROAD	Dwelling	73.0	72.9	73.4	0.4	Negligible Adverse	73.8	0.8	Negligible Adverse	59.4	59.3	60.2
680. GREAT NORTHERN ROAD	Dwelling	69.7	70.4	69.9	0.2	Negligible Adverse	70.6	0.9	Negligible Adverse	56.5	57.1	57.3
695. GREAT NORTHERN ROAD	Dwelling	74.9	74.1	75.4	0.5	Negligible Adverse	75.6	0.7	Negligible Adverse	61.1	60.4	61.8
703. GREAT NORTHERN ROAD	Dwelling	74.8	74.1	75.3	0.5	Negligible Adverse	75.5	0.7	Negligible Adverse	61.1	60.4	61.7
703. GREAT NORTHERN ROAD	Dwelling	74.8	74.1	75.3	0.5	Negligible Adverse	75.5	0.7	Negligible Adverse	61.1	60.4	61.7
703. GREAT NORTHERN ROAD	Dwelling	74.8	74.1	75.3	0.5	Negligible Adverse	75.5	0.7	Negligible Adverse	61.1	60.4	61.7
703. GREAT NORTHERN ROAD	Dwelling	74.8	74.1	75.3	0.5	Negligible Adverse	75.5	0.7	Negligible Adverse	61.1	60.4	61.7
705. GREAT NORTHERN ROAD	Dwelling	74.4	73.5	75.0	0.6	Negligible Adverse	75.1	0.7	Negligible Adverse	60.7	59.9	61.3
716. GREAT NORTHERN ROAD	Dwelling	53.3	53.4	53.4	0.1	Negligible Adverse	54.0	0.7	Negligible Adverse	41.7	41.8	42.3
744. GREAT NORTHERN ROAD	Dwelling	69.7	69.9	70.3	0.6	Negligible Adverse	70.4	0.7	Negligible Adverse	56.5	56.6	57.1
746. GREAT NORTHERN ROAD	Dwelling	69.7	69.9	70.3	0.6	Negligible Adverse	70.4	0.7	Negligible Adverse	56.5	56.6	57.1
748. GREAT NORTHERN ROAD	Dwelling	63.3	63.4	64.1	0.8	Negligible Adverse	64.1	0.8	Negligible Adverse	50.7	50.8	51.4
750. GREAT NORTHERN ROAD	Dwelling	63.3	63.4	64.1	0.8	Negligible Adverse	64.1	0.8	Negligible Adverse	50.7	50.8	51.4
752. GREAT NORTHERN ROAD	Dwelling	63.3	63.4	64.1	0.8	Negligible Adverse	64.1	0.8	Negligible Adverse	50.7	50.8	51.4
754. GREAT NORTHERN ROAD	Dwelling	69.7	69.9	70.3	0.6	Negligible Adverse	70.4	0.7	Negligible Adverse	56.5	56.6	57.1
756. GREAT NORTHERN ROAD	Dwelling	69.7	69.9	70.3	0.6	Negligible Adverse	70.4	0.7	Negligible Adverse	56.5	56.6	57.1
758. GREAT NORTHERN ROAD	Dwelling	63.3	63.4	64.1	0.8	Negligible Adverse	64.1	0.8	Negligible Adverse	50.7	50.8	51.4
760. GREAT NORTHERN ROAD	Dwelling	63.3	63.4	64.1	0.8	Negligible Adverse	64.1	0.8	Negligible Adverse	50.7	50.8	51.4
762. GREAT NORTHERN ROAD	Dwelling	63.3	63.4	64.1	0.8	Negligible Adverse	64.1	0.8	Negligible Adverse	50.7	50.8	51.4
764. GREAT NORTHERN ROAD	Dwelling	69.3	69.6	69.9	0.6	Negligible Adverse	70.1	0.8	Negligible Adverse	56.1	56.4	56.8
766. GREAT NORTHERN ROAD	Dwelling	69.3	69.6	69.9	0.6	Negligible Adverse	70.1	0.8	Negligible Adverse	56.1	56.4	56.8
770. GREAT NORTHERN ROAD	Dwelling	72.1	72.8	72.4	0.3	Negligible Adverse	72.8	0.7	Negligible Adverse	58.6	59.3	59.3
772. GREAT NORTHERN ROAD	Dwelling	72.1	72.8	72.4	0.3	Negligible Adverse	72.8	0.7	Negligible Adverse	58.6	59.3	59.3
774. GREAT NORTHERN ROAD	Dwelling	72.1	72.8	72.4	0.3	Negligible Adverse	72.8	0.7	Negligible Adverse	58.6	59.3	59.3
776. GREAT NORTHERN ROAD	Dwelling	72.1	72.8	72.4	0.3	Negligible Adverse	72.8	0.7	Negligible Adverse	58.6	59.3	59.3
778. GREAT NORTHERN ROAD	Dwelling	72.1	72.8	72.4	0.3	Negligible Adverse	72.8	0.7	Negligible Adverse	58.6	59.3	59.3
780. GREAT NORTHERN ROAD	Dwelling	72.1	72.8	72.4	0.3	Negligible Adverse	72.8	0.7	Negligible Adverse	58.6	59.3	59.3
782. GREAT NORTHERN ROAD	Dwelling	72.3	73.0	72.5	0.2	Negligible Adverse	72.9	0.6	Negligible Adverse	58.8	59.4	59.3
784. GREAT NORTHERN ROAD	Dwelling	72.3	73.0	72.5	0.2	Negligible Adverse	72.9	0.6	Negligible Adverse	58.8	59.4	59.3
786. GREAT NORTHERN ROAD	Dwelling	72.3	73.0	72.5	0.2	Negligible Adverse	72.9	0.6	Negligible Adverse	58.8	59.4	59.3
788. GREAT NORTHERN ROAD	Dwelling	72.3	73.0	72.5	0.2	Negligible Adverse	72.9	0.6	Negligible Adverse	58.8	59.4	59.3
790. GREAT NORTHERN ROAD	Dwelling	72.3	73.0	72.5	0.2	Negligible Adverse	72.9	0.6	Negligible Adverse	58.8	59.4	59.3
792. GREAT NORTHERN ROAD	Dwelling	72.3	73.0	72.5	0.2	Negligible Adverse	72.9	0.6	Negligible Adverse	58.8	59.4	59.3
794. GREAT NORTHERN ROAD	Dwelling	72.4	73.0	72.4	0.0	No Change	72.9	0.5	Negligible Adverse	58.9	59.4	59.3
796. GREAT NORTHERN ROAD	Dwelling	72.4	73.0	72.4	0.0	No Change	72.9	0.5	Negligible Adverse	58.9	59.4	59.3
798. GREAT NORTHERN ROAD	Dwelling	72.4	73.0	72.4	0.0	No Change	72.9	0.5	Negligible Adverse	58.9	59.4	59.3
800. GREAT NORTHERN ROAD	Dwelling	72.4	73.0	72.4	0.0	No Change	72.9	0.5	Negligible Adverse	58.9	59.4	59.3
801. GREAT NORTHERN ROAD	Dwelling	73.6	74.4	74.4	0.8	Negligible Adverse	74.5	0.9	Negligible Adverse	60.0	60.7	60.8
801. GREAT NORTHERN ROAD	Dwelling	64.2	65.1	64.9	0.7	Negligible Adverse	65.1	0.9	Negligible Adverse	51.5	52.3	52.3
802. GREAT NORTHERN ROAD	Dwelling	72.4	73.0	72.4	0.0	No Change	72.9	0.5	Negligible Adverse	58.9	59.4	59.3
804. GREAT NORTHERN ROAD	Dwelling	72.4	73.0	72.4	0.0	No Change	72.9	0.5	Negligible Adverse	58.9	59.4	59.3
806. GREAT NORTHERN ROAD	Dwelling	62.9	63.6	62.7	-0.2	Negligible Beneficial	63.5	0.6	Negligible Adverse	50.3	51.0	50.9
808. GREAT NORTHERN ROAD	Dwelling	60.0	60.8	59.9	-0.1	Negligible Beneficial	60.7	0.7	Negligible Adverse	47.7	48.5	48.4
810. GREAT NORTHERN ROAD	Dwelling	62.9	63.6	62.7	-0.2	Negligible Beneficial	63.5	0.6	Negligible Adverse	50.3	51.0	50.9
812. GREAT NORTHERN ROAD	Dwelling	60.0	60.8	59.9	-0.1	Negligible Beneficial	60.7	0.7	Negligible Adverse	47.7	48.5	48.4
814. GREAT NORTHERN ROAD	Dwelling	62.9	63.6	62.7	-0.2	Negligible Beneficial	63.5	0.6	Negligible Adverse	50.3	51.0	50.9
816. GREAT NORTHERN ROAD	Dwelling	60.0	60.8	59.9	-0.1	Negligible Beneficial	60.7	0.7	Negligible Adverse	47.7	48.5	48.4

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
818. GREAT NORTHERN ROAD	Dwelling	72.2	73.0	72.0	-0.2	Negligible Beneficial	72.8	0.6	Negligible Adverse	58.7	59.4	59.3
820. GREAT NORTHERN ROAD	Dwelling	72.2	73.0	72.0	-0.2	Negligible Beneficial	72.8	0.6	Negligible Adverse	58.7	59.4	59.3
822. GREAT NORTHERN ROAD	Dwelling	72.2	73.0	72.0	-0.2	Negligible Beneficial	72.8	0.6	Negligible Adverse	58.7	59.4	59.3
824. GREAT NORTHERN ROAD	Dwelling	72.2	73.0	72.0	-0.2	Negligible Beneficial	72.8	0.6	Negligible Adverse	58.7	59.4	59.3
826. GREAT NORTHERN ROAD	Dwelling	72.2	73.0	72.0	-0.2	Negligible Beneficial	72.8	0.6	Negligible Adverse	58.7	59.4	59.3
827. GREAT NORTHERN ROAD	Dwelling	74.2	74.4	71.5	-2.7	Minor Beneficial	72.1	-2.1	Negligible Beneficial	60.5	60.7	58.6
828. GREAT NORTHERN ROAD	Dwelling	72.2	73.0	72.0	-0.2	Negligible Beneficial	72.8	0.6	Negligible Adverse	58.7	59.4	59.3
830. GREAT NORTHERN ROAD	Dwelling	60.8	61.8	60.7	-0.1	Negligible Beneficial	61.7	0.9	Negligible Adverse	48.5	49.4	49.3
832. GREAT NORTHERN ROAD	Dwelling	64.6	65.5	64.2	-0.4	Negligible Beneficial	65.1	0.5	Negligible Adverse	51.9	52.7	52.3
833. GREAT NORTHERN ROAD	Dwelling	73.5	73.5	70.7	-2.8	Minor Beneficial	71.1	-2.4	Negligible Beneficial	59.9	59.9	57.7
834. GREAT NORTHERN ROAD	Dwelling	60.8	61.8	60.7	-0.1	Negligible Beneficial	61.7	0.9	Negligible Adverse	48.5	49.4	49.3
835. GREAT NORTHERN ROAD	Dwelling	73.5	73.4	70.6	-2.9	Minor Beneficial	71.1	-2.4	Negligible Beneficial	59.9	59.8	57.7
836. GREAT NORTHERN ROAD	Dwelling	64.6	65.5	64.2	-0.4	Negligible Beneficial	65.1	0.5	Negligible Adverse	51.9	52.7	52.3
837. GREAT NORTHERN ROAD	Dwelling	73.5	73.4	70.7	-2.8	Minor Beneficial	71.1	-2.4	Negligible Beneficial	59.9	59.8	57.7
838. GREAT NORTHERN ROAD	Dwelling	60.8	61.8	60.7	-0.1	Negligible Beneficial	61.7	0.9	Negligible Adverse	48.5	49.4	49.3
839. GREAT NORTHERN ROAD	Dwelling	73.6	73.4	70.7	-2.9	Minor Beneficial	71.1	-2.5	Negligible Beneficial	60.0	59.8	57.7
840. GREAT NORTHERN ROAD	Dwelling	64.6	65.5	64.2	-0.4	Negligible Beneficial	65.1	0.5	Negligible Adverse	51.9	52.7	52.3
842. GREAT NORTHERN ROAD	Dwelling	73.7	74.6	73.0	-0.7	Negligible Beneficial	74.0	0.3	Negligible Adverse	60.1	60.9	60.3
844. GREAT NORTHERN ROAD	Dwelling	73.7	74.6	73.0	-0.7	Negligible Beneficial	74.0	0.3	Negligible Adverse	60.1	60.9	60.3
846. GREAT NORTHERN ROAD	Dwelling	73.7	74.6	73.0	-0.7	Negligible Beneficial	74.0	0.3	Negligible Adverse	60.1	60.9	60.3
848. GREAT NORTHERN ROAD	Dwelling	73.7	74.6	73.0	-0.7	Negligible Beneficial	74.0	0.3	Negligible Adverse	60.1	60.9	60.3
850. GREAT NORTHERN ROAD	Dwelling	73.7	74.6	73.0	-0.7	Negligible Beneficial	74.0	0.3	Negligible Adverse	60.1	60.9	60.3
852. GREAT NORTHERN ROAD	Dwelling	73.7	74.6	73.0	-0.7	Negligible Beneficial	74.0	0.3	Negligible Adverse	60.1	60.9	60.3
854. GREAT NORTHERN ROAD	Dwelling	69.2	70.4	68.5	-0.7	Negligible Beneficial	69.6	0.4	Negligible Adverse	56.0	57.1	56.4
856. GREAT NORTHERN ROAD	Dwelling	70.4	68.5	68.5	-0.7	Negligible Beneficial	69.6	0.4	Negligible Adverse	56.0	57.1	56.4
858. GREAT NORTHERN ROAD	Dwelling	69.2	70.4	68.5	-0.7	Negligible Beneficial	69.6	0.4	Negligible Adverse	56.0	57.1	56.4
860. GREAT NORTHERN ROAD	Dwelling	69.2	70.4	68.5	-0.7	Negligible Beneficial	69.6	0.4	Negligible Adverse	56.0	57.1	56.4
862. GREAT NORTHERN ROAD	Dwelling	69.2	70.4	68.5	-0.7	Negligible Beneficial	69.6	0.4	Negligible Adverse	56.0	57.1	56.4
864. GREAT NORTHERN ROAD	Dwelling	69.2	70.4	68.5	-0.7	Negligible Beneficial	69.6	0.4	Negligible Adverse	56.0	57.1	56.4
CONGREGATIONAL CHURCH, GREAT NORTHERN ROAD	Church	69.5	70.2	69.8	0.3	Negligible Adverse	70.4	0.9	Negligible Adverse	56.3	56.9	57.1
FLAT B, 819. GREAT NORTHERN ROAD	Dwelling	75.3	76.1	73.7	-1.6	Minor Beneficial	74.4	-0.9	Negligible Beneficial	61.5	62.2	60.7
821. GREAT NORTHERN ROAD [G_rep 3]	Dwelling	75.0	75.7	73.1	-1.9	Minor Beneficial	73.8	-1.2	Negligible Beneficial	61.2	61.9	60.2
FLAT D, 819. GREAT NORTHERN ROAD	Dwelling	75.4	76.2	73.9	-1.5	Minor Beneficial	74.7	-0.7	Negligible Beneficial	61.6	62.3	61.0
821. GREAT NORTHERN ROAD [2nd_rep 2]	Dwelling	75.1	75.7	73.3	-1.8	Minor Beneficial	74.0	-1.1	Negligible Beneficial	61.3	61.9	60.3
FLAT C, 819. GREAT NORTHERN ROAD	Dwelling	75.7	76.5	74.1	-1.6	Minor Beneficial	74.9	-0.8	Negligible Beneficial	61.9	62.6	61.1
821. GREAT NORTHERN ROAD [1st_rep 3]	Dwelling	75.3	76.0	73.5	-1.8	Minor Beneficial	74.2	-1.1	Negligible Beneficial	61.5	62.1	60.5
1. GREENMORE GARDENS	Dwelling	53.0	55.6	53.8	0.8	Negligible Adverse	55.6	2.6	Negligible Adverse	41.4	43.8	43.8
11. GREENMORE GARDENS	Dwelling	50.1	51.3	50.5	0.4	Negligible Adverse	51.3	1.2	Negligible Adverse	38.8	39.9	39.9
13. GREENMORE GARDENS	Dwelling	50.7	51.6	51.0	0.3	Negligible Adverse	51.6	0.9	Negligible Adverse	39.4	40.2	40.2
15. GREENMORE GARDENS	Dwelling	50.8	51.7	51.1	0.3	Negligible Adverse	51.7	0.9	Negligible Adverse	39.5	40.3	40.3
17. GREENMORE GARDENS	Dwelling	51.4	51.6	52.0	0.2	Negligible Adverse	52.0	0.6	Negligible Adverse	40.0	40.5	40.5
18. GREENMORE GARDENS	Dwelling	57.8	58.1	57.9	0.1	Negligible Adverse	58.1	0.3	Negligible Adverse	45.8	46.0	46.0
19. GREENMORE GARDENS	Dwelling	52.1	52.7	52.4	0.3	Negligible Adverse	52.7	0.6	Negligible Adverse	40.6	41.2	41.2
20. GREENMORE GARDENS	Dwelling	59.1	59.4	59.2	0.1	Negligible Adverse	59.3	0.2	Negligible Adverse	46.9	47.2	47.1
21. GREENMORE GARDENS	Dwelling	53.2	53.4	53.4	0.2	Negligible Adverse	53.7	0.5	Negligible Adverse	41.6	42.1	42.1
22. GREENMORE GARDENS	Dwelling	60.6	60.8	60.7	0.1	Negligible Adverse	60.8	0.2	Negligible Adverse	48.3	48.5	48.5
23. GREENMORE GARDENS	Dwelling	53.6	54.0	53.7	0.1	Negligible Adverse	54.0	0.4	Negligible Adverse	42.0	42.3	42.3
24. GREENMORE GARDENS	Dwelling	61.9	62.1	62.0	0.1	Negligible Adverse	62.1	0.2	Negligible Adverse	49.4	49.6	49.6
25. GREENMORE GARDENS	Dwelling	54.9	55.3	55.0	0.1	Negligible Adverse	55.3	0.4	Negligible Adverse	43.1	43.5	43.5
27. GREENMORE GARDENS	Dwelling	55.8	56.2	56.0	0.2	Negligible Adverse	56.2	0.4	Negligible Adverse	44.0	44.3	44.3
29. GREENMORE GARDENS	Dwelling	57.3	57.7	57.5	0.2	Negligible Adverse	57.7	0.4	Negligible Adverse	45.3	45.7	45.7
31. GREENMORE GARDENS	Dwelling	51.8	54.1	52.4	0.6	Negligible Adverse	54.1	2.3	Negligible Adverse	40.4	42.4	42.4
31. GREENMORE GARDENS	Dwelling	57.3	57.7	57.5	0.2	Negligible Adverse	57.7	0.4	Negligible Adverse	45.3	45.7	45.7
5. GREENMORE GARDENS	Dwelling	51.0	53.0	51.5	0.5	Negligible Adverse	53.0	2.0	Negligible Adverse	39.6	41.4	41.4
7. GREENMORE GARDENS	Dwelling	50.4	52.1	50.9	0.5	Negligible Adverse	52.1	1.7	Negligible Adverse	39.1	40.6	40.6
9. GREENMORE GARDENS	Dwelling	50.2	51.6	50.6	0.4	Negligible Adverse	51.6	1.4	Negligible Adverse	38.9	40.2	40.2
1. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
101. HAMMERMAN AVENUE, HILTON	Dwelling	47.1	48.0	47.0	-0.1	Negligible Beneficial	47.9	0.8	Negligible Adverse	36.1	36.9	36.8
103. HAMMERMAN AVENUE, HILTON	Dwelling	47.1	48.0	47.0	-0.1	Negligible Beneficial	47.9	0.8	Negligible Adverse	36.1	36.9	36.8
105. HAMMERMAN AVENUE, HILTON	Dwelling	47.1	48.0	47.0	-0.1	Negligible Beneficial	47.9	0.8	Negligible Adverse	36.1	36.9	36.8
107. HAMMERMAN AVENUE, HILTON	Dwelling	47.1	48.0	47.0	-0.1	Negligible Beneficial	47.9	0.8	Negligible Adverse	36.1	36.9	36.8
109. HAMMERMAN AVENUE, HILTON	Dwelling	47.1	48.0	47.0	-0.1	Negligible Beneficial	47.9	0.8	Negligible Adverse	36.1	36.9	36.8
111. HAMMERMAN AVENUE, HILTON	Dwelling	47.1	48.0	47.0	-0.1	Negligible Beneficial	47.9	0.8	Negligible Adverse	36.1	36.9	36.8
113. HAMMERMAN AVENUE, HILTON	Dwelling	47.1	48.0	47.0	-0.1	Negligible Beneficial	47.9	0.8	Negligible Adverse	36.1	36.9	36.8
115. HAMMERMAN AVENUE, HILTON	Dwelling	47.1	48.0	47.0	-0.1	Negligible Beneficial	47.9	0.8	Negligible Adverse	36.1	36.9	36.8
15. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
17. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
19. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
21. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
23. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
25. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
27. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
29. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
31. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
31. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
33. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
35. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
37. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
39. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
41. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
43. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
45. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5
47. HAMMERMAN AVENUE, HILTON	Dwelling	46.6	47.6	46.5	-0.1	Negligible Beneficial	47.5	0.9	Negligible Adverse	35.7	36.6	36.5

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DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
27. HAMMERMAN DRIVE, HILTON	Dwelling	51.0	51.5	51.0	0.0	No Change	51.5	0.5	Negligible Adverse	39.6	40.1	40.1
28. HAMMERMAN DRIVE, HILTON	Dwelling	70.3	70.6	70.3	0.0	No Change	70.7	0.4	Negligible Adverse	57.0	57.3	57.4
29. HAMMERMAN DRIVE, HILTON	Dwelling	51.0	51.5	51.0	0.0	No Change	51.5	0.5	Negligible Adverse	39.6	40.1	40.1
3. HAMMERMAN DRIVE, HILTON	Dwelling	51.0	51.5	51.0	0.0	No Change	51.5	0.5	Negligible Adverse	39.6	40.1	40.1
30. HAMMERMAN DRIVE, HILTON	Dwelling	70.3	70.6	70.3	0.0	No Change	70.7	0.4	Negligible Adverse	57.0	57.3	57.4
31. HAMMERMAN DRIVE, HILTON	Dwelling	51.0	51.5	51.0	0.0	No Change	51.5	0.5	Negligible Adverse	39.6	40.1	40.1
32. HAMMERMAN DRIVE, HILTON	Dwelling	70.3	70.6	70.3	0.0	No Change	70.7	0.4	Negligible Adverse	57.0	57.3	57.4
33. HAMMERMAN DRIVE, HILTON	Dwelling	51.0	51.5	51.0	0.0	No Change	51.5	0.5	Negligible Adverse	39.6	40.1	40.1
34. HAMMERMAN DRIVE, HILTON	Dwelling	70.3	70.6	70.3	0.0	No Change	70.7	0.4	Negligible Adverse	57.0	57.3	57.4
35. HAMMERMAN DRIVE, HILTON	Dwelling	51.0	51.5	51.0	0.0	No Change	51.5	0.5	Negligible Adverse	39.6	40.1	40.1
36. HAMMERMAN DRIVE, HILTON	Dwelling	70.3	70.6	70.3	0.0	No Change	70.7	0.4	Negligible Adverse	57.0	57.3	57.4
37. HAMMERMAN DRIVE, HILTON	Dwelling	51.0	51.5	51.0	0.0	No Change	51.5	0.5	Negligible Adverse	39.6	40.1	40.1
38. HAMMERMAN DRIVE, HILTON	Dwelling	67.3	67.4	67.4	0.1	Negligible Adverse	67.8	0.5	Negligible Adverse	54.3	54.7	54.8
39. HAMMERMAN DRIVE, HILTON	Dwelling	51.0	51.5	51.0	0.0	No Change	51.5	0.5	Negligible Adverse	39.6	40.1	40.1
4. HAMMERMAN DRIVE, HILTON	Dwelling	50.3	51.1	50.2	-0.1	Negligible Beneficial	51.0	0.7	Negligible Adverse	39.0	39.7	39.6
40. HAMMERMAN DRIVE, HILTON	Dwelling	67.7	68.1	67.8	0.1	Negligible Beneficial	68.2	0.5	Negligible Adverse	54.7	55.0	55.1
41. HAMMERMAN DRIVE, HILTON	Dwelling	51.0	51.5	51.0	0.0	No Change	51.5	0.5	Negligible Adverse	39.6	40.1	40.1
42. HAMMERMAN DRIVE, HILTON	Dwelling	67.8	68.2	67.9	0.1	Negligible Adverse	68.3	0.5	Negligible Adverse	54.8	55.1	55.2
43. HAMMERMAN DRIVE, HILTON	Dwelling	46.6	47.2	46.6	0.0	No Change	47.2	0.6	Negligible Adverse	35.7	36.2	36.2
44. HAMMERMAN DRIVE, HILTON	Dwelling	67.9	68.3	67.9	0.0	No Change	68.4	0.5	Negligible Adverse	54.8	55.2	55.3
45. HAMMERMAN DRIVE, HILTON	Dwelling	46.6	47.2	46.6	0.0	No Change	47.2	0.6	Negligible Adverse	35.7	36.2	36.2
46. HAMMERMAN DRIVE, HILTON	Dwelling	67.9	68.2	67.9	0.0	No Change	68.4	0.5	Negligible Adverse	54.8	55.1	55.3
47. HAMMERMAN DRIVE, HILTON	Dwelling	46.6	47.2	46.6	0.0	No Change	47.2	0.6	Negligible Adverse	35.7	36.2	36.2
48. HAMMERMAN DRIVE, HILTON	Dwelling	68.0	68.4	68.1	0.1	Negligible Beneficial	68.5	0.5	Negligible Adverse	54.9	55.3	55.4
49. HAMMERMAN DRIVE, HILTON	Dwelling	46.6	47.2	46.6	0.0	No Change	47.2	0.6	Negligible Adverse	35.7	36.2	36.2
5. HAMMERMAN DRIVE, HILTON	Dwelling	51.0	51.5	51.0	0.0	No Change	51.5	0.5	Negligible Adverse	39.6	40.1	40.1
50. HAMMERMAN DRIVE, HILTON	Dwelling	68.1	68.5	68.2	0.1	Negligible Adverse	68.6	0.5	Negligible Adverse	55.0	55.4	55.5
51. HAMMERMAN DRIVE, HILTON	Dwelling	46.6	47.2	46.6	0.0	No Change	47.2	0.6	Negligible Adverse	35.7	36.2	36.2
52. HAMMERMAN DRIVE, HILTON	Dwelling	68.1	68.5	68.2	0.1	Negligible Adverse	68.6	0.5	Negligible Adverse	55.0	55.4	55.5
53. HAMMERMAN DRIVE, HILTON	Dwelling	46.6	47.2	46.6	0.0	No Change	47.2	0.6	Negligible Adverse	35.7	36.2	36.2
54. HAMMERMAN DRIVE, HILTON	Dwelling	67.9	68.3	68.0	0.1	Negligible Beneficial	68.4	0.5	Negligible Adverse	54.8	55.2	55.3
55. HAMMERMAN DRIVE, HILTON	Dwelling	46.6	47.2	46.6	0.0	No Change	47.2	0.6	Negligible Adverse	35.7	36.2	36.2
56. HAMMERMAN DRIVE, HILTON	Dwelling	68.1	68.5	68.2	0.1	Negligible Adverse	68.6	0.5	Negligible Adverse	55.0	55.4	55.5
57. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
58. HAMMERMAN DRIVE, HILTON	Dwelling	68.3	68.7	68.4	0.1	Negligible Adverse	68.8	0.5	Negligible Adverse	55.2	55.6	55.7
59. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
6. HAMMERMAN DRIVE, HILTON	Dwelling	50.3	51.1	50.2	-0.1	Negligible Beneficial	51.0	0.7	Negligible Adverse	39.0	39.7	39.6
60. HAMMERMAN DRIVE, HILTON	Dwelling	68.0	68.4	68.1	0.1	Negligible Beneficial	68.5	0.5	Negligible Adverse	54.9	55.3	55.4
61. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
62. HAMMERMAN DRIVE, HILTON	Dwelling	68.0	68.3	68.0	0.0	No Change	68.4	0.4	Negligible Adverse	54.9	55.2	55.3
63. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
64. HAMMERMAN DRIVE, HILTON	Dwelling	68.3	68.6	68.3	0.0	No Change	68.8	0.5	Negligible Adverse	55.2	55.5	55.7
65. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
66. HAMMERMAN DRIVE, HILTON	Dwelling	68.3	68.7	68.4	0.1	Negligible Adverse	68.8	0.5	Negligible Adverse	55.2	55.6	55.7
67. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
68. HAMMERMAN DRIVE, HILTON	Dwelling	68.0	68.4	68.0	0.0	No Change	68.5	0.5	Negligible Adverse	54.9	55.3	55.4
69. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
7. HAMMERMAN DRIVE, HILTON	Dwelling	51.0	51.5	51.0	0.0	No Change	51.5	0.5	Negligible Adverse	39.6	40.1	40.1
70. HAMMERMAN DRIVE, HILTON	Dwelling	67.7	68.0	67.7	0.0	No Change	68.1	0.4	Negligible Adverse	54.7	54.9	55.0
71. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
72. HAMMERMAN DRIVE, HILTON	Dwelling	68.1	68.5	68.2	0.1	Negligible Adverse	68.6	0.5	Negligible Adverse	55.0	55.4	55.5
73. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
75. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
77. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
79. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
8. HAMMERMAN DRIVE, HILTON	Dwelling	50.3	51.1	50.2	-0.1	Negligible Beneficial	51.0	0.7	Negligible Adverse	39.0	39.7	39.6
81. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
83. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
85. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
87. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
89. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
9. HAMMERMAN DRIVE, HILTON	Dwelling	51.0	51.5	51.0	0.0	No Change	51.5	0.5	Negligible Adverse	39.6	40.1	40.1
91. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
93. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
95. HAMMERMAN DRIVE, HILTON	Dwelling	48.6	49.0	48.6	0.0	No Change	49.1	0.5	Negligible Adverse	37.5	37.8	37.9
97. HAMMERMAN DRIVE, HILTON	Dwelling	55.1	55.5	55.1	0.0	No Change	55.6	0.5	Negligible Adverse	43.3	43.7	43.8
99. HAMMERMAN DRIVE, HILTON	Dwelling	55.1	55.5	55.1	0.0	No Change	55.6	0.5	Negligible Adverse	43.3	43.7	43.8
1. HAMMERMAN LANE, HILTON	Dwelling	48.6	49.2	48.7	0.1	Negligible Adverse	49.2	0.6	Negligible Adverse	37.5	38.0	37.9
2. HAMMERMAN LANE, HILTON	Dwelling	48.3	48.9	48.4	0.1	Negligible Adverse	48.9	0.6	Negligible Adverse	37.2	37.7	37.7
11. HAYFIELD CRESCENT	Dwelling	57.8	58.5	57.3	-0.5	Negligible Beneficial	58.2	0.4	Negligible Adverse	45.8	46.4	46.1
11. HAYFIELD CRESCENT	Dwelling	53.6	54.3	53.1	-0.5	Negligible Beneficial	54.0	0.4	Negligible Adverse	42.0	42.6	42.3
13. HAYFIELD CRESCENT	Dwelling	53.0	53.7	52.5	-0.5	Negligible Beneficial	53.4	0.4	Negligible Adverse	41.4	42.1	41.8
15. HAYFIELD CRESCENT	Dwelling	52.7	53.4	52.2	-0.5	Negligible Beneficial	53.1	0.4	Negligible Adverse	41.2	41.8	41.5
17. HAYFIELD CRESCENT	Dwelling	52.2	53.0	51.8	-0.4	Negligible Beneficial	52.7	0.5	Negligible Adverse	40.7	41.4	41.2
19. HAYFIELD CRESCENT	Dwelling	51.9	52.6	51.5	-0.4	Negligible Beneficial	52.4	0.5	Negligible Adverse	40.4	41.1	40.9
2. HAYFIELD CRESCENT	Dwelling	53.8	54.5	53.3	-0.5	Negligible Beneficial	54.2	0.4	Negligible Adverse	42.2	42.8	42.5
3. HAYFIELD CRESCENT	Dwelling	56.7	57.4	56.2	-0.5	Negligible Beneficial	57.1	0.4	Negligible Adverse	44.8	45.4	45.1
4. HAYFIELD CRESCENT	Dwelling	52.5	53.2	52.0	-0.5	Negligible Beneficial	53.0	0.5	Negligible Adverse	41.0	41.6	41.4
5. HAYFIELD CRESCENT	Dwelling	55.5	56.2	55.0	-0.5	Negligible Beneficial	55.8	0.3	Negligible Adverse	43.7	44.3	44.0
6. HAYFIELD CRESCENT	Dwelling	52.7	53.4	52.3	-0.4	Negligible Beneficial	53.2	0.5	Negligible Adverse	41.2	41.8	41.6
7. HAYFIELD CRESCENT	Dwelling	54.4	55.2	54.0	-0.4	Negligible Beneficial	54.8	0.4	Negligible Adverse	42.7	43.4	43.1
9. HAYFIELD CRESCENT	Dwelling	53.8	54.5	53.3	-0.5	Negligible Beneficial	54.2	0.4	Negligible Adverse	42.2	42.8	42.5
11. HAYFIELD PLACE	Dwelling	56.8	57.1	56.2	-0.6	Negligible Beneficial	56.9	0.1	Negligible Adverse	44.9	45.1	44.9

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
10. HEATHRYFOLD CIRCLE	Dwelling	42.9	43.2	43.5	0.6	Negligible Adverse	44.3	1.4	Negligible Adverse	32.3	32.6	33.6
100. HEATHRYFOLD CIRCLE	Dwelling	49.0	49.0	48.8	-0.2	Negligible Beneficial	49.5	0.5	Negligible Adverse	37.8	37.8	38.3
101. HEATHRYFOLD CIRCLE	Dwelling	55.4	54.7	55.3	-0.7	Negligible Beneficial	55.7	0.3	Negligible Adverse	43.6	43.0	43.9
102. HEATHRYFOLD CIRCLE	Dwelling	48.9	48.8	48.7	-0.1	Negligible Beneficial	49.4	0.5	Negligible Adverse	37.7	37.7	38.2
103. HEATHRYFOLD CIRCLE	Dwelling	55.3	54.6	55.2	-0.7	Negligible Beneficial	55.6	0.3	Negligible Adverse	43.5	42.9	43.8
104. HEATHRYFOLD CIRCLE	Dwelling	49.6	49.7	49.6	0.0	No Change	50.3	0.7	Negligible Adverse	38.4	38.5	39.0
105. HEATHRYFOLD CIRCLE	Dwelling	55.4	54.7	55.3	-0.7	Negligible Beneficial	55.7	0.3	Negligible Adverse	43.6	43.0	43.9
106. HEATHRYFOLD CIRCLE	Dwelling	50.5	50.3	50.5	0.0	No Change	51.1	0.6	Negligible Adverse	39.2	39.0	39.7
107. HEATHRYFOLD CIRCLE	Dwelling	55.3	54.5	55.2	-0.7	Negligible Beneficial	55.6	0.3	Negligible Adverse	43.5	42.8	43.8
108. HEATHRYFOLD CIRCLE	Dwelling	50.3	50.2	50.2	-0.1	Negligible Beneficial	50.8	0.5	Negligible Adverse	39.0	38.9	39.5
109. HEATHRYFOLD CIRCLE	Dwelling	55.8	55.1	55.7	-0.7	Negligible Beneficial	56.0	0.2	Negligible Adverse	44.0	43.3	44.1
11. HEATHRYFOLD CIRCLE	Dwelling	44.5	45.0	44.7	0.2	Negligible Adverse	45.7	1.2	Negligible Adverse	33.8	34.2	34.9
110. HEATHRYFOLD CIRCLE	Dwelling	50.3	50.3	50.2	-0.1	Negligible Beneficial	50.9	0.6	Negligible Adverse	39.0	39.0	39.5
111. HEATHRYFOLD CIRCLE	Dwelling	55.8	55.1	55.7	-0.7	Negligible Beneficial	56.0	0.2	Negligible Adverse	44.0	43.3	44.1
112. HEATHRYFOLD CIRCLE	Dwelling	50.9	50.8	50.8	-0.1	Negligible Beneficial	51.4	0.5	Negligible Adverse	39.5	39.5	40.0
113. HEATHRYFOLD CIRCLE	Dwelling	55.8	55.1	55.7	-0.7	Negligible Beneficial	56.1	0.3	Negligible Adverse	44.0	43.3	44.2
114. HEATHRYFOLD CIRCLE	Dwelling	52.8	52.2	52.8	0.0	No Change	53.1	0.3	Negligible Adverse	41.3	40.7	41.5
115. HEATHRYFOLD CIRCLE	Dwelling	55.9	55.1	55.9	-0.2	Negligible Beneficial	56.1	0.2	Negligible Adverse	44.0	43.3	44.2
116. HEATHRYFOLD CIRCLE	Dwelling	51.0	51.0	50.9	-0.1	Negligible Beneficial	51.6	0.6	Negligible Adverse	39.6	39.6	40.2
117. HEATHRYFOLD CIRCLE	Dwelling	55.9	55.1	55.8	-0.1	Negligible Beneficial	56.1	0.2	Negligible Adverse	44.0	43.3	44.2
118. HEATHRYFOLD CIRCLE	Dwelling	50.9	50.8	50.8	-0.1	Negligible Beneficial	51.4	0.5	Negligible Adverse	39.5	39.5	40.0
119. HEATHRYFOLD CIRCLE	Dwelling	55.9	55.1	55.8	-0.1	Negligible Beneficial	56.1	0.2	Negligible Adverse	44.0	43.3	44.2
12. HEATHRYFOLD CIRCLE	Dwelling	42.9	43.2	43.5	0.6	Negligible Adverse	44.3	1.4	Negligible Adverse	32.3	32.6	33.6
120. HEATHRYFOLD CIRCLE	Dwelling	50.6	50.6	50.4	-0.2	Negligible Beneficial	51.1	0.5	Negligible Adverse	39.3	39.3	39.7
121. HEATHRYFOLD CIRCLE	Dwelling	55.9	55.1	55.8	-0.1	Negligible Beneficial	56.1	0.2	Negligible Adverse	44.0	43.3	44.2
122. HEATHRYFOLD CIRCLE	Dwelling	51.1	50.9	50.9	-0.2	Negligible Beneficial	51.5	0.4	Negligible Adverse	39.7	39.6	40.1
123. HEATHRYFOLD CIRCLE	Dwelling	55.8	55.0	55.7	-0.7	Negligible Beneficial	56.0	0.2	Negligible Adverse	44.0	43.2	44.1
124. HEATHRYFOLD CIRCLE	Dwelling	51.4	51.2	51.2	-0.2	Negligible Beneficial	51.8	0.4	Negligible Adverse	40.0	39.8	40.4
125. HEATHRYFOLD CIRCLE	Dwelling	55.7	54.8	55.6	-0.7	Negligible Beneficial	55.9	0.2	Negligible Adverse	43.9	43.1	44.0
126. HEATHRYFOLD CIRCLE	Dwelling	51.1	50.9	50.9	-0.2	Negligible Beneficial	51.5	0.4	Negligible Adverse	39.7	39.5	40.1
127. HEATHRYFOLD CIRCLE	Dwelling	55.6	54.6	55.5	-0.7	Negligible Beneficial	55.7	0.1	Negligible Adverse	43.8	42.9	43.9
128. HEATHRYFOLD CIRCLE	Dwelling	50.8	50.8	50.6	-0.2	Negligible Beneficial	51.3	0.5	Negligible Adverse	39.5	39.5	39.9
129. HEATHRYFOLD CIRCLE	Dwelling	56.1	55.3	56.0	-0.7	Negligible Beneficial	56.3	0.2	Negligible Adverse	44.2	43.5	44.4
13. HEATHRYFOLD CIRCLE	Dwelling	44.8	45.5	44.7	-0.1	Negligible Beneficial	45.7	0.9	Negligible Adverse	34.1	34.7	34.9
130. HEATHRYFOLD CIRCLE	Dwelling	51.0	50.8	50.8	-0.2	Negligible Beneficial	51.4	0.4	Negligible Adverse	39.6	39.5	40.0
131. HEATHRYFOLD CIRCLE	Dwelling	56.1	55.3	56.0	-0.2	Negligible Beneficial	56.3	0.2	Negligible Adverse	44.2	43.5	44.4
132. HEATHRYFOLD CIRCLE	Dwelling	50.6	50.6	50.5	-0.1	Negligible Beneficial	51.2	0.6	Negligible Adverse	39.3	39.3	39.8
133. HEATHRYFOLD CIRCLE	Dwelling	56.2	55.4	56.1	-0.7	Negligible Beneficial	56.4	0.2	Negligible Adverse	44.3	43.6	44.5
134. HEATHRYFOLD CIRCLE	Dwelling	51.0	51.0	50.9	-0.1	Negligible Beneficial	51.6	0.6	Negligible Adverse	39.6	39.6	40.2
135. HEATHRYFOLD CIRCLE	Dwelling	56.4	56.7	56.3	-0.1	Negligible Beneficial	56.6	0.2	Negligible Adverse	44.5	43.9	44.7
136. HEATHRYFOLD CIRCLE	Dwelling	50.8	50.8	50.8	0.0	No Change	51.4	0.6	Negligible Adverse	39.5	39.5	40.0
137. HEATHRYFOLD CIRCLE	Dwelling	55.2	54.7	55.2	0.0	No Change	55.7	0.5	Negligible Adverse	43.4	43.0	43.9
138. HEATHRYFOLD CIRCLE	Dwelling	51.2	51.2	51.2	0.0	No Change	51.9	0.7	Negligible Adverse	39.8	39.8	40.4
139. HEATHRYFOLD CIRCLE	Dwelling	54.6	54.2	54.7	-0.1	Negligible Adverse	55.2	0.6	Negligible Adverse	42.9	42.5	43.4
14. HEATHRYFOLD CIRCLE	Dwelling	43.2	43.4	43.1	0.1	Negligible Beneficial	43.9	0.7	Negligible Adverse	32.6	32.8	33.2
140. HEATHRYFOLD CIRCLE	Dwelling	54.7	53.8	54.7	0.0	No Change	55.0	0.3	Negligible Adverse	43.0	42.2	43.2
141. HEATHRYFOLD CIRCLE	Dwelling	54.1	53.6	54.2	0.1	Negligible Adverse	54.7	0.6	Negligible Adverse	42.4	42.0	43.0
142. HEATHRYFOLD CIRCLE	Dwelling	54.7	53.6	54.6	0.1	Negligible Beneficial	54.8	0.1	Negligible Beneficial	43.0	42.0	43.1
143. HEATHRYFOLD CIRCLE	Dwelling	54.5	53.8	54.6	-0.1	Negligible Adverse	55.0	0.5	Negligible Adverse	42.8	42.2	43.2
144. HEATHRYFOLD CIRCLE	Dwelling	50.9	51.1	50.7	-0.2	Negligible Beneficial	51.5	0.6	Negligible Adverse	39.5	39.7	40.1
145. HEATHRYFOLD CIRCLE	Dwelling	54.5	53.9	54.6	0.1	Negligible Adverse	55.0	0.5	Negligible Adverse	42.8	42.2	43.2
146. HEATHRYFOLD CIRCLE	Dwelling	50.8	51.0	50.7	-0.1	Negligible Beneficial	51.4	0.6	Negligible Adverse	39.5	39.6	40.0
147. HEATHRYFOLD CIRCLE	Dwelling	54.7	53.9	54.8	0.1	Negligible Beneficial	55.1	0.4	Negligible Adverse	43.0	42.3	43.3
148. HEATHRYFOLD CIRCLE	Dwelling	50.4	50.7	50.3	-0.1	Negligible Beneficial	51.1	0.7	Negligible Adverse	39.1	39.4	39.7
149. HEATHRYFOLD CIRCLE	Dwelling	54.8	54.0	54.8	0.0	No Change	55.2	0.4	Negligible Adverse	43.1	42.3	43.4
15. HEATHRYFOLD CIRCLE	Dwelling	45.0	45.7	44.9	-0.1	Negligible Beneficial	45.9	0.9	Negligible Adverse	34.2	34.9	35.0
150. HEATHRYFOLD CIRCLE	Dwelling	50.2	50.5	50.1	-0.1	Negligible Beneficial	50.9	0.7	Negligible Adverse	38.9	39.2	39.5
151. HEATHRYFOLD CIRCLE	Dwelling	54.7	54.0	54.8	0.1	Negligible Beneficial	55.2	0.5	Negligible Adverse	43.0	42.3	43.4
152. HEATHRYFOLD CIRCLE	Dwelling	50.5	50.8	50.4	-0.1	Negligible Beneficial	51.2	0.7	Negligible Adverse	39.2	39.5	39.8
153. HEATHRYFOLD CIRCLE	Dwelling	54.7	53.9	54.7	0.0	No Change	55.1	0.4	Negligible Adverse	43.0	42.2	43.3
154. HEATHRYFOLD CIRCLE	Dwelling	50.9	51.3	51.0	0.1	Negligible Adverse	51.9	1.0	Negligible Adverse	39.5	39.9	40.4
155. HEATHRYFOLD CIRCLE	Dwelling	54.6	53.8	54.7	0.1	Negligible Adverse	55.1	0.5	Negligible Adverse	42.9	42.2	43.3
156. HEATHRYFOLD CIRCLE	Dwelling	49.5	50.5	49.7	0.2	Negligible Adverse	50.8	1.3	Negligible Adverse	38.3	39.2	39.5
157. HEATHRYFOLD CIRCLE	Dwelling	54.1	53.3	54.3	0.2	Negligible Adverse	54.6	0.5	Negligible Adverse	42.4	41.7	42.9
158. HEATHRYFOLD CIRCLE	Dwelling	49.5	50.5	49.7	0.2	Negligible Adverse	50.8	1.3	Negligible Adverse	38.3	39.2	39.5
159. HEATHRYFOLD CIRCLE	Dwelling	54.0	53.1	54.2	0.2	Negligible Adverse	54.5	0.5	Negligible Adverse	42.3	41.5	42.8
16. HEATHRYFOLD CIRCLE	Dwelling	43.2	43.4	43.1	-0.1	Negligible Beneficial	43.9	0.7	Negligible Adverse	32.6	32.8	33.2
160. HEATHRYFOLD CIRCLE	Dwelling	50.5	50.5	49.7	-0.2	Negligible Adverse	50.8	1.3	Negligible Adverse	38.3	39.2	39.5
161. HEATHRYFOLD CIRCLE	Dwelling	54.0	53.5	54.2	0.2	Negligible Adverse	54.5	0.5	Negligible Adverse	42.3	41.5	42.8
162. HEATHRYFOLD CIRCLE	Dwelling	49.5	50.5	49.7	0.2	Negligible Adverse	50.8	1.3	Negligible Adverse	38.3	39.2	39.5
163. HEATHRYFOLD CIRCLE	Dwelling	54.0	53.1	54.2	0.2	Negligible Adverse	54.6	0.6	Negligible Adverse	42.3	41.5	42.9
164. HEATHRYFOLD CIRCLE	Dwelling	49.5	50.5	49.7	0.2	Negligible Adverse	50.8	1.3	Negligible Adverse	38.3	39.2	39.5
165. HEATHRYFOLD CIRCLE	Dwelling	53.7	52.9	53.9	0.2	Negligible Adverse	54.3	0.6	Negligible Adverse	42.1	41.3	42.6
166. HEATHRYFOLD CIRCLE	Dwelling	49.5	50.5	49.7	0.2	Negligible Adverse	50.8	1.3	Negligible Adverse	38.3	39.2	39.5
167. HEATHRYFOLD CIRCLE	Dwelling	53.8	53.1	54.0	0.2	Negligible Adverse	54.5	0.7	Negligible Adverse	42.2	41.5	42.8
168. HEATHRYFOLD CIRCLE	Dwelling	49.8	50.8	50.1	0.3	Negligible Adverse	51.2	1.4	Negligible Adverse	38.6	39.5	39.8
169. HEATHRYFOLD CIRCLE	Dwelling	53.2	52.1	53.3	0.1	Negligible Beneficial	53.6	0.4	Negligible Adverse	41.6	40.6	42.0
17. HEATHRYFOLD CIRCLE	Dwelling	44.4	45.2	44.4	0.0	No Change	45.4	1.0	Negligible Adverse	33.7	34.4	34.6
170. HEATHRYFOLD CIRCLE	Dwelling	49.8	50.8	50.1	0.3	Negligible Adverse	51.2	1.4	Negligible Adverse	38.6	39.5	39.8
171. HEATHRYFOLD CIRCLE	Dwelling	53.4	52.4	53.6	0.2	Negligible Adverse	53.9	0.5	Negligible Adverse	41.8	40.9	42.2
172. HEATHRYFOLD CIRCLE	Dwelling	49.8	50.8	50.1	0.3	Negligible Adverse	51.2	1.4	Negligible Adverse	38.6	39.5	39.8
174. HEATHRYFOLD CIRCLE	Dwelling	49.8	50.8	50.1	0.3	Negligible Adverse	51.2	1.4	Negligible Adverse	38.6	39.5	39.8
176. HEATHRYFOLD CIRCLE	Dwelling	49.8	50.8	50.1	0.3	Negligible Adverse	51.2	1.4	Negligible Adverse	38.6	39.5	39.8

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
178. HEATHRYFOLD CIRCLE	Dwelling	49.8	50.8	50.1	0.3	Negligible Adverse	51.2	1.4	Negligible Adverse	38.6	39.5	39.8
18. HEATHRYFOLD CIRCLE	Dwelling	43.2	43.4	43.1	-0.1	Negligible Beneficial	43.9	0.7	Negligible Adverse	32.6	32.8	33.2
180. HEATHRYFOLD CIRCLE	Dwelling	42.8	42.8	42.6	-0.2	Negligible Beneficial	43.2	0.4	Negligible Adverse	32.3	32.3	32.6
182. HEATHRYFOLD CIRCLE	Dwelling	42.8	42.8	42.6	-0.2	Negligible Beneficial	43.2	0.4	Negligible Adverse	32.3	32.3	32.6
184. HEATHRYFOLD CIRCLE	Dwelling	42.8	42.8	42.6	-0.2	Negligible Beneficial	43.2	0.4	Negligible Adverse	32.3	32.3	32.6
186. HEATHRYFOLD CIRCLE	Dwelling	42.8	42.8	42.6	-0.2	Negligible Beneficial	43.2	0.4	Negligible Adverse	32.3	32.3	32.6
188. HEATHRYFOLD CIRCLE	Dwelling	42.8	42.8	42.6	-0.2	Negligible Beneficial	43.2	0.4	Negligible Adverse	32.3	32.3	32.6
19. HEATHRYFOLD CIRCLE	Dwelling	44.3	45.0	44.2	-0.1	Negligible Beneficial	45.2	0.9	Negligible Adverse	33.6	34.2	34.4
190. HEATHRYFOLD CIRCLE	Dwelling	42.8	42.8	42.6	-0.2	Negligible Beneficial	43.2	0.4	Negligible Adverse	32.3	32.3	32.6
192. HEATHRYFOLD CIRCLE	Dwelling	43.1	43.2	42.9	-0.2	Negligible Beneficial	43.5	0.4	Negligible Adverse	32.5	32.6	32.9
194. HEATHRYFOLD CIRCLE	Dwelling	43.1	43.2	42.9	-0.2	Negligible Beneficial	43.5	0.4	Negligible Adverse	32.5	32.6	32.9
196. HEATHRYFOLD CIRCLE	Dwelling	43.1	43.2	42.9	-0.2	Negligible Beneficial	43.5	0.4	Negligible Adverse	32.5	32.6	32.9
198. HEATHRYFOLD CIRCLE	Dwelling	43.1	43.2	42.9	-0.2	Negligible Beneficial	43.5	0.4	Negligible Adverse	32.5	32.6	32.9
2. HEATHRYFOLD CIRCLE	Dwelling	42.9	43.2	43.5	0.6	Negligible Adverse	44.3	1.4	Negligible Adverse	32.3	32.6	33.6
20. HEATHRYFOLD CIRCLE	Dwelling	43.2	43.4	43.1	-0.1	Negligible Beneficial	43.9	0.7	Negligible Adverse	32.6	32.8	33.2
200. HEATHRYFOLD CIRCLE	Dwelling	43.1	43.2	42.9	-0.2	Negligible Beneficial	43.5	0.4	Negligible Adverse	32.5	32.6	32.9
202. HEATHRYFOLD CIRCLE	Dwelling	43.1	43.2	42.9	-0.2	Negligible Beneficial	43.5	0.4	Negligible Adverse	32.5	32.6	32.9
204. HEATHRYFOLD CIRCLE	Dwelling	44.3	44.2	44.1	-0.2	Negligible Beneficial	44.7	0.4	Negligible Adverse	33.6	33.5	34.0
206. HEATHRYFOLD CIRCLE	Dwelling	44.3	44.2	44.1	-0.2	Negligible Beneficial	44.7	0.4	Negligible Adverse	33.6	33.5	34.0
208. HEATHRYFOLD CIRCLE	Dwelling	44.3	44.2	44.1	-0.2	Negligible Beneficial	44.7	0.4	Negligible Adverse	33.6	33.5	34.0
21. HEATHRYFOLD CIRCLE	Dwelling	43.4	44.0	43.3	-0.1	Negligible Beneficial	44.2	0.8	Negligible Adverse	32.8	33.3	33.5
210. HEATHRYFOLD CIRCLE	Dwelling	44.3	44.2	44.1	-0.2	Negligible Beneficial	44.7	0.4	Negligible Adverse	33.6	33.5	34.0
212. HEATHRYFOLD CIRCLE	Dwelling	44.3	44.2	44.1	-0.2	Negligible Beneficial	44.7	0.4	Negligible Adverse	33.6	33.5	34.0
214. HEATHRYFOLD CIRCLE	Dwelling	44.3	44.2	44.1	-0.2	Negligible Beneficial	44.7	0.4	Negligible Adverse	33.6	33.5	34.0
216. HEATHRYFOLD CIRCLE	Dwelling	44.3	44.2	44.1	-0.2	Negligible Beneficial	44.7	0.4	Negligible Adverse	33.6	33.5	34.0
218. HEATHRYFOLD CIRCLE	Dwelling	44.4	44.2	44.3	-0.2	Negligible Beneficial	44.9	0.5	Negligible Adverse	33.7	33.5	34.1
22. HEATHRYFOLD CIRCLE	Dwelling	43.2	43.4	43.1	-0.1	Negligible Beneficial	43.9	0.7	Negligible Adverse	32.6	32.8	33.2
220. HEATHRYFOLD CIRCLE	Dwelling	44.4	44.2	44.2	-0.2	Negligible Beneficial	44.9	0.5	Negligible Adverse	33.7	33.5	34.1
222. HEATHRYFOLD CIRCLE	Dwelling	44.4	44.2	44.2	-0.2	Negligible Beneficial	44.9	0.5	Negligible Adverse	33.7	33.5	34.1
224. HEATHRYFOLD CIRCLE	Dwelling	44.4	44.2	44.2	-0.2	Negligible Beneficial	44.9	0.5	Negligible Adverse	33.7	33.5	34.1
226. HEATHRYFOLD CIRCLE	Dwelling	44.4	44.2	44.2	-0.2	Negligible Beneficial	44.9	0.5	Negligible Adverse	33.7	33.5	34.1
228. HEATHRYFOLD CIRCLE	Dwelling	44.2	44.0	44.0	-0.2	Negligible Beneficial	44.7	0.5	Negligible Adverse	33.5	33.3	34.0
23. HEATHRYFOLD CIRCLE	Dwelling	42.8	43.1	42.6	-0.2	Negligible Beneficial	43.4	0.6	Negligible Adverse	32.3	32.5	32.8
230. HEATHRYFOLD CIRCLE	Dwelling	44.2	44.0	44.0	-0.2	Negligible Beneficial	44.7	0.5	Negligible Adverse	33.5	33.3	34.0
232. HEATHRYFOLD CIRCLE	Dwelling	44.2	44.0	44.0	-0.2	Negligible Beneficial	44.7	0.5	Negligible Adverse	33.5	33.3	34.0
234. HEATHRYFOLD CIRCLE	Dwelling	44.2	44.0	44.0	-0.2	Negligible Beneficial	44.7	0.5	Negligible Adverse	33.5	33.3	34.0
236. HEATHRYFOLD CIRCLE	Dwelling	44.2	44.0	44.0	-0.2	Negligible Beneficial	44.7	0.5	Negligible Adverse	33.5	33.3	34.0
238. HEATHRYFOLD CIRCLE	Dwelling	44.2	44.0	44.0	-0.2	Negligible Beneficial	44.7	0.5	Negligible Adverse	33.5	33.3	34.0
24. HEATHRYFOLD CIRCLE	Dwelling	43.2	43.4	43.1	-0.1	Negligible Beneficial	43.9	0.7	Negligible Adverse	32.6	32.8	33.2
241. HEATHRYFOLD CIRCLE	Dwelling	46.2	46.5	46.6	0.4	Negligible Adverse	47.4	1.2	Negligible Adverse	35.3	35.6	36.4
243. HEATHRYFOLD CIRCLE	Dwelling	45.6	45.6	45.6	0.0	No Change	46.4	0.8	Negligible Adverse	34.8	35.0	35.5
245. HEATHRYFOLD CIRCLE	Dwelling	45.3	45.6	45.0	-0.3	Negligible Beneficial	45.8	0.5	Negligible Adverse	34.5	34.8	35.0
249. HEATHRYFOLD CIRCLE	Dwelling	52.4	53.4	52.5	0.1	Negligible Adverse	53.6	1.2	Negligible Adverse	40.9	41.8	42.0
25. HEATHRYFOLD CIRCLE	Dwelling	42.8	43.2	42.7	-0.1	Negligible Beneficial	43.5	0.7	Negligible Adverse	32.3	32.6	32.9
251. HEATHRYFOLD CIRCLE	Dwelling	44.9	45.3	45.4	0.5	Negligible Adverse	46.2	1.3	Negligible Adverse	34.1	34.5	35.3
253. HEATHRYFOLD CIRCLE	Dwelling	44.8	45.1	45.4	0.6	Negligible Adverse	46.1	1.3	Negligible Adverse	34.1	34.3	35.2
255. HEATHRYFOLD CIRCLE	Dwelling	44.8	45.1	45.4	0.6	Negligible Adverse	46.2	1.4	Negligible Adverse	34.1	34.3	35.3
257. HEATHRYFOLD CIRCLE	Dwelling	44.3	44.6	45.0	0.7	Negligible Adverse	45.8	1.5	Negligible Adverse	33.6	33.9	35.0
259. HEATHRYFOLD CIRCLE	Dwelling	43.9	44.3	44.7	0.8	Negligible Adverse	45.5	1.6	Negligible Adverse	33.2	33.6	34.7
26. HEATHRYFOLD CIRCLE	Dwelling	44.0	44.3	43.9	-0.1	Negligible Beneficial	44.7	0.7	Negligible Adverse	33.3	33.6	34.0
261. HEATHRYFOLD CIRCLE	Dwelling	43.7	44.1	44.5	0.8	Negligible Adverse	45.3	1.6	Negligible Adverse	33.1	33.4	34.5
263. HEATHRYFOLD CIRCLE	Dwelling	43.6	44.0	44.3	0.7	Negligible Adverse	45.2	1.6	Negligible Adverse	33.0	33.3	34.4
265. HEATHRYFOLD CIRCLE	Dwelling	49.0	50.1	49.1	0.1	Negligible Adverse	50.2	1.2	Negligible Adverse	37.8	38.8	38.9
27. HEATHRYFOLD CIRCLE	Dwelling	43.6	43.7	43.5	-0.1	Negligible Beneficial	44.2	0.6	Negligible Adverse	33.0	33.1	33.5
28. HEATHRYFOLD CIRCLE	Dwelling	44.0	44.3	43.9	-0.1	Negligible Beneficial	44.7	0.7	Negligible Adverse	33.3	33.6	34.0
29. HEATHRYFOLD CIRCLE	Dwelling	44.1	44.2	43.9	-0.2	Negligible Beneficial	44.6	0.5	Negligible Adverse	33.4	33.5	33.9
3. HEATHRYFOLD CIRCLE	Dwelling	47.1	48.1	47.1	0.0	No Change	48.2	1.1	Negligible Adverse	36.1	37.0	37.1
30. HEATHRYFOLD CIRCLE	Dwelling	44.0	44.3	43.9	-0.1	Negligible Beneficial	44.7	0.7	Negligible Adverse	33.3	33.6	34.0
31. HEATHRYFOLD CIRCLE	Dwelling	44.5	44.6	44.3	-0.2	Negligible Beneficial	45.1	0.6	Negligible Adverse	33.8	33.9	34.3
32. HEATHRYFOLD CIRCLE	Dwelling	44.0	44.3	43.9	-0.1	Negligible Beneficial	44.7	0.7	Negligible Adverse	33.3	33.6	34.0
33. HEATHRYFOLD CIRCLE	Dwelling	44.9	45.2	44.8	-0.1	Negligible Beneficial	45.6	0.7	Negligible Adverse	34.1	34.4	34.8
34. HEATHRYFOLD CIRCLE	Dwelling	44.0	44.3	43.9	-0.1	Negligible Beneficial	44.7	0.7	Negligible Adverse	33.3	33.6	34.0
35. HEATHRYFOLD CIRCLE	Dwelling	45.2	45.5	45.2	0.0	No Change	45.9	0.7	Negligible Adverse	34.4	34.7	35.0
36. HEATHRYFOLD CIRCLE	Dwelling	44.0	44.3	43.9	-0.1	Negligible Beneficial	44.7	0.7	Negligible Adverse	33.3	33.6	34.0
37. HEATHRYFOLD CIRCLE	Dwelling	48.1	48.8	48.0	-0.1	Negligible Beneficial	49.1	1.0	Negligible Adverse	37.0	37.7	37.9
38. HEATHRYFOLD CIRCLE	Dwelling	44.9	45.1	44.9	0.0	No Change	45.6	0.7	Negligible Adverse	34.1	34.3	34.8
39. HEATHRYFOLD CIRCLE	Dwelling	46.6	47.1	46.6	0.0	No Change	47.5	0.9	Negligible Adverse	35.7	36.1	36.5
4. HEATHRYFOLD CIRCLE	Dwelling	42.9	43.2	43.5	0.6	Negligible Adverse	44.3	1.4	Negligible Adverse	32.3	32.6	33.6
40. HEATHRYFOLD CIRCLE	Dwelling	44.9	45.1	44.9	0.0	No Change	45.6	0.7	Negligible Adverse	34.1	34.3	34.8
41. HEATHRYFOLD CIRCLE	Dwelling	46.9	47.4	46.8	-0.1	Negligible Beneficial	47.8	0.9	Negligible Adverse	35.9	36.4	36.8
42. HEATHRYFOLD CIRCLE	Dwelling	44.9	45.1	44.9	0.0	No Change	45.6	0.7	Negligible Adverse	34.1	34.3	34.8
43. HEATHRYFOLD CIRCLE	Dwelling	47.6	48.3	47.6	0.0	No Change	48.6	1.0	Negligible Adverse	36.6	37.2	37.5
44. HEATHRYFOLD CIRCLE	Dwelling	44.9	45.1	44.9	0.0	No Change	45.6	0.7	Negligible Adverse	34.1	34.3	34.8
45. HEATHRYFOLD CIRCLE	Dwelling	47.8	48.4	47.7	-0.1	Negligible Beneficial	48.8	1.0	Negligible Adverse	36.8	37.3	37.7
46. HEATHRYFOLD CIRCLE	Dwelling	44.9	45.1	44.9	0.0	No Change	45.6	0.7	Negligible Adverse	34.1	34.3	34.8
47. HEATHRYFOLD CIRCLE	Dwelling	45.8	45.9	45.7	-0.1	Negligible Beneficial	46.4	0.6	Negligible Adverse	35.0	35.0	35.5
48. HEATHRYFOLD CIRCLE	Dwelling	44.9	45.1	44.9	0.0	No Change	45.6	0.7	Negligible Adverse	34.1	34.3	34.8
49. HEATHRYFOLD CIRCLE	Dwelling	46.4	46.6	46.2	-0.2	Negligible Beneficial	47.0	0.6	Negligible Adverse	35.5	35.7	36.0
5. HEATHRYFOLD CIRCLE	Dwelling	44.0	44.5	44.2	0.2	Negligible Adverse	45.1	1.1	Negligible Adverse	33.3	33.8	34.3
50. HEATHRYFOLD CIRCLE	Dwelling	45.4	45.6	45.3	-0.1	Negligible Beneficial	46.1	0.7	Negligible Adverse	34.6	34.8	35.2
51. HEATHRYFOLD CIRCLE	Dwelling	46.3	46.5	46.3	-0.1	Negligible Beneficial	47.0	0.7	Negligible Adverse	35.4	35.6	36.0
52. HEATHRYFOLD CIRCLE	Dwelling	45.4	45.6	45.3	-0.1	Negligible Beneficial	46.1	0.7	Negligible Adverse	34.6	34.8	35.2
53. HEATHRYFOLD CIRCLE	Dwelling	51.8	50.2	51.8	0.0	No Change	51.9	0.1	Negligible Adverse	40.4	38.9	40.4

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
54. HEATHRYFOLD CIRCLE	Dwelling	45.4	45.6	45.3	-0.1	Negligible Beneficial	46.1	0.7	Negligible Adverse	34.6	34.8	35.2
55. HEATHRYFOLD CIRCLE	Dwelling	52.2	50.7	52.2	0.0	No Change	52.4	0.2	Negligible Adverse	40.7	39.4	40.9
56. HEATHRYFOLD CIRCLE	Dwelling	45.4	45.6	45.3	-0.1	Negligible Beneficial	46.1	0.7	Negligible Adverse	34.6	34.8	35.2
57. HEATHRYFOLD CIRCLE	Dwelling	52.8	51.4	52.7	-0.1	Negligible Beneficial	52.9	0.1	Negligible Adverse	41.3	40.0	41.3
58. HEATHRYFOLD CIRCLE	Dwelling	45.4	45.6	45.3	-0.1	Negligible Beneficial	46.1	0.7	Negligible Adverse	34.6	34.8	35.2
59. HEATHRYFOLD CIRCLE	Dwelling	53.1	51.9	53.0	-0.1	Negligible Beneficial	53.3	0.2	Negligible Adverse	41.5	40.4	41.7
6. HEATHRYFOLD CIRCLE	Dwelling	42.9	43.2	43.5	0.6	Negligible Adverse	44.3	1.4	Negligible Adverse	32.3	32.6	33.6
60. HEATHRYFOLD CIRCLE	Dwelling	45.4	45.6	45.3	-0.1	Negligible Beneficial	46.1	0.7	Negligible Adverse	34.6	34.8	35.2
61. HEATHRYFOLD CIRCLE	Dwelling	53.6	52.6	53.5	-0.1	Negligible Beneficial	53.9	0.3	Negligible Adverse	42.0	41.1	42.2
62. HEATHRYFOLD CIRCLE	Dwelling	48.4	49.4	48.4	0.0	No Change	49.5	1.1	Negligible Adverse	37.3	38.2	38.3
63. HEATHRYFOLD CIRCLE	Dwelling	53.6	52.7	53.6	0.0	No Change	53.9	0.3	Negligible Adverse	42.0	41.2	42.2
64. HEATHRYFOLD CIRCLE	Dwelling	48.4	49.4	48.4	0.0	No Change	49.5	1.1	Negligible Adverse	37.3	38.2	38.3
65. HEATHRYFOLD CIRCLE	Dwelling	53.8	52.8	53.7	-0.1	Negligible Beneficial	54.0	0.2	Negligible Adverse	42.2	41.3	42.3
66. HEATHRYFOLD CIRCLE	Dwelling	48.4	49.4	48.4	0.0	No Change	49.5	1.1	Negligible Adverse	37.3	38.2	38.3
67. HEATHRYFOLD CIRCLE	Dwelling	53.9	53.0	53.9	0.0	No Change	54.2	0.3	Negligible Adverse	42.2	41.4	42.5
68. HEATHRYFOLD CIRCLE	Dwelling	48.4	49.4	48.4	0.0	No Change	49.5	1.1	Negligible Adverse	37.3	38.2	38.3
69. HEATHRYFOLD CIRCLE	Dwelling	54.1	53.1	54.0	-0.1	Negligible Beneficial	54.3	0.2	Negligible Adverse	42.4	41.5	42.6
7. HEATHRYFOLD CIRCLE	Dwelling	44.0	44.5	44.2	0.2	Negligible Adverse	45.1	1.1	Negligible Adverse	33.3	33.8	34.3
70. HEATHRYFOLD CIRCLE	Dwelling	48.4	49.4	48.4	0.0	No Change	49.5	1.1	Negligible Adverse	37.3	38.2	38.3
71. HEATHRYFOLD CIRCLE	Dwelling	54.1	53.2	54.0	-0.1	Negligible Beneficial	54.4	0.3	Negligible Adverse	42.4	41.6	42.7
72. HEATHRYFOLD CIRCLE	Dwelling	48.4	49.4	48.4	0.0	No Change	49.5	1.1	Negligible Adverse	37.3	38.2	38.3
73. HEATHRYFOLD CIRCLE	Dwelling	54.3	53.4	54.2	-0.1	Negligible Beneficial	54.6	0.3	Negligible Adverse	42.6	41.8	42.9
74. HEATHRYFOLD CIRCLE	Dwelling	45.9	46.1	45.8	-0.1	Negligible Beneficial	46.5	0.6	Negligible Adverse	35.0	35.2	35.6
75. HEATHRYFOLD CIRCLE	Dwelling	54.4	53.5	54.3	-0.1	Negligible Beneficial	54.6	0.2	Negligible Adverse	42.7	41.9	42.9
76. HEATHRYFOLD CIRCLE	Dwelling	46.6	46.9	46.5	-0.1	Negligible Beneficial	47.3	0.7	Negligible Adverse	35.7	35.9	36.3
77. HEATHRYFOLD CIRCLE	Dwelling	54.9	54.1	54.7	-0.2	Negligible Beneficial	55.1	0.2	Negligible Adverse	43.1	43.1	43.1
78. HEATHRYFOLD CIRCLE	Dwelling	50.3	51.3	50.3	0.0	No Change	51.4	1.1	Negligible Adverse	39.0	39.9	40.0
79. HEATHRYFOLD CIRCLE	Dwelling	54.9	54.2	54.8	-0.1	Negligible Beneficial	55.2	0.3	Negligible Adverse	43.1	42.5	43.4
8. HEATHRYFOLD CIRCLE	Dwelling	42.9	43.2	43.5	0.6	Negligible Adverse	44.3	1.4	Negligible Adverse	32.3	32.6	33.6
80. HEATHRYFOLD CIRCLE	Dwelling	45.8	45.5	45.6	-0.2	Negligible Beneficial	46.2	0.4	Negligible Adverse	35.0	34.7	35.3
81. HEATHRYFOLD CIRCLE	Dwelling	55.0	54.2	54.9	-0.1	Negligible Beneficial	55.3	0.3	Negligible Adverse	43.2	42.5	43.5
82. HEATHRYFOLD CIRCLE	Dwelling	46.3	46.1	46.1	-0.2	Negligible Beneficial	46.7	0.4	Negligible Adverse	35.4	35.2	35.8
83. HEATHRYFOLD CIRCLE	Dwelling	54.9	54.2	54.8	-0.1	Negligible Beneficial	55.2	0.3	Negligible Adverse	43.1	42.5	43.4
84. HEATHRYFOLD CIRCLE	Dwelling	47.2	47.2	47.0	-0.2	Negligible Beneficial	47.7	0.5	Negligible Adverse	36.2	36.2	36.7
85. HEATHRYFOLD CIRCLE	Dwelling	55.2	54.6	55.1	-0.1	Negligible Beneficial	55.5	0.3	Negligible Adverse	43.4	42.9	43.7
86. HEATHRYFOLD CIRCLE	Dwelling	47.3	47.2	47.1	-0.2	Negligible Beneficial	47.8	0.5	Negligible Adverse	36.3	36.2	36.8
87. HEATHRYFOLD CIRCLE	Dwelling	55.3	54.6	55.2	-0.1	Negligible Beneficial	55.6	0.3	Negligible Adverse	43.5	42.9	43.8
88. HEATHRYFOLD CIRCLE	Dwelling	47.6	47.4	47.4	-0.2	Negligible Beneficial	48.0	0.4	Negligible Adverse	36.6	36.4	36.9
89. HEATHRYFOLD CIRCLE	Dwelling	55.4	54.7	55.3	-0.1	Negligible Beneficial	55.7	0.3	Negligible Adverse	43.6	43.0	43.9
9. HEATHRYFOLD CIRCLE	Dwelling	44.2	44.7	44.4	0.2	Negligible Adverse	45.3	1.1	Negligible Adverse	33.5	34.0	34.5
90. HEATHRYFOLD CIRCLE	Dwelling	47.6	47.4	47.4	-0.2	Negligible Beneficial	48.0	0.4	Negligible Adverse	36.6	36.6	36.9
91. HEATHRYFOLD CIRCLE	Dwelling	55.4	54.8	55.3	-0.1	Negligible Beneficial	55.7	0.3	Negligible Adverse	43.6	43.1	43.9
92. HEATHRYFOLD CIRCLE	Dwelling	48.1	48.0	48.0	-0.1	Negligible Beneficial	48.6	0.5	Negligible Adverse	37.0	36.9	37.5
93. HEATHRYFOLD CIRCLE	Dwelling	55.4	54.8	55.3	-0.1	Negligible Beneficial	55.7	0.3	Negligible Adverse	43.6	43.1	43.9
94. HEATHRYFOLD CIRCLE	Dwelling	48.2	48.0	48.0	-0.2	Negligible Beneficial	48.6	0.4	Negligible Adverse	37.1	36.9	37.5
95. HEATHRYFOLD CIRCLE	Dwelling	55.4	54.7	55.3	-0.1	Negligible Beneficial	55.7	0.3	Negligible Adverse	43.6	43.0	43.9
96. HEATHRYFOLD CIRCLE	Dwelling	48.8	48.9	48.6	-0.2	Negligible Beneficial	49.4	0.6	Negligible Adverse	37.7	37.7	38.2
97. HEATHRYFOLD CIRCLE	Dwelling	55.5	54.8	55.3	-0.2	Negligible Beneficial	55.7	0.2	Negligible Adverse	43.7	43.1	43.9
98. HEATHRYFOLD CIRCLE	Dwelling	49.0	49.0	48.8	-0.2	Negligible Beneficial	49.5	0.5	Negligible Adverse	37.8	37.8	38.3
99. HEATHRYFOLD CIRCLE	Dwelling	55.5	54.8	55.4	-0.1	Negligible Beneficial	55.8	0.3	Negligible Adverse	43.7	43.1	44.0
HEATHRYFOLD CIRCLE	Dwelling	54.7	53.8	54.9	0.2	Negligible Adverse	55.2	0.5	Negligible Adverse	43.0	42.2	43.4
1. HEATHRYFOLD DRIVE	Dwelling	52.6	51.5	52.7	0.1	Negligible Adverse	53.0	0.4	Negligible Adverse	41.1	40.1	41.4
10. HEATHRYFOLD DRIVE	Dwelling	52.1	51.4	52.0	-0.1	Negligible Beneficial	52.5	0.4	Negligible Adverse	40.6	40.0	41.0
11. HEATHRYFOLD DRIVE	Dwelling	48.1	48.2	48.1	0.0	No Change	48.8	0.7	Negligible Adverse	37.0	37.1	37.7
12. HEATHRYFOLD DRIVE	Dwelling	50.2	50.3	50.2	0.0	No Change	50.9	0.7	Negligible Adverse	38.9	39.0	39.5
13. HEATHRYFOLD DRIVE	Dwelling	48.0	47.9	47.9	-0.1	Negligible Beneficial	48.6	0.6	Negligible Adverse	36.9	36.8	37.5
14. HEATHRYFOLD DRIVE	Dwelling	50.4	50.2	50.3	-0.1	Negligible Beneficial	51.0	0.6	Negligible Adverse	39.1	38.9	39.6
15. HEATHRYFOLD DRIVE	Dwelling	47.4	47.5	47.4	0.0	No Change	48.1	0.7	Negligible Adverse	36.4	36.5	37.0
16. HEATHRYFOLD DRIVE	Dwelling	50.3	50.2	50.2	-0.1	Negligible Beneficial	50.9	0.6	Negligible Adverse	39.0	38.9	39.5
17. HEATHRYFOLD DRIVE	Dwelling	47.3	47.4	47.3	0.0	No Change	48.0	0.7	Negligible Adverse	36.3	36.4	36.9
18. HEATHRYFOLD DRIVE	Dwelling	50.1	50.0	50.0	-0.1	Negligible Beneficial	50.7	0.6	Negligible Adverse	38.8	38.7	39.4
19. HEATHRYFOLD DRIVE	Dwelling	47.4	47.4	47.3	-0.1	Negligible Beneficial	48.0	0.6	Negligible Adverse	36.4	36.4	36.9
2. HEATHRYFOLD DRIVE	Dwelling	49.2	49.0	49.0	-0.2	Negligible Beneficial	49.6	0.4	Negligible Adverse	38.0	37.8	38.4
20. HEATHRYFOLD DRIVE	Dwelling	49.8	49.9	49.8	0.0	No Change	50.5	0.7	Negligible Adverse	38.6	38.6	39.2
21. HEATHRYFOLD DRIVE	Dwelling	46.8	46.8	46.6	-0.2	Negligible Beneficial	47.3	0.5	Negligible Adverse	35.9	35.9	36.3
22. HEATHRYFOLD DRIVE	Dwelling	49.8	49.8	49.8	0.0	No Change	50.4	0.6	Negligible Adverse	38.6	38.6	39.1
23. HEATHRYFOLD DRIVE	Dwelling	46.1	46.1	45.9	-0.2	Negligible Beneficial	46.6	0.5	Negligible Adverse	35.2	35.2	35.7
24. HEATHRYFOLD DRIVE	Dwelling	49.6	49.6	49.6	0.0	No Change	49.3	0.7	Negligible Adverse	38.4	38.4	39.0
25. HEATHRYFOLD DRIVE	Dwelling	45.6	45.6	45.4	-0.2	Negligible Beneficial	46.1	0.5	Negligible Adverse	34.8	34.8	35.2
26. HEATHRYFOLD DRIVE	Dwelling	49.4	49.4	49.4	0.0	No Change	50.1	0.7	Negligible Adverse	38.2	38.2	38.8
27. HEATHRYFOLD DRIVE	Dwelling	45.2	45.2	45.0	-0.2	Negligible Beneficial	45.7	0.5	Negligible Adverse	34.4	34.4	34.9
28. HEATHRYFOLD DRIVE	Dwelling	49.2	49.2	49.2	0.0	No Change	49.9	0.7	Negligible Adverse	38.0	38.0	38.6
29. HEATHRYFOLD DRIVE	Dwelling	44.9	44.9	44.7	-0.2	Negligible Beneficial	45.4	0.5	Negligible Adverse	34.1	34.1	34.6
3. HEATHRYFOLD DRIVE	Dwelling	49.7	49.5	49.6	-0.1	Negligible Beneficial	50.3	0.6	Negligible Adverse	38.5	38.3	39.0
30. HEATHRYFOLD DRIVE	Dwelling	48.8	48.9	48.8	0.0	No Change	49.5	0.7	Negligible Adverse	37.7	37.7	38.3
31. HEATHRYFOLD DRIVE	Dwelling	44.8	44.8	44.6	-0.2	Negligible Beneficial	45.3	0.5	Negligible Adverse	34.1	34.1	34.5
32. HEATHRYFOLD DRIVE	Dwelling	48.7	48.8	48.6	-0.1	Negligible Beneficial	49.4	0.7	Negligible Adverse	37.6	37.7	38.2
33. HEATHRYFOLD DRIVE	Dwelling	44.1	44.1	43.9	-0.2	Negligible Beneficial	44.6	0.5	Negligible Adverse	33.4	33.4	33.9
34. HEATHRYFOLD DRIVE	Dwelling	47.0	46.9	46.8	-0.2	Negligible Beneficial	47.4	0.4	Negligible Adverse	36.0	35.9	36.4
35. HEATHRYFOLD DRIVE	Dwelling	43.6	43.5	43.5	-0.1	Negligible Beneficial	44.1	0.5	Negligible Adverse	33.0	32.9	33.4
36. HEATHRYFOLD DRIVE	Dwelling	46.9	46.8	46.9	-0.2	Negligible Beneficial	47.3	0.4	Negligible Adverse	35.9	35.9	36.3
38. HEATHRYFOLD DRIVE	Dwelling	46.7	46.6	46.5	-0.2	Negligible Beneficial	47.1	0.4	Negligible Adverse	35.8	35.7	36.1
4. HEATHRYFOLD DRIVE	Dwelling	50.9	50.3	50.7	-0.2	Negligible Beneficial	51.2	0.3	Negligible Adverse	39.5	39.0	39.8

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
40, HEATHRYFOLD DRIVE	Dwelling	46.6	46.5	46.4	-0.2	Negligible Beneficial	47.1	0.5	Negligible Adverse	35.7	35.6	36.1
42, HEATHRYFOLD DRIVE	Dwelling	46.2	46.2	46.0	-0.2	Negligible Beneficial	46.7	0.5	Negligible Adverse	35.3	35.3	35.8
44, HEATHRYFOLD DRIVE	Dwelling	46.2	46.1	46.0	-0.2	Negligible Beneficial	46.6	0.4	Negligible Adverse	35.3	35.2	35.7
46, HEATHRYFOLD DRIVE	Dwelling	45.9	45.8	45.7	-0.2	Negligible Beneficial	46.3	0.4	Negligible Adverse	35.0	35.0	35.4
48, HEATHRYFOLD DRIVE	Dwelling	45.8	45.7	45.6	-0.2	Negligible Beneficial	46.3	0.5	Negligible Adverse	35.0	34.9	35.4
5, HEATHRYFOLD DRIVE	Dwelling	48.7	48.9	48.6	-0.1	Negligible Beneficial	49.4	0.7	Negligible Adverse	37.6	37.7	38.2
50, HEATHRYFOLD DRIVE	Dwelling	45.6	45.6	45.4	-0.2	Negligible Beneficial	46.1	0.5	Negligible Adverse	34.8	34.8	35.2
52, HEATHRYFOLD DRIVE	Dwelling	45.2	45.1	45.0	-0.2	Negligible Beneficial	45.6	0.4	Negligible Adverse	34.4	34.3	34.8
54, HEATHRYFOLD DRIVE	Dwelling	45.5	45.6	45.3	-0.2	Negligible Beneficial	46.0	0.5	Negligible Adverse	34.7	34.8	35.1
6, HEATHRYFOLD DRIVE	Dwelling	52.9	51.8	52.8	-0.1	Negligible Beneficial	53.1	0.2	Negligible Adverse	41.3	40.4	41.5
7, HEATHRYFOLD DRIVE	Dwelling	48.8	48.9	48.7	-0.1	Negligible Beneficial	49.5	0.7	Negligible Adverse	37.7	37.7	38.3
8, HEATHRYFOLD DRIVE	Dwelling	50.9	50.5	50.8	-0.1	Negligible Beneficial	51.4	0.5	Negligible Adverse	39.5	39.2	40.0
9, HEATHRYFOLD DRIVE	Dwelling	48.3	48.5	48.4	0.1	Negligible Adverse	49.1	0.8	Negligible Adverse	37.2	37.4	37.9
1, HEATHRYFOLD PLACE	Dwelling	48.3	48.7	48.2	-0.1	Negligible Beneficial	49.0	0.7	Negligible Adverse	37.2	37.6	37.8
10, HEATHRYFOLD PLACE	Dwelling	46.1	45.9	46.0	-0.1	Negligible Beneficial	46.6	0.5	Negligible Adverse	35.2	35.0	35.7
11, HEATHRYFOLD PLACE	Dwelling	44.8	44.9	44.6	-0.2	Negligible Beneficial	45.3	0.5	Negligible Adverse	34.1	34.1	34.5
12, HEATHRYFOLD PLACE	Dwelling	46.1	45.9	46.0	-0.1	Negligible Beneficial	46.6	0.5	Negligible Adverse	35.2	35.0	35.7
13, HEATHRYFOLD PLACE	Dwelling	44.8	44.9	44.6	-0.2	Negligible Beneficial	45.3	0.5	Negligible Adverse	34.1	34.1	34.5
14, HEATHRYFOLD PLACE	Dwelling	46.1	45.9	46.0	-0.1	Negligible Beneficial	46.6	0.5	Negligible Adverse	35.2	35.0	35.7
15, HEATHRYFOLD PLACE	Dwelling	44.8	44.9	44.6	-0.2	Negligible Beneficial	45.3	0.5	Negligible Adverse	34.1	34.1	34.5
16, HEATHRYFOLD PLACE	Dwelling	46.1	45.9	46.0	-0.1	Negligible Beneficial	46.6	0.5	Negligible Adverse	35.2	35.0	35.7
17, HEATHRYFOLD PLACE	Dwelling	44.8	44.9	44.6	-0.2	Negligible Beneficial	45.3	0.5	Negligible Adverse	34.1	34.1	34.5
18, HEATHRYFOLD PLACE	Dwelling	46.1	45.9	46.0	-0.1	Negligible Beneficial	46.6	0.5	Negligible Adverse	35.2	35.0	35.7
19, HEATHRYFOLD PLACE	Dwelling	44.8	44.9	44.6	-0.2	Negligible Beneficial	45.3	0.5	Negligible Adverse	34.1	34.1	34.5
2, HEATHRYFOLD PLACE	Dwelling	48.5	48.6	48.4	-0.1	Negligible Beneficial	49.2	0.7	Negligible Adverse	37.4	37.5	38.0
20, HEATHRYFOLD PLACE	Dwelling	48.5	48.9	48.0	-0.1	Negligible Beneficial	48.0	0.5	Negligible Adverse	35.2	35.0	35.7
21, HEATHRYFOLD PLACE	Dwelling	45.0	44.7	44.8	-0.2	Negligible Beneficial	45.4	0.4	Negligible Adverse	34.2	34.0	34.6
22, HEATHRYFOLD PLACE	Dwelling	45.5	45.6	45.3	-0.2	Negligible Beneficial	46.1	0.6	Negligible Adverse	34.7	34.8	35.2
23, HEATHRYFOLD PLACE	Dwelling	45.0	44.7	44.8	-0.2	Negligible Beneficial	45.4	0.4	Negligible Adverse	34.2	34.0	34.6
24, HEATHRYFOLD PLACE	Dwelling	45.5	45.6	45.3	-0.2	Negligible Beneficial	46.1	0.6	Negligible Adverse	34.7	34.8	35.2
25, HEATHRYFOLD PLACE	Dwelling	45.0	44.7	44.8	-0.2	Negligible Beneficial	45.4	0.4	Negligible Adverse	34.2	34.0	34.6
26, HEATHRYFOLD PLACE	Dwelling	45.5	45.6	45.3	-0.2	Negligible Beneficial	46.1	0.6	Negligible Adverse	34.7	34.8	35.2
27, HEATHRYFOLD PLACE	Dwelling	45.0	44.7	44.8	-0.2	Negligible Beneficial	45.4	0.4	Negligible Adverse	34.2	34.0	34.6
28, HEATHRYFOLD PLACE	Dwelling	45.5	45.6	45.3	-0.2	Negligible Beneficial	46.1	0.6	Negligible Adverse	34.7	34.8	35.2
29, HEATHRYFOLD PLACE	Dwelling	45.0	44.7	44.8	-0.2	Negligible Beneficial	45.4	0.4	Negligible Adverse	34.2	34.0	34.6
3, HEATHRYFOLD PLACE	Dwelling	48.6	49.0	48.8	0.2	Negligible Adverse	49.8	1.2	Negligible Adverse	37.5	37.8	38.6
30, HEATHRYFOLD PLACE	Dwelling	45.5	45.6	45.3	-0.2	Negligible Beneficial	46.1	0.6	Negligible Adverse	34.7	34.8	35.2
31, HEATHRYFOLD PLACE	Dwelling	45.0	44.7	44.8	-0.2	Negligible Beneficial	45.4	0.4	Negligible Adverse	34.2	34.0	34.6
32, HEATHRYFOLD PLACE	Dwelling	45.5	45.6	45.3	-0.2	Negligible Beneficial	46.1	0.6	Negligible Adverse	34.7	34.8	35.2
33, HEATHRYFOLD PLACE	Dwelling	44.9	45.2	44.8	-0.1	Negligible Beneficial	44.9	0.7	Negligible Adverse	34.1	34.4	34.8
34, HEATHRYFOLD PLACE	Dwelling	45.6	45.5	45.3	-0.1	Negligible Beneficial	46.2	0.6	Negligible Adverse	34.8	34.9	35.3
35, HEATHRYFOLD PLACE	Dwelling	44.9	45.2	44.8	-0.1	Negligible Beneficial	45.6	0.7	Negligible Adverse	34.1	34.4	34.8
36, HEATHRYFOLD PLACE	Dwelling	46.0	46.1	45.8	-0.2	Negligible Beneficial	46.6	0.6	Negligible Adverse	35.1	35.2	35.7
37, HEATHRYFOLD PLACE	Dwelling	44.9	45.2	44.8	-0.1	Negligible Beneficial	45.6	0.7	Negligible Adverse	34.1	34.4	34.8
38, HEATHRYFOLD PLACE	Dwelling	46.4	46.7	46.3	-0.1	Negligible Beneficial	47.1	0.7	Negligible Adverse	35.5	35.8	36.1
39, HEATHRYFOLD PLACE	Dwelling	44.9	45.2	44.8	-0.1	Negligible Beneficial	45.6	0.7	Negligible Adverse	34.1	34.4	34.8
4, HEATHRYFOLD PLACE	Dwelling	49.7	49.4	49.6	-0.1	Negligible Beneficial	50.1	0.4	Negligible Adverse	38.5	38.2	38.8
40, HEATHRYFOLD PLACE	Dwelling	45.9	46.3	46.0	0.1	Negligible Adverse	46.8	0.9	Negligible Adverse	35.0	35.4	35.9
41, HEATHRYFOLD PLACE	Dwelling	44.9	45.2	44.8	-0.1	Negligible Beneficial	45.6	0.7	Negligible Adverse	34.1	34.4	34.8
43, HEATHRYFOLD PLACE	Dwelling	44.9	45.2	44.8	-0.1	Negligible Beneficial	45.6	0.7	Negligible Adverse	34.1	34.4	34.8
45, HEATHRYFOLD PLACE	Dwelling	45.3	45.4	45.1	-0.2	Negligible Beneficial	45.9	0.6	Negligible Adverse	34.5	34.6	35.0
47, HEATHRYFOLD PLACE	Dwelling	45.3	45.4	45.1	-0.2	Negligible Beneficial	45.9	0.6	Negligible Adverse	34.5	34.6	35.0
49, HEATHRYFOLD PLACE	Dwelling	45.3	45.4	45.1	-0.2	Negligible Beneficial	45.9	0.6	Negligible Adverse	34.5	34.6	35.0
5, HEATHRYFOLD PLACE	Dwelling	48.8	49.2	48.7	-0.1	Negligible Beneficial	49.6	0.8	Negligible Adverse	37.7	38.0	38.4
51, HEATHRYFOLD PLACE	Dwelling	45.3	45.4	45.1	-0.2	Negligible Beneficial	45.9	0.6	Negligible Adverse	34.5	34.6	35.0
53, HEATHRYFOLD PLACE	Dwelling	45.3	45.4	45.1	-0.2	Negligible Beneficial	45.9	0.6	Negligible Adverse	34.5	34.6	35.0
55, HEATHRYFOLD PLACE	Dwelling	45.3	45.4	45.1	-0.2	Negligible Beneficial	45.9	0.6	Negligible Adverse	34.5	34.6	35.0
57, HEATHRYFOLD PLACE	Dwelling	45.5	45.8	45.4	-0.1	Negligible Beneficial	46.2	0.7	Negligible Adverse	34.7	35.0	35.3
59, HEATHRYFOLD PLACE	Dwelling	50.5	51.6	50.5	0.0	No Change	51.7	1.2	Negligible Adverse	39.2	40.2	40.3
6, HEATHRYFOLD PLACE	Dwelling	47.7	47.6	47.6	-0.1	Negligible Beneficial	48.3	0.6	Negligible Adverse	36.7	36.6	37.2
61, HEATHRYFOLD PLACE	Dwelling	49.1	49.9	49.1	0.0	No Change	50.1	1.0	Negligible Adverse	37.9	38.6	38.8
63, HEATHRYFOLD PLACE	Dwelling	49.6	50.5	49.6	0.0	No Change	50.7	1.1	Negligible Adverse	38.4	39.2	39.4
7, HEATHRYFOLD PLACE	Dwelling	49.3	49.9	49.5	0.2	Negligible Adverse	50.4	1.1	Negligible Adverse	38.1	38.6	39.1
8, HEATHRYFOLD PLACE	Dwelling	46.9	47.0	46.8	-0.1	Negligible Beneficial	47.6	0.7	Negligible Adverse	35.9	36.0	36.6
9, HEATHRYFOLD PLACE	Dwelling	44.8	44.9	44.6	-0.2	Negligible Beneficial	45.3	0.5	Negligible Adverse	34.1	34.1	34.5
1, HILLCREST PLACE	Dwelling	48.9	49.8	48.8	-0.1	Negligible Beneficial	49.7	0.8	Negligible Adverse	37.7	38.6	38.5
2, HILLCREST PLACE	Dwelling	47.8	48.6	47.8	0.0	No Change	48.6	0.8	Negligible Adverse	36.8	37.5	37.5
3, HILLCREST PLACE	Dwelling	48.8	47.8	48.6	-0.2	Negligible Beneficial	48.7	0.9	Negligible Adverse	35.9	36.9	36.9
4, HILLCREST PLACE	Dwelling	47.2	47.2	47.2	0.0	No Change	48.1	0.9	Negligible Adverse	36.2	37.1	37.0
5, HILLCREST PLACE	Dwelling	46.9	48.0	46.7	-0.2	Negligible Beneficial	47.8	0.9	Negligible Adverse	35.9	36.9	36.8
6, HILLCREST PLACE	Dwelling	47.0	48.0	46.9	-0.1	Negligible Beneficial	47.9	0.9	Negligible Adverse	36.0	36.9	36.8
7, HILLCREST PLACE	Dwelling	46.7	47.8	46.6	-0.1	Negligible Beneficial	47.7	1.0	Negligible Adverse	35.8	36.8	36.7
8, HILLCREST PLACE	Dwelling	47.0	47.9	46.9	-0.1	Negligible Beneficial	47.8	0.8	Negligible Adverse	36.0	36.8	36.8
1, HILTON AVENUE	Dwelling	62.1	66.5	63.2	1.1	Minor Adverse	66.1	4.0	Minor Adverse	49.6	53.6	53.2
10, HILTON AVENUE	Dwelling	55.5	61.9	55.3	-0.2	Negligible Beneficial	60.3	4.8	Minor Adverse	43.7	49.4	48.0
101, HILTON AVENUE	Dwelling	54.5	61.2	54.2	-0.3	Negligible Beneficial	59.2	4.7	Minor Adverse	42.8	48.8	47.0
103, HILTON AVENUE	Dwelling	54.7	61.3	54.4	-0.3	Negligible Beneficial	59.4	4.7	Minor Adverse	43.0	48.9	47.2
105, HILTON AVENUE	Dwelling	54.8	61.4	54.5	-0.3	Negligible Beneficial	59.4	4.6	Minor Adverse	43.1	49.0	47.2
107, HILTON AVENUE	Dwelling	54.9	61.5	54.7	-0.2	Negligible Beneficial	59.5	4.6	Minor Adverse	43.1	49.1	47.3
109, HILTON AVENUE	Dwelling	55.1	61.6	54.8	-0.3	Negligible Beneficial	59.6	4.5	Minor Adverse	43.3	49.2	47.4
118, HILTON AVENUE	Dwelling	57.5	61.6	56.5	0.0	No Change	60.5	3.1	Minor Adverse	45.3	49.2	47.4
112, HILTON AVENUE	Dwelling	54.7	61.8	54.5	-0.2	Negligible Beneficial	59.7	5.0	Moderate Adverse	43.0	49.4	47.5
120, HILTON AVENUE	Dwelling	57.4	61.6	57.4	0.0	No Change	60.6	3.2	Minor Adverse	45.4	49.2	48.3

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
121. HILTON AVENUE	Dwelling	57.2	60.5	57.3	0.1	Negligible Beneficial	59.6	2.4	Negligible Adverse	45.2	48.2	47.4
122. HILTON AVENUE	Dwelling	57.4	61.5	57.3	-0.1	Negligible Beneficial	60.5	3.1	Minor Adverse	45.4	49.1	48.2
123. HILTON AVENUE	Dwelling	56.1	59.7	56.2	0.1	Negligible Adverse	58.8	2.7	Negligible Adverse	44.2	47.5	46.7
124. HILTON AVENUE	Dwelling	57.4	61.4	57.3	-0.1	Negligible Beneficial	60.5	3.1	Minor Adverse	45.4	49.0	48.2
125. HILTON AVENUE	Dwelling	55.4	59.3	55.5	0.1	Negligible Adverse	58.3	2.9	Negligible Adverse	43.6	47.1	46.2
126. HILTON AVENUE	Dwelling	57.3	61.3	57.3	0.0	No Change	60.4	3.1	Minor Adverse	45.3	48.9	48.1
127. HILTON AVENUE	Dwelling	55.3	59.2	55.4	0.1	Negligible Adverse	58.2	2.9	Negligible Adverse	43.5	47.0	46.1
128. HILTON AVENUE	Dwelling	57.1	61.2	57.1	0.0	No Change	60.2	3.1	Minor Adverse	45.1	48.8	47.9
129. HILTON AVENUE	Dwelling	55.2	59.3	55.3	0.1	Negligible Beneficial	58.2	3.0	Minor Adverse	43.4	47.1	46.1
130. HILTON AVENUE	Dwelling	57.2	61.2	57.1	-0.1	Negligible Beneficial	60.3	3.1	Minor Adverse	45.2	48.8	48.0
131. HILTON AVENUE	Dwelling	55.1	59.2	55.2	0.1	Negligible Adverse	58.1	3.0	Minor Adverse	43.3	47.0	46.0
132. HILTON AVENUE	Dwelling	57.2	61.2	57.1	-0.1	Negligible Beneficial	60.2	3.0	Minor Adverse	45.2	48.8	47.9
133. HILTON AVENUE	Dwelling	56.0	59.1	55.1	0.1	Negligible Adverse	58.0	3.0	Minor Adverse	43.2	46.9	45.9
134. HILTON AVENUE	Dwelling	57.2	61.2	57.2	0.0	No Change	60.3	3.1	Minor Adverse	45.2	48.8	48.0
135. HILTON AVENUE	Dwelling	55.4	59.4	55.4	0.0	No Change	58.4	3.0	Minor Adverse	43.6	47.2	46.3
136. HILTON AVENUE	Dwelling	57.1	61.1	57.1	0.0	No Change	60.2	3.1	Minor Adverse	45.1	48.7	47.9
137. HILTON AVENUE	Dwelling	55.8	59.8	55.8	0.0	No Change	58.9	3.1	Minor Adverse	44.0	47.6	46.7
139. HILTON AVENUE	Dwelling	55.9	60.0	55.8	-0.1	Negligible Beneficial	59.0	3.1	Minor Adverse	44.0	47.7	46.8
14. HILTON AVENUE	Dwelling	52.5	59.1	52.3	-0.2	Negligible Beneficial	57.2	4.7	Minor Adverse	41.0	46.9	45.2
140. HILTON AVENUE	Dwelling	57.2	61.1	57.1	-0.1	Negligible Beneficial	60.4	3.2	Minor Adverse	45.2	48.7	48.1
141. HILTON AVENUE	Dwelling	56.1	60.3	56.1	0.0	No Change	59.3	3.2	Minor Adverse	44.2	48.0	47.1
142. HILTON AVENUE	Dwelling	57.2	61.1	57.1	-0.1	Negligible Beneficial	60.4	3.2	Minor Adverse	45.2	48.7	48.1
143. HILTON AVENUE	Dwelling	56.0	60.2	55.9	-0.1	Negligible Beneficial	59.2	3.2	Minor Adverse	44.1	47.9	47.0
144. HILTON AVENUE	Dwelling	57.2	61.1	57.1	-0.1	Negligible Beneficial	60.4	3.2	Minor Adverse	45.2	48.7	48.1
145. HILTON AVENUE	Dwelling	56.1	60.2	56.1	0.0	No Change	59.3	3.2	Minor Adverse	44.2	47.9	47.1
146. HILTON AVENUE	Dwelling	61.1	57.1	57.1	0.0	Negligible Beneficial	60.1	3.2	Minor Adverse	45.2	48.7	48.1
147. HILTON AVENUE	Dwelling	55.9	60.0	55.9	0.0	No Change	59.1	3.2	Minor Adverse	44.0	47.7	46.9
148. HILTON AVENUE	Dwelling	57.2	61.1	57.2	0.0	No Change	60.3	3.1	Minor Adverse	45.2	48.7	48.0
149. HILTON AVENUE	Dwelling	55.6	59.5	55.6	0.0	No Change	58.7	3.1	Minor Adverse	43.8	47.3	46.6
150. HILTON AVENUE	Dwelling	57.2	61.1	57.2	0.0	No Change	60.3	3.1	Minor Adverse	45.2	48.7	48.0
151. HILTON AVENUE	Dwelling	55.1	58.8	55.0	-0.1	Negligible Beneficial	58.1	3.0	Minor Adverse	43.3	46.7	46.0
152. HILTON AVENUE	Dwelling	57.2	61.1	57.2	0.0	No Change	60.3	3.1	Minor Adverse	45.2	48.7	48.0
153. HILTON AVENUE	Dwelling	55.2	58.8	55.1	-0.1	Negligible Beneficial	58.2	3.0	Minor Adverse	43.4	46.7	46.1
154. HILTON AVENUE	Dwelling	57.2	61.1	57.2	0.0	No Change	60.3	3.1	Minor Adverse	45.2	48.7	48.0
155. HILTON AVENUE	Dwelling	56.8	60.6	56.8	0.0	No Change	59.9	3.1	Minor Adverse	44.9	48.3	47.6
156. HILTON AVENUE	Dwelling	54.3	57.0	54.2	-0.1	Negligible Beneficial	56.5	2.2	Negligible Adverse	42.6	45.0	44.6
157. HILTON AVENUE	Dwelling	56.8	60.6	56.8	0.0	No Change	59.9	3.1	Minor Adverse	44.9	48.3	47.6
158. HILTON AVENUE	Dwelling	54.3	57.0	54.2	-0.1	Negligible Beneficial	56.5	2.2	Negligible Adverse	42.6	45.0	44.6
159. HILTON AVENUE	Dwelling	56.8	60.6	56.8	0.0	No Change	59.9	3.1	Minor Adverse	44.9	48.3	47.6
16. HILTON AVENUE	Dwelling	54.0	60.9	53.8	-0.2	Negligible Beneficial	58.9	4.9	Minor Adverse	42.3	48.5	46.7
160. HILTON AVENUE	Dwelling	54.3	57.0	54.2	-0.1	Negligible Beneficial	56.5	2.2	Negligible Adverse	42.6	45.0	44.6
161. HILTON AVENUE	Dwelling	56.8	60.6	56.8	0.0	No Change	59.9	3.1	Minor Adverse	44.9	48.3	47.6
162. HILTON AVENUE	Dwelling	54.3	57.0	54.2	-0.1	Negligible Beneficial	56.5	2.2	Negligible Adverse	42.6	45.0	44.6
163. HILTON AVENUE	Dwelling	55.7	59.2	55.7	0.0	No Change	58.6	2.9	Negligible Adverse	43.9	47.0	46.5
164. HILTON AVENUE	Dwelling	51.4	53.0	51.2	-0.2	Negligible Beneficial	52.7	1.3	Negligible Adverse	40.0	41.4	41.2
165. HILTON AVENUE	Dwelling	55.7	59.2	55.7	0.0	No Change	58.6	2.9	Negligible Adverse	43.9	47.0	46.5
166. HILTON AVENUE	Dwelling	51.4	53.0	51.2	-0.2	Negligible Beneficial	52.7	1.3	Negligible Adverse	40.0	41.4	41.2
167. HILTON AVENUE	Dwelling	55.7	59.2	55.7	0.0	No Change	58.6	2.9	Negligible Adverse	43.9	47.0	46.5
168. HILTON AVENUE	Dwelling	51.4	53.0	51.2	-0.2	Negligible Beneficial	52.7	1.3	Negligible Adverse	40.0	41.4	41.2
169. HILTON AVENUE	Dwelling	55.7	59.2	55.7	0.0	No Change	58.6	2.9	Negligible Adverse	43.9	47.0	46.5
170. HILTON AVENUE	Dwelling	51.4	53.0	51.2	-0.2	Negligible Beneficial	52.7	1.3	Negligible Adverse	40.0	41.4	41.2
171. HILTON AVENUE	Dwelling	57.1	60.7	57.0	-0.1	Negligible Beneficial	60.0	2.9	Negligible Adverse	45.1	48.4	47.7
172. HILTON AVENUE	Dwelling	50.1	51.5	49.9	-0.2	Negligible Beneficial	51.3	1.2	Negligible Adverse	38.8	40.1	39.9
173. HILTON AVENUE	Dwelling	57.1	60.7	57.0	-0.1	Negligible Beneficial	60.0	2.9	Negligible Adverse	45.1	48.4	47.7
174. HILTON AVENUE	Dwelling	50.1	51.5	49.9	-0.2	Negligible Beneficial	51.3	1.2	Negligible Adverse	38.8	40.1	39.9
175. HILTON AVENUE	Dwelling	57.1	60.7	57.0	-0.1	Negligible Beneficial	60.0	2.9	Negligible Adverse	45.1	48.4	47.7
176. HILTON AVENUE	Dwelling	50.1	51.5	49.9	-0.2	Negligible Beneficial	51.3	1.2	Negligible Adverse	38.8	40.1	39.9
177. HILTON AVENUE	Dwelling	57.1	60.7	57.0	-0.1	Negligible Beneficial	60.0	2.9	Negligible Adverse	45.1	48.4	47.7
178. HILTON AVENUE	Dwelling	50.1	51.5	49.9	-0.2	Negligible Beneficial	51.3	1.2	Negligible Adverse	38.8	40.1	39.9
179. HILTON AVENUE	Dwelling	57.5	61.1	57.5	0.0	No Change	60.4	2.9	Negligible Adverse	45.5	48.7	48.1
18. HILTON AVENUE	Dwelling	54.0	60.9	53.7	-0.3	Negligible Beneficial	58.9	4.9	Minor Adverse	42.3	48.5	46.7
180. HILTON AVENUE	Dwelling	49.4	50.8	49.3	-0.1	Negligible Beneficial	50.6	1.2	Negligible Adverse	38.2	39.5	39.3
181. HILTON AVENUE	Dwelling	57.5	61.1	57.5	0.0	No Change	60.4	2.9	Negligible Adverse	45.5	48.7	48.1
182. HILTON AVENUE	Dwelling	49.4	50.8	49.3	-0.1	Negligible Beneficial	50.6	1.2	Negligible Adverse	38.2	39.5	39.3
183. HILTON AVENUE	Dwelling	57.5	61.1	57.5	0.0	No Change	60.4	2.9	Negligible Adverse	45.5	48.7	48.1
184. HILTON AVENUE	Dwelling	49.4	50.8	49.3	-0.1	Negligible Beneficial	50.6	1.2	Negligible Adverse	38.2	39.5	39.3
185. HILTON AVENUE	Dwelling	57.5	61.1	57.5	0.0	No Change	60.4	2.9	Negligible Adverse	45.5	48.7	48.1
186. HILTON AVENUE	Dwelling	49.4	50.8	49.3	-0.1	Negligible Beneficial	50.6	1.2	Negligible Adverse	38.2	39.5	39.3
187. HILTON AVENUE	Dwelling	58.2	61.5	58.1	-0.1	Negligible Beneficial	60.9	2.7	Negligible Adverse	46.1	49.1	48.5
188. HILTON AVENUE	Dwelling	47.6	49.3	47.4	-0.2	Negligible Beneficial	49.0	1.4	Negligible Adverse	36.6	38.1	37.8
189. HILTON AVENUE	Dwelling	58.2	61.5	58.1	-0.1	Negligible Beneficial	60.9	2.7	Negligible Adverse	46.1	49.1	48.5
190. HILTON AVENUE	Dwelling	47.6	49.3	47.4	-0.2	Negligible Beneficial	49.0	1.4	Negligible Adverse	36.6	38.1	37.8
191. HILTON AVENUE	Dwelling	58.2	61.5	58.1	-0.1	Negligible Beneficial	60.9	2.7	Negligible Adverse	46.1	49.1	48.5
192. HILTON AVENUE	Dwelling	47.6	49.3	47.4	-0.2	Negligible Beneficial	49.0	1.4	Negligible Adverse	36.6	38.1	37.8
193. HILTON AVENUE	Dwelling	58.2	61.5	58.1	-0.1	Negligible Beneficial	60.9	2.7	Negligible Adverse	46.1	49.1	48.5
194. HILTON AVENUE	Dwelling	47.6	49.3	47.4	-0.2	Negligible Beneficial	49.0	1.4	Negligible Adverse	36.6	38.1	37.8
195. HILTON AVENUE	Dwelling	63.7	64.2	63.2	-0.5	Negligible Beneficial	64.2	0.5	Negligible Adverse	51.1	51.5	51.5
196. HILTON AVENUE	Dwelling	49.1	51.3	49.0	-0.1	Negligible Beneficial	50.9	1.8	Negligible Adverse	37.9	39.9	39.5
197. HILTON AVENUE	Dwelling	63.7	64.2	63.2	-0.5	Negligible Beneficial	64.2	0.5	Negligible Adverse	51.1	51.5	51.5
198. HILTON AVENUE	Dwelling	49.1	51.3	49.0	-0.1	Negligible Beneficial	50.9	1.8	Negligible Adverse	37.9	39.9	39.5
199. HILTON AVENUE	Dwelling	63.7	64.2	63.2	-0.5	Negligible Beneficial	64.2	0.5	Negligible Adverse	51.1	51.5	51.5
20. HILTON AVENUE	Dwelling	54.1	60.9	53.8	-0.3	Negligible Beneficial	59.0	4.9	Minor Adverse	42.4	48.8	46.8
200. HILTON AVENUE	Dwelling	49.1	51.3	49.0	-0.1	Negligible Beneficial	50.9	1.8	Negligible Adverse	37.9	39.9	39.5

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
201. HILTON AVENUE	Dwelling	63.7	64.2	63.2	-0.5	Negligible Beneficial	64.2	0.5	Negligible Adverse	51.1	51.5	51.5
202. HILTON AVENUE	Dwelling	49.1	51.3	49.0	-0.1	Negligible Beneficial	50.9	1.8	Negligible Adverse	37.9	39.9	39.5
204. HILTON AVENUE	Dwelling	54.0	56.9	53.9	-0.1	Negligible Beneficial	56.4	2.4	Negligible Adverse	42.3	44.9	44.5
206. HILTON AVENUE	Dwelling	54.0	56.9	53.9	-0.1	Negligible Beneficial	56.4	2.4	Negligible Adverse	42.3	44.9	44.5
208. HILTON AVENUE	Dwelling	54.0	56.9	53.9	-0.1	Negligible Beneficial	56.4	2.4	Negligible Adverse	42.3	44.9	44.5
210. HILTON AVENUE	Dwelling	54.0	56.9	53.9	-0.1	Negligible Beneficial	56.4	2.4	Negligible Adverse	42.3	44.9	44.5
212. HILTON AVENUE	Dwelling	58.2	61.5	58.1	-0.1	Negligible Beneficial	60.9	2.7	Negligible Adverse	46.1	49.1	48.5
214. HILTON AVENUE	Dwelling	58.2	61.5	58.1	-0.1	Negligible Beneficial	60.9	2.7	Negligible Adverse	46.1	49.1	48.5
216. HILTON AVENUE	Dwelling	58.2	61.5	58.1	-0.1	Negligible Beneficial	60.9	2.7	Negligible Adverse	46.1	49.1	48.5
218. HILTON AVENUE	Dwelling	58.2	61.5	58.1	-0.1	Negligible Beneficial	60.9	2.7	Negligible Adverse	46.1	49.1	48.5
22. HILTON AVENUE	Dwelling	54.2	60.9	54.0	-0.2	Negligible Beneficial	59.0	4.8	Minor Adverse	42.5	46.5	46.8
220. HILTON AVENUE	Dwelling	59.2	61.9	59.0	-0.2	Negligible Beneficial	61.4	2.2	Negligible Adverse	47.0	49.4	49.0
222. HILTON AVENUE	Dwelling	59.2	61.9	59.0	-0.2	Negligible Beneficial	61.4	2.2	Negligible Adverse	47.0	49.4	49.0
224. HILTON AVENUE	Dwelling	59.2	61.9	59.0	-0.2	Negligible Beneficial	61.4	2.2	Negligible Adverse	47.0	49.4	49.0
226. HILTON AVENUE	Dwelling	59.2	61.9	59.0	-0.2	Negligible Beneficial	61.4	2.2	Negligible Adverse	47.0	49.4	49.0
228. HILTON AVENUE	Dwelling	60.8	62.8	60.5	-0.3	Negligible Beneficial	62.4	1.6	Negligible Adverse	48.5	50.3	49.9
230. HILTON AVENUE	Dwelling	60.8	62.8	60.5	-0.3	Negligible Beneficial	62.4	1.6	Negligible Adverse	48.5	50.3	49.9
232. HILTON AVENUE	Dwelling	60.8	62.8	60.5	-0.3	Negligible Beneficial	62.4	1.6	Negligible Adverse	48.5	50.3	49.9
234. HILTON AVENUE	Dwelling	60.8	62.8	60.5	-0.3	Negligible Beneficial	62.4	1.6	Negligible Adverse	48.5	50.3	49.9
236. HILTON AVENUE	Dwelling	63.3	64.6	63.0	-0.3	Negligible Beneficial	64.4	1.1	Negligible Adverse	50.7	51.9	51.7
238. HILTON AVENUE	Dwelling	63.3	64.6	63.0	-0.3	Negligible Beneficial	64.4	1.1	Negligible Adverse	50.7	51.9	51.7
24. HILTON AVENUE	Dwelling	54.2	60.8	54.1	-0.1	Negligible Beneficial	58.9	4.7	Minor Adverse	42.5	48.5	46.7
240. HILTON AVENUE	Dwelling	63.3	64.6	63.0	-0.3	Negligible Beneficial	64.4	1.1	Negligible Adverse	50.7	51.9	51.7
242. HILTON AVENUE	Dwelling	63.3	64.6	63.0	-0.3	Negligible Beneficial	64.4	1.1	Negligible Adverse	50.7	51.9	51.7
244. HILTON AVENUE	Dwelling	66.1	66.9	65.7	-0.4	Negligible Beneficial	66.8	0.7	Negligible Adverse	53.2	53.9	53.9
246. HILTON AVENUE	Dwelling	66.1	66.9	65.7	-0.4	Negligible Beneficial	66.8	0.7	Negligible Adverse	53.2	53.9	53.9
248. HILTON AVENUE	Dwelling	66.1	66.9	65.7	-0.4	Negligible Beneficial	66.8	0.7	Negligible Adverse	53.2	53.9	53.9
250. HILTON AVENUE	Dwelling	66.1	66.9	65.7	-0.4	Negligible Beneficial	66.8	0.7	Negligible Adverse	53.2	53.9	53.9
3. HILTON AVENUE	Dwelling	59.6	64.7	60.4	0.8	Negligible Adverse	63.9	4.3	Minor Adverse	47.4	52.0	51.2
4. HILTON AVENUE	Dwelling	55.4	61.5	55.3	-0.1	Negligible Beneficial	60.2	4.8	Minor Adverse	43.6	49.1	47.9
6. HILTON AVENUE	Dwelling	55.4	61.8	55.3	-0.1	Negligible Beneficial	60.3	4.9	Minor Adverse	43.6	49.4	48.0
7. HILTON AVENUE	Dwelling	56.7	62.6	56.9	0.2	Negligible Adverse	61.4	4.7	Minor Adverse	44.8	50.1	49.0
70. HILTON AVENUE	Dwelling	56.7	61.9	56.5	-0.2	Negligible Beneficial	60.2	3.5	Minor Adverse	44.8	49.4	47.9
71. HILTON AVENUE	Dwelling	55.2	61.8	55.0	-0.2	Negligible Beneficial	60.0	4.8	Minor Adverse	43.4	49.4	47.7
72. HILTON AVENUE	Dwelling	57.5	62.1	57.4	-0.1	Negligible Beneficial	60.6	3.1	Minor Adverse	45.5	49.6	48.3
73. HILTON AVENUE	Dwelling	54.9	61.7	54.6	-0.3	Negligible Beneficial	59.7	4.8	Minor Adverse	43.1	49.3	47.5
75. HILTON AVENUE	Dwelling	54.6	61.6	54.4	-0.2	Negligible Beneficial	59.6	5.0	Moderate Adverse	42.9	49.2	47.4
77. HILTON AVENUE	Dwelling	54.5	61.6	54.3	-0.2	Negligible Beneficial	59.5	5.0	Moderate Adverse	42.8	49.2	47.3
79. HILTON AVENUE	Dwelling	54.4	61.5	54.1	-0.3	Negligible Beneficial	59.4	5.0	Moderate Adverse	42.7	49.1	47.2
8. HILTON AVENUE	Dwelling	55.5	61.8	55.3	-0.2	Negligible Beneficial	60.4	4.9	Minor Adverse	43.7	49.4	48.1
81. HILTON AVENUE	Dwelling	54.4	61.5	54.1	-0.3	Negligible Beneficial	59.4	5.0	Moderate Adverse	42.7	49.1	47.2
83. HILTON AVENUE	Dwelling	54.9	62.2	54.6	-0.3	Negligible Beneficial	59.9	5.0	Moderate Adverse	43.1	49.7	47.6
85. HILTON AVENUE	Dwelling	55.9	62.7	55.8	-0.1	Negligible Beneficial	60.5	4.6	Minor Adverse	44.0	50.2	48.2
87. HILTON AVENUE	Dwelling	54.7	61.5	54.4	-0.3	Negligible Beneficial	59.5	4.8	Minor Adverse	43.0	49.1	47.3
89. HILTON AVENUE	Dwelling	54.9	61.8	54.7	-0.2	Negligible Beneficial	59.7	4.8	Minor Adverse	43.1	49.4	47.5
9. HILTON AVENUE	Dwelling	55.3	61.1	55.3	0.0	No Change	59.8	4.5	Minor Adverse	43.5	48.7	47.6
91. HILTON AVENUE	Dwelling	54.2	60.9	53.9	-0.3	Negligible Beneficial	58.9	4.7	Minor Adverse	42.5	48.5	46.7
93. HILTON AVENUE	Dwelling	54.2	61.0	54.0	-0.2	Negligible Beneficial	59.0	4.8	Minor Adverse	42.5	48.6	46.8
95. HILTON AVENUE	Dwelling	54.3	61.1	54.1	-0.2	Negligible Beneficial	59.1	4.8	Minor Adverse	42.6	48.7	46.9
97. HILTON AVENUE	Dwelling	54.4	61.1	54.1	-0.3	Negligible Beneficial	59.1	4.7	Minor Adverse	42.7	48.7	46.9
99. HILTON AVENUE	Dwelling	54.5	61.3	54.2	-0.3	Negligible Beneficial	59.2	4.7	Minor Adverse	42.8	48.9	47.0
HILTON CLINIC, HILTON AVENUE	Clinic	50.4	56.2	50.2	-0.2	Negligible Beneficial	54.6	4.2	Minor Adverse	39.1	44.3	42.9
HILTON CLINIC, HILTON AVENUE	Clinic	50.4	56.2	50.2	-0.2	Negligible Beneficial	54.6	4.2	Minor Adverse	39.1	44.3	42.9
1. HILTON CIRCLE	Dwelling	53.7	54.6	53.7	0.0	No Change	54.5	0.8	Negligible Adverse	42.1	42.9	42.8
2. HILTON CIRCLE	Dwelling	53.4	54.2	53.3	0.0	Negligible Beneficial	54.1	0.7	Negligible Adverse	41.8	42.5	42.4
3. HILTON CIRCLE	Dwelling	53.7	54.6	53.7	0.0	No Change	54.5	0.8	Negligible Adverse	42.1	42.9	42.8
4. HILTON CIRCLE	Dwelling	53.0	53.9	53.0	0.0	No Change	53.8	0.8	Negligible Adverse	41.4	42.2	42.2
5. HILTON CIRCLE	Dwelling	53.1	53.7	53.1	0.0	No Change	53.7	0.6	Negligible Adverse	41.5	42.1	42.1
6. HILTON CIRCLE	Dwelling	53.9	54.7	53.8	-0.1	Negligible Beneficial	54.6	0.7	Negligible Adverse	42.2	43.0	42.9
7. HILTON CIRCLE	Dwelling	52.3	53.2	52.3	0.0	No Change	53.1	0.8	Negligible Adverse	40.8	41.6	41.5
8. HILTON CIRCLE	Dwelling	53.4	54.3	53.4	0.0	No Change	54.2	0.8	Negligible Adverse	41.8	42.6	42.5
102. HILTON DRIVE	Dwelling	65.5	66.8	65.4	0.0	No Change	66.6	1.1	Negligible Adverse	52.7	53.9	53.7
104. HILTON DRIVE	Dwelling	65.4	66.7	65.5	0.1	Negligible Beneficial	66.5	1.1	Negligible Adverse	52.6	53.8	53.6
106. HILTON DRIVE	Dwelling	65.3	66.6	65.4	0.1	Negligible Adverse	66.5	1.2	Negligible Adverse	52.5	53.7	53.6
11. HILTON DRIVE	Dwelling	65.2	66.0	65.1	-0.1	Negligible Beneficial	65.9	0.7	Negligible Adverse	52.4	53.1	53.0
120. HILTON DRIVE	Dwelling	66.7	67.9	66.8	0.1	Negligible Beneficial	67.7	1.0	Negligible Adverse	53.8	54.8	54.7
122. HILTON DRIVE	Dwelling	66.7	67.9	66.8	0.1	Negligible Beneficial	67.7	1.0	Negligible Adverse	53.8	54.8	54.7
124. HILTON DRIVE	Dwelling	66.7	67.9	66.8	0.1	Negligible Beneficial	67.8	1.1	Negligible Adverse	53.8	54.8	54.8
126. HILTON DRIVE	Dwelling	66.7	67.9	66.8	0.1	Negligible Beneficial	67.8	1.1	Negligible Adverse	53.8	54.8	54.8
128. HILTON DRIVE	Dwelling	66.7	67.9	66.8	0.1	Negligible Beneficial	67.8	1.1	Negligible Adverse	53.8	54.8	54.8
13. HILTON DRIVE	Dwelling	65.7	66.6	65.6	-0.1	Negligible Beneficial	66.4	0.7	Negligible Adverse	52.9	53.7	53.5
130. HILTON DRIVE	Dwelling	66.7	67.9	66.8	0.1	Negligible Beneficial	67.8	1.1	Negligible Adverse	53.8	54.8	54.8
132. HILTON DRIVE	Dwelling	66.6	67.9	66.8	0.1	Negligible Adverse	67.7	1.1	Negligible Adverse	53.7	54.8	54.7
134. HILTON DRIVE	Dwelling	66.6	67.9	66.7	0.1	Negligible Adverse	67.7	1.1	Negligible Adverse	53.7	54.8	54.7
136. HILTON DRIVE	Dwelling	66.5	67.8	66.6	0.1	Negligible Beneficial	67.7	1.2	Negligible Adverse	53.6	54.8	54.7
138. HILTON DRIVE	Dwelling	66.6	67.9	66.7	0.1	Negligible Adverse	67.7	1.1	Negligible Adverse	53.7	54.8	54.7
14. HILTON DRIVE	Dwelling	65.6	66.4	65.5	-0.1	Negligible Beneficial	66.2	0.6	Negligible Adverse	52.8	53.5	53.3
140. HILTON DRIVE	Dwelling	66.5	67.8	66.5	0.0	No Change	67.6	1.1	Negligible Adverse	53.6	54.8	54.6
142. HILTON DRIVE	Dwelling	66.5	67.8	66.5	0.0	No Change	67.6	1.1	Negligible Adverse	53.6	54.8	54.6
147. HILTON DRIVE	Dwelling	67.1	68.4	67.1	0.0	No Change	68.3	1.2	Negligible Adverse	54.1	55.3	55.2
148. HILTON DRIVE	Dwelling	67.1	68.9	67.1	0.1	Negligible Beneficial	68.7	1.2	Negligible Adverse	54.5	55.7	55.6
149. HILTON DRIVE	Dwelling	67.1	68.4	67.1	0.0	No Change	68.3	1.2	Negligible Adverse	54.1	55.3	55.2
15. HILTON DRIVE	Dwelling	65.7	66.6	65.6	-0.1	Negligible Beneficial	66.5	0.8	Negligible Adverse	52.9	53.7	53.6

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
226. HILTON DRIVE	Dwelling	65.3	66.5	65.3	0.0	No Change	67.0	1.7	Negligible Adverse	52.5	53.6	54.0
227. HILTON DRIVE	Dwelling	62.7	63.9	62.8	0.1	Negligible Beneficial	64.4	1.7	Negligible Adverse	50.2	51.2	51.7
228. HILTON DRIVE	Dwelling	65.0	66.2	65.0	0.0	No Change	66.6	1.6	Negligible Adverse	52.2	53.3	53.7
229. HILTON DRIVE	Dwelling	62.7	63.9	62.8	0.1	Negligible Beneficial	64.4	1.7	Negligible Adverse	50.2	51.2	51.7
23. HILTON DRIVE	Dwelling	65.8	66.8	65.8	0.0	No Change	66.7	0.9	Negligible Adverse	53.0	53.9	53.8
230. HILTON DRIVE	Dwelling	65.0	66.2	65.0	0.0	No Change	66.6	1.6	Negligible Adverse	52.2	53.3	53.7
231. HILTON DRIVE	Dwelling	62.7	63.9	62.8	0.1	Negligible Beneficial	64.4	1.7	Negligible Adverse	50.2	51.2	51.7
232. HILTON DRIVE	Dwelling	65.0	66.2	65.0	0.0	No Change	66.6	1.6	Negligible Adverse	52.2	53.3	53.7
233. HILTON DRIVE	Dwelling	65.1	66.3	65.2	0.1	Negligible Adverse	66.8	1.7	Negligible Adverse	52.3	53.4	53.9
234. HILTON DRIVE	Dwelling	65.0	66.2	65.0	0.0	No Change	66.6	1.6	Negligible Adverse	52.2	53.3	53.7
235. HILTON DRIVE	Dwelling	65.1	66.3	65.2	0.1	Negligible Adverse	66.8	1.7	Negligible Adverse	52.3	53.4	53.9
236. HILTON DRIVE	Dwelling	64.8	66.0	64.9	0.1	Negligible Adverse	66.5	1.7	Negligible Adverse	52.1	53.1	53.6
237. HILTON DRIVE	Dwelling	65.1	66.3	65.2	0.1	Negligible Adverse	66.8	1.7	Negligible Adverse	52.3	53.4	53.9
238. HILTON DRIVE	Dwelling	64.8	66.0	64.9	0.1	Negligible Adverse	66.5	1.7	Negligible Adverse	52.1	53.1	53.6
239. HILTON DRIVE	Dwelling	65.1	66.3	65.2	0.1	Negligible Adverse	66.8	1.7	Negligible Adverse	52.3	53.4	53.9
24. HILTON DRIVE	Dwelling	65.8	66.7	65.8	0.0	No Change	66.6	0.8	Negligible Adverse	53.0	53.8	53.7
240. HILTON DRIVE	Dwelling	64.8	66.0	64.9	0.1	Negligible Adverse	66.5	1.7	Negligible Adverse	52.1	53.1	53.6
241. HILTON DRIVE	Dwelling	65.0	66.2	65.0	0.0	No Change	66.7	1.7	Negligible Adverse	52.2	53.3	53.8
242. HILTON DRIVE	Dwelling	64.8	66.0	64.9	0.1	Negligible Adverse	66.5	1.7	Negligible Adverse	52.1	53.1	53.6
243. HILTON DRIVE	Dwelling	65.0	66.2	65.0	0.0	No Change	66.7	1.7	Negligible Adverse	52.2	53.3	53.8
244. HILTON DRIVE	Dwelling	64.6	65.8	64.7	0.1	Negligible Adverse	66.3	1.7	Negligible Adverse	51.9	53.0	53.4
245. HILTON DRIVE	Dwelling	65.0	66.2	65.0	0.0	No Change	66.7	1.7	Negligible Adverse	52.2	53.3	53.8
246. HILTON DRIVE	Dwelling	64.6	65.8	64.7	0.1	Negligible Adverse	66.3	1.7	Negligible Adverse	51.9	53.0	53.4
247. HILTON DRIVE	Dwelling	65.0	66.2	65.0	0.0	No Change	66.7	1.7	Negligible Adverse	52.2	53.3	53.8
248. HILTON DRIVE	Dwelling	64.6	65.8	64.7	0.1	Negligible Adverse	66.3	1.7	Negligible Adverse	51.9	53.0	53.4
249. HILTON DRIVE	Dwelling	64.8	66.0	64.8	0.0	No Change	66.5	1.7	Negligible Adverse	52.1	53.0	53.6
25. HILTON DRIVE	Dwelling	66.2	67.2	66.2	0.0	No Change	67.1	0.9	Negligible Adverse	53.3	54.2	54.1
250. HILTON DRIVE	Dwelling	64.6	65.8	64.7	0.1	Negligible Adverse	66.3	1.7	Negligible Adverse	51.9	53.0	53.4
251. HILTON DRIVE	Dwelling	64.8	65.9	64.8	0.0	No Change	66.5	1.7	Negligible Adverse	52.1	53.0	53.6
252. HILTON DRIVE	Dwelling	64.5	65.7	64.6	0.1	Negligible Beneficial	66.2	1.7	Negligible Adverse	51.8	52.9	53.3
253. HILTON DRIVE	Dwelling	64.8	65.9	64.8	0.0	No Change	66.5	1.7	Negligible Adverse	52.1	53.0	53.6
254. HILTON DRIVE	Dwelling	64.5	65.7	64.6	0.1	Negligible Beneficial	66.2	1.7	Negligible Adverse	51.8	52.9	53.3
255. HILTON DRIVE	Dwelling	64.8	65.9	64.8	0.0	No Change	66.5	1.7	Negligible Adverse	52.1	53.0	53.6
256. HILTON DRIVE	Dwelling	64.5	65.7	64.6	0.1	Negligible Beneficial	66.2	1.7	Negligible Adverse	51.8	52.9	53.3
257. HILTON DRIVE	Dwelling	64.9	66.1	65.0	0.1	Negligible Beneficial	66.6	1.7	Negligible Adverse	52.1	53.2	53.7
258. HILTON DRIVE	Dwelling	64.5	65.7	64.6	0.1	Negligible Beneficial	66.2	1.7	Negligible Adverse	51.8	52.9	53.3
259. HILTON DRIVE	Dwelling	64.9	66.1	65.0	0.1	Negligible Beneficial	66.6	1.7	Negligible Adverse	52.1	53.2	53.7
26. HILTON DRIVE	Dwelling	65.9	66.9	65.9	0.0	No Change	66.7	0.8	Negligible Adverse	53.0	53.9	53.8
260. HILTON DRIVE	Dwelling	64.2	65.4	64.3	0.1	Negligible Beneficial	65.8	1.6	Negligible Adverse	51.5	52.6	53.0
261. HILTON DRIVE	Dwelling	64.9	66.1	65.0	0.1	Negligible Beneficial	66.1	1.7	Negligible Adverse	52.1	53.2	53.7
262. HILTON DRIVE	Dwelling	64.2	65.4	64.3	0.1	Negligible Beneficial	65.8	1.6	Negligible Adverse	51.5	52.6	53.0
263. HILTON DRIVE	Dwelling	64.9	66.1	65.0	0.1	Negligible Beneficial	66.6	1.7	Negligible Adverse	52.1	53.2	53.7
264. HILTON DRIVE	Dwelling	64.2	65.4	64.3	0.1	Negligible Beneficial	65.8	1.6	Negligible Adverse	51.5	52.6	53.0
265. HILTON DRIVE	Dwelling	61.3	62.4	61.3	0.0	No Change	62.9	1.6	Negligible Adverse	48.9	49.9	50.3
266. HILTON DRIVE	Dwelling	64.2	65.4	64.3	0.1	Negligible Beneficial	65.8	1.6	Negligible Adverse	51.5	52.6	53.0
267. HILTON DRIVE	Dwelling	62.0	63.0	62.0	0.0	No Change	63.5	1.5	Negligible Adverse	49.5	50.4	50.9
268. HILTON DRIVE	Dwelling	65.1	66.0	65.0	-0.1	Negligible Beneficial	66.5	1.4	Negligible Adverse	52.3	53.1	53.6
269. HILTON DRIVE	Dwelling	62.0	63.0	62.0	0.0	No Change	63.5	1.5	Negligible Adverse	49.5	50.4	50.9
27. HILTON DRIVE	Dwelling	66.3	67.2	66.3	0.0	No Change	67.1	0.8	Negligible Adverse	53.4	54.2	54.1
270. HILTON DRIVE	Dwelling	65.1	66.0	65.0	-0.1	Negligible Beneficial	66.5	1.4	Negligible Adverse	52.3	53.1	53.6
271. HILTON DRIVE	Dwelling	62.0	63.0	62.0	0.0	No Change	63.5	1.5	Negligible Adverse	49.5	50.4	50.9
272. HILTON DRIVE	Dwelling	65.1	66.0	65.0	-0.1	Negligible Beneficial	66.5	1.4	Negligible Adverse	52.3	53.1	53.6
273. HILTON DRIVE	Dwelling	62.0	63.0	62.0	0.0	No Change	63.5	1.5	Negligible Adverse	49.5	50.4	50.9
274. HILTON DRIVE	Dwelling	65.1	66.0	65.0	-0.1	Negligible Beneficial	66.5	1.4	Negligible Adverse	52.3	53.1	53.6
275. HILTON DRIVE	Dwelling	65.6	66.6	65.6	0.0	No Change	67.1	1.5	Negligible Adverse	52.8	53.7	54.1
276. HILTON DRIVE	Dwelling	65.2	66.1	65.2	0.0	No Change	66.6	1.4	Negligible Adverse	52.4	53.2	53.7
277. HILTON DRIVE	Dwelling	65.6	66.6	65.6	0.0	No Change	67.1	1.5	Negligible Adverse	52.8	53.7	54.1
278. HILTON DRIVE	Dwelling	65.2	66.1	65.2	0.0	No Change	66.6	1.4	Negligible Adverse	52.4	53.2	53.7
279. HILTON DRIVE	Dwelling	65.6	66.6	65.6	0.0	No Change	67.1	1.5	Negligible Adverse	52.8	53.7	54.1
28. HILTON DRIVE	Dwelling	66.4	67.4	66.4	0.0	No Change	67.3	0.9	Negligible Adverse	53.5	54.4	54.3
280. HILTON DRIVE	Dwelling	65.2	66.1	65.2	0.0	No Change	66.6	1.4	Negligible Adverse	52.4	53.2	53.7
281. HILTON DRIVE	Dwelling	65.6	66.6	65.6	0.0	No Change	67.1	1.5	Negligible Adverse	52.8	53.7	54.1
282. HILTON DRIVE	Dwelling	65.2	66.1	65.2	0.0	No Change	66.6	1.4	Negligible Adverse	52.4	53.2	53.7
283. HILTON DRIVE	Dwelling	65.8	66.7	65.7	-0.1	Negligible Beneficial	67.2	1.4	Negligible Adverse	53.0	53.8	54.2
284. HILTON DRIVE	Dwelling	65.2	66.1	65.2	0.0	No Change	66.6	1.4	Negligible Adverse	52.4	53.2	53.7
285. HILTON DRIVE	Dwelling	65.8	66.7	65.7	-0.1	Negligible Beneficial	67.2	1.4	Negligible Adverse	53.0	53.8	54.2
286. HILTON DRIVE	Dwelling	65.2	66.1	65.2	0.0	No Change	66.6	1.4	Negligible Adverse	52.4	53.2	53.7
287. HILTON DRIVE	Dwelling	65.8	66.7	65.7	0.1	Negligible Beneficial	67.2	1.4	Negligible Adverse	53.0	53.8	54.2
288. HILTON DRIVE	Dwelling	65.2	66.1	65.2	0.0	No Change	66.6	1.4	Negligible Adverse	52.4	53.2	53.7
289. HILTON DRIVE	Dwelling	65.8	66.7	65.7	-0.1	Negligible Beneficial	67.2	1.4	Negligible Adverse	53.0	53.8	54.2
29. HILTON DRIVE	Dwelling	65.9	66.9	65.9	0.0	No Change	66.8	0.9	Negligible Adverse	53.0	53.9	53.9
290. HILTON DRIVE	Dwelling	65.2	66.1	65.2	0.0	No Change	66.6	1.4	Negligible Adverse	52.4	53.2	53.7
291. HILTON DRIVE	Dwelling	65.6	66.5	65.7	0.1	Negligible Adverse	67.0	1.4	Negligible Adverse	52.8	53.6	54.0
292. HILTON DRIVE	Dwelling	65.1	66.0	65.2	0.1	Negligible Adverse	66.5	1.4	Negligible Adverse	52.3	53.1	53.6
293. HILTON DRIVE	Dwelling	65.6	66.5	65.7	0.1	Negligible Adverse	67.0	1.4	Negligible Adverse	52.8	53.6	54.0
294. HILTON DRIVE	Dwelling	65.1	66.0	65.2	0.1	Negligible Adverse	66.5	1.4	Negligible Adverse	52.3	53.1	53.6
295. HILTON DRIVE	Dwelling	65.6	66.5	65.7	0.1	Negligible Adverse	67.0	1.4	Negligible Adverse	52.8	53.6	54.0
296. HILTON DRIVE	Dwelling	65.1	66.0	65.2	0.1	Negligible Adverse	66.5	1.4	Negligible Adverse	52.3	53.1	53.6
297. HILTON DRIVE	Dwelling	65.6	66.5	65.7	0.1	Negligible Adverse	67.0	1.4	Negligible Adverse	52.8	53.6	54.0
298. HILTON DRIVE	Dwelling	65.1	66.0	65.2	0.1	Negligible Adverse	66.5	1.4	Negligible Adverse	52.3	53.1	53.6
299. HILTON DRIVE	Dwelling	65.6	66.5	65.7	0.1	Negligible Adverse	67.0	1.4	Negligible Adverse	52.8	53.6	54.0
30. HILTON DRIVE	Dwelling	66.4	67.3	66.4	0.0	No Change	67.2	0.8	Negligible Adverse	53.5	54.3	54.2
300. HILTON DRIVE	Dwelling	65.3	66.2	65.4	0.1	Negligible Adverse	66.7	1.4	Negligible Adverse	52.5	53.3	53.8

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
39. HILTON DRIVE	Dwelling	66.4	67.6	66.4	0.0	No Change	67.4	1.0	Negligible Adverse	53.5	54.6	54.4
390. HILTON DRIVE	Dwelling	66.6	67.6	66.4	-0.2	Negligible Beneficial	67.6	1.0	Negligible Adverse	53.7	54.6	54.6
392. HILTON DRIVE	Dwelling	66.6	67.6	66.4	-0.2	Negligible Beneficial	67.6	1.0	Negligible Adverse	53.7	54.6	54.6
394. HILTON DRIVE	Dwelling	66.6	67.6	66.4	-0.2	Negligible Beneficial	67.6	1.0	Negligible Adverse	53.7	54.6	54.6
396. HILTON DRIVE	Dwelling	67.5	68.4	67.2	-0.3	Negligible Beneficial	68.3	0.8	Negligible Adverse	54.5	55.3	55.2
398. HILTON DRIVE	Dwelling	67.5	68.4	67.2	-0.3	Negligible Beneficial	68.3	0.8	Negligible Adverse	54.5	55.3	55.2
400. HILTON DRIVE	Dwelling	67.5	68.4	67.2	-0.3	Negligible Beneficial	68.3	0.8	Negligible Adverse	54.5	55.3	55.2
402. HILTON DRIVE	Dwelling	67.5	68.4	67.2	-0.3	Negligible Beneficial	68.3	0.8	Negligible Adverse	54.5	55.3	55.2
404. HILTON DRIVE	Dwelling	68.5	69.3	68.0	-0.5	Negligible Beneficial	69.2	0.7	Negligible Adverse	55.4	56.1	56.0
406. HILTON DRIVE	Dwelling	68.5	69.3	68.0	-0.5	Negligible Beneficial	69.2	0.7	Negligible Adverse	55.4	56.1	56.0
408. HILTON DRIVE	Dwelling	68.5	69.3	68.0	-0.5	Negligible Beneficial	69.2	0.7	Negligible Adverse	55.4	56.1	56.0
41. HILTON DRIVE	Dwelling	66.1	67.3	66.1	0.0	No Change	67.1	1.0	Negligible Adverse	53.2	54.3	54.1
410. HILTON DRIVE	Dwelling	68.5	69.3	68.0	-0.5	Negligible Beneficial	69.2	0.7	Negligible Adverse	55.4	56.1	56.0
412. HILTON DRIVE	Dwelling	70.4	70.8	69.7	-0.7	Negligible Beneficial	70.8	0.4	Negligible Adverse	57.1	57.5	57.5
414. HILTON DRIVE	Dwelling	70.4	70.8	69.7	-0.7	Negligible Beneficial	70.8	0.4	Negligible Adverse	57.1	57.5	57.5
416. HILTON DRIVE	Dwelling	70.4	70.8	69.7	-0.7	Negligible Beneficial	70.8	0.4	Negligible Adverse	57.1	57.5	57.5
418. HILTON DRIVE	Dwelling	70.4	70.8	69.7	-0.7	Negligible Beneficial	70.8	0.4	Negligible Adverse	57.1	57.5	57.5
420. HILTON DRIVE	Dwelling	70.7	71.2	69.9	-0.8	Negligible Beneficial	71.1	0.4	Negligible Adverse	57.4	57.8	57.7
422. HILTON DRIVE	Dwelling	70.7	71.2	69.9	-0.8	Negligible Beneficial	71.1	0.4	Negligible Adverse	57.4	57.8	57.7
424. HILTON DRIVE	Dwelling	70.7	71.2	69.9	-0.8	Negligible Beneficial	71.1	0.4	Negligible Adverse	57.4	57.8	57.7
426. HILTON DRIVE	Dwelling	70.7	71.2	69.9	-0.8	Negligible Beneficial	71.1	0.4	Negligible Adverse	57.4	57.8	57.7
428. HILTON DRIVE	Dwelling	71.7	72.4	70.6	-1.1	Minor Beneficial	72.0	0.3	Negligible Adverse	58.3	58.9	58.5
43. HILTON DRIVE	Dwelling	66.0	67.2	66.0	0.0	No Change	67.0	1.0	Negligible Adverse	53.1	54.2	54.0
430. HILTON DRIVE	Dwelling	71.7	72.4	70.6	-1.1	Minor Beneficial	72.0	0.3	Negligible Adverse	58.3	58.9	58.5
432. HILTON DRIVE	Dwelling	71.7	72.4	70.6	-1.1	Minor Beneficial	72.0	0.3	Negligible Adverse	58.3	58.9	58.5
434. HILTON DRIVE	Dwelling	71.7	72.4	70.6	-1.1	Minor Beneficial	72.0	0.3	Negligible Adverse	58.3	58.9	58.5
45. HILTON DRIVE	Dwelling	66.1	67.3	66.1	0.0	No Change	67.1	1.0	Negligible Adverse	53.2	54.3	54.1
47. HILTON DRIVE	Dwelling	65.9	67.1	65.9	0.0	No Change	66.9	1.0	Negligible Adverse	53.0	54.1	53.9
49. HILTON DRIVE	Dwelling	65.7	66.9	65.7	0.0	No Change	66.7	1.0	Negligible Adverse	52.9	53.9	53.8
5. HILTON DRIVE	Dwelling	65.7	66.5	65.6	-0.1	Negligible Beneficial	66.3	0.6	Negligible Adverse	52.9	53.6	53.4
51. HILTON DRIVE	Dwelling	65.6	66.8	65.6	0.0	No Change	66.6	1.0	Negligible Adverse	52.8	53.9	53.7
53. HILTON DRIVE	Dwelling	65.4	66.6	65.4	0.0	No Change	66.4	1.0	Negligible Adverse	52.6	53.7	53.5
55. HILTON DRIVE	Dwelling	65.3	66.5	65.3	0.0	No Change	66.3	1.0	Negligible Adverse	52.5	53.6	53.4
57. HILTON DRIVE	Dwelling	65.2	66.4	65.1	-0.1	Negligible Beneficial	66.1	0.9	Negligible Adverse	52.4	53.5	53.2
58. HILTON DRIVE	Dwelling	65.4	66.3	65.3	-0.1	Negligible Beneficial	66.2	0.8	Negligible Adverse	52.6	53.4	53.3
59. HILTON DRIVE	Dwelling	65.0	66.3	65.0	0.0	No Change	66.0	1.0	Negligible Adverse	52.2	53.4	53.1
60. HILTON DRIVE	Dwelling	65.5	66.4	65.4	-0.1	Negligible Beneficial	66.3	0.8	Negligible Adverse	52.7	53.5	53.4
61. HILTON DRIVE	Dwelling	62.9	65.2	63.0	0.1	Negligible Adverse	64.6	1.7	Negligible Adverse	50.3	52.4	51.9
62. HILTON DRIVE	Dwelling	66.6	67.5	66.6	0.0	No Change	67.4	0.8	Negligible Adverse	53.7	54.5	54.4
64. HILTON DRIVE	Dwelling	66.7	67.6	66.6	-0.1	Negligible Beneficial	67.5	0.8	Negligible Adverse	53.8	54.6	54.5
66. HILTON DRIVE	Dwelling	66.7	67.6	66.6	-0.1	Negligible Beneficial	67.5	0.8	Negligible Adverse	53.8	54.7	54.5
68. HILTON DRIVE	Dwelling	66.6	67.6	66.5	-0.1	Negligible Beneficial	67.5	0.9	Negligible Adverse	53.7	54.6	54.5
7. HILTON DRIVE	Dwelling	65.6	66.4	65.5	-0.1	Negligible Beneficial	66.2	0.6	Negligible Adverse	52.8	53.5	53.3
70. HILTON DRIVE	Dwelling	64.7	65.8	64.7	0.0	No Change	65.7	1.0	Negligible Adverse	52.0	53.0	52.9
72. HILTON DRIVE	Dwelling	66.2	67.4	66.2	0.0	No Change	67.2	1.0	Negligible Adverse	53.3	54.4	54.2
74. HILTON DRIVE	Dwelling	66.0	67.1	65.9	-0.1	Negligible Beneficial	67.0	1.0	Negligible Adverse	53.1	54.1	54.0
76. HILTON DRIVE	Dwelling	66.0	67.2	66.0	0.0	No Change	67.0	1.0	Negligible Adverse	53.1	54.2	54.0
78. HILTON DRIVE	Dwelling	65.8	67.0	65.8	0.0	No Change	66.8	1.0	Negligible Adverse	53.0	54.0	53.9
80. HILTON DRIVE	Dwelling	65.8	67.0	65.8	0.0	No Change	66.8	1.0	Negligible Adverse	53.0	54.0	53.9
82. HILTON DRIVE	Dwelling	65.7	66.9	65.7	0.0	No Change	66.7	1.0	Negligible Adverse	52.9	53.9	53.8
84. HILTON DRIVE	Dwelling	65.7	66.9	65.6	-0.1	Negligible Beneficial	66.7	1.0	Negligible Adverse	52.9	53.9	53.8
86. HILTON DRIVE	Dwelling	65.5	66.7	65.5	0.0	No Change	66.5	1.0	Negligible Adverse	52.7	53.8	53.6
88. HILTON DRIVE	Dwelling	65.5	66.7	65.5	0.0	No Change	66.5	1.0	Negligible Adverse	52.7	53.8	53.6
9. HILTON DRIVE	Dwelling	65.2	66.0	65.1	-0.1	Negligible Beneficial	65.9	0.7	Negligible Adverse	52.4	53.1	53.0
90. HILTON DRIVE	Dwelling	65.2	66.4	65.2	0.0	No Change	66.2	1.0	Negligible Adverse	52.4	53.5	53.3
92. HILTON DRIVE	Dwelling	65.1	66.3	65.1	0.0	No Change	66.1	1.0	Negligible Adverse	52.3	53.4	53.2
ALLOTMENTS. HILTON DRIVE	Allotments	55.0	55.6	55.1	0.1	Negligible Adverse	55.5	0.5	Negligible Adverse	43.2	43.8	43.7
HIGH CHURCH HILTON. HIGH CHURCH HILTON. HILTON DRIVE	Church	69.3	69.7	68.7	-0.6	Negligible Beneficial	69.5	0.2	Negligible Adverse	56.1	56.5	56.3
HILTON CHURCH HALL. HILTON DRIVE	Church Hall	64.2	65.0	64.1	-0.1	Negligible Beneficial	64.8	0.6	Negligible Adverse	51.5	52.2	52.1
371. HILTON DRIVE	Dwelling	69.1	69.7	69.2	0.1	Negligible Adverse	69.2	0.1	Negligible Adverse	55.9	56.5	56.0
395. HILTON DRIVE	Dwelling	72.9	73.5	72.8	-0.1	Negligible Beneficial	72.7	-0.2	Negligible Beneficial	59.3	59.9	59.2
375. HILTON DRIVE	Dwelling	72.7	73.4	72.9	-0.2	Negligible Adverse	72.9	0.2	Negligible Adverse	59.2	59.8	59.3
399. HILTON DRIVE	Dwelling	75.2	75.8	75.1	-0.1	Negligible Beneficial	75.1	-0.1	Negligible Beneficial	61.4	62.0	61.3
373. HILTON DRIVE	Dwelling	71.7	72.3	71.8	0.1	Negligible Beneficial	71.8	0.1	Negligible Beneficial	58.3	58.8	58.4
397. HILTON DRIVE	Dwelling	75.0	75.7	75.0	0.0	No Change	75.0	0.0	No Change	61.2	61.9	61.2
1. HILTON HEIGHTS	Dwelling	65.1	66.1	66.2	0.1	Negligible Adverse	66.0	2.9	Negligible Adverse	44.2	46.8	46.8
10. HILTON HEIGHTS	Dwelling	57.0	61.3	57.0	0.0	Negligible Adverse	60.2	3.2	Minor Adverse	45.0	48.9	48.9
100. HILTON HEIGHTS	Dwelling	53.7	55.0	53.8	0.1	Negligible Adverse	54.8	1.1	Negligible Adverse	42.1	43.2	43.1
101. HILTON HEIGHTS	Dwelling	53.1	54.4	53.2	0.1	Negligible Adverse	54.2	1.1	Negligible Adverse	41.5	42.7	42.5
102. HILTON HEIGHTS	Dwelling	54.4	55.6	54.5	0.1	Negligible Adverse	55.5	1.1	Negligible Adverse	42.7	43.8	43.7
103. HILTON HEIGHTS	Dwelling	54.4	55.6	54.5	0.1	Negligible Adverse	55.5	1.1	Negligible Adverse	42.7	43.8	43.7
104. HILTON HEIGHTS	Dwelling	54.4	55.6	54.5	0.1	Negligible Adverse	55.5	1.1	Negligible Adverse	42.7	43.8	43.7
105. HILTON HEIGHTS	Dwelling	54.4	55.6	54.5	0.1	Negligible Adverse	55.5	1.1	Negligible Adverse	42.7	43.8	43.7
106. HILTON HEIGHTS	Dwelling	59.4	60.7	59.5	0.1	Negligible Adverse	60.6	1.2	Negligible Adverse	47.2	48.4	48.3
107. HILTON HEIGHTS	Dwelling	59.4	60.7	59.5	0.1	Negligible Adverse	60.6	1.2	Negligible Adverse	47.2	48.4	48.3
108. HILTON HEIGHTS	Dwelling	59.4	60.7	59.5	0.1	Negligible Adverse	60.6	1.2	Negligible Adverse	47.2	48.4	48.3
109. HILTON HEIGHTS	Dwelling	59.4	60.7	59.5	0.1	Negligible Adverse	60.6	1.2	Negligible Adverse	47.2	48.4	48.3
11. HILTON HEIGHTS	Dwelling	57.0	61.3	57.1	0.1	Negligible Adverse	60.2	3.2	Minor Adverse	45.0	48.9	47.9
110. HILTON HEIGHTS	Dwelling	65.5	66.8	65.6	-0.1	Negligible Beneficial	66.7	1.2	Negligible Adverse	52.7	53.9	53.8
111. HILTON HEIGHTS	Dwelling	65.5	66.8	65.6	-0.1	Negligible Beneficial	66.7	1.2	Negligible Adverse	52.7	53.9	53.8
112. HILTON HEIGHTS	Dwelling	65.5	66.8	65.6	-0.1	Negligible Beneficial	66.7	1.2	Negligible Adverse	52.7	53.9	53.8
113. HILTON HEIGHTS	Dwelling	65.5	66.8	65.6	0.1	Negligible Beneficial	66.7	1.2	Negligible Adverse	52.7	53.9	53.8

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
80. HILTON HEIGHTS	Dwelling	65.6	66.9	65.8	0.2	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.9	53.8
81. HILTON HEIGHTS	Dwelling	65.6	66.9	65.8	0.2	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.9	53.8
82. HILTON HEIGHTS	Dwelling	65.6	66.9	65.8	0.2	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.9	53.8
83. HILTON HEIGHTS	Dwelling	65.6	66.9	65.8	0.2	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.9	53.8
84. HILTON HEIGHTS	Dwelling	60.3	61.6	60.4	0.1	Negligible Adverse	61.4	1.1	Negligible Adverse	48.0	49.2	49.0
85. HILTON HEIGHTS	Dwelling	60.3	61.6	60.4	0.1	Negligible Adverse	61.4	1.1	Negligible Adverse	48.0	49.2	49.0
86. HILTON HEIGHTS	Dwelling	60.3	61.6	60.4	0.1	Negligible Adverse	61.4	1.1	Negligible Adverse	48.0	49.2	49.0
87. HILTON HEIGHTS	Dwelling	60.3	61.6	60.4	0.1	Negligible Adverse	61.4	1.1	Negligible Adverse	48.0	49.2	49.0
88. HILTON HEIGHTS	Dwelling	55.2	56.5	55.3	0.1	Negligible Beneficial	56.3	1.1	Negligible Adverse	43.4	44.6	44.4
89. HILTON HEIGHTS	Dwelling	55.2	56.5	55.3	0.1	Negligible Beneficial	56.3	1.1	Negligible Adverse	43.4	44.6	44.4
9. HILTON HEIGHTS	Dwelling	57.0	61.3	57.1	0.1	Negligible Adverse	60.2	3.2	Minor Adverse	45.0	48.9	47.9
90. HILTON HEIGHTS	Dwelling	55.2	56.5	55.3	0.1	Negligible Beneficial	56.3	1.1	Negligible Adverse	43.4	44.6	44.4
91. HILTON HEIGHTS	Dwelling	55.2	56.5	55.3	0.1	Negligible Beneficial	56.3	1.1	Negligible Adverse	43.4	44.6	44.4
92. HILTON HEIGHTS	Dwelling	53.6	54.9	53.7	0.1	Negligible Adverse	54.7	1.1	Negligible Adverse	42.0	43.1	43.0
93. HILTON HEIGHTS	Dwelling	53.7	55.0	53.8	0.1	Negligible Beneficial	54.8	1.1	Negligible Adverse	42.1	43.2	43.1
94. HILTON HEIGHTS	Dwelling	53.7	55.0	53.8	0.1	Negligible Beneficial	54.8	1.1	Negligible Adverse	42.1	43.2	43.1
95. HILTON HEIGHTS	Dwelling	53.7	55.0	53.8	0.1	Negligible Beneficial	54.8	1.1	Negligible Adverse	42.1	43.2	43.1
96. HILTON HEIGHTS	Dwelling	53.7	55.0	53.8	0.1	Negligible Beneficial	54.8	1.1	Negligible Adverse	42.1	43.2	43.1
97. HILTON HEIGHTS	Dwelling	54.2	55.5	54.3	0.1	Negligible Beneficial	55.3	1.1	Negligible Adverse	42.5	43.7	43.5
98. HILTON HEIGHTS	Dwelling	53.7	55.0	53.8	0.1	Negligible Beneficial	54.8	1.1	Negligible Adverse	42.1	43.2	43.1
99. HILTON HEIGHTS	Dwelling	53.7	55.0	53.8	0.1	Negligible Beneficial	54.8	1.1	Negligible Adverse	42.1	43.2	43.1
THE LODGE, 69, HILTON PLACE	Serviced Apartments	48.7	52.1	48.8	0.1	Negligible Beneficial	51.5	2.8	Negligible Adverse	37.6	40.6	40.1
10. HILTON PLACE	Dwelling	63.0	64.1	63.0	0.0	No Change	64.0	1.0	Negligible Adverse	50.4	51.4	51.3
12. HILTON PLACE	Dwelling	62.0	63.2	62.0	0.0	No Change	63.1	1.1	Negligible Adverse	49.5	50.6	50.5
14. HILTON PLACE	Dwelling	61.3	62.6	61.4	0.1	Negligible Adverse	62.5	1.2	Negligible Adverse	48.9	50.1	50.0
16. HILTON PLACE	Dwelling	60.8	62.2	60.8	0.0	No Change	62.0	1.2	Negligible Adverse	48.5	49.7	49.5
18. HILTON PLACE	Dwelling	60.4	61.9	60.4	0.0	No Change	61.7	1.3	Negligible Adverse	48.1	49.4	49.3
20. HILTON PLACE	Dwelling	60.4	61.9	60.5	0.1	Negligible Adverse	61.7	1.3	Negligible Adverse	48.1	49.4	49.3
22. HILTON PLACE	Dwelling	59.7	61.3	59.7	0.0	No Change	61.1	1.4	Negligible Adverse	47.5	48.9	48.7
24. HILTON PLACE	Dwelling	59.7	61.3	59.7	0.0	No Change	61.1	1.4	Negligible Adverse	47.5	48.9	48.7
26. HILTON PLACE	Dwelling	59.2	60.9	59.2	0.0	No Change	60.7	1.5	Negligible Adverse	47.0	48.5	48.4
28. HILTON PLACE	Dwelling	59.2	60.9	59.2	0.0	No Change	60.7	1.5	Negligible Adverse	47.0	48.5	48.4
30. HILTON PLACE	Dwelling	58.5	60.5	58.5	0.0	No Change	60.2	1.7	Negligible Adverse	46.4	48.2	47.9
32. HILTON PLACE	Dwelling	58.5	60.5	58.5	0.0	No Change	60.2	1.7	Negligible Adverse	46.4	48.2	47.9
34. HILTON PLACE	Dwelling	57.5	59.7	57.5	0.0	No Change	59.4	1.9	Negligible Adverse	45.5	47.5	47.2
36. HILTON PLACE	Dwelling	57.6	59.7	57.6	0.0	No Change	59.4	1.8	Negligible Adverse	45.6	47.5	47.2
38. HILTON PLACE	Dwelling	56.6	59.1	56.7	0.1	Negligible Adverse	58.8	2.2	Negligible Adverse	44.7	46.9	46.7
40. HILTON PLACE	Dwelling	56.6	59.1	56.7	0.1	Negligible Adverse	58.8	2.2	Negligible Adverse	44.7	46.9	46.7
42. HILTON PLACE	Dwelling	55.6	58.4	55.7	0.1	Negligible Adverse	58.0	2.4	Negligible Adverse	43.8	46.3	45.9
44. HILTON PLACE	Dwelling	55.6	58.4	55.7	0.1	Negligible Adverse	58.0	2.4	Negligible Adverse	43.8	46.3	45.9
46. HILTON PLACE	Dwelling	54.5	57.1	54.6	0.1	Negligible Adverse	57.3	2.8	Negligible Adverse	42.8	45.7	45.3
48. HILTON PLACE	Dwelling	54.5	57.7	54.6	0.1	Negligible Adverse	57.3	2.8	Negligible Adverse	42.8	45.7	45.3
50. HILTON PLACE	Dwelling	54.0	57.3	54.0	0.0	No Change	56.9	2.9	Negligible Adverse	42.3	45.3	44.9
52. HILTON PLACE	Dwelling	54.0	57.3	54.0	0.0	No Change	56.9	2.9	Negligible Adverse	42.3	45.3	44.9
54. HILTON PLACE	Dwelling	53.6	57.2	53.7	0.1	Negligible Adverse	56.8	3.2	Minor Adverse	42.0	45.2	44.9
56. HILTON PLACE	Dwelling	53.6	57.2	53.7	0.1	Negligible Adverse	56.8	3.2	Minor Adverse	42.0	45.2	44.9
58. HILTON PLACE	Dwelling	53.4	57.1	53.5	0.1	Negligible Adverse	56.7	3.3	Minor Adverse	41.8	45.1	44.8
60. HILTON PLACE	Dwelling	53.4	57.1	53.5	0.1	Negligible Adverse	56.7	3.3	Minor Adverse	41.8	45.1	44.8
62. HILTON PLACE	Dwelling	53.4	57.1	53.5	0.1	Negligible Adverse	56.7	3.3	Minor Adverse	41.8	45.1	44.8
64. HILTON PLACE	Dwelling	53.4	57.1	53.5	0.1	Negligible Adverse	56.7	3.3	Minor Adverse	41.8	45.1	44.8
65. HILTON PLACE	Dwelling	53.8	57.0	53.9	0.1	Negligible Adverse	56.6	2.8	Negligible Adverse	42.2	45.0	44.7
66. HILTON PLACE	Dwelling	53.3	57.3	53.4	0.1	Negligible Adverse	56.8	3.5	Minor Adverse	41.7	45.3	44.9
69. HILTON PLACE	Dwelling	50.5	54.0	50.6	0.1	Negligible Adverse	53.4	2.9	Negligible Adverse	39.2	42.3	41.8
82. HILTON PLACE	Dwelling	48.3	50.0	48.5	0.2	Negligible Adverse	49.8	1.5	Negligible Adverse	37.2	38.7	38.6
84. HILTON PLACE	Dwelling	45.8	47.5	46.0	0.2	Negligible Adverse	47.3	1.5	Negligible Adverse	35.0	36.5	36.3
86. HILTON PLACE	Dwelling	46.0	47.6	46.2	0.2	Negligible Adverse	47.4	1.4	Negligible Adverse	35.1	36.6	36.4
88. HILTON PLACE	Dwelling	45.4	46.8	45.6	0.2	Negligible Adverse	46.7	1.3	Negligible Adverse	34.6	35.9	35.8
90. HILTON PLACE	Dwelling	46.9	49.6	47.0	0.1	Negligible Adverse	49.1	2.2	Negligible Adverse	35.9	38.4	37.9
92. HILTON PLACE	Dwelling	48.3	52.0	48.3	0.0	No Change	51.2	2.9	Negligible Adverse	37.2	40.5	39.8
94. HILTON PLACE	Dwelling	51.4	56.0	51.5	0.1	Negligible Adverse	55.1	3.7	Minor Adverse	40.0	44.1	43.3
96. HILTON PLACE	Dwelling	53.0	58.3	53.0	0.0	No Change	57.2	4.2	Minor Adverse	41.4	46.2	45.2
HILTON COURT, 1, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 2, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 3, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 4, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 5, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 6, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 7, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 8, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 9, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 10, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 11, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 12, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 13, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 14, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 15, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 16, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 17, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 18, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 19, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 20, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 21, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3
HILTON COURT, 22, HILTON ROAD	Dwelling	67.3	68.6	67.0	-0.3	Negligible Beneficial	68.4	1.1	Negligible Adverse	54.3	55.5	55.3

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
35, HILTON ROAD	Dwelling	54.3	60.3	54.4	0.1	Negligible Adverse	59.0	4.7	Minor Adverse	42.6	48.0	46.8
37, HILTON ROAD	Dwelling	53.9	60.2	54.0	0.1	Negligible Adverse	58.8	4.9	Minor Adverse	42.2	47.9	46.7
39, HILTON ROAD	Dwelling	54.0	60.2	54.0	0.0	No Change	58.8	4.8	Minor Adverse	42.3	47.9	46.7
4, HILTON ROAD	Dwelling	63.6	67.4	65.1	1.5	Minor Adverse	68.2	4.6	Minor Adverse	51.0	54.4	55.1
4, HILTON ROAD	Dwelling	63.6	67.4	65.1	1.5	Minor Adverse	68.2	4.6	Minor Adverse	51.0	54.4	55.1
4, HILTON ROAD	Dwelling	63.6	67.4	65.1	1.5	Minor Adverse	68.2	4.6	Minor Adverse	51.0	54.4	55.1
41, HILTON ROAD	Dwelling	54.0	60.3	54.0	0.0	No Change	58.8	4.8	Minor Adverse	42.3	48.0	46.7
43, HILTON ROAD	Dwelling	54.0	60.3	54.0	0.0	No Change	58.8	4.8	Minor Adverse	42.3	48.0	46.7
45, HILTON ROAD	Dwelling	50.7	56.3	50.7	0.0	No Change	55.1	4.4	Minor Adverse	39.4	44.4	43.3
47, HILTON ROAD	Dwelling	50.5	56.1	50.5	0.0	No Change	54.9	4.4	Minor Adverse	39.2	44.2	43.1
49, HILTON ROAD	Dwelling	45.8	49.0	45.8	0.0	No Change	48.4	2.6	Negligible Adverse	35.0	37.8	37.3
5, HILTON ROAD	Dwelling	55.8	62.2	56.1	0.3	Negligible Adverse	60.8	5.0	Moderate Adverse	44.0	49.7	48.5
51, HILTON ROAD	Dwelling	44.9	46.4	45.0	0.1	Negligible Adverse	46.2	1.3	Negligible Adverse	34.1	35.5	35.3
53, HILTON ROAD	Dwelling	50.8	56.4	50.8	0.0	No Change	55.2	4.4	Minor Adverse	39.5	44.5	43.4
54, HILTON ROAD	Dwelling	54.0	60.5	54.0	0.0	No Change	59.0	5.0	Moderate Adverse	42.3	48.2	46.8
55, HILTON ROAD	Dwelling	50.9	56.6	50.9	0.0	No Change	55.4	4.5	Minor Adverse	39.5	44.7	43.6
56, HILTON ROAD	Dwelling	54.0	60.5	54.0	0.0	No Change	59.0	5.0	Moderate Adverse	42.3	48.2	46.8
57, HILTON ROAD	Dwelling	46.6	49.9	46.6	0.0	No Change	49.2	2.6	Negligible Adverse	35.7	38.6	38.0
58, HILTON ROAD	Dwelling	54.1	60.5	54.1	0.0	No Change	59.0	4.9	Minor Adverse	42.4	48.2	46.8
59, HILTON ROAD	Dwelling	45.5	47.0	45.6	0.1	Negligible Adverse	46.8	1.3	Negligible Adverse	34.7	36.0	35.9
6, HILTON ROAD	Dwelling	54.6	60.9	54.8	0.2	Negligible Adverse	59.6	5.0	Moderate Adverse	42.9	48.5	47.4
60, HILTON ROAD	Dwelling	54.1	60.5	54.1	0.0	No Change	59.0	4.9	Minor Adverse	42.4	48.2	46.8
61, HILTON ROAD	Dwelling	55.0	61.3	55.0	0.0	No Change	59.8	4.8	Minor Adverse	43.2	48.2	47.6
62, HILTON ROAD	Dwelling	54.1	60.6	54.1	0.0	No Change	59.1	5.0	Moderate Adverse	42.4	48.3	46.9
63, HILTON ROAD	Dwelling	55.0	61.3	55.0	0.0	No Change	59.8	4.8	Minor Adverse	43.2	48.3	47.6
64, HILTON ROAD	Dwelling	54.1	60.6	54.1	0.0	No Change	59.1	5.0	Moderate Adverse	42.4	48.3	46.9
65, HILTON ROAD	Dwelling	55.3	61.5	55.3	0.0	No Change	60.0	4.7	Minor Adverse	43.5	49.1	47.7
66, HILTON ROAD	Dwelling	54.6	60.9	54.6	0.0	No Change	59.4	4.8	Minor Adverse	42.9	48.5	47.2
67, HILTON ROAD	Dwelling	55.3	61.5	55.3	0.0	No Change	60.0	4.7	Minor Adverse	43.5	49.1	47.7
68, HILTON ROAD	Dwelling	54.6	60.9	54.6	0.0	No Change	59.4	4.8	Minor Adverse	42.9	48.5	47.2
69, HILTON ROAD	Dwelling	55.5	61.5	55.5	0.0	No Change	60.1	4.6	Minor Adverse	43.7	49.1	47.8
7, HILTON ROAD	Dwelling	55.6	62.2	55.8	0.2	Negligible Adverse	60.7	5.1	Moderate Adverse	43.8	49.7	48.4
70, HILTON ROAD	Dwelling	54.0	59.9	53.9	-0.1	Negligible Beneficial	58.5	4.5	Minor Adverse	42.3	47.6	46.4
71, HILTON ROAD	Dwelling	55.5	61.5	55.5	0.0	No Change	60.1	4.6	Minor Adverse	43.7	49.1	47.8
72, HILTON ROAD	Dwelling	54.0	59.9	53.9	-0.1	Negligible Beneficial	58.5	4.5	Minor Adverse	42.3	47.6	46.4
73, HILTON ROAD	Dwelling	55.8	61.6	55.8	0.0	No Change	60.2	4.4	Minor Adverse	44.0	49.2	47.9
74, HILTON ROAD	Dwelling	54.0	59.9	54.0	0.0	No Change	58.5	4.5	Minor Adverse	42.3	47.6	46.4
75, HILTON ROAD	Dwelling	55.8	61.6	55.8	0.0	No Change	60.2	4.4	Minor Adverse	44.0	49.2	47.9
76, HILTON ROAD	Dwelling	54.0	59.9	54.0	0.0	No Change	58.5	4.5	Minor Adverse	42.3	47.6	46.4
77, HILTON ROAD	Dwelling	56.3	61.7	56.3	0.0	No Change	60.3	4.0	Minor Adverse	44.4	49.3	48.0
78, HILTON ROAD	Dwelling	55.6	61.5	55.6	0.0	Negligible Beneficial	59.8	4.2	Minor Adverse	43.8	48.8	47.6
79, HILTON ROAD	Dwelling	56.3	61.7	56.2	-0.1	Negligible Beneficial	60.3	4.0	Minor Adverse	44.4	49.3	48.0
8, HILTON ROAD	Dwelling	54.6	60.9	54.8	0.2	Negligible Adverse	59.6	5.0	Moderate Adverse	42.9	48.5	47.4
80, HILTON ROAD	Dwelling	55.6	61.2	55.5	-0.1	Negligible Beneficial	59.8	4.2	Minor Adverse	43.8	48.8	47.6
81, HILTON ROAD	Dwelling	56.8	61.8	56.8	0.0	No Change	60.5	3.7	Minor Adverse	44.9	49.4	48.2
82, HILTON ROAD	Dwelling	56.0	61.3	55.9	-0.1	Negligible Beneficial	59.9	3.9	Minor Adverse	44.1	48.9	47.6
83, HILTON ROAD	Dwelling	56.8	61.8	56.8	0.0	No Change	60.5	3.7	Minor Adverse	44.9	49.4	48.2
84, HILTON ROAD	Dwelling	56.0	61.3	55.9	-0.1	Negligible Beneficial	59.9	3.9	Minor Adverse	44.1	48.9	47.6
85, HILTON ROAD	Dwelling	66.9	68.4	67.0	0.1	Negligible Beneficial	68.1	1.2	Negligible Adverse	53.9	55.3	55.0
85, HILTON ROAD	Dwelling	57.9	62.2	57.8	-0.1	Negligible Beneficial	61.0	3.1	Minor Adverse	45.8	49.7	48.6
86, HILTON ROAD	Dwelling	57.5	61.8	57.4	-0.1	Negligible Beneficial	60.6	3.1	Minor Adverse	45.5	49.4	48.3
88, HILTON ROAD	Dwelling	57.5	61.8	57.4	-0.1	Negligible Beneficial	60.6	3.1	Minor Adverse	45.5	49.4	48.3
89, HILTON ROAD	Dwelling	58.0	63.1	57.3	-0.7	Negligible Beneficial	60.5	2.5	Negligible Adverse	45.9	50.5	48.2
9, HILTON ROAD	Dwelling	55.6	62.2	55.8	0.2	Negligible Adverse	60.6	5.0	Moderate Adverse	43.8	49.7	48.3
90, HILTON ROAD	Dwelling	59.0	62.5	59.0	0.0	No Change	61.6	2.6	Negligible Adverse	46.8	50.0	49.2
91, HILTON ROAD	Dwelling	57.7	62.7	57.0	-0.7	Negligible Beneficial	60.2	2.5	Negligible Adverse	45.7	50.2	47.9
92, HILTON ROAD	Dwelling	59.1	62.6	59.0	-0.1	Negligible Beneficial	61.6	2.5	Negligible Adverse	46.9	50.1	49.2
93, HILTON ROAD	Dwelling	57.6	62.4	56.9	-0.7	Negligible Beneficial	60.0	2.4	Negligible Adverse	45.6	49.9	47.7
94, HILTON ROAD	Dwelling	60.1	63.6	59.9	-0.2	Negligible Beneficial	62.1	2.0	Negligible Adverse	47.8	51.0	49.6
95, HILTON ROAD	Dwelling	57.4	62.1	56.7	-0.7	Negligible Beneficial	59.7	2.3	Negligible Adverse	45.4	49.6	47.5
96, HILTON ROAD	Dwelling	60.1	63.6	59.9	-0.2	Negligible Beneficial	62.1	2.0	Negligible Adverse	47.8	51.0	49.6
97, HILTON ROAD	Dwelling	58.2	62.7	57.6	-0.6	Negligible Beneficial	60.5	2.3	Negligible Adverse	46.1	50.2	48.2
98, HILTON ROAD	Dwelling	60.1	63.6	59.9	-0.2	Negligible Beneficial	62.1	2.0	Negligible Adverse	47.8	51.0	49.6
99, HILTON ROAD	Dwelling	58.1	62.6	57.4	-0.7	Negligible Beneficial	60.4	2.3	Negligible Adverse	46.0	50.1	48.1
HILTON COMMUNITY CENTRE, HILTON COMMUNITY CENTRE, HILTON ROAD	Public / Village Hall / Other Community Facility	49.4	55.0	49.4	0.0	No Change	53.8	4.4	Minor Adverse	38.2	43.2	42.2
HILTON WOODS, HILTON ROAD	Green Space	51.3	52.5	51.1	-0.2	Negligible Beneficial	52.3	1.0	Negligible Adverse	38.9	41.0	40.8
STEWART PARK, HILTON ROAD	Playing Field	48.2	49.1	48.0	-0.1	Negligible Beneficial	49.2	1.0	Negligible Adverse	37.1	37.9	38.0
STEWART PARK, PLAYING FIELDS, HILTON ROAD	Playing Field	48.2	49.2	48.0	-0.2	Negligible Beneficial	49.2	1.0	Negligible Adverse	37.1	38.0	38.0
STEWART PARK, PLAYING FIELDS, HILTON ROAD (2)	Playing Field	49.3	50.8	49.0	-0.3	Negligible Beneficial	50.3	1.0	Negligible Adverse	38.1	39.5	39.0
1, HILTON STREET	Dwelling	68.7	70.7	69.0	0.3	Negligible Adverse	70.5	1.8	Negligible Adverse	55.6	57.4	57.2
10, HILTON STREET	Dwelling	72.9	74.2	72.8	-0.1	Negligible Beneficial	74.1	1.2	Negligible Adverse	59.3	60.5	60.4
11, HILTON STREET	Dwelling	72.2	73.6	72.2	0.0	No Change	73.5	1.3	Negligible Adverse	58.7	60.0	59.9
12, HILTON STREET	Dwelling	72.9	74.2	72.8	-0.1	Negligible Beneficial	74.1	1.2	Negligible Adverse	59.3	60.5	60.4
13, HILTON STREET	Dwelling	72.5	73.9	72.4	-0.1	Negligible Beneficial	73.8	1.3	Negligible Adverse	59.0	60.2	60.2
14, HILTON STREET	Dwelling	73.3	74.7	73.3	0.0	No Change	74.6	1.3	Negligible Adverse	59.7	61.0	60.9
15, HILTON STREET	Dwelling	72.5	73.8	72.4	-0.1	Negligible Beneficial	73.7	1.2	Negligible Adverse	59.0	60.2	60.1
16, HILTON STREET	Dwelling	73.7	75.0	73.6	-0.1	Negligible Beneficial	74.9	1.2	Negligible Adverse	60.1	61.2	61.1
17, HILTON STREET	Dwelling	73.4	74.8	73.4	0.0	No Change	74.7	1.3	Negligible Adverse	59.8	61.1	61.0
18, HILTON STREET	Dwelling	73.7	75.0	73.6	-0.1	Negligible Beneficial	74.9	1.2	Negligible Adverse	60.1	61.2	61.1
19, HILTON STREET	Dwelling	73.4	74.7	73.3	-0.1	Negligible Beneficial	74.6	1.2	Negligible Adverse	59.8	61.0	60.9
20, HILTON STREET	Dwelling	73.7	74.9	73.6	-0.1	Negligible Beneficial	74.9	1.2	Negligible Adverse	60.1	61.1	61.1
21, HILTON STREET	Dwelling	73.9	75.2	73.8	-0.1	Negligible Beneficial	75.1	1.2	Negligible Adverse	60.2	61.4	61.3

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
23, HILTON STREET	Dwelling	73.9	75.2	73.8	-0.1	Negligible Beneficial	75.1	1.2	Negligible Adverse	60.2	61.4	61.3
25, HILTON STREET	Dwelling	73.7	75.0	73.6	-0.1	Negligible Beneficial	74.9	1.2	Negligible Adverse	60.1	61.2	61.1
27, HILTON STREET	Dwelling	73.7	75.0	73.6	-0.1	Negligible Beneficial	74.9	1.2	Negligible Adverse	60.1	61.2	61.1
29, HILTON STREET	Dwelling	73.4	74.6	73.4	0.0	No Change	74.6	1.2	Negligible Adverse	59.8	60.9	60.9
3, HILTON STREET	Dwelling	68.7	70.7	69.0	0.3	Negligible Adverse	70.5	1.8	Negligible Adverse	55.6	57.4	57.2
31, HILTON STREET	Dwelling	73.4	74.6	73.4	0.0	No Change	74.6	1.2	Negligible Adverse	59.8	60.9	60.9
33, HILTON STREET	Dwelling	73.0	73.9	73.0	0.0	No Change	73.9	0.9	Negligible Adverse	59.4	60.2	60.2
35, HILTON STREET	Dwelling	73.0	73.9	73.0	0.0	No Change	73.9	0.9	Negligible Adverse	59.4	60.2	60.2
4, HILTON STREET	Dwelling	71.7	73.1	71.7	0.0	No Change	73.0	1.3	Negligible Adverse	58.3	59.5	59.4
5, HILTON STREET	Dwelling	72.0	73.4	71.9	-0.1	Negligible Beneficial	73.3	1.3	Negligible Adverse	58.5	59.8	59.7
6, HILTON STREET	Dwelling	71.7	73.1	71.7	0.0	No Change	73.0	1.3	Negligible Adverse	58.3	59.5	59.4
7, HILTON STREET	Dwelling	72.0	73.4	71.9	-0.1	Negligible Beneficial	73.3	1.3	Negligible Adverse	58.5	59.8	59.7
8, HILTON STREET	Dwelling	72.3	73.6	72.2	-0.1	Negligible Beneficial	73.5	1.2	Negligible Adverse	58.8	60.0	59.9
9, HILTON STREET	Dwelling	72.2	73.6	72.1	-0.1	Negligible Beneficial	73.5	1.3	Negligible Adverse	58.7	60.0	59.9
1, HILTON TERRACE	Dwelling	50.0	52.0	50.5	0.5	Negligible Adverse	52.1	2.1	Negligible Adverse	38.7	40.5	40.6
10, HILTON TERRACE	Dwelling	45.7	47.3	45.8	0.1	Negligible Beneficial	47.0	1.3	Negligible Adverse	34.9	36.3	36.0
11, HILTON TERRACE	Dwelling	48.8	50.7	49.2	0.4	Negligible Adverse	50.8	2.0	Negligible Adverse	37.7	39.4	39.5
12, HILTON TERRACE	Dwelling	45.7	47.3	45.8	0.1	Negligible Beneficial	47.0	1.3	Negligible Adverse	34.9	36.3	36.0
13, HILTON TERRACE	Dwelling	48.2	50.0	48.5	0.3	Negligible Adverse	50.1	1.9	Negligible Adverse	37.1	38.7	38.8
14, HILTON TERRACE	Dwelling	45.8	47.3	45.9	0.1	Negligible Adverse	47.1	1.3	Negligible Adverse	35.0	36.3	36.1
15, HILTON TERRACE	Dwelling	48.2	50.0	48.5	0.3	Negligible Adverse	50.1	1.9	Negligible Adverse	37.1	38.7	38.8
16, HILTON TERRACE	Dwelling	45.8	47.3	45.9	0.1	Negligible Adverse	47.1	1.3	Negligible Adverse	35.0	36.3	36.1
17, HILTON TERRACE	Dwelling	47.8	49.5	48.1	0.3	Negligible Adverse	49.6	1.8	Negligible Adverse	36.8	38.3	38.4
18, HILTON TERRACE	Dwelling	45.6	47.1	45.7	0.1	Negligible Adverse	46.9	1.3	Negligible Adverse	34.8	36.1	35.9
19, HILTON TERRACE	Dwelling	47.8	49.5	48.1	0.3	Negligible Adverse	49.5	1.8	Negligible Adverse	36.8	38.3	38.4
2, HILTON TERRACE	Dwelling	47.8	49.7	48.2	0.3	Negligible Adverse	49.7	1.9	Negligible Adverse	36.8	38.5	38.5
20, HILTON TERRACE	Dwelling	45.6	47.1	45.7	0.1	Negligible Adverse	46.9	1.3	Negligible Adverse	34.8	36.1	35.9
21, HILTON TERRACE	Dwelling	47.5	49.1	47.8	0.3	Negligible Adverse	49.1	1.6	Negligible Adverse	36.5	37.9	37.9
22, HILTON TERRACE	Dwelling	46.0	47.6	46.1	0.1	Negligible Adverse	47.3	1.3	Negligible Adverse	35.1	36.6	36.3
23, HILTON TERRACE	Dwelling	47.5	49.1	47.7	0.2	Negligible Adverse	49.3	1.6	Negligible Adverse	36.5	37.9	37.9
24, HILTON TERRACE	Dwelling	46.1	47.6	46.2	0.1	Negligible Adverse	47.4	1.3	Negligible Adverse	35.2	36.6	36.4
25, HILTON TERRACE	Dwelling	47.1	48.7	47.4	0.3	Negligible Adverse	48.7	1.6	Negligible Adverse	36.1	37.6	37.6
26, HILTON TERRACE	Dwelling	45.9	47.4	46.0	0.1	Negligible Adverse	47.2	1.3	Negligible Adverse	35.0	36.4	36.2
27, HILTON TERRACE	Dwelling	47.1	48.7	47.4	0.3	Negligible Adverse	48.7	1.6	Negligible Adverse	36.1	37.6	37.6
28, HILTON TERRACE	Dwelling	45.9	47.4	46.0	0.1	Negligible Adverse	47.2	1.3	Negligible Adverse	35.0	36.4	36.2
29, HILTON TERRACE	Dwelling	46.9	48.5	47.1	0.2	Negligible Adverse	48.5	1.6	Negligible Adverse	35.9	37.4	37.4
3, HILTON TERRACE	Dwelling	50.0	52.0	50.5	0.5	Negligible Adverse	52.1	2.1	Negligible Adverse	38.7	40.5	40.6
30, HILTON TERRACE	Dwelling	46.1	47.6	46.2	0.1	Negligible Adverse	47.4	1.3	Negligible Adverse	35.2	36.6	36.4
31, HILTON TERRACE	Dwelling	47.0	48.5	47.1	0.1	Negligible Adverse	48.5	1.5	Negligible Adverse	36.0	37.4	37.4
32, HILTON TERRACE	Dwelling	47.5	49.1	48.0	0.1	Negligible Adverse	49.3	1.3	Negligible Adverse	35.1	36.5	36.3
33, HILTON TERRACE	Dwelling	48.9	48.3	47.0	0.1	Negligible Adverse	48.3	1.4	Negligible Adverse	36.9	37.2	37.2
34, HILTON TERRACE	Dwelling	46.2	47.7	46.3	0.1	Negligible Beneficial	47.5	1.3	Negligible Adverse	35.3	36.7	36.5
35, HILTON TERRACE	Dwelling	46.9	48.3	47.0	0.1	Negligible Adverse	48.3	1.4	Negligible Adverse	35.9	37.2	37.2
36, HILTON TERRACE	Dwelling	46.2	47.7	46.3	0.1	Negligible Beneficial	47.5	1.3	Negligible Adverse	35.3	36.7	36.5
37, HILTON TERRACE	Dwelling	46.2	47.8	46.4	0.2	Negligible Adverse	47.7	1.5	Negligible Adverse	35.3	36.8	36.7
38, HILTON TERRACE	Dwelling	46.5	48.0	46.6	0.1	Negligible Adverse	47.7	1.2	Negligible Adverse	35.6	36.9	36.7
39, HILTON TERRACE	Dwelling	46.2	47.8	46.4	0.2	Negligible Adverse	47.7	1.5	Negligible Adverse	35.3	36.8	36.7
4, HILTON TERRACE	Dwelling	47.8	49.7	48.2	0.4	Negligible Adverse	49.7	1.9	Negligible Adverse	36.8	38.5	38.5
40, HILTON TERRACE	Dwelling	46.5	48.0	46.6	0.1	Negligible Adverse	47.7	1.2	Negligible Adverse	35.6	36.9	36.7
41, HILTON TERRACE	Dwelling	47.6	48.9	47.7	0.1	Negligible Adverse	48.9	1.3	Negligible Adverse	36.6	37.7	37.7
42, HILTON TERRACE	Dwelling	46.2	47.7	46.3	0.1	Negligible Beneficial	47.5	1.3	Negligible Adverse	35.3	36.7	36.5
43, HILTON TERRACE	Dwelling	47.6	48.9	47.7	0.1	Negligible Adverse	48.9	1.3	Negligible Adverse	36.6	37.7	37.7
44, HILTON TERRACE	Dwelling	46.2	47.7	46.3	0.1	Negligible Beneficial	47.5	1.3	Negligible Adverse	35.3	36.7	36.5
45, HILTON TERRACE	Dwelling	47.7	49.1	47.8	0.1	Negligible Beneficial	49.0	1.3	Negligible Adverse	36.7	37.9	37.8
46, HILTON TERRACE	Dwelling	45.4	47.0	45.4	0.0	No Change	46.7	1.3	Negligible Adverse	34.6	36.0	35.8
47, HILTON TERRACE	Dwelling	47.7	49.1	47.8	0.1	Negligible Beneficial	49.0	1.3	Negligible Adverse	36.7	37.9	37.8
48, HILTON TERRACE	Dwelling	45.4	47.0	45.4	0.0	No Change	46.7	1.3	Negligible Adverse	34.6	36.0	35.8
49, HILTON TERRACE	Dwelling	47.9	49.2	48.0	0.1	Negligible Adverse	49.1	1.2	Negligible Adverse	36.8	38.0	37.9
5, HILTON TERRACE	Dwelling	49.3	51.3	49.8	0.5	Negligible Adverse	51.5	2.2	Negligible Adverse	38.1	39.9	40.1
50, HILTON TERRACE	Dwelling	47.1	48.6	47.2	0.1	Negligible Adverse	48.4	1.3	Negligible Adverse	36.1	37.5	37.3
51, HILTON TERRACE	Dwelling	47.9	49.2	48.0	0.1	Negligible Adverse	49.1	1.2	Negligible Adverse	36.8	38.0	37.9
52, HILTON TERRACE	Dwelling	47.1	48.5	47.2	0.1	Negligible Adverse	48.3	1.2	Negligible Adverse	36.1	37.4	37.2
53, HILTON TERRACE	Dwelling	48.1	49.4	48.2	0.1	Negligible Adverse	49.3	1.2	Negligible Adverse	37.0	38.2	38.1
54, HILTON TERRACE	Dwelling	47.7	49.1	47.7	0.0	No Change	48.9	1.2	Negligible Adverse	36.7	37.9	37.7
55, HILTON TERRACE	Dwelling	48.1	49.4	48.2	0.1	Negligible Adverse	49.3	1.2	Negligible Adverse	37.0	38.2	38.1
56, HILTON TERRACE	Dwelling	47.7	49.2	47.8	0.1	Negligible Beneficial	48.9	1.2	Negligible Adverse	36.7	38.0	38.1
57, HILTON TERRACE	Dwelling	48.2	49.5	48.3	0.1	Negligible Beneficial	49.4	1.2	Negligible Adverse	37.1	38.3	38.2
58, HILTON TERRACE	Dwelling	48.2	49.7	48.3	0.1	Negligible Adverse	49.5	1.3	Negligible Adverse	37.1	38.5	38.3
59, HILTON TERRACE	Dwelling	48.2	49.5	48.3	0.1	Negligible Beneficial	49.4	1.2	Negligible Adverse	37.1	38.3	38.2
6, HILTON TERRACE	Dwelling	46.1	47.6	46.2	0.1	Negligible Adverse	47.4	1.3	Negligible Adverse	35.2	36.6	36.4
60, HILTON TERRACE	Dwelling	48.2	49.7	48.3	0.1	Negligible Beneficial	49.4	1.2	Negligible Adverse	37.1	38.5	38.2
61, HILTON TERRACE	Dwelling	48.9	50.3	49.0	0.1	Negligible Adverse	50.1	1.2	Negligible Adverse	37.7	39.0	38.8
62, HILTON TERRACE	Dwelling	48.3	49.8	48.4	0.1	Negligible Adverse	49.6	1.3	Negligible Adverse	37.2	38.6	38.4
63, HILTON TERRACE	Dwelling	48.9	50.3	49.0	0.1	Negligible Adverse	50.1	1.2	Negligible Adverse	37.7	39.0	38.8
64, HILTON TERRACE	Dwelling	48.3	49.8	48.4	0.1	Negligible Adverse	49.6	1.3	Negligible Adverse	37.2	38.6	38.4
65, HILTON TERRACE	Dwelling	49.7	50.9	49.8	0.1	Negligible Beneficial	50.8	1.1	Negligible Adverse	38.5	39.5	39.5
66, HILTON TERRACE	Dwelling	51.0	52.3	51.0	0.0	No Change	52.1	1.1	Negligible Adverse	39.6	40.8	40.6
67, HILTON TERRACE	Dwelling	49.7	50.9	49.8	0.1	Negligible Beneficial	50.8	1.1	Negligible Adverse	38.5	39.5	39.5
68, HILTON TERRACE	Dwelling	51.0	52.3	51.0	0.0	No Change	52.1	1.1	Negligible Adverse	39.6	40.8	40.6
69, HILTON TERRACE	Dwelling	48.8	50.1	48.8	0.0	No Change	49.9	1.1	Negligible Adverse	37.7	38.9	38.6
7, HILTON TERRACE	Dwelling	49.3	51.3	49.8	0.5	Negligible Adverse	51.5	2.2	Negligible Adverse	38.1	39.9	40.1
70, HILTON TERRACE	Dwelling	51.3	52.6	51.4	0.1	Negligible Adverse	52.5	1.2	Negligible Adverse	39.9	41.1	41.0
71, HILTON TERRACE	Dwelling	48.6	49.9	48.7	0.1	Negligible Adverse	49.8	1.2	Negligible Adverse	37.5	38.6	38.6

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
72. HILTON TERRACE	Dwelling	51.3	52.6	51.4	0.1	Negligible Adverse	52.5	1.2	Negligible Adverse	39.9	41.1	41.0
73. HILTON TERRACE	Dwelling	51.5	52.7	51.6	0.1	Negligible Adverse	52.6	1.1	Negligible Adverse	40.1	41.2	41.1
74. HILTON TERRACE	Dwelling	53.3	54.6	53.4	0.1	Negligible Adverse	54.5	1.2	Negligible Adverse	41.7	42.9	42.8
75. HILTON TERRACE	Dwelling	51.5	52.7	51.6	0.1	Negligible Adverse	52.6	1.1	Negligible Adverse	40.1	41.2	41.1
76. HILTON TERRACE	Dwelling	53.3	54.5	53.3	0.0	No Change	54.4	1.1	Negligible Adverse	41.7	42.8	42.7
77. HILTON TERRACE	Dwelling	52.3	53.5	52.4	0.1	Negligible Adverse	53.4	1.1	Negligible Adverse	40.8	41.9	41.8
78. HILTON TERRACE	Dwelling	54.3	55.5	54.4	0.1	Negligible Adverse	55.5	1.2	Negligible Adverse	42.6	43.7	43.7
79. HILTON TERRACE	Dwelling	52.3	53.5	52.4	0.1	Negligible Adverse	53.4	1.1	Negligible Adverse	40.8	41.9	41.8
80. HILTON TERRACE	Dwelling	46.1	47.6	46.2	0.1	Negligible Adverse	47.4	1.3	Negligible Adverse	35.2	36.6	36.4
8. HILTON TERRACE	Dwelling	54.3	55.5	54.4	0.1	Negligible Adverse	55.5	1.2	Negligible Adverse	42.6	43.7	43.7
81. HILTON TERRACE	Dwelling	54.0	55.1	54.1	0.1	Negligible Adverse	55.1	1.1	Negligible Adverse	42.3	43.3	43.3
82. HILTON TERRACE	Dwelling	57.2	58.5	57.3	0.1	Negligible Beneficial	58.4	1.2	Negligible Adverse	45.2	46.4	46.3
83. HILTON TERRACE	Dwelling	54.0	55.1	54.1	0.1	Negligible Adverse	55.1	1.1	Negligible Adverse	42.3	43.3	43.3
84. HILTON TERRACE	Dwelling	57.4	58.6	57.5	0.1	Negligible Adverse	58.5	1.1	Negligible Adverse	45.4	46.5	46.4
85. HILTON TERRACE	Dwelling	55.3	56.5	55.4	0.1	Negligible Adverse	56.4	1.1	Negligible Adverse	43.5	44.6	44.5
86. HILTON TERRACE	Dwelling	59.3	60.6	59.4	0.1	Negligible Adverse	60.5	1.2	Negligible Adverse	47.1	48.3	48.2
87. HILTON TERRACE	Dwelling	55.3	56.5	55.4	0.1	Negligible Adverse	56.4	1.1	Negligible Adverse	43.5	44.6	44.5
88. HILTON TERRACE	Dwelling	59.3	60.6	59.4	0.1	Negligible Adverse	60.5	1.2	Negligible Adverse	47.1	48.3	48.2
89. HILTON TERRACE	Dwelling	57.6	58.8	57.7	0.1	Negligible Adverse	58.7	1.1	Negligible Adverse	45.6	46.7	46.6
9. HILTON TERRACE	Dwelling	48.8	50.7	49.2	0.4	Negligible Adverse	50.8	2.0	Negligible Adverse	37.7	39.4	39.5
91. HILTON TERRACE	Dwelling	57.4	58.6	57.5	0.1	Negligible Adverse	58.5	1.1	Negligible Adverse	45.4	46.5	46.4
93. HILTON TERRACE	Dwelling	59.0	60.2	59.1	0.1	Negligible Adverse	60.1	1.1	Negligible Adverse	46.8	47.9	47.8
95. HILTON TERRACE	Dwelling	59.0	60.2	59.1	0.1	Negligible Adverse	60.1	1.1	Negligible Adverse	46.8	47.9	47.8
1. HILTON WALK	Dwelling	52.6	55.1	52.2	-0.4	Negligible Beneficial	54.2	1.6	Negligible Adverse	41.1	43.3	42.5
10. HILTON WALK	Dwelling	54.1	54.4	51.6	-0.5	Negligible Beneficial	53.4	1.3	Negligible Adverse	40.6	42.7	41.8
11. HILTON WALK	Dwelling	52.1	54.3	51.6	-0.5	Negligible Beneficial	53.4	1.3	Negligible Adverse	40.6	42.6	41.8
12. HILTON WALK	Dwelling	52.1	54.4	51.6	-0.5	Negligible Beneficial	53.4	1.3	Negligible Adverse	40.6	42.7	41.8
13. HILTON WALK	Dwelling	52.4	54.7	51.9	-0.5	Negligible Beneficial	53.7	1.3	Negligible Adverse	40.9	43.0	42.1
14. HILTON WALK	Dwelling	52.6	55.0	52.1	-0.5	Negligible Beneficial	54.0	1.4	Negligible Adverse	41.1	43.2	42.3
15. HILTON WALK	Dwelling	52.8	55.2	52.3	-0.5	Negligible Beneficial	54.2	1.4	Negligible Adverse	41.3	43.4	42.5
16. HILTON WALK	Dwelling	53.0	55.5	52.5	-0.5	Negligible Beneficial	54.4	1.4	Negligible Adverse	41.4	43.7	42.7
2. HILTON WALK	Dwelling	52.5	54.8	52.0	-0.5	Negligible Beneficial	53.9	1.4	Negligible Adverse	41.0	43.1	42.2
3. HILTON WALK	Dwelling	52.3	54.6	51.8	-0.5	Negligible Beneficial	53.7	1.4	Negligible Adverse	40.8	42.9	42.1
4. HILTON WALK	Dwelling	52.1	54.4	51.6	-0.5	Negligible Beneficial	53.5	1.4	Negligible Adverse	40.6	42.7	41.9
5. HILTON WALK	Dwelling	52.2	54.5	51.7	-0.5	Negligible Beneficial	53.6	1.4	Negligible Adverse	40.7	42.8	42.0
6. HILTON WALK	Dwelling	52.1	54.4	51.6	-0.5	Negligible Beneficial	53.5	1.4	Negligible Adverse	40.6	42.7	41.9
7. HILTON WALK	Dwelling	52.1	54.3	51.6	-0.5	Negligible Beneficial	53.4	1.3	Negligible Adverse	40.6	42.6	41.8
8. HILTON WALK	Dwelling	52.1	54.3	51.5	-0.6	Negligible Beneficial	53.4	1.3	Negligible Adverse	40.6	42.6	41.8
9. HILTON WALK	Dwelling	52.1	54.3	51.6	-0.5	Negligible Beneficial	53.4	1.3	Negligible Adverse	40.6	42.6	41.8
105. HOWES DRIVE	Dwelling	52.3	51.3	52.2	-0.1	Negligible Beneficial	52.6	0.3	Negligible Adverse	40.8	39.9	41.1
107. HOWES DRIVE	Dwelling	53.3	53.3	53.8	0.0	No Change	53.8	0.5	Negligible Adverse	41.7	41.3	42.2
109. HOWES DRIVE	Dwelling	52.0	51.3	52.0	0.0	No Change	52.5	0.5	Negligible Adverse	40.5	39.9	41.0
111. HOWES DRIVE	Dwelling	51.4	50.6	51.3	-0.1	Negligible Beneficial	51.9	0.5	Negligible Adverse	40.0	39.3	40.4
113. HOWES DRIVE	Dwelling	51.3	50.5	51.2	-0.1	Negligible Beneficial	51.8	0.5	Negligible Adverse	39.9	39.2	40.4
121. HOWES DRIVE	Dwelling	51.2	50.5	51.2	0.0	No Change	51.7	0.5	Negligible Adverse	39.8	39.2	40.3
123. HOWES DRIVE	Dwelling	51.1	50.3	51.1	0.0	No Change	51.6	0.5	Negligible Adverse	39.7	39.0	40.2
125. HOWES DRIVE	Dwelling	50.9	49.9	50.8	-0.1	Negligible Beneficial	51.3	0.4	Negligible Adverse	39.5	38.6	39.9
127. HOWES DRIVE	Dwelling	50.6	49.5	50.5	-0.1	Negligible Beneficial	51.0	0.4	Negligible Adverse	39.3	38.3	39.6
129. HOWES DRIVE	Dwelling	45.5	45.7	45.4	-0.1	Negligible Beneficial	46.2	0.7	Negligible Adverse	34.7	34.9	35.3
131. HOWES DRIVE	Dwelling	44.9	45.2	45.0	0.1	Negligible Adverse	45.8	0.9	Negligible Adverse	34.1	34.4	35.0
133. HOWES DRIVE	Dwelling	45.0	45.3	44.9	-0.1	Negligible Beneficial	45.7	0.7	Negligible Adverse	34.2	34.5	34.9
135. HOWES DRIVE	Dwelling	45.2	45.7	45.2	0.0	No Change	46.1	0.9	Negligible Adverse	34.4	34.9	35.2
137. HOWES DRIVE	Dwelling	46.1	46.1	45.5	-0.1	Negligible Beneficial	46.4	0.8	Negligible Adverse	34.8	35.2	35.5
1. HUTCHEON LOW DRIVE	Dwelling	61.7	62.6	61.5	-0.2	Negligible Beneficial	62.4	0.7	Negligible Adverse	49.3	50.1	49.9
101. HUTCHEON LOW DRIVE	Dwelling	52.6	53.1	52.3	-0.3	Negligible Beneficial	53.1	0.5	Negligible Adverse	41.1	41.5	41.5
103. HUTCHEON LOW DRIVE	Dwelling	55.1	54.9	55.0	-0.1	Negligible Beneficial	55.5	0.4	Negligible Adverse	43.3	43.1	43.7
105. HUTCHEON LOW DRIVE	Dwelling	55.1	54.8	55.0	-0.1	Negligible Beneficial	55.5	0.4	Negligible Adverse	43.3	43.1	43.7
107. HUTCHEON LOW DRIVE	Dwelling	55.3	55.1	55.2	-0.1	Negligible Beneficial	55.7	0.4	Negligible Adverse	43.5	43.3	43.9
109. HUTCHEON LOW DRIVE	Dwelling	55.3	55.0	55.2	-0.1	Negligible Beneficial	55.7	0.4	Negligible Adverse	43.5	43.2	43.9
11. HUTCHEON LOW DRIVE	Dwelling	60.3	61.1	60.0	-0.3	Negligible Beneficial	61.0	0.7	Negligible Adverse	48.0	48.7	48.6
111. HUTCHEON LOW DRIVE	Dwelling	55.3	55.1	55.2	-0.1	Negligible Beneficial	55.8	0.5	Negligible Adverse	43.5	43.3	44.0
113. HUTCHEON LOW DRIVE	Dwelling	53.7	53.3	53.6	-0.1	Negligible Beneficial	54.1	0.4	Negligible Adverse	42.1	41.7	42.4
115. HUTCHEON LOW DRIVE	Dwelling	53.3	52.9	53.2	-0.1	Negligible Beneficial	53.7	0.4	Negligible Adverse	41.7	41.3	42.1
117. HUTCHEON LOW DRIVE	Dwelling	52.8	52.3	52.7	-0.1	Negligible Beneficial	53.1	0.3	Negligible Adverse	41.3	40.8	41.5
119. HUTCHEON LOW DRIVE	Dwelling	52.5	52.0	52.4	-0.1	Negligible Beneficial	52.8	0.3	Negligible Adverse	41.0	40.5	41.3
121. HUTCHEON LOW DRIVE	Dwelling	52.2	52.6	52.6	-0.3	Negligible Beneficial	53.0	0.3	Negligible Adverse	41.2	41.7	41.4
123. HUTCHEON LOW DRIVE	Dwelling	52.0	52.5	51.7	-0.3	Negligible Beneficial	52.5	0.5	Negligible Adverse	40.5	41.0	41.0
125. HUTCHEON LOW DRIVE	Dwelling	52.0	51.7	52.0	-0.3	Negligible Beneficial	52.6	0.6	Negligible Adverse	40.6	41.0	41.1
127. HUTCHEON LOW DRIVE	Dwelling	50.2	50.1	50.7	-0.3	Negligible Beneficial	50.8	0.6	Negligible Adverse	38.9	39.4	39.5
129. HUTCHEON LOW DRIVE	Dwelling	51.8	52.3	51.6	-0.2	Negligible Beneficial	52.4	0.6	Negligible Adverse	40.4	40.8	40.9
15. HUTCHEON LOW DRIVE	Dwelling	61.2	62.0	61.0	-0.2	Negligible Beneficial	62.0	0.8	Negligible Adverse	48.8	49.5	49.5
17. HUTCHEON LOW DRIVE	Dwelling	60.6	61.3	60.4	-0.2	Negligible Beneficial	61.3	0.7	Negligible Adverse	48.3	48.9	48.9
19. HUTCHEON LOW DRIVE	Dwelling	59.1	59.5	58.8	-0.3	Negligible Beneficial	59.7	0.6	Negligible Adverse	46.9	47.3	47.5
21. HUTCHEON LOW DRIVE	Dwelling	56.0	56.9	55.8	-0.2	Negligible Beneficial	56.7	0.7	Negligible Adverse	44.1	44.9	44.8
23. HUTCHEON LOW DRIVE	Dwelling	56.6	56.9	56.5	-0.1	Negligible Beneficial	57.3	0.7	Negligible Adverse	44.7	44.9	45.3
25. HUTCHEON LOW DRIVE	Dwelling	56.0	56.0	55.9	-0.1	Negligible Beneficial	56.6	0.6	Negligible Adverse	44.1	44.1	44.7
27. HUTCHEON LOW DRIVE	Dwelling	56.9	56.9	56.7	-0.2	Negligible Beneficial	57.4	0.5	Negligible Adverse	44.9	44.9	45.4
29. HUTCHEON LOW DRIVE	Dwelling	57.3	58.0	56.9	-0.4	Negligible Beneficial	57.8	0.5	Negligible Adverse	45.3	45.9	45.8
3. HUTCHEON LOW DRIVE	Dwelling	61.7	62.6	61.6	-0.1	Negligible Beneficial	62.5	0.8	Negligible Adverse	49.3	50.1	50.0
31. HUTCHEON LOW DRIVE	Dwelling	57.3	58.0	56.9	-0.4	Negligible Beneficial	57.8	0.5	Negligible Adverse	45.3	45.9	45.8
33. HUTCHEON LOW DRIVE	Dwelling	56.8	57.4	56.3	-0.5	Negligible Beneficial	57.2	0.4	Negligible Adverse	44.9	45.4	45.2
35. HUTCHEON LOW DRIVE	Dwelling	56.2	57.0	56.0	-0.5	Negligible Beneficial	57.9	0.4	Negligible Adverse	45.0	46.1	45.8
37. HUTCHEON LOW DRIVE	Dwelling	57.8	58.6	57.5	-0.3	Negligible Beneficial	58.4	0.6	Negligible Adverse	45.8	46.5	46.3

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
39. HUTCHEON LOW DRIVE	Dwelling	57.6	58.4	57.3	-0.3	Negligible Beneficial	58.2	0.6	Negligible Adverse	45.6	46.3	46.1
41. HUTCHEON LOW DRIVE	Dwelling	57.8	58.6	57.5	-0.3	Negligible Beneficial	58.4	0.6	Negligible Adverse	45.8	46.5	46.3
43. HUTCHEON LOW DRIVE	Dwelling	57.9	58.7	57.6	-0.3	Negligible Beneficial	58.5	0.6	Negligible Adverse	45.8	46.6	46.4
45. HUTCHEON LOW DRIVE	Dwelling	55.4	56.2	55.0	-0.4	Negligible Beneficial	55.9	0.5	Negligible Adverse	43.6	44.3	44.0
47. HUTCHEON LOW DRIVE	Dwelling	55.9	56.7	55.7	-0.2	Negligible Beneficial	56.6	0.7	Negligible Adverse	44.0	44.8	44.7
49. HUTCHEON LOW DRIVE	Dwelling	55.7	56.5	55.4	-0.3	Negligible Beneficial	56.3	0.6	Negligible Adverse	43.9	44.6	44.4
5. HUTCHEON LOW DRIVE	Dwelling	61.1	62.1	60.9	-0.2	Negligible Beneficial	61.9	0.8	Negligible Adverse	48.7	49.6	49.4
51. HUTCHEON LOW DRIVE	Dwelling	56.0	56.7	55.7	-0.3	Negligible Beneficial	56.6	0.6	Negligible Adverse	44.1	44.9	44.7
53. HUTCHEON LOW DRIVE	Dwelling	56.0	56.7	55.6	-0.4	Negligible Beneficial	56.5	0.5	Negligible Adverse	44.1	44.8	44.6
55. HUTCHEON LOW DRIVE	Dwelling	56.0	56.7	55.6	-0.4	Negligible Beneficial	56.5	0.5	Negligible Adverse	44.1	44.8	44.6
57. HUTCHEON LOW DRIVE	Dwelling	55.5	56.3	55.0	-0.5	Negligible Beneficial	55.9	0.4	Negligible Adverse	43.7	44.4	44.0
59. HUTCHEON LOW DRIVE	Dwelling	54.9	55.4	54.5	-0.4	Negligible Beneficial	55.4	0.5	Negligible Adverse	43.1	43.6	43.6
61. HUTCHEON LOW DRIVE	Dwelling	55.9	56.3	55.5	-0.4	Negligible Beneficial	56.4	0.5	Negligible Adverse	44.0	44.4	44.5
63. HUTCHEON LOW DRIVE	Dwelling	56.3	56.1	56.0	-0.3	Negligible Beneficial	56.6	0.3	Negligible Adverse	44.4	44.2	44.7
65. HUTCHEON LOW DRIVE	Dwelling	56.1	55.8	56.8	-0.3	Negligible Beneficial	56.4	0.3	Negligible Adverse	44.2	44.0	44.5
67. HUTCHEON LOW DRIVE	Dwelling	55.3	54.8	55.1	-0.2	Negligible Beneficial	55.6	0.3	Negligible Adverse	43.5	43.1	43.8
69. HUTCHEON LOW DRIVE	Dwelling	56.1	55.8	55.9	-0.2	Negligible Beneficial	56.5	0.4	Negligible Adverse	44.2	44.0	44.6
7. HUTCHEON LOW DRIVE	Dwelling	61.9	62.8	61.7	-0.2	Negligible Beneficial	62.7	0.8	Negligible Adverse	49.4	50.3	50.2
71. HUTCHEON LOW DRIVE	Dwelling	56.2	55.9	56.0	-0.2	Negligible Beneficial	56.6	0.4	Negligible Adverse	44.3	44.0	44.7
73. HUTCHEON LOW DRIVE	Dwelling	55.4	54.9	55.3	-0.1	Negligible Beneficial	55.8	0.4	Negligible Adverse	43.6	43.1	44.0
75. HUTCHEON LOW DRIVE	Dwelling	56.0	55.7	55.9	-0.1	Negligible Beneficial	56.4	0.4	Negligible Adverse	44.1	43.9	44.5
77. HUTCHEON LOW DRIVE	Dwelling	54.7	54.2	54.6	-0.1	Negligible Beneficial	55.1	0.4	Negligible Adverse	43.0	42.5	43.3
79. HUTCHEON LOW DRIVE	Dwelling	54.1	53.6	54.0	-0.1	Negligible Beneficial	54.4	0.3	Negligible Adverse	42.4	42.0	42.7
81. HUTCHEON LOW DRIVE	Dwelling	52.3	51.7	52.2	-0.1	Negligible Beneficial	52.5	0.2	Negligible Adverse	40.8	40.3	41.0
83. HUTCHEON LOW DRIVE	Dwelling	52.0	51.0	52.0	-0.1	Negligible Beneficial	53.4	0.3	Negligible Adverse	41.5	41.0	41.8
85. HUTCHEON LOW DRIVE	Dwelling	52.8	52.3	52.8	-0.1	Negligible Beneficial	53.1	0.2	Negligible Adverse	41.3	40.8	41.5
87. HUTCHEON LOW DRIVE	Dwelling	53.1	52.5	53.0	-0.1	Negligible Beneficial	53.4	0.3	Negligible Adverse	41.5	41.0	41.8
89. HUTCHEON LOW DRIVE	Dwelling	54.1	54.4	53.9	-0.2	Negligible Beneficial	54.6	0.5	Negligible Adverse	42.4	42.7	42.9
9. HUTCHEON LOW DRIVE	Dwelling	61.8	62.7	61.6	-0.2	Negligible Beneficial	62.6	0.8	Negligible Adverse	49.4	50.2	50.1
91. HUTCHEON LOW DRIVE	Dwelling	54.0	54.5	53.6	-0.4	Negligible Beneficial	54.5	0.5	Negligible Adverse	42.3	42.8	42.8
93. HUTCHEON LOW DRIVE	Dwelling	53.9	54.6	53.7	-0.2	Negligible Beneficial	54.5	0.6	Negligible Adverse	42.2	42.9	42.8
95. HUTCHEON LOW DRIVE	Dwelling	53.4	53.9	53.0	-0.4	Negligible Beneficial	53.9	0.5	Negligible Adverse	41.8	42.2	42.2
97. HUTCHEON LOW DRIVE	Dwelling	53.0	53.6	52.7	-0.3	Negligible Beneficial	53.6	0.6	Negligible Adverse	41.4	42.0	42.0
99. HUTCHEON LOW DRIVE	Dwelling	53.6	53.9	53.4	-0.2	Negligible Beneficial	54.1	0.5	Negligible Adverse	42.0	42.2	42.4
PERSLEY WALLED GARDEN, HUTCHEON LOW DRIVE	Walled Garden	59.8	60.4	59.6	-0.2	Negligible Beneficial	60.5	0.7	Negligible Adverse	47.6	48.1	48.2
1. HUTCHEON LOW PLACE	Dwelling	55.3	56.2	55.0	-0.3	Negligible Beneficial	56.0	0.7	Negligible Adverse	43.5	44.3	44.1
10. HUTCHEON LOW PLACE	Dwelling	57.2	58.3	57.1	-0.1	Negligible Beneficial	58.1	0.9	Negligible Adverse	45.2	46.2	46.0
101. HUTCHEON LOW PLACE	Dwelling	51.8	52.6	51.4	-0.4	Negligible Beneficial	52.3	0.5	Negligible Adverse	40.4	41.1	40.8
103. HUTCHEON LOW PLACE	Dwelling	51.8	52.6	51.4	-0.4	Negligible Beneficial	52.3	0.5	Negligible Adverse	40.4	41.1	40.8
105. HUTCHEON LOW PLACE	Dwelling	51.8	52.6	51.4	-0.4	Negligible Beneficial	52.3	0.5	Negligible Adverse	40.4	41.1	40.8
107. HUTCHEON LOW PLACE	Dwelling	51.8	52.6	51.4	-0.4	Negligible Beneficial	52.3	0.5	Negligible Adverse	40.4	41.1	40.8
109. HUTCHEON LOW PLACE	Dwelling	51.8	52.6	51.4	-0.4	Negligible Beneficial	52.3	0.5	Negligible Adverse	40.4	41.1	40.8
11. HUTCHEON LOW PLACE	Dwelling	55.3	56.2	55.0	-0.3	Negligible Beneficial	56.0	0.7	Negligible Adverse	43.5	44.3	44.1
111. HUTCHEON LOW PLACE	Dwelling	51.4	52.3	51.2	-0.2	Negligible Beneficial	52.0	0.6	Negligible Adverse	40.0	40.8	40.5
113. HUTCHEON LOW PLACE	Dwelling	51.4	52.3	51.2	-0.2	Negligible Beneficial	52.0	0.6	Negligible Adverse	40.0	40.8	40.5
115. HUTCHEON LOW PLACE	Dwelling	51.4	52.3	51.2	-0.2	Negligible Beneficial	52.0	0.6	Negligible Adverse	40.0	40.8	40.5
117. HUTCHEON LOW PLACE	Dwelling	51.4	52.3	51.2	-0.2	Negligible Beneficial	52.0	0.6	Negligible Adverse	40.0	40.8	40.5
119. HUTCHEON LOW PLACE	Dwelling	51.4	52.3	51.2	-0.2	Negligible Beneficial	52.0	0.6	Negligible Adverse	40.0	40.8	40.5
12. HUTCHEON LOW PLACE	Dwelling	57.2	58.3	57.1	-0.1	Negligible Beneficial	58.1	0.9	Negligible Adverse	45.2	46.2	46.0
121. HUTCHEON LOW PLACE	Dwelling	51.4	52.3	51.2	-0.2	Negligible Beneficial	52.0	0.6	Negligible Adverse	40.0	40.8	40.5
123. HUTCHEON LOW PLACE	Dwelling	52.9	53.9	52.7	-0.2	Negligible Beneficial	53.6	0.7	Negligible Adverse	41.3	42.2	42.0
125. HUTCHEON LOW PLACE	Dwelling	52.9	53.9	52.7	-0.2	Negligible Beneficial	53.6	0.7	Negligible Adverse	41.3	42.2	42.0
127. HUTCHEON LOW PLACE	Dwelling	52.9	53.9	52.7	-0.2	Negligible Beneficial	53.6	0.7	Negligible Adverse	41.3	42.2	42.0
129. HUTCHEON LOW PLACE	Dwelling	52.9	53.9	52.7	-0.2	Negligible Beneficial	53.6	0.7	Negligible Adverse	41.3	42.2	42.0
14. HUTCHEON LOW PLACE	Dwelling	57.2	58.3	57.1	-0.1	Negligible Beneficial	58.1	0.9	Negligible Adverse	45.2	46.2	46.0
15. HUTCHEON LOW PLACE	Dwelling	53.4	54.3	53.3	-0.1	Negligible Beneficial	54.2	0.8	Negligible Adverse	41.8	42.6	42.5
16. HUTCHEON LOW PLACE	Dwelling	57.2	58.3	57.1	-0.1	Negligible Beneficial	58.1	0.9	Negligible Adverse	45.2	46.2	46.0
17. HUTCHEON LOW PLACE	Dwelling	53.4	54.3	53.3	-0.1	Negligible Beneficial	54.2	0.8	Negligible Adverse	41.8	42.6	42.5
18. HUTCHEON LOW PLACE	Dwelling	57.2	58.3	57.1	-0.1	Negligible Beneficial	58.1	0.9	Negligible Adverse	45.2	46.2	46.0
19. HUTCHEON LOW PLACE	Dwelling	53.4	54.3	53.3	-0.1	Negligible Beneficial	54.2	0.8	Negligible Adverse	41.8	42.6	42.5
2. HUTCHEON LOW PLACE	Dwelling	57.2	58.3	57.1	-0.1	Negligible Beneficial	58.1	0.9	Negligible Adverse	45.2	46.2	46.0
20. HUTCHEON LOW PLACE	Dwelling	59.0	60.1	58.9	-0.1	Negligible Beneficial	59.9	0.9	Negligible Adverse	46.8	47.8	47.6
21. HUTCHEON LOW PLACE	Dwelling	53.4	54.3	53.3	-0.1	Negligible Beneficial	54.2	0.8	Negligible Adverse	41.8	42.6	42.5
22. HUTCHEON LOW PLACE	Dwelling	59.0	60.1	58.9	-0.1	Negligible Beneficial	59.9	0.9	Negligible Adverse	46.8	47.8	47.6
23. HUTCHEON LOW PLACE	Dwelling	54.1	55.0	53.8	-0.3	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.2	43.1
24. HUTCHEON LOW PLACE	Dwelling	59.0	60.1	58.9	-0.1	Negligible Beneficial	59.9	0.9	Negligible Adverse	46.8	47.8	47.6
25. HUTCHEON LOW PLACE	Dwelling	54.1	55.0	53.8	-0.3	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.2	43.1
26. HUTCHEON LOW PLACE	Dwelling	59.0	60.1	58.9	-0.1	Negligible Beneficial	59.9	0.9	Negligible Adverse	46.8	47.8	47.6
27. HUTCHEON LOW PLACE	Dwelling	54.1	55.0	53.8	-0.3	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.2	43.1
28. HUTCHEON LOW PLACE	Dwelling	59.0	60.1	58.9	-0.1	Negligible Beneficial	59.9	0.9	Negligible Adverse	46.8	47.8	47.6
29. HUTCHEON LOW PLACE	Dwelling	54.1	55.0	53.8	-0.3	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.2	43.1
3. HUTCHEON LOW PLACE	Dwelling	55.3	56.2	55.0	-0.3	Negligible Beneficial	56.0	0.7	Negligible Adverse	43.5	44.3	44.1
30. HUTCHEON LOW PLACE	Dwelling	59.0	60.1	58.9	-0.1	Negligible Beneficial	59.9	0.9	Negligible Adverse	46.8	47.8	47.6
31. HUTCHEON LOW PLACE	Dwelling	54.1	55.0	53.8	-0.3	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.2	43.1
32. HUTCHEON LOW PLACE	Dwelling	59.0	60.1	58.9	-0.1	Negligible Beneficial	59.9	0.9	Negligible Adverse	46.8	47.8	47.6
33. HUTCHEON LOW PLACE	Dwelling	54.1	55.0	53.8	-0.3	Negligible Beneficial	54.8	0.7	Negligible Adverse	42.4	43.2	43.1
34. HUTCHEON LOW PLACE	Dwelling	59.0	60.1	58.9	-0.1	Negligible Beneficial	59.9	0.9	Negligible Adverse	46.8	47.8	47.6
35. HUTCHEON LOW PLACE	Dwelling	53.0	53.8	52.7	-0.3	Negligible Beneficial	53.5	0.5	Negligible Adverse	41.4	42.2	41.9
36. HUTCHEON LOW PLACE	Dwelling	59.0	60.1	58.9	-0.1	Negligible Beneficial	59.9	0.9	Negligible Adverse	46.8	47.8	47.6
37. HUTCHEON LOW PLACE	Dwelling	53.0	53.8	52.7	-0.3	Negligible Beneficial	53.5	0.5	Negligible Adverse	41.4	42.2	41.9
38. HUTCHEON LOW PLACE	Dwelling	59.0	60.1	58.9	-0.1	Negligible Beneficial	59.9	0.9	Negligible Adverse	46.8	47.8	47.6
39. HUTCHEON LOW PLACE	Dwelling	53.0	53.8	52.7	-0.3	Negligible Beneficial	53.5	0.5	Negligible Adverse	41.4	42.2	41.9
4. HUTCHEON LOW PLACE	Dwelling	57.2	58.3	57.1	-0.1	Negligible Beneficial	58.1	0.9	Negligible Adverse	45.2	46.2	46.0

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
40. HUTCHEON LOW PLACE	Dwelling	59.3	60.3	59.2	-0.1	Negligible Beneficial	60.1	0.8	Negligible Adverse	47.1	48.0	47.8
41. HUTCHEON LOW PLACE	Dwelling	53.0	53.8	52.7	-0.3	Negligible Beneficial	53.5	0.5	Negligible Adverse	41.4	42.2	41.9
42. HUTCHEON LOW PLACE	Dwelling	59.3	60.3	59.2	-0.1	Negligible Beneficial	60.1	0.8	Negligible Adverse	47.1	48.0	47.8
43. HUTCHEON LOW PLACE	Dwelling	53.0	53.8	52.7	-0.3	Negligible Beneficial	53.5	0.5	Negligible Adverse	41.4	42.2	41.9
44. HUTCHEON LOW PLACE	Dwelling	59.3	60.3	59.2	-0.1	Negligible Beneficial	60.1	0.8	Negligible Adverse	47.1	48.0	47.8
45. HUTCHEON LOW PLACE	Dwelling	53.0	53.8	52.7	-0.3	Negligible Beneficial	53.5	0.5	Negligible Adverse	41.4	42.2	41.9
46. HUTCHEON LOW PLACE	Dwelling	59.3	60.3	59.2	-0.1	Negligible Beneficial	60.1	0.8	Negligible Adverse	47.1	48.0	47.8
47. HUTCHEON LOW PLACE	Dwelling	53.0	53.8	52.7	-0.3	Negligible Beneficial	53.5	0.5	Negligible Adverse	41.4	42.2	41.9
48. HUTCHEON LOW PLACE	Dwelling	59.3	60.3	59.2	-0.1	Negligible Beneficial	60.1	0.8	Negligible Adverse	47.1	48.0	47.8
49. HUTCHEON LOW PLACE	Dwelling	53.0	53.8	52.7	-0.3	Negligible Beneficial	53.5	0.5	Negligible Adverse	41.4	42.2	41.9
5. HUTCHEON LOW PLACE	Dwelling	59.3	56.2	55.0	-0.3	Negligible Beneficial	56.0	0.7	Negligible Adverse	43.5	44.3	44.1
50. HUTCHEON LOW PLACE	Dwelling	59.3	60.3	59.2	-0.1	Negligible Beneficial	60.1	0.8	Negligible Adverse	47.1	48.0	47.8
51. HUTCHEON LOW PLACE	Dwelling	50.3	50.2	50.2	-0.1	Negligible Beneficial	51.0	0.7	Negligible Adverse	39.0	38.9	39.6
52. HUTCHEON LOW PLACE	Dwelling	59.3	60.3	59.2	-0.1	Negligible Beneficial	60.1	0.8	Negligible Adverse	47.1	48.0	47.8
53. HUTCHEON LOW PLACE	Dwelling	50.3	50.2	50.2	-0.1	Negligible Beneficial	51.0	0.7	Negligible Adverse	39.0	38.9	39.6
54. HUTCHEON LOW PLACE	Dwelling	59.3	60.3	59.2	-0.1	Negligible Beneficial	60.1	0.8	Negligible Adverse	47.1	48.0	47.8
55. HUTCHEON LOW PLACE	Dwelling	50.3	50.2	50.2	-0.1	Negligible Beneficial	51.0	0.7	Negligible Adverse	39.0	38.9	39.6
56. HUTCHEON LOW PLACE	Dwelling	57.8	58.7	57.6	-0.2	Negligible Beneficial	58.5	0.7	Negligible Adverse	45.8	46.6	46.4
57. HUTCHEON LOW PLACE	Dwelling	50.3	50.2	50.2	-0.1	Negligible Beneficial	51.0	0.7	Negligible Adverse	39.0	38.9	39.6
58. HUTCHEON LOW PLACE	Dwelling	57.8	58.7	57.6	-0.2	Negligible Beneficial	58.5	0.7	Negligible Adverse	45.8	46.6	46.4
59. HUTCHEON LOW PLACE	Dwelling	50.3	50.2	50.2	-0.1	Negligible Beneficial	51.0	0.7	Negligible Adverse	39.0	38.9	39.6
6. HUTCHEON LOW PLACE	Dwelling	57.2	58.3	57.1	-0.1	Negligible Beneficial	58.1	0.9	Negligible Adverse	45.2	46.2	46.0
60. HUTCHEON LOW PLACE	Dwelling	57.8	58.7	57.6	-0.2	Negligible Beneficial	58.5	0.7	Negligible Adverse	45.8	46.6	46.4
61. HUTCHEON LOW PLACE	Dwelling	50.3	50.2	50.2	-0.1	Negligible Beneficial	51.0	0.7	Negligible Adverse	39.0	38.9	39.6
62. HUTCHEON LOW PLACE	Dwelling	57.8	58.7	57.6	-0.2	Negligible Beneficial	58.5	0.7	Negligible Adverse	45.8	46.6	46.4
63. HUTCHEON LOW PLACE	Dwelling	52.2	52.9	51.8	-0.4	Negligible Beneficial	52.7	0.5	Negligible Adverse	40.7	41.3	41.2
64. HUTCHEON LOW PLACE	Dwelling	57.8	58.7	57.6	-0.2	Negligible Beneficial	58.5	0.7	Negligible Adverse	45.8	46.6	46.4
65. HUTCHEON LOW PLACE	Dwelling	52.2	52.9	51.8	-0.4	Negligible Beneficial	52.7	0.5	Negligible Adverse	40.7	41.3	41.2
66. HUTCHEON LOW PLACE	Dwelling	57.8	58.7	57.6	-0.2	Negligible Beneficial	58.5	0.7	Negligible Adverse	45.8	46.6	46.4
67. HUTCHEON LOW PLACE	Dwelling	52.2	52.9	51.8	-0.4	Negligible Beneficial	52.7	0.5	Negligible Adverse	40.7	41.3	41.2
68. HUTCHEON LOW PLACE	Dwelling	57.8	58.7	57.6	-0.2	Negligible Beneficial	58.5	0.7	Negligible Adverse	45.8	46.6	46.4
69. HUTCHEON LOW PLACE	Dwelling	52.2	52.9	51.8	-0.4	Negligible Beneficial	52.7	0.5	Negligible Adverse	40.7	41.3	41.2
7. HUTCHEON LOW PLACE	Dwelling	55.3	56.2	55.0	-0.3	Negligible Beneficial	56.0	0.7	Negligible Adverse	43.5	44.3	44.1
70. HUTCHEON LOW PLACE	Dwelling	57.8	58.7	57.6	-0.2	Negligible Beneficial	58.5	0.7	Negligible Adverse	45.8	46.6	46.4
71. HUTCHEON LOW PLACE	Dwelling	52.2	52.9	51.8	-0.4	Negligible Beneficial	52.7	0.5	Negligible Adverse	40.7	41.3	41.2
72. HUTCHEON LOW PLACE	Dwelling	57.8	58.7	57.6	-0.2	Negligible Beneficial	58.5	0.7	Negligible Adverse	45.8	46.6	46.4
73. HUTCHEON LOW PLACE	Dwelling	52.2	52.9	51.8	-0.4	Negligible Beneficial	52.7	0.5	Negligible Adverse	40.7	41.3	41.2
74. HUTCHEON LOW PLACE	Dwelling	56.0	56.9	55.7	-0.3	Negligible Beneficial	56.7	0.7	Negligible Adverse	44.1	44.9	44.8
75. HUTCHEON LOW PLACE	Dwelling	52.9	53.7	52.5	-0.4	Negligible Beneficial	53.4	0.5	Negligible Adverse	41.3	42.1	41.8
76. HUTCHEON LOW PLACE	Dwelling	51.1	50.8	50.8	-0.3	Negligible Beneficial	50.9	0.7	Negligible Adverse	44.1	44.9	44.8
77. HUTCHEON LOW PLACE	Dwelling	52.9	53.4	52.4	-0.4	Negligible Beneficial	53.4	0.5	Negligible Adverse	41.3	42.1	41.8
78. HUTCHEON LOW PLACE	Dwelling	56.0	56.9	55.7	-0.3	Negligible Beneficial	56.7	0.7	Negligible Adverse	44.1	44.9	44.8
79. HUTCHEON LOW PLACE	Dwelling	52.9	53.7	52.5	-0.4	Negligible Beneficial	53.4	0.5	Negligible Adverse	41.3	42.1	41.8
8. HUTCHEON LOW PLACE	Dwelling	57.2	58.3	57.1	-0.1	Negligible Beneficial	58.1	0.9	Negligible Adverse	45.2	46.2	46.0
80. HUTCHEON LOW PLACE	Dwelling	56.0	56.9	55.7	-0.3	Negligible Beneficial	56.7	0.7	Negligible Adverse	44.1	44.9	44.8
81. HUTCHEON LOW PLACE	Dwelling	52.9	53.7	52.5	-0.4	Negligible Beneficial	53.4	0.5	Negligible Adverse	41.3	42.1	41.8
82. HUTCHEON LOW PLACE	Dwelling	56.0	56.9	55.7	-0.3	Negligible Beneficial	56.7	0.7	Negligible Adverse	44.1	44.9	44.8
83. HUTCHEON LOW PLACE	Dwelling	51.1	50.8	51.0	-0.1	Negligible Beneficial	51.6	0.5	Negligible Adverse	39.7	39.5	40.2
84. HUTCHEON LOW PLACE	Dwelling	56.0	56.9	55.7	-0.3	Negligible Beneficial	56.7	0.7	Negligible Adverse	44.1	44.9	44.8
85. HUTCHEON LOW PLACE	Dwelling	51.1	50.8	51.0	-0.1	Negligible Beneficial	51.6	0.5	Negligible Adverse	39.7	39.5	40.2
86. HUTCHEON LOW PLACE	Dwelling	56.0	56.9	55.7	-0.3	Negligible Beneficial	56.7	0.7	Negligible Adverse	44.1	44.9	44.8
87. HUTCHEON LOW PLACE	Dwelling	51.1	50.8	51.0	-0.1	Negligible Beneficial	51.6	0.5	Negligible Adverse	39.7	39.5	40.2
88. HUTCHEON LOW PLACE	Dwelling	56.0	56.9	55.7	-0.3	Negligible Beneficial	56.7	0.7	Negligible Adverse	44.1	44.9	44.8
89. HUTCHEON LOW PLACE	Dwelling	51.1	50.8	51.0	-0.1	Negligible Beneficial	51.6	0.5	Negligible Adverse	39.7	39.5	40.2
9. HUTCHEON LOW PLACE	Dwelling	55.3	56.2	55.0	-0.3	Negligible Beneficial	56.0	0.7	Negligible Adverse	43.5	44.3	44.1
90. HUTCHEON LOW PLACE	Dwelling	56.0	56.9	55.7	-0.3	Negligible Beneficial	56.7	0.7	Negligible Adverse	44.1	44.9	44.8
91. HUTCHEON LOW PLACE	Dwelling	51.1	50.8	51.0	-0.1	Negligible Beneficial	51.6	0.5	Negligible Adverse	39.7	39.5	40.2
93. HUTCHEON LOW PLACE	Dwelling	51.1	50.8	51.0	-0.1	Negligible Beneficial	51.6	0.5	Negligible Adverse	39.7	39.5	40.2
95. HUTCHEON LOW PLACE	Dwelling	51.8	52.6	51.4	-0.4	Negligible Beneficial	52.3	0.5	Negligible Adverse	40.4	41.1	40.8
97. HUTCHEON LOW PLACE	Dwelling	51.8	52.6	51.4	-0.4	Negligible Beneficial	52.3	0.5	Negligible Adverse	40.4	41.1	40.8
99. HUTCHEON LOW PLACE	Dwelling	51.8	52.6	51.4	-0.4	Negligible Beneficial	52.3	0.5	Negligible Adverse	40.4	41.1	40.8
1. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	54.3	55.1	54.1	-0.2	Negligible Beneficial	55.6	1.3	Negligible Adverse	42.6	43.3	43.8
10. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	55.5	56.3	55.3	-0.2	Negligible Beneficial	56.8	1.3	Negligible Adverse	43.7	44.4	44.9
11. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	67.5	68.4	67.2	-0.3	Negligible Beneficial	68.8	1.3	Negligible Adverse	54.5	55.3	55.7
12. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	56.3	57.1	56.1	-0.2	Negligible Beneficial	57.6	1.3	Negligible Adverse	44.4	45.1	45.6
14. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	58.6	59.5	58.4	-0.2	Negligible Beneficial	60.0	1.4	Negligible Adverse	46.5	47.3	47.7
16. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	69.2	70.0	69.0	-0.2	Negligible Beneficial	71.5	1.3	Negligible Adverse	47.9	48.6	49.1
17. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	69.5	70.7	69.5	-0.2	Negligible Beneficial	71.1	1.4	Negligible Adverse	56.5	57.4	57.7
18. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	63.9	63.7	63.7	-0.2	Negligible Beneficial	65.3	1.4	Negligible Adverse	51.2	52.1	52.5
19. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	69.6	70.5	69.3	-0.3	Negligible Beneficial	70.9	1.3	Negligible Adverse	56.4	57.2	57.5
2. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	53.7	54.5	53.5	-0.2	Negligible Beneficial	55.0	1.3	Negligible Adverse	42.1	42.8	43.2
20. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	64.6	65.5	64.4	-0.2	Negligible Beneficial	65.9	1.3	Negligible Adverse	51.9	52.7	53.0
3. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	55.4	56.2	55.1	-0.3	Negligible Beneficial	56.7	1.3	Negligible Adverse	43.6	44.3	44.8
4. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	53.6	54.4	53.4	-0.2	Negligible Beneficial	54.9	1.3	Negligible Adverse	42.0	42.7	43.1
5. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	57.7	58.5	57.5	-0.2	Negligible Beneficial	59.0	1.3	Negligible Adverse	45.7	46.4	46.8
6. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	54.5	55.3	54.3	-0.2	Negligible Beneficial	55.8	1.3	Negligible Adverse	42.8	43.5	44.0
7. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	56.8	57.7	56.6	-0.2	Negligible Beneficial	58.1	1.3	Negligible Adverse	44.9	45.7	46.0
8. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	54.7	55.5	54.5	-0.2	Negligible Beneficial	56.0	1.3	Negligible Adverse	43.0	43.7	44.1
9. JOHN PARK PLACE, BRIDGE OF DON	Dwelling	57.4	58.3	57.2	-0.2	Negligible Beneficial	58.8	1.4	Negligible Adverse	45.4	46.2	46.7
10. KEMP STREET	Dwelling	58.4	59.8	58.4	0.0	No Change	59.8	1.4	Negligible Adverse	46.3	47.6	47.6
11. KEMP STREET	Dwelling	51.3	51.1	51.1	-0.2	Negligible Beneficial	52.3	1.0	Negligible Adverse	39.9	40.8	40.8
11. KEMP STREET	Dwelling	53.7	54.9	53.6	-0.1	Negligible Beneficial	54.9	1.2	Negligible Adverse	42.1	43.1	43.1
12. KEMP STREET	Dwelling	51.3	52.4	51.1	-0.2	Negligible Beneficial	52.3	1.0	Negligible Adverse	39.9	40.9	40.8

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
13. KEMP STREET	Dwelling	52.2	53.2	52.1	-0.1	Negligible Beneficial	53.3	1.1	Negligible Adverse	40.7	41.6	41.7
14. KEMP STREET	Dwelling	51.3	52.4	51.1	-0.2	Negligible Beneficial	52.3	1.0	Negligible Adverse	39.9	40.9	40.8
15. KEMP STREET	Dwelling	52.2	53.2	52.1	-0.1	Negligible Beneficial	53.3	1.1	Negligible Adverse	40.7	41.6	41.7
16. KEMP STREET	Dwelling	51.3	52.4	51.1	-0.2	Negligible Beneficial	52.3	1.0	Negligible Adverse	39.9	40.9	40.8
17. KEMP STREET	Dwelling	52.2	53.2	52.1	-0.1	Negligible Beneficial	53.3	1.1	Negligible Adverse	40.7	41.6	41.7
18. KEMP STREET	Dwelling	50.9	51.8	50.7	-0.2	Negligible Beneficial	51.9	1.0	Negligible Adverse	39.5	40.4	40.4
19. KEMP STREET	Dwelling	52.2	53.2	52.1	-0.1	Negligible Beneficial	53.3	1.1	Negligible Adverse	40.7	41.6	41.7
2. KEMP STREET	Dwelling	51.2	52.4	51.1	-0.1	Negligible Beneficial	52.3	1.1	Negligible Adverse	39.8	40.9	40.8
20. KEMP STREET	Dwelling	50.8	51.8	50.7	-0.1	Negligible Beneficial	51.9	1.1	Negligible Adverse	39.5	40.4	40.4
21. KEMP STREET	Dwelling	51.2	52.0	51.1	-0.1	Negligible Beneficial	52.2	1.0	Negligible Adverse	39.8	40.5	40.7
22. KEMP STREET	Dwelling	50.9	51.8	50.8	-0.1	Negligible Beneficial	51.9	1.0	Negligible Adverse	39.5	40.4	40.4
23. KEMP STREET	Dwelling	50.7	51.4	50.6	-0.1	Negligible Beneficial	51.6	0.9	Negligible Adverse	39.4	40.0	40.2
24. KEMP STREET	Dwelling	50.9	51.8	50.8	-0.1	Negligible Beneficial	51.9	1.0	Negligible Adverse	39.5	40.4	40.4
25. KEMP STREET	Dwelling	49.4	49.9	49.3	-0.1	Negligible Beneficial	50.2	0.8	Negligible Adverse	38.2	38.6	38.9
26. KEMP STREET	Dwelling	50.7	51.5	50.6	-0.1	Negligible Beneficial	51.6	0.9	Negligible Adverse	39.4	40.1	40.2
27. KEMP STREET	Dwelling	49.4	49.9	49.3	-0.1	Negligible Beneficial	50.2	0.8	Negligible Adverse	38.2	38.6	38.9
28. KEMP STREET	Dwelling	50.7	51.5	50.6	-0.1	Negligible Beneficial	51.6	0.9	Negligible Adverse	39.4	40.1	40.2
3. KEMP STREET	Dwelling	57.1	58.5	57.1	0.0	No Change	58.4	1.3	Negligible Adverse	45.1	46.4	46.3
30. KEMP STREET	Dwelling	50.7	51.5	50.6	-0.1	Negligible Beneficial	51.6	0.9	Negligible Adverse	39.4	40.1	40.2
32. KEMP STREET	Dwelling	50.7	51.5	50.6	-0.1	Negligible Beneficial	51.6	0.9	Negligible Adverse	39.4	40.1	40.2
34. KEMP STREET	Dwelling	50.0	50.8	49.9	-0.1	Negligible Beneficial	50.9	0.9	Negligible Adverse	38.7	39.5	39.5
36. KEMP STREET	Dwelling	50.0	50.8	49.9	-0.1	Negligible Beneficial	50.9	0.9	Negligible Adverse	38.7	39.5	39.5
38. KEMP STREET	Dwelling	50.0	50.8	49.9	-0.1	Negligible Beneficial	50.9	0.9	Negligible Adverse	38.7	39.5	39.5
4. KEMP STREET	Dwelling	51.2	52.4	51.1	-0.1	Negligible Beneficial	52.3	1.1	Negligible Adverse	39.8	40.9	40.8
40. KEMP STREET	Dwelling	50.0	50.8	49.9	-0.1	Negligible Beneficial	50.9	0.9	Negligible Adverse	38.7	39.5	39.5
42. KEMP STREET	Dwelling	49.5	49.3	49.3	-0.2	Negligible Beneficial	50.3	0.8	Negligible Adverse	38.3	39.1	39.0
44. KEMP STREET	Dwelling	49.5	50.4	49.3	-0.2	Negligible Beneficial	50.3	0.8	Negligible Adverse	38.3	39.1	39.0
5. KEMP STREET	Dwelling	53.7	54.9	53.6	-0.1	Negligible Beneficial	54.9	1.2	Negligible Adverse	42.1	43.1	43.1
6. KEMP STREET	Dwelling	51.2	52.4	51.1	-0.1	Negligible Beneficial	52.3	1.1	Negligible Adverse	39.8	40.9	40.8
7. KEMP STREET	Dwelling	53.7	54.9	53.6	-0.1	Negligible Beneficial	54.9	1.2	Negligible Adverse	42.1	43.1	43.1
8. KEMP STREET	Dwelling	51.2	52.4	51.1	-0.1	Negligible Beneficial	52.3	1.1	Negligible Adverse	39.8	40.9	40.8
9. KEMP STREET	Dwelling	53.7	54.9	53.6	-0.1	Negligible Beneficial	54.9	1.2	Negligible Adverse	42.1	43.1	43.1
32. KETTLEHILLS CRESCENT	Dwelling	48.1	47.3	48.0	-0.1	Negligible Beneficial	48.3	0.2	Negligible Adverse	37.0	36.3	37.2
33. KETTLEHILLS CRESCENT	Dwelling	48.1	47.3	48.1	0.0	No Change	48.4	0.3	Negligible Adverse	37.0	36.3	37.3
34. KETTLEHILLS CRESCENT	Dwelling	48.1	47.2	48.0	-0.1	Negligible Beneficial	48.3	0.2	Negligible Adverse	37.0	36.2	37.2
35. KETTLEHILLS CRESCENT	Dwelling	47.8	46.9	47.7	-0.1	Negligible Beneficial	48.0	0.2	Negligible Adverse	36.8	35.9	36.9
36. KETTLEHILLS CRESCENT	Dwelling	47.6	46.7	47.5	-0.1	Negligible Beneficial	47.8	0.2	Negligible Adverse	36.6	35.8	36.8
37. KETTLEHILLS CRESCENT	Dwelling	47.7	46.8	47.7	0.0	No Change	48.0	0.3	Negligible Adverse	36.7	35.9	36.9
38. KETTLEHILLS CRESCENT	Dwelling	47.4	46.5	47.3	-0.1	Negligible Beneficial	47.6	0.2	Negligible Adverse	36.4	35.6	36.6
39. KETTLEHILLS CRESCENT	Dwelling	47.5	46.6	47.4	-0.1	Negligible Beneficial	47.7	0.2	Negligible Adverse	36.5	35.7	36.7
40. KETTLEHILLS CRESCENT	Dwelling	47.3	46.4	47.3	0.0	No Change	47.5	0.2	Negligible Adverse	36.3	35.5	36.5
41. KETTLEHILLS CRESCENT	Dwelling	45.5	45.3	45.4	-0.1	Negligible Beneficial	46.0	0.5	Negligible Adverse	34.7	34.5	35.1
42. KETTLEHILLS CRESCENT	Dwelling	44.9	44.9	44.9	0.0	No Change	45.5	0.6	Negligible Adverse	34.1	34.1	34.7
43. KETTLEHILLS CRESCENT	Dwelling	43.5	43.9	43.4	-0.1	Negligible Beneficial	44.2	0.7	Negligible Adverse	32.9	33.2	33.5
44. KETTLEHILLS CRESCENT	Dwelling	43.3	43.8	43.3	0.0	No Change	44.1	0.8	Negligible Adverse	32.7	33.2	33.4
1. KETTLEHILLS LANE	Dwelling	44.7	44.8	44.6	-0.1	Negligible Beneficial	45.3	0.6	Negligible Adverse	34.0	34.1	34.5
2. KETTLEHILLS LANE	Dwelling	43.5	43.9	43.4	-0.1	Negligible Beneficial	44.2	0.7	Negligible Adverse	32.9	33.2	33.5
3. KETTLEHILLS LANE	Dwelling	43.3	43.1	43.2	-0.1	Negligible Beneficial	43.8	0.5	Negligible Adverse	32.7	32.5	33.2
4. KETTLEHILLS LANE	Dwelling	43.3	43.7	43.3	0.0	No Change	44.0	0.7	Negligible Adverse	32.7	33.1	33.3
6. KETTLEHILLS LANE	Dwelling	42.5	43.2	42.4	-0.1	Negligible Beneficial	43.3	0.8	Negligible Adverse	32.0	32.6	32.7
187. KING STREET	Dwelling	49.7	50.1	49.7	0.0	No Change	50.0	0.3	Negligible Adverse	38.5	38.8	38.7
21. KING STREET	Dwelling	49.7	50.1	49.7	0.0	No Change	50.0	0.3	Negligible Adverse	38.5	38.8	38.7
21. KING STREET	Dwelling	49.7	50.1	49.7	0.0	No Change	50.0	0.3	Negligible Adverse	38.5	38.8	38.7
11. KING STREET, WOODSIDE	Dwelling	49.6	50.3	49.7	0.1	Negligible Adverse	50.5	0.9	Negligible Adverse	38.4	39.0	39.2
13. KING STREET, WOODSIDE	Dwelling	49.6	50.3	49.7	0.1	Negligible Adverse	50.5	0.9	Negligible Adverse	38.4	39.0	39.2
15. KING STREET, WOODSIDE	Dwelling	49.6	50.3	49.7	0.1	Negligible Adverse	50.5	0.9	Negligible Adverse	38.4	39.0	39.2
5. KING STREET, WOODSIDE	Dwelling	51.9	52.7	52.0	0.1	Negligible Adverse	52.8	0.9	Negligible Adverse	40.4	41.2	41.3
7. KING STREET, WOODSIDE	Dwelling	51.2	51.9	51.3	0.1	Negligible Beneficial	52.1	0.9	Negligible Adverse	39.8	40.4	40.6
KINMUNDY, KINMUNDY, LAUREL LANE, BRIDGE OF DON	Dwelling	58.8	59.2	58.7	-0.1	Negligible Beneficial	59.5	0.7	Negligible Adverse	46.7	47.0	47.3
1. LABURNUM WALK	Dwelling	51.8	52.4	51.8	0.0	No Change	52.4	0.6	Negligible Adverse	40.4	40.9	40.9
11. LABURNUM WALK	Dwelling	54.5	54.8	54.6	0.1	Negligible Adverse	54.9	0.4	Negligible Adverse	42.8	43.1	43.1
13. LABURNUM WALK	Dwelling	56.5	56.8	56.1	0.1	Negligible Adverse	56.9	0.4	Negligible Adverse	44.6	44.9	44.9
15. LABURNUM WALK	Dwelling	56.6	57.0	56.7	0.1	Negligible Adverse	57.0	0.4	Negligible Adverse	44.7	45.0	45.0
17. LABURNUM WALK	Dwelling	62.3	62.6	62.5	0.2	Negligible Adverse	62.6	0.3	Negligible Adverse	49.8	50.1	50.1
19. LABURNUM WALK	Dwelling	62.3	62.6	62.5	0.2	Negligible Adverse	62.6	0.3	Negligible Adverse	49.8	50.1	50.1
2. LABURNUM WALK	Dwelling	49.9	50.6	49.9	0.0	No Change	50.5	0.6	Negligible Adverse	38.6	39.3	39.2
21. LABURNUM WALK	Dwelling	62.3	62.6	62.5	0.2	Negligible Adverse	62.6	0.3	Negligible Adverse	49.8	50.1	50.1
23. LABURNUM WALK	Dwelling	62.3	62.6	62.5	0.2	Negligible Adverse	62.6	0.3	Negligible Adverse	49.8	50.1	50.1
25. LABURNUM WALK	Dwelling	62.3	62.6	62.5	0.2	Negligible Adverse	62.6	0.3	Negligible Adverse	49.8	50.1	50.1
27. LABURNUM WALK	Dwelling	62.3	62.6	62.5	0.2	Negligible Adverse	62.6	0.3	Negligible Adverse	49.8	50.1	50.1
29. LABURNUM WALK	Dwelling	62.3	62.6	62.5	0.2	Negligible Adverse	62.6	0.3	Negligible Adverse	49.8	50.1	50.1
3. LABURNUM WALK	Dwelling	52.0	52.5	52.0	0.0	No Change	52.5	0.5	Negligible Adverse	40.5	41.0	41.0
31. LABURNUM WALK	Dwelling	62.3	62.6	62.5	0.2	Negligible Adverse	62.6	0.3	Negligible Adverse	49.8	50.1	50.1
33. LABURNUM WALK	Dwelling	64.1	64.3	64.2	0.1	Negligible Adverse	64.4	0.3	Negligible Adverse	51.4	51.6	51.7
35. LABURNUM WALK	Dwelling	64.1	64.3	64.2	0.1	Negligible Adverse	64.4	0.3	Negligible Adverse	51.4	51.6	51.7
37. LABURNUM WALK	Dwelling	64.1	64.3	64.2	0.1	Negligible Adverse	64.4	0.3	Negligible Adverse	51.4	51.6	51.7
39. LABURNUM WALK	Dwelling	64.1	64.3	64.2	0.1	Negligible Adverse	64.4	0.3	Negligible Adverse	51.4	51.6	51.7
4. LABURNUM WALK	Dwelling	48.3	49.1	48.3	0.0	No Change	49.0	0.7	Negligible Adverse	37.2	37.9	37.8
41. LABURNUM WALK	Dwelling	64.1	64.3	64.2	0.1	Negligible Adverse	64.4	0.3	Negligible Adverse	51.4	51.6	51.7
43. LABURNUM WALK	Dwelling	64.1	64.3	64.2	0.1	Negligible Adverse	64.4	0.3	Negligible Adverse	51.4	51.6	51.7
45. LABURNUM WALK	Dwelling	64.1	64.3	64.2	0.1	Negligible Adverse	64.4	0.3	Negligible Adverse	51.4	51.6	51.7
47. LABURNUM WALK	Dwelling	64.1	64.3	64.2	0.1	Negligible Adverse	64.4	0.3	Negligible Adverse	51.4	51.6	51.7
49. LABURNUM WALK	Dwelling	68.2	68.4	68.4	0.2	Negligible Adverse	68.5	0.3	Negligible Adverse	55.1	55.3	55.4

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
5. LABURNUM WALK	Dwelling	52.9	53.3	52.9	0.0	No Change	53.3	0.4	Negligible Adverse	41.3	41.7	41.7
51. LABURNUM WALK	Dwelling	68.2	68.4	68.4	0.2	Negligible Adverse	68.5	0.3	Negligible Adverse	55.1	55.3	55.4
53. LABURNUM WALK	Dwelling	68.2	68.4	68.4	0.2	Negligible Adverse	68.5	0.3	Negligible Adverse	55.1	55.3	55.4
55. LABURNUM WALK	Dwelling	68.2	68.4	68.4	0.2	Negligible Adverse	68.5	0.3	Negligible Adverse	55.1	55.3	55.4
57. LABURNUM WALK	Dwelling	68.2	68.4	68.4	0.2	Negligible Adverse	68.5	0.3	Negligible Adverse	55.1	55.3	55.4
59. LABURNUM WALK	Dwelling	68.2	68.4	68.4	0.2	Negligible Adverse	68.5	0.3	Negligible Adverse	55.1	55.3	55.4
6. LABURNUM WALK	Dwelling	52.0	52.5	52.1	0.1	Negligible Adverse	52.5	0.5	Negligible Adverse	40.5	41.0	41.0
61. LABURNUM WALK	Dwelling	68.2	68.4	68.4	0.2	Negligible Adverse	68.5	0.3	Negligible Adverse	55.1	55.3	55.4
63. LABURNUM WALK	Dwelling	68.2	68.4	68.4	0.2	Negligible Adverse	68.5	0.3	Negligible Adverse	55.1	55.3	55.4
7. LABURNUM WALK	Dwelling	54.2	54.5	54.3	0.1	Negligible Beneficial	54.6	0.4	Negligible Adverse	42.5	42.8	42.9
9. LABURNUM WALK	Dwelling	54.3	54.6	54.4	0.1	Negligible Adverse	54.7	0.4	Negligible Adverse	42.6	42.9	43.0
LADESIDE COTTAGE, 2. GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	47.8	48.0	47.6	-0.2	Negligible Beneficial	48.6	0.8	Negligible Adverse	36.8	36.9	37.5
LADESIDE COTTAGE, 3. GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	47.9	48.4	47.8	-0.1	Negligible Beneficial	49.0	1.1	Negligible Adverse	36.8	37.3	37.8
LADESIDE COTTAGE, 4. GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	48.0	48.2	47.8	-0.2	Negligible Beneficial	48.8	0.8	Negligible Adverse	36.9	37.1	37.7
1. LARCH ROAD	Dwelling	56.8	57.0	56.8	0.0	No Change	57.1	0.3	Negligible Adverse	44.9	45.0	45.1
10. LARCH ROAD	Dwelling	64.3	64.5	64.3	0.0	No Change	64.6	0.3	Negligible Adverse	51.6	51.8	51.9
11. LARCH ROAD	Dwelling	57.7	58.0	57.7	0.0	No Change	58.0	0.3	Negligible Adverse	45.7	45.9	45.9
12. LARCH ROAD	Dwelling	64.3	64.5	64.3	0.0	No Change	64.6	0.3	Negligible Adverse	51.6	51.8	51.9
14. LARCH ROAD	Dwelling	64.3	64.5	64.3	0.0	No Change	64.6	0.3	Negligible Adverse	51.6	51.8	51.9
16. LARCH ROAD	Dwelling	64.3	64.5	64.3	0.0	No Change	64.6	0.3	Negligible Adverse	51.6	51.8	51.9
18. LARCH ROAD	Dwelling	66.8	67.0	66.8	0.0	No Change	67.1	0.3	Negligible Adverse	53.9	54.0	54.1
2. LARCH ROAD	Dwelling	64.3	64.5	64.3	0.0	No Change	64.6	0.3	Negligible Adverse	51.6	51.8	51.9
20. LARCH ROAD	Dwelling	66.8	67.0	66.8	0.0	No Change	67.1	0.3	Negligible Adverse	53.9	54.0	54.1
22. LARCH ROAD	Dwelling	66.8	67.0	66.8	0.0	No Change	67.1	0.3	Negligible Adverse	53.9	54.0	54.1
24. LARCH ROAD	Dwelling	66.8	67.0	66.8	0.0	No Change	67.1	0.3	Negligible Adverse	53.9	54.0	54.1
26. LARCH ROAD	Dwelling	66.8	67.0	66.8	0.0	No Change	67.1	0.3	Negligible Adverse	53.9	54.0	54.1
28. LARCH ROAD	Dwelling	66.8	67.0	66.8	0.0	No Change	67.1	0.3	Negligible Adverse	53.9	54.0	54.1
3. LARCH ROAD	Dwelling	57.0	57.3	57.0	0.0	No Change	57.4	0.4	Negligible Adverse	45.0	45.3	45.4
30. LARCH ROAD	Dwelling	66.8	67.0	66.8	0.0	No Change	67.1	0.3	Negligible Adverse	53.9	54.0	54.1
32. LARCH ROAD	Dwelling	66.8	67.0	66.8	0.0	No Change	67.1	0.3	Negligible Adverse	53.9	54.0	54.1
34. LARCH ROAD	Dwelling	69.4	69.7	69.3	-0.1	Negligible Beneficial	69.8	0.4	Negligible Adverse	56.2	56.5	56.6
36. LARCH ROAD	Dwelling	69.4	69.7	69.3	-0.1	Negligible Beneficial	69.8	0.4	Negligible Adverse	56.2	56.5	56.6
38. LARCH ROAD	Dwelling	69.4	69.7	69.3	-0.1	Negligible Beneficial	69.8	0.4	Negligible Adverse	56.2	56.5	56.6
4. LARCH ROAD	Dwelling	64.3	64.5	64.3	0.0	No Change	64.6	0.3	Negligible Adverse	51.6	51.8	51.9
40. LARCH ROAD	Dwelling	69.4	69.7	69.3	-0.1	Negligible Beneficial	69.8	0.4	Negligible Adverse	56.2	56.5	56.6
42. LARCH ROAD	Dwelling	69.4	69.7	69.3	-0.1	Negligible Beneficial	69.8	0.4	Negligible Adverse	56.2	56.5	56.6
44. LARCH ROAD	Dwelling	69.4	69.7	69.3	-0.1	Negligible Beneficial	69.8	0.4	Negligible Adverse	56.2	56.5	56.6
46. LARCH ROAD	Dwelling	69.4	69.7	69.3	-0.1	Negligible Beneficial	69.8	0.4	Negligible Adverse	56.2	56.5	56.6
48. LARCH ROAD	Dwelling	69.4	69.7	69.3	-0.1	Negligible Beneficial	69.8	0.4	Negligible Adverse	56.2	56.5	56.6
5. LARCH ROAD	Dwelling	57.4	57.6	57.4	0.0	No Change	57.7	0.3	Negligible Adverse	45.4	45.6	45.7
6. LARCH ROAD	Dwelling	64.3	64.5	64.3	0.0	No Change	64.6	0.3	Negligible Adverse	51.6	51.8	51.9
7. LARCH ROAD	Dwelling	57.5	57.8	57.5	0.0	No Change	57.8	0.3	Negligible Adverse	45.5	45.8	45.8
8. LARCH ROAD	Dwelling	64.3	64.5	64.3	0.0	No Change	64.6	0.3	Negligible Adverse	51.6	51.8	51.9
9. LARCH ROAD	Dwelling	57.3	57.6	57.2	-0.1	Negligible Beneficial	57.7	0.4	Negligible Adverse	45.3	45.6	45.7
1. LAUREL AVENUE, DANESTONE	Dwelling	54.2	54.9	54.0	-0.2	Negligible Beneficial	54.9	0.7	Negligible Adverse	42.5	43.1	43.1
10. LAUREL AVENUE, DANESTONE	Dwelling	52.3	52.8	52.1	-0.2	Negligible Beneficial	53.0	0.7	Negligible Adverse	40.8	41.3	41.4
100. LAUREL AVENUE, DANESTONE	Dwelling	53.1	53.8	53.0	-0.1	Negligible Beneficial	54.3	1.2	Negligible Adverse	41.5	42.2	42.6
102. LAUREL AVENUE, DANESTONE	Dwelling	53.6	54.2	53.4	-0.2	Negligible Beneficial	54.8	1.2	Negligible Adverse	42.0	42.5	43.1
104. LAUREL AVENUE, DANESTONE	Dwelling	54.0	54.7	53.8	-0.2	Negligible Beneficial	55.2	1.2	Negligible Adverse	42.3	43.0	43.4
106. LAUREL AVENUE, DANESTONE	Dwelling	54.7	55.4	54.5	-0.2	Negligible Beneficial	55.9	1.2	Negligible Adverse	43.0	43.6	44.0
108. LAUREL AVENUE, DANESTONE	Dwelling	54.1	54.8	53.9	-0.2	Negligible Beneficial	55.3	1.2	Negligible Adverse	42.4	43.1	43.5
11. LAUREL AVENUE, DANESTONE	Dwelling	54.0	54.6	53.8	-0.2	Negligible Beneficial	55.0	1.0	Negligible Adverse	42.3	42.9	43.2
110. LAUREL AVENUE, DANESTONE	Dwelling	54.4	55.1	54.2	-0.2	Negligible Beneficial	55.6	1.2	Negligible Adverse	42.7	43.3	43.8
112. LAUREL AVENUE, DANESTONE	Dwelling	59.0	59.6	58.8	-0.2	Negligible Beneficial	60.1	1.1	Negligible Adverse	46.8	47.4	47.8
114. LAUREL AVENUE, DANESTONE	Dwelling	60.9	61.6	60.7	-0.2	Negligible Beneficial	62.1	1.2	Negligible Adverse	48.5	49.2	49.6
12. LAUREL AVENUE, DANESTONE	Dwelling	52.3	52.8	52.1	-0.2	Negligible Beneficial	53.0	0.7	Negligible Adverse	40.8	41.3	41.4
14. LAUREL AVENUE, DANESTONE	Dwelling	51.5	51.9	51.4	-0.1	Negligible Beneficial	52.3	0.8	Negligible Adverse	40.1	40.4	40.8
15. LAUREL AVENUE, DANESTONE	Dwelling	53.5	54.3	53.3	-0.2	Negligible Beneficial	54.7	1.2	Negligible Adverse	41.9	42.6	43.0
16. LAUREL AVENUE, DANESTONE	Dwelling	51.5	51.9	51.4	-0.1	Negligible Beneficial	52.3	0.8	Negligible Adverse	40.1	40.4	40.8
17. LAUREL AVENUE, DANESTONE	Dwelling	53.8	54.5	53.6	-0.2	Negligible Beneficial	55.0	1.2	Negligible Adverse	42.2	42.8	43.2
18. LAUREL AVENUE, DANESTONE	Dwelling	51.5	51.9	51.4	-0.1	Negligible Adverse	52.3	0.8	Negligible Adverse	40.1	40.4	40.8
19. LAUREL AVENUE, DANESTONE	Dwelling	59.3	60.0	59.1	-0.2	Negligible Beneficial	60.5	1.2	Negligible Adverse	47.1	47.7	48.2
2. LAUREL AVENUE, DANESTONE	Dwelling	52.3	52.8	52.1	-0.2	Negligible Beneficial	53.0	0.7	Negligible Adverse	40.8	41.3	41.4
20. LAUREL AVENUE, DANESTONE	Dwelling	51.4	51.9	51.4	-0.1	Negligible Beneficial	52.3	0.8	Negligible Adverse	40.1	40.4	40.8
21. LAUREL AVENUE, DANESTONE	Dwelling	56.3	57.0	56.1	-0.2	Negligible Beneficial	57.3	1.2	Negligible Adverse	44.4	45.0	45.5
22. LAUREL AVENUE, DANESTONE	Dwelling	51.5	51.9	51.4	-0.1	Negligible Beneficial	52.3	0.8	Negligible Adverse	40.1	40.4	40.8
23. LAUREL AVENUE, DANESTONE	Dwelling	60.7	61.3	60.5	-0.2	Negligible Beneficial	61.8	1.1	Negligible Adverse	48.4	48.9	49.4
24. LAUREL AVENUE, DANESTONE	Dwelling	51.5	51.9	51.4	-0.1	Negligible Beneficial	52.3	0.8	Negligible Adverse	40.1	40.4	40.8
25. LAUREL AVENUE, DANESTONE	Dwelling	61.0	61.6	60.8	-0.2	Negligible Beneficial	62.1	1.1	Negligible Adverse	48.6	49.2	49.6
26. LAUREL AVENUE, DANESTONE	Dwelling	50.2	50.8	50.0	-0.2	Negligible Beneficial	51.3	1.1	Negligible Adverse	38.9	39.5	39.9
27. LAUREL AVENUE, DANESTONE	Dwelling	62.4	63.1	62.2	-0.2	Negligible Beneficial	63.6	1.2	Negligible Adverse	49.9	50.5	51.0
28. LAUREL AVENUE, DANESTONE	Dwelling	52.6	53.4	52.4	-0.2	Negligible Beneficial	53.8	1.2	Negligible Adverse	41.1	41.8	42.2
29. LAUREL AVENUE, DANESTONE	Dwelling	62.8	63.5	62.6	-0.2	Negligible Beneficial	64.0	1.2	Negligible Adverse	50.3	50.9	51.3
3. LAUREL AVENUE, DANESTONE	Dwelling	57.3	58.5	57.3	0.0	No Change	57.8	0.5	Negligible Adverse	45.3	46.4	45.8
30. LAUREL AVENUE, DANESTONE	Dwelling	52.4	52.9	52.3	-0.1	Negligible Beneficial	53.3	0.9	Negligible Adverse	40.9	41.3	41.7
31. LAUREL AVENUE, DANESTONE	Dwelling	63.5	64.3	63.3	-0.2	Negligible Beneficial	64.8	1.3	Negligible Adverse	50.9	51.6	52.1
32. LAUREL AVENUE, DANESTONE	Dwelling	52.4	52.9	52.3	-0.1	Negligible Beneficial	53.3	0.9	Negligible Adverse	40.9	41.3	41.7
33. LAUREL AVENUE, DANESTONE	Dwelling	63.5	64.3	63.3	-0.2	Negligible Beneficial	64.8	1.3	Negligible Adverse	50.9	51.6	52.1
34. LAUREL AVENUE, DANESTONE	Dwelling	52.4	52.9	52.3	-0.1	Negligible Beneficial	53.3	0.9	Negligible Adverse	40.9	41.3	41.7
35. LAUREL AVENUE, DANESTONE	Dwelling	63.8	64.5	63.6	-0.2	Negligible Beneficial	65.0	1.2	Negligible Adverse	51.2	51.8	52.2

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
36. LAUREL AVENUE, DANESTONE	Dwelling	52.4	52.9	52.3	-0.1	Negligible Beneficial	53.3	0.9	Negligible Adverse	40.9	41.3	41.7
37. LAUREL AVENUE, DANESTONE	Dwelling	54.3	55.1	54.1	-0.2	Negligible Beneficial	55.6	1.3	Negligible Adverse	42.6	43.3	43.8
38. LAUREL AVENUE, DANESTONE	Dwelling	52.4	52.9	52.3	-0.1	Negligible Beneficial	53.3	0.9	Negligible Adverse	40.9	41.3	41.7
39. LAUREL AVENUE, DANESTONE	Dwelling	54.5	55.1	54.3	-0.2	Negligible Beneficial	55.6	1.1	Negligible Adverse	42.8	43.3	43.8
4. LAUREL AVENUE, DANESTONE	Dwelling	52.3	52.8	52.1	-0.2	Negligible Beneficial	53.0	0.7	Negligible Adverse	40.8	41.3	41.4
40. LAUREL AVENUE, DANESTONE	Dwelling	52.4	52.9	52.3	-0.1	Negligible Beneficial	53.3	0.9	Negligible Adverse	40.9	41.3	41.7
41. LAUREL AVENUE, DANESTONE	Dwelling	54.5	55.2	54.4	-0.1	Negligible Beneficial	55.7	1.2	Negligible Adverse	42.8	43.4	43.9
42. LAUREL AVENUE, DANESTONE	Dwelling	52.4	52.9	52.3	-0.1	Negligible Beneficial	53.3	0.9	Negligible Adverse	40.9	41.3	41.7
43. LAUREL AVENUE, DANESTONE	Dwelling	54.9	55.6	54.7	-0.2	Negligible Beneficial	56.1	1.2	Negligible Adverse	43.1	43.8	44.2
44. LAUREL AVENUE, DANESTONE	Dwelling	52.4	52.9	52.3	-0.1	Negligible Beneficial	53.3	0.9	Negligible Adverse	40.9	41.3	41.7
45. LAUREL AVENUE, DANESTONE	Dwelling	54.6	55.3	54.4	-0.2	Negligible Beneficial	55.8	1.2	Negligible Adverse	42.9	43.5	44.0
46. LAUREL AVENUE, DANESTONE	Dwelling	52.9	52.3	52.3	-0.1	Negligible Beneficial	53.3	0.9	Negligible Adverse	40.9	41.3	41.7
47. LAUREL AVENUE, DANESTONE	Dwelling	55.4	56.1	55.2	-0.2	Negligible Beneficial	56.7	1.3	Negligible Adverse	43.6	44.2	44.8
48. LAUREL AVENUE, DANESTONE	Dwelling	50.3	50.8	50.1	-0.2	Negligible Beneficial	51.4	1.1	Negligible Adverse	39.0	39.5	40.0
49. LAUREL AVENUE, DANESTONE	Dwelling	55.8	56.5	55.6	-0.2	Negligible Beneficial	57.0	1.2	Negligible Adverse	44.0	44.6	45.0
5. LAUREL AVENUE, DANESTONE	Dwelling	53.9	54.5	53.7	-0.2	Negligible Beneficial	54.7	0.8	Negligible Adverse	42.2	42.8	43.0
50. LAUREL AVENUE, DANESTONE	Dwelling	50.2	50.9	50.0	-0.2	Negligible Beneficial	51.4	1.2	Negligible Adverse	38.9	39.5	40.0
51. LAUREL AVENUE, DANESTONE	Dwelling	56.3	57.1	56.1	-0.2	Negligible Beneficial	57.6	1.3	Negligible Adverse	44.4	45.1	45.6
52. LAUREL AVENUE, DANESTONE	Dwelling	52.4	53.3	52.2	-0.2	Negligible Beneficial	53.5	1.1	Negligible Adverse	40.9	41.7	41.9
53. LAUREL AVENUE, DANESTONE	Dwelling	57.1	57.9	56.9	-0.2	Negligible Beneficial	58.4	1.3	Negligible Adverse	45.1	45.8	46.3
54. LAUREL AVENUE, DANESTONE	Dwelling	57.1	57.5	57.0	-0.1	Negligible Beneficial	58.0	0.9	Negligible Adverse	45.1	45.5	45.9
55. LAUREL AVENUE, DANESTONE	Dwelling	57.8	58.6	57.6	-0.2	Negligible Beneficial	59.1	1.3	Negligible Adverse	45.8	46.5	46.9
56. LAUREL AVENUE, DANESTONE	Dwelling	55.8	56.6	55.7	-0.1	Negligible Adverse	57.1	1.3	Negligible Adverse	44.0	44.7	45.1
57. LAUREL AVENUE, DANESTONE	Dwelling	58.0	58.8	57.8	-0.2	Negligible Beneficial	59.3	1.3	Negligible Adverse	45.9	46.7	47.1
58. LAUREL AVENUE, DANESTONE	Dwelling	56.4	57.5	56.5	-0.2	Negligible Beneficial	56.9	1.2	Negligible Adverse	43.9	44.5	44.9
59. LAUREL AVENUE, DANESTONE	Dwelling	58.1	59.9	58.9	-0.2	Negligible Beneficial	60.9	1.3	Negligible Adverse	46.0	46.7	47.2
6. LAUREL AVENUE, DANESTONE	Dwelling	52.3	52.8	52.1	-0.2	Negligible Beneficial	53.0	0.7	Negligible Adverse	40.8	41.3	41.4
60. LAUREL AVENUE, DANESTONE	Dwelling	52.0	52.6	51.8	-0.2	Negligible Beneficial	52.9	0.9	Negligible Adverse	40.5	41.1	41.3
61. LAUREL AVENUE, DANESTONE	Dwelling	61.9	62.7	61.7	-0.2	Negligible Beneficial	63.2	1.3	Negligible Adverse	49.4	50.2	50.6
62. LAUREL AVENUE, DANESTONE	Dwelling	57.0	57.8	56.8	-0.2	Negligible Beneficial	58.4	1.4	Negligible Adverse	45.0	45.8	46.3
63. LAUREL AVENUE, DANESTONE	Dwelling	61.0	61.8	60.8	-0.2	Negligible Beneficial	62.3	1.3	Negligible Adverse	48.6	49.4	49.8
64. LAUREL AVENUE, DANESTONE	Dwelling	56.1	56.8	55.9	-0.2	Negligible Beneficial	57.3	1.2	Negligible Adverse	44.2	44.9	45.3
65. LAUREL AVENUE, DANESTONE	Dwelling	63.7	64.5	63.5	-0.2	Negligible Beneficial	65.0	1.3	Negligible Adverse	51.1	51.8	52.2
66. LAUREL AVENUE, DANESTONE	Dwelling	55.1	56.0	54.9	-0.2	Negligible Beneficial	56.4	1.3	Negligible Adverse	43.3	44.1	44.5
67. LAUREL AVENUE, DANESTONE	Dwelling	63.8	64.6	63.6	-0.2	Negligible Beneficial	65.1	1.3	Negligible Adverse	51.2	51.9	52.3
68. LAUREL AVENUE, DANESTONE	Dwelling	54.4	55.4	54.2	-0.2	Negligible Beneficial	55.8	1.4	Negligible Adverse	42.7	43.6	44.0
69. LAUREL AVENUE, DANESTONE	Dwelling	62.6	63.3	62.4	-0.2	Negligible Beneficial	63.8	1.2	Negligible Adverse	50.1	50.7	51.2
7. LAUREL AVENUE, DANESTONE	Dwelling	53.9	54.5	53.7	-0.2	Negligible Adverse	54.8	0.9	Negligible Adverse	42.2	42.8	43.1
70. LAUREL AVENUE, DANESTONE	Dwelling	54.9	55.7	54.7	-0.2	Negligible Beneficial	56.2	1.3	Negligible Adverse	43.1	43.9	44.3
72. LAUREL AVENUE, DANESTONE	Dwelling	53.7	54.6	53.5	-0.2	Negligible Beneficial	53.0	1.3	Negligible Adverse	42.1	42.9	43.2
74. LAUREL AVENUE, DANESTONE	Dwelling	54.2	54.1	54.1	-0.1	Negligible Beneficial	55.5	1.3	Negligible Adverse	42.5	43.3	43.7
76. LAUREL AVENUE, DANESTONE	Dwelling	53.1	54.0	52.9	-0.2	Negligible Beneficial	54.4	1.3	Negligible Adverse	41.5	42.3	42.7
78. LAUREL AVENUE, DANESTONE	Dwelling	53.1	54.0	52.9	-0.2	Negligible Beneficial	54.4	1.3	Negligible Adverse	41.5	42.3	42.7
8. LAUREL AVENUE, DANESTONE	Dwelling	52.3	52.8	52.1	-0.2	Negligible Beneficial	53.0	0.7	Negligible Adverse	40.8	41.3	41.4
80. LAUREL AVENUE, DANESTONE	Dwelling	53.0	53.9	52.8	-0.2	Negligible Beneficial	54.3	1.3	Negligible Adverse	41.4	42.2	42.6
82. LAUREL AVENUE, DANESTONE	Dwelling	53.0	53.9	52.9	-0.1	Negligible Beneficial	54.3	1.3	Negligible Adverse	41.4	42.2	42.6
84. LAUREL AVENUE, DANESTONE	Dwelling	50.9	51.4	50.7	-0.2	Negligible Beneficial	51.8	0.9	Negligible Adverse	39.5	40.0	40.4
86. LAUREL AVENUE, DANESTONE	Dwelling	50.1	50.7	50.0	-0.1	Negligible Beneficial	51.2	1.1	Negligible Adverse	38.8	39.4	39.8
88. LAUREL AVENUE, DANESTONE	Dwelling	50.5	51.0	50.3	-0.2	Negligible Beneficial	51.6	1.1	Negligible Adverse	39.2	39.6	40.2
9. LAUREL AVENUE, DANESTONE	Dwelling	53.6	54.2	53.3	-0.3	Negligible Beneficial	54.5	0.9	Negligible Adverse	42.0	42.5	42.8
90. LAUREL AVENUE, DANESTONE	Dwelling	50.3	50.9	50.1	-0.2	Negligible Adverse	51.4	1.1	Negligible Adverse	39.0	39.5	40.0
92. LAUREL AVENUE, DANESTONE	Dwelling	52.1	52.7	52.0	-0.1	Negligible Beneficial	53.2	1.1	Negligible Adverse	40.6	41.2	41.6
94. LAUREL AVENUE, DANESTONE	Dwelling	51.9	52.5	51.8	-0.1	Negligible Beneficial	53.0	1.1	Negligible Adverse	40.4	41.0	41.4
96. LAUREL AVENUE, DANESTONE	Dwelling	52.2	52.8	52.0	-0.2	Negligible Beneficial	53.3	1.1	Negligible Adverse	40.7	41.3	41.7
98. LAUREL AVENUE, DANESTONE	Dwelling	52.7	53.3	52.5	-0.2	Negligible Beneficial	53.8	1.1	Negligible Adverse	41.2	41.7	42.2
LAUREL AVENUE, DANESTONE	Dwelling	63.8	64.7	63.5	-0.3	Negligible Beneficial	65.1	1.3	Negligible Adverse	51.2	52.0	52.3
1. LAUREL BRAES, DANESTONE	Dwelling	51.3	53.0	51.1	-0.2	Negligible Beneficial	51.9	0.6	Negligible Adverse	39.9	41.4	40.4
10. LAUREL BRAES, DANESTONE	Dwelling	47.9	48.3	47.8	-0.1	Negligible Beneficial	48.6	0.7	Negligible Adverse	36.8	37.2	37.5
11. LAUREL BRAES, DANESTONE	Dwelling	49.6	50.7	49.5	-0.1	Negligible Beneficial	50.4	0.8	Negligible Adverse	38.4	39.4	39.1
15. LAUREL BRAES, DANESTONE	Dwelling	49.3	50.3	49.2	-0.1	Negligible Beneficial	50.1	0.8	Negligible Adverse	38.1	39.0	38.8
17. LAUREL BRAES, DANESTONE	Dwelling	49.2	50.1	49.1	-0.1	Negligible Beneficial	50.0	0.8	Negligible Adverse	38.0	38.8	38.7
19. LAUREL BRAES, DANESTONE	Dwelling	48.4	49.1	48.3	-0.1	Negligible Beneficial	49.2	0.8	Negligible Adverse	37.3	37.9	38.0
2. LAUREL BRAES, DANESTONE	Dwelling	50.2	50.8	50.0	-0.2	Negligible Beneficial	50.9	0.7	Negligible Adverse	38.9	39.5	39.5
21. LAUREL BRAES, DANESTONE	Dwelling	48.1	48.8	48.0	-0.1	Negligible Beneficial	49.0	0.9	Negligible Adverse	37.0	37.7	37.8
3. LAUREL BRAES, DANESTONE	Dwelling	50.4	52.1	50.3	-0.1	Negligible Beneficial	51.2	0.8	Negligible Adverse	39.1	40.6	39.8
37. LAUREL BRAES, DANESTONE	Dwelling	48.4	48.7	48.2	-0.2	Negligible Beneficial	49.2	0.8	Negligible Adverse	37.3	37.6	38.0
39. LAUREL BRAES, DANESTONE	Dwelling	48.5	48.7	48.2	-0.3	Negligible Beneficial	49.1	0.6	Negligible Adverse	37.4	37.6	37.9
4. LAUREL BRAES, DANESTONE	Dwelling	48.1	48.5	48.0	-0.1	Negligible Beneficial	48.9	0.9	Negligible Adverse	37.0	37.4	37.4
5. LAUREL BRAES, DANESTONE	Dwelling	50.5	50.4	50.4	-0.1	Negligible Beneficial	51.2	0.7	Negligible Adverse	39.2	40.5	39.8
6. LAUREL BRAES, DANESTONE	Dwelling	48.1	48.5	48.0	-0.1	Negligible Beneficial	49.0	0.9	Negligible Adverse	37.0	37.4	37.8
7. LAUREL BRAES, DANESTONE	Dwelling	48.7	50.0	48.6	-0.1	Negligible Beneficial	49.5	0.8	Negligible Adverse	37.6	38.7	38.3
8. LAUREL BRAES, DANESTONE	Dwelling	48.1	48.5	47.9	-0.2	Negligible Beneficial	48.9	0.8	Negligible Adverse	37.0	37.4	37.7
9. LAUREL BRAES, DANESTONE	Dwelling	49.8	51.0	49.7	-0.1	Negligible Beneficial	50.6	0.8	Negligible Adverse	38.6	39.6	39.3
DANESTONE COUNTRY PARK, LAUREL DRIVE, DANESTONE	Country Park	52.4	53.1	51.9	-0.5	Negligible Beneficial	53.0	0.6	Negligible Adverse	40.9	41.5	41.4
TESCO STORES LTD, TESCO PHARMACY, LAUREL DRIVE, DANESTONE	Pharmacy	65.9	68.1	65.3	-0.6	Negligible Beneficial	67.3	1.4	Negligible Adverse	53.0	55.0	54.3
1. LAUREL GARDENS, DANESTONE	Dwelling	61.9	62.8	61.4	-0.5	Negligible Beneficial	62.6	0.7	Negligible Adverse	49.4	50.3	50.1
10. LAUREL GARDENS, DANESTONE	Dwelling	54.3	55.0	53.9	-0.4	Negligible Beneficial	54.7	0.4	Negligible Adverse	42.6	43.2	43.0
11. LAUREL GARDENS, DANESTONE	Dwelling	54.3	55.0	53.9	-0.4	Negligible Beneficial	54.7	0.4	Negligible Adverse	42.6	43.2	43.0
12. LAUREL GARDENS, DANESTONE	Dwelling	58.3	59.4	57.3	-1.0	Minor Beneficial	58.6	0.3	Negligible Adverse	46.2	47.2	46.5
14. LAUREL GARDENS, DANESTONE	Dwelling	58.3	59.4	57.3	-1.0	Minor Beneficial	58.6	0.3	Negligible Adverse	46.2	47.2	46.5
15. LAUREL GARDENS, DANESTONE	Dwelling	61.9	63.0	60.8	-1.1	Minor Beneficial	62.2	0.3	Negligible Adverse	49.4	50.4	49.7
16. LAUREL GARDENS, DANESTONE	Dwelling	61.9	63.0	60.7	-1.2	Minor Beneficial	62.2	0.3	Negligible Adverse	49.4	50.4	49.7

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
17. LAUREL GARDENS, DANESTONE	Dwelling	61.9	63.0	60.9	-1.0	Minor Beneficial	62.3	0.4	Negligible Adverse	49.4	50.4	49.8
18. LAUREL GARDENS, DANESTONE	Dwelling	61.9	63.0	60.9	-1.0	Minor Beneficial	62.3	0.4	Negligible Adverse	49.4	50.4	49.8
19. LAUREL GARDENS, DANESTONE	Dwelling	62.3	63.3	61.3	-1.0	Minor Beneficial	62.7	0.4	Negligible Adverse	49.8	50.7	50.2
2. LAUREL GARDENS, DANESTONE	Dwelling	63.3	64.0	63.0	-0.3	Negligible Beneficial	64.1	0.8	Negligible Adverse	50.7	51.3	51.4
20. LAUREL GARDENS, DANESTONE	Dwelling	62.3	63.3	61.3	-1.0	Minor Beneficial	62.7	0.4	Negligible Adverse	49.8	50.7	50.2
21. LAUREL GARDENS, DANESTONE	Dwelling	61.2	62.2	60.4	-0.8	Negligible Beneficial	61.8	0.6	Negligible Adverse	48.8	49.7	49.4
3. LAUREL GARDENS, DANESTONE	Dwelling	60.8	61.4	60.6	-0.2	Negligible Beneficial	61.9	1.1	Negligible Adverse	48.5	49.0	49.4
3. LAUREL GARDENS, DANESTONE	Dwelling	60.8	61.4	60.6	-0.2	Negligible Beneficial	61.9	1.1	Negligible Adverse	48.5	49.0	49.4
4. LAUREL GARDENS, DANESTONE	Dwelling	57.6	58.3	57.4	-0.2	Negligible Beneficial	58.6	1.0	Negligible Adverse	45.6	46.2	46.5
5. LAUREL GARDENS, DANESTONE	Dwelling	57.6	58.3	57.4	-0.2	Negligible Beneficial	58.6	1.0	Negligible Adverse	45.6	46.2	46.5
6. LAUREL GARDENS, DANESTONE	Dwelling	52.6	53.3	52.2	-0.4	Negligible Beneficial	53.2	0.6	Negligible Adverse	41.1	41.7	41.6
7. LAUREL GARDENS, DANESTONE	Dwelling	52.6	53.3	52.2	-0.4	Negligible Beneficial	53.2	0.6	Negligible Adverse	41.1	41.7	41.6
8. LAUREL GARDENS, DANESTONE	Dwelling	56.0	56.6	55.7	-0.3	Negligible Beneficial	56.8	0.8	Negligible Adverse	44.1	44.7	44.9
9. LAUREL GARDENS, DANESTONE	Dwelling	56.0	56.6	55.7	-0.3	Negligible Beneficial	56.8	0.8	Negligible Adverse	44.1	44.7	44.9
1. LAUREL GROVE, DANESTONE	Dwelling	61.2	62.4	60.0	-1.2	Minor Beneficial	61.6	0.4	Negligible Adverse	48.8	49.9	49.2
10. LAUREL GROVE, DANESTONE	Dwelling	54.2	54.6	53.9	-0.3	Negligible Beneficial	54.8	0.6	Negligible Adverse	42.5	42.9	43.1
11. LAUREL GROVE, DANESTONE	Dwelling	60.6	60.7	60.5	-0.1	Negligible Beneficial	61.2	0.6	Negligible Adverse	48.3	48.4	48.8
12. LAUREL GROVE, DANESTONE	Dwelling	62.1	62.4	62.0	-0.1	Negligible Beneficial	62.9	0.8	Negligible Adverse	49.6	49.9	50.3
14. LAUREL GROVE, DANESTONE	Dwelling	62.0	62.4	61.9	-0.1	Negligible Beneficial	62.9	0.9	Negligible Adverse	49.5	49.9	50.3
15. LAUREL GROVE, DANESTONE	Dwelling	65.0	65.5	64.8	-0.2	Negligible Beneficial	65.9	0.9	Negligible Adverse	52.2	52.7	53.0
16. LAUREL GROVE, DANESTONE	Dwelling	64.9	65.9	64.4	-0.5	Negligible Beneficial	65.7	0.8	Negligible Adverse	52.1	53.0	52.9
17. LAUREL GROVE, DANESTONE	Dwelling	56.6	57.7	55.9	-0.7	Negligible Beneficial	57.2	0.6	Negligible Adverse	44.7	45.7	45.2
18. LAUREL GROVE, DANESTONE	Dwelling	64.3	65.4	63.7	-0.6	Negligible Beneficial	65.1	0.8	Negligible Adverse	51.6	52.6	52.3
19. LAUREL GROVE, DANESTONE	Dwelling	61.7	62.9	61.0	-0.7	Negligible Beneficial	62.5	0.8	Negligible Adverse	49.3	50.3	50.0
2. LAUREL GROVE, DANESTONE	Dwelling	58.0	59.8	58.3	-0.7	Negligible Beneficial	59.6	0.6	Negligible Adverse	46.8	47.6	47.4
20. LAUREL GROVE, DANESTONE	Dwelling	58.0	59.8	58.3	-0.7	Negligible Beneficial	59.6	0.6	Negligible Adverse	46.8	47.6	47.4
21. LAUREL GROVE, DANESTONE	Dwelling	59.7	60.2	59.4	-0.3	Negligible Beneficial	60.5	0.8	Negligible Adverse	47.5	47.9	48.2
22. LAUREL GROVE, DANESTONE	Dwelling	61.6	62.8	60.7	-0.9	Negligible Beneficial	62.2	0.6	Negligible Adverse	49.2	50.3	49.7
3. LAUREL GROVE, DANESTONE	Dwelling	54.5	55.3	53.8	-0.7	Negligible Beneficial	54.9	0.4	Negligible Adverse	42.8	43.5	43.1
4. LAUREL GROVE, DANESTONE	Dwelling	60.2	61.3	59.8	-1.2	Minor Beneficial	60.5	0.3	Negligible Adverse	47.9	48.9	48.2
5. LAUREL GROVE, DANESTONE	Dwelling	51.9	52.3	51.6	-0.3	Negligible Beneficial	52.5	0.6	Negligible Adverse	40.4	40.8	41.0
6. LAUREL GROVE, DANESTONE	Dwelling	55.3	55.7	55.0	-0.3	Negligible Beneficial	56.0	0.7	Negligible Adverse	43.5	43.9	44.1
7. LAUREL GROVE, DANESTONE	Dwelling	54.5	55.3	54.0	-0.5	Negligible Beneficial	55.1	0.6	Negligible Adverse	42.8	43.5	43.3
8. LAUREL GROVE, DANESTONE	Dwelling	55.6	56.2	55.1	-0.5	Negligible Beneficial	56.2	0.6	Negligible Adverse	43.8	44.3	44.3
9. LAUREL GROVE, DANESTONE	Dwelling	53.9	54.4	53.6	-0.3	Negligible Beneficial	54.5	0.6	Negligible Adverse	42.2	42.7	42.8
LAUREL HOUSE, 2, GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	52.7	53.2	52.5	-0.2	Negligible Beneficial	53.8	1.1	Negligible Adverse	41.2	41.6	42.2
LAUREL HOUSE, 3, GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	52.9	53.4	52.7	-0.2	Negligible Beneficial	54.0	1.1	Negligible Adverse	41.3	41.8	42.3
LAUREL HOUSE, 4, GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	52.9	53.4	52.7	-0.2	Negligible Beneficial	54.0	1.1	Negligible Adverse	41.3	41.8	42.3
1. LAUREL PARK, DANESTONE	Dwelling	48.1	48.8	48.0	-0.1	Negligible Beneficial	49.0	0.9	Negligible Adverse	37.0	37.7	37.8
10. LAUREL PARK, DANESTONE	Dwelling	49.7	50.1	49.5	-0.2	Negligible Beneficial	50.2	0.9	Negligible Adverse	38.5	38.8	39.3
11. LAUREL PARK, DANESTONE	Dwelling	47.8	47.7	47.1	-0.1	Negligible Beneficial	48.6	0.8	Negligible Adverse	36.8	37.1	37.5
12. LAUREL PARK, DANESTONE	Dwelling	47.0	47.4	46.8	-0.2	Negligible Beneficial	47.9	0.9	Negligible Adverse	36.0	36.4	36.8
14. LAUREL PARK, DANESTONE	Dwelling	47.4	47.7	47.2	-0.2	Negligible Beneficial	48.3	0.9	Negligible Adverse	36.4	36.7	37.2
15. LAUREL PARK, DANESTONE	Dwelling	47.8	48.2	47.6	-0.2	Negligible Beneficial	48.7	0.9	Negligible Adverse	36.8	37.1	37.6
16. LAUREL PARK, DANESTONE	Dwelling	49.2	49.5	49.0	-0.2	Negligible Beneficial	49.8	0.6	Negligible Adverse	38.0	38.3	38.6
17. LAUREL PARK, DANESTONE	Dwelling	48.0	48.4	47.9	-0.1	Negligible Beneficial	48.9	0.9	Negligible Adverse	36.9	37.3	37.7
18. LAUREL PARK, DANESTONE	Dwelling	47.6	48.1	47.4	-0.2	Negligible Beneficial	48.6	1.0	Negligible Adverse	36.6	37.0	37.5
19. LAUREL PARK, DANESTONE	Dwelling	48.4	48.7	48.2	-0.2	Negligible Beneficial	49.2	0.8	Negligible Adverse	37.3	37.6	38.0
2. LAUREL PARK, DANESTONE	Dwelling	48.3	48.8	48.1	-0.2	Negligible Beneficial	49.1	0.8	Negligible Adverse	37.2	37.7	37.9
20. LAUREL PARK, DANESTONE	Dwelling	48.5	48.8	48.3	-0.2	Negligible Beneficial	49.3	0.8	Negligible Adverse	37.4	37.7	38.1
3. LAUREL PARK, DANESTONE	Dwelling	48.2	48.7	48.1	-0.1	Negligible Beneficial	49.1	0.9	Negligible Adverse	37.1	37.6	37.9
4. LAUREL PARK, DANESTONE	Dwelling	47.9	48.4	47.8	-0.1	Negligible Beneficial	48.8	0.9	Negligible Adverse	36.8	37.3	37.7
5. LAUREL PARK, DANESTONE	Dwelling	48.7	48.7	48.7	0.0	No Change	49.5	0.8	Negligible Adverse	37.6	38.0	38.3
6. LAUREL PARK, DANESTONE	Dwelling	48.1	48.6	48.0	-0.1	Negligible Beneficial	48.9	0.8	Negligible Adverse	37.0	37.5	37.7
7. LAUREL PARK, DANESTONE	Dwelling	47.7	48.1	47.5	-0.2	Negligible Beneficial	48.6	0.9	Negligible Adverse	36.7	37.0	37.5
8. LAUREL PARK, DANESTONE	Dwelling	49.5	50.0	49.4	-0.1	Negligible Beneficial	50.5	1.0	Negligible Adverse	38.3	38.7	39.2
9. LAUREL PARK, DANESTONE	Dwelling	48.5	49.0	48.3	-0.2	Negligible Beneficial	49.6	1.1	Negligible Adverse	37.4	37.8	38.4
1. LAUREL ROAD, DANESTONE	Dwelling	52.6	54.3	52.6	0.0	No Change	53.4	0.8	Negligible Adverse	41.1	42.6	41.8
10. LAUREL ROAD, DANESTONE	Dwelling	48.9	49.4	48.4	-0.5	Negligible Beneficial	49.5	0.6	Negligible Adverse	37.7	38.2	38.3
11. LAUREL ROAD, DANESTONE	Dwelling	51.9	53.1	51.7	-0.2	Negligible Beneficial	52.6	0.7	Negligible Adverse	40.4	41.5	41.1
12. LAUREL ROAD, DANESTONE	Dwelling	50.2	50.9	49.6	-0.6	Negligible Beneficial	50.9	0.7	Negligible Adverse	38.9	39.5	39.5
14. LAUREL ROAD, DANESTONE	Dwelling	50.9	51.6	50.2	-0.7	Negligible Beneficial	51.5	0.6	Negligible Adverse	39.5	40.2	40.1
16. LAUREL ROAD, DANESTONE	Dwelling	52.4	53.5	51.5	-0.9	Negligible Beneficial	53.0	0.6	Negligible Adverse	40.9	41.9	41.4
18. LAUREL ROAD, DANESTONE	Dwelling	57.9	59.2	56.2	-1.7	Minor Beneficial	58.1	0.2	Negligible Adverse	45.8	47.0	46.0
2. LAUREL ROAD, DANESTONE	Dwelling	55.3	57.3	55.4	-0.1	Negligible Adverse	56.1	0.8	Negligible Adverse	43.5	45.3	44.2
20. LAUREL ROAD, DANESTONE	Dwelling	58.9	57.3	57.1	1.8	Minor Beneficial	59.2	0.3	Negligible Adverse	46.7	48.0	47.0
22. LAUREL ROAD, DANESTONE	Dwelling	55.8	57.2	54.4	-1.4	Minor Beneficial	56.2	0.4	Negligible Adverse	44.0	45.2	44.3
24. LAUREL ROAD, DANESTONE	Dwelling	56.3	58.8	56.7	-1.6	Minor Beneficial	56.7	0.4	Negligible Adverse	46.2	47.6	46.6
26. LAUREL ROAD, DANESTONE	Dwelling	58.7	60.2	58.7	-1.7	Minor Beneficial	59.0	0.3	Negligible Adverse	46.9	47.9	46.8
28. LAUREL ROAD, DANESTONE	Dwelling	51.1	51.8	50.5	-0.6	Negligible Beneficial	51.8	0.7	Negligible Adverse	39.7	40.4	40.4
3. LAUREL ROAD, DANESTONE	Dwelling	51.9	53.5	51.9	0.0	No Change	52.7	0.8	Negligible Adverse	40.4	41.9	41.2
30. LAUREL ROAD, DANESTONE	Dwelling	52.4	53.5	51.4	-1.0	Minor Beneficial	52.9	0.5	Negligible Adverse	40.9	41.9	41.3
32. LAUREL ROAD, DANESTONE	Dwelling	58.5	60.4	57.0	-1.5	Minor Beneficial	59.2	0.7	Negligible Adverse	46.4	48.1	47.0
34. LAUREL ROAD, DANESTONE	Dwelling	56.6	58.7	55.6	-1.0	Minor Beneficial	57.6	1.0	Negligible Adverse	44.7	46.6	45.6
36. LAUREL ROAD, DANESTONE	Dwelling	59.4	61.4	57.8	-1.6	Minor Beneficial	60.1	0.7	Negligible Adverse	47.2	49.0	47.8
4. LAUREL ROAD, DANESTONE	Dwelling	49.7	50.8	49.5	-0.2	Negligible Beneficial	50.4	0.7	Negligible Adverse	38.5	39.5	39.1
5. LAUREL ROAD, DANESTONE	Dwelling	52.1	53.2	51.9	-0.2	Negligible Beneficial	52.7	0.6	Negligible Adverse	40.6	41.6	41.2
6. LAUREL ROAD, DANESTONE	Dwelling	47.5	48.1	47.3	-0.2	Negligible Beneficial	48.3	0.8	Negligible Adverse	36.5	37.0	37.2
8. LAUREL ROAD, DANESTONE	Dwelling	51.7	52.6	51.5	-0.2	Negligible Beneficial	52.3	0.6	Negligible Adverse	40.3	41.1	40.8
9. LAUREL ROAD, DANESTONE	Dwelling	47.9	48.5	47.4	-0.5	Negligible Beneficial	48.6	0.7	Negligible Adverse	36.8	37.4	37.5
8. LAUREL ROAD, DANESTONE	Dwelling	52.0	53.1	51.8	-0.2	Negligible Beneficial	52.7	0.7	Negligible Adverse	40.5	41.5	41.2
6. LAUREL TERRACE, DANESTONE	Dwelling	53.6	54.7	53.5	-0.1	Negligible Beneficial	54.2	0.6	Negligible Adverse	42.0	43.0	42.2
10. LAUREL TERRACE, DANESTONE	Dwelling	55.3	56.2	54.1	-1.2	Minor Beneficial	55.6	0.3	Negligible Adverse	43.5	44.3	43.8

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
11. LAUREL TERRACE, DANESTONE	Dwelling	52.3	53.6	52.4	0.1	Negligible Adverse	53.1	0.8	Negligible Adverse	40.8	42.0	41.5
12. LAUREL TERRACE, DANESTONE	Dwelling	55.4	56.4	54.1	-1.3	Minor Beneficial	55.7	0.3	Negligible Adverse	43.6	44.5	43.9
14. LAUREL TERRACE, DANESTONE	Dwelling	55.2	56.2	53.8	-1.4	Minor Beneficial	55.5	0.3	Negligible Adverse	43.4	44.3	43.7
15. LAUREL TERRACE, DANESTONE	Dwelling	53.6	55.2	53.7	0.1	Negligible Adverse	54.4	0.8	Negligible Adverse	42.0	43.4	42.7
16. LAUREL TERRACE, DANESTONE	Dwelling	57.4	58.6	55.6	-1.8	Minor Beneficial	57.6	0.2	Negligible Adverse	45.4	46.5	45.6
17. LAUREL TERRACE, DANESTONE	Dwelling	50.3	51.1	50.0	-0.3	Negligible Beneficial	51.0	0.7	Negligible Adverse	39.0	39.7	39.6
18. LAUREL TERRACE, DANESTONE	Dwelling	58.2	59.4	56.4	-1.8	Minor Beneficial	58.3	0.1	Negligible Beneficial	46.1	47.2	46.2
19. LAUREL TERRACE, DANESTONE	Dwelling	49.5	50.2	49.3	-0.2	Negligible Beneficial	50.3	0.8	Negligible Adverse	38.3	38.9	39.0
2. LAUREL TERRACE, DANESTONE	Dwelling	57.8	59.0	57.0	-0.8	Negligible Beneficial	58.1	0.3	Negligible Adverse	45.8	46.8	46.0
20. LAUREL TERRACE, DANESTONE	Dwelling	54.5	55.6	53.2	-1.3	Minor Beneficial	54.9	0.4	Negligible Adverse	42.8	43.8	43.1
21. LAUREL TERRACE, DANESTONE	Dwelling	51.8	52.2	51.5	-0.3	Negligible Beneficial	52.4	0.6	Negligible Adverse	40.4	40.7	40.9
22. LAUREL TERRACE, DANESTONE	Dwelling	54.5	55.5	53.2	-1.3	Minor Beneficial	54.8	0.3	Negligible Adverse	42.8	43.7	43.1
23. LAUREL TERRACE, DANESTONE	Dwelling	51.7	52.2	51.3	-0.4	Negligible Beneficial	52.3	0.6	Negligible Adverse	40.3	40.7	40.8
25. LAUREL TERRACE, DANESTONE	Dwelling	51.9	52.4	51.4	-0.5	Negligible Beneficial	52.5	0.6	Negligible Adverse	40.4	40.9	41.0
27. LAUREL TERRACE, DANESTONE	Dwelling	52.1	52.6	51.6	-0.5	Negligible Beneficial	52.7	0.6	Negligible Adverse	40.6	41.1	41.2
3. LAUREL TERRACE, DANESTONE	Dwelling	53.6	54.6	53.5	-0.1	Negligible Beneficial	54.3	0.7	Negligible Adverse	42.0	42.9	42.6
4. LAUREL TERRACE, DANESTONE	Dwelling	54.8	55.6	53.7	-1.1	Minor Beneficial	55.1	0.3	Negligible Adverse	43.1	43.8	43.3
5. LAUREL TERRACE, DANESTONE	Dwelling	52.6	53.7	52.6	0.0	No Change	53.3	0.7	Negligible Adverse	41.1	42.1	41.7
6. LAUREL TERRACE, DANESTONE	Dwelling	54.6	55.4	53.5	-1.1	Minor Beneficial	54.9	0.3	Negligible Adverse	42.9	43.6	43.1
7. LAUREL TERRACE, DANESTONE	Dwelling	52.8	53.9	52.9	0.1	Negligible Adverse	53.5	0.7	Negligible Adverse	41.3	42.2	41.9
8. LAUREL TERRACE, DANESTONE	Dwelling	54.6	55.5	53.5	-1.1	Minor Beneficial	54.9	0.3	Negligible Adverse	42.9	43.7	43.1
9. LAUREL TERRACE, DANESTONE	Dwelling	52.7	53.9	52.7	0.0	No Change	53.5	0.8	Negligible Adverse	41.2	42.2	41.9
1. LAUREL VIEW, DANESTONE	Dwelling	52.3	54.1	52.1	-0.2	Negligible Beneficial	53.0	0.7	Negligible Adverse	40.8	42.4	41.4
10. LAUREL VIEW, DANESTONE	Dwelling	55.5	58.2	54.0	-1.5	Minor Beneficial	56.7	1.2	Negligible Adverse	43.7	46.1	44.8
11. LAUREL VIEW, DANESTONE	Dwelling	61.3	64.4	59.5	-1.8	Minor Beneficial	62.7	1.4	Negligible Adverse	48.9	51.7	50.2
12. LAUREL VIEW, DANESTONE	Dwelling	61.9	65.1	60.1	-1.8	Minor Beneficial	63.8	1.4	Negligible Adverse	49.4	52.3	49.7
14. LAUREL VIEW, DANESTONE	Dwelling	62.2	65.5	60.4	-1.8	Minor Beneficial	63.7	1.5	Negligible Adverse	49.7	52.7	51.1
15. LAUREL VIEW, DANESTONE	Dwelling	51.6	53.4	50.8	-0.8	Negligible Beneficial	52.6	1.0	Negligible Adverse	40.2	41.8	41.1
16. LAUREL VIEW, DANESTONE	Dwelling	50.8	52.6	50.0	-0.8	Negligible Beneficial	51.8	1.0	Negligible Adverse	39.5	41.1	40.4
17. LAUREL VIEW, DANESTONE	Dwelling	48.6	49.9	48.1	-0.5	Negligible Beneficial	49.5	0.9	Negligible Adverse	37.5	38.6	38.3
18. LAUREL VIEW, DANESTONE	Dwelling	49.8	50.5	49.5	-0.3	Negligible Beneficial	50.5	0.7	Negligible Adverse	38.6	39.2	39.2
19. LAUREL VIEW, DANESTONE	Dwelling	47.3	48.1	47.1	-0.2	Negligible Beneficial	48.1	0.8	Negligible Adverse	36.3	37.0	37.0
2. LAUREL VIEW, DANESTONE	Dwelling	51.9	53.6	51.5	-0.4	Negligible Beneficial	52.4	0.5	Negligible Adverse	40.4	42.0	40.9
20. LAUREL VIEW, DANESTONE	Dwelling	47.6	48.4	47.3	-0.3	Negligible Beneficial	48.4	0.8	Negligible Adverse	36.6	37.3	37.3
21. LAUREL VIEW, DANESTONE	Dwelling	48.6	49.2	48.3	-0.3	Negligible Beneficial	49.4	0.8	Negligible Adverse	37.5	38.0	38.2
22. LAUREL VIEW, DANESTONE	Dwelling	48.3	48.9	48.0	-0.3	Negligible Beneficial	49.1	0.8	Negligible Adverse	37.2	37.7	37.9
23. LAUREL VIEW, DANESTONE	Dwelling	48.7	49.3	48.4	-0.3	Negligible Beneficial	49.4	0.7	Negligible Adverse	37.6	38.1	38.2
24. LAUREL VIEW, DANESTONE	Dwelling	47.5	47.9	47.2	-0.3	Negligible Beneficial	48.2	0.7	Negligible Adverse	36.5	36.8	37.1
25. LAUREL VIEW, DANESTONE	Dwelling	47.5	48.0	47.3	-0.2	Negligible Beneficial	48.3	0.8	Negligible Adverse	36.5	36.9	37.2
26. LAUREL VIEW, DANESTONE	Dwelling	47.5	47.9	47.3	-0.2	Negligible Beneficial	48.2	0.8	Negligible Adverse	36.5	36.8	37.2
27. LAUREL VIEW, DANESTONE	Dwelling	48.2	48.6	48.0	-0.2	Negligible Beneficial	49.0	0.8	Negligible Adverse	37.1	37.5	37.8
28. LAUREL VIEW, DANESTONE	Dwelling	47.8	48.2	47.6	-0.2	Negligible Beneficial	48.6	0.8	Negligible Adverse	36.8	37.1	37.5
29. LAUREL VIEW, DANESTONE	Dwelling	48.7	49.0	48.5	-0.2	Negligible Beneficial	49.4	0.7	Negligible Adverse	37.6	37.8	38.2
3. LAUREL VIEW, DANESTONE	Dwelling	53.5	55.4	53.0	-0.5	Negligible Beneficial	54.0	0.5	Negligible Adverse	41.9	43.6	42.3
30. LAUREL VIEW, DANESTONE	Dwelling	48.7	49.0	48.5	-0.2	Negligible Beneficial	49.4	0.7	Negligible Adverse	37.6	37.8	38.2
31. LAUREL VIEW, DANESTONE	Dwelling	48.2	49.0	48.1	-0.1	Negligible Beneficial	49.1	0.9	Negligible Adverse	37.1	37.8	37.9
32. LAUREL VIEW, DANESTONE	Dwelling	48.8	49.2	48.5	-0.3	Negligible Beneficial	49.4	0.6	Negligible Adverse	37.7	38.0	38.2
33. LAUREL VIEW, DANESTONE	Dwelling	49.4	49.8	49.1	-0.3	Negligible Beneficial	49.9	0.5	Negligible Adverse	38.2	38.6	38.6
4. LAUREL VIEW, DANESTONE	Dwelling	53.7	55.6	53.3	-0.4	Negligible Beneficial	54.3	0.6	Negligible Adverse	42.1	43.8	42.6
5. LAUREL VIEW, DANESTONE	Dwelling	53.3	55.1	52.9	-0.4	Negligible Beneficial	53.9	0.6	Negligible Adverse	41.7	43.3	42.2
6. LAUREL VIEW, DANESTONE	Dwelling	53.1	54.7	52.7	-0.4	Negligible Beneficial	53.7	0.6	Negligible Adverse	41.5	43.0	42.1
7. LAUREL VIEW, DANESTONE	Dwelling	52.4	54.0	51.9	-0.5	Negligible Beneficial	53.0	0.6	Negligible Adverse	40.9	42.3	41.4
8. LAUREL VIEW, DANESTONE	Dwelling	55.7	57.9	54.6	-1.1	Minor Beneficial	55.6	0.9	Negligible Adverse	43.9	45.8	44.7
9. LAUREL VIEW, DANESTONE	Dwelling	52.9	55.0	51.9	-1.0	Minor Beneficial	53.9	1.0	Negligible Adverse	41.3	43.2	42.2
1. LAUREL WYND, DANESTONE	Dwelling	48.2	48.5	48.0	-0.2	Negligible Beneficial	49.0	0.8	Negligible Adverse	37.1	37.4	37.8
10. LAUREL WYND, DANESTONE	Dwelling	48.3	48.5	48.1	-0.2	Negligible Beneficial	49.1	0.8	Negligible Adverse	37.2	37.4	37.9
12. LAUREL WYND, DANESTONE	Dwelling	48.4	48.7	48.3	-0.1	Negligible Beneficial	49.2	0.8	Negligible Adverse	37.3	37.6	38.0
14. LAUREL WYND, DANESTONE	Dwelling	48.3	48.6	48.2	-0.1	Negligible Beneficial	49.1	0.8	Negligible Adverse	37.2	37.5	37.9
16. LAUREL WYND, DANESTONE	Dwelling	50.2	50.5	49.9	-0.3	Negligible Beneficial	50.8	0.6	Negligible Adverse	38.9	39.2	39.5
18. LAUREL WYND, DANESTONE	Dwelling	50.7	51.0	50.5	-0.2	Negligible Beneficial	51.3	0.6	Negligible Adverse	39.4	39.6	39.9
2. LAUREL WYND, DANESTONE	Dwelling	48.8	49.3	48.6	-0.2	Negligible Beneficial	49.6	0.8	Negligible Adverse	37.7	38.1	38.4
20. LAUREL WYND, DANESTONE	Dwelling	50.8	51.1	50.6	-0.2	Negligible Beneficial	51.3	0.5	Negligible Adverse	39.5	39.7	39.9
22. LAUREL WYND, DANESTONE	Dwelling	48.0	48.1	47.8	-0.2	Negligible Beneficial	48.7	0.7	Negligible Adverse	36.9	37.0	37.6
24. LAUREL WYND, DANESTONE	Dwelling	48.0	48.2	47.9	-0.1	Negligible Beneficial	48.8	0.8	Negligible Adverse	36.9	37.1	37.7
26. LAUREL WYND, DANESTONE	Dwelling	48.2	48.3	48.0	-0.2	Negligible Beneficial	49.0	0.8	Negligible Adverse	37.1	37.2	37.8
3. LAUREL WYND, DANESTONE	Dwelling	48.1	48.3	48.0	-0.1	Negligible Beneficial	48.9	0.8	Negligible Adverse	37.0	37.2	37.7
3. LAUREL WYND, DANESTONE	Dwelling	46.7	47.3	46.6	-0.1	Negligible Beneficial	47.6	0.9	Negligible Adverse	35.8	36.3	36.6
30. LAUREL WYND, DANESTONE	Dwelling	48.0	48.4	48.0	-0.1	Negligible Beneficial	48.6	0.7	Negligible Adverse	37.0	37.3	37.7
32. LAUREL WYND, DANESTONE	Dwelling	48.5	48.7	48.0	-0.2	Negligible Beneficial	49.2	0.7	Negligible Adverse	37.4	37.6	38.0
34. LAUREL WYND, DANESTONE	Dwelling	48.9	49.2	48.7	-0.2	Negligible Beneficial	49.6	0.7	Negligible Adverse	37.7	38.0	38.4
36. LAUREL WYND, DANESTONE	Dwelling	47.2	47.7	47.0	-0.2	Negligible Beneficial	48.1	0.9	Negligible Adverse	36.2	36.7	37.0
38. LAUREL WYND, DANESTONE	Dwelling	47.6	48.1	47.5	-0.1	Negligible Beneficial	48.5	0.9	Negligible Adverse	36.6	37.0	37.4
4. LAUREL WYND, DANESTONE	Dwelling	47.8	48.2	47.6	-0.2	Negligible Beneficial	48.6	0.8	Negligible Adverse	36.8	37.1	37.5
40. LAUREL WYND, DANESTONE	Dwelling	48.3	48.6	48.1	-0.2	Negligible Beneficial	49.2	0.9	Negligible Adverse	37.2	37.5	38.0
42. LAUREL WYND, DANESTONE	Dwelling	48.1	48.4	48.0	-0.1	Negligible Beneficial	49.0	0.9	Negligible Adverse	37.0	37.3	37.8
44. LAUREL WYND, DANESTONE	Dwelling	48.6	48.8	48.4	-0.2	Negligible Beneficial	49.4	0.8	Negligible Adverse	37.5	37.7	38.2
46. LAUREL WYND, DANESTONE	Dwelling	48.4	48.6	48.2	-0.2	Negligible Beneficial	49.2	0.8	Negligible Adverse	37.3	37.5	38.0
48. LAUREL WYND, DANESTONE	Dwelling	48.7	49.0	48.6	-0.1	Negligible Beneficial	49.6	0.9	Negligible Adverse	37.6	37.8	38.4
5. LAUREL WYND, DANESTONE	Dwelling	47.1	47.4	47.0	-0.1	Negligible Beneficial	47.9	0.8	Negligible Adverse	36.1	36.4	36.8
50. LAUREL WYND, DANESTONE	Dwelling	47.4	48.1	47.2	-0.2	Negligible Beneficial	48.4	1.0	Negligible Adverse	36.4	37.0	37.3
52. LAUREL WYND, DANESTONE	Dwelling	48.4	48.7	48.2	-0.2	Negligible Beneficial	49.3	0.9	Negligible Adverse	37.3	37.6	38.1
54. LAUREL WYND, DANESTONE	Dwelling	47.7	47.9	47.5	-0.2	Negligible Beneficial	48.6	0.9	Negligible Adverse	36.7	36.8	37.5
56. LAUREL WYND, DANESTONE	Dwelling	48.4	48.7	48.2	-0.2	Negligible Beneficial	49.2	0.8	Negligible Adverse	37.3	37.6	38.0

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
58, LAUREL WYND, DANESTONE	Dwelling	48.0	48.2	47.8	-0.2	Negligible Beneficial	48.8	0.8	Negligible Adverse	36.9	37.1	37.7
6, LAUREL WYND, DANESTONE	Dwelling	48.5	48.8	48.4	-0.1	Negligible Beneficial	49.3	0.8	Negligible Adverse	37.4	37.7	38.1
7, LAUREL WYND, DANESTONE	Dwelling	47.0	47.4	46.9	-0.1	Negligible Beneficial	47.8	0.8	Negligible Adverse	36.0	36.4	36.8
8, LAUREL WYND, DANESTONE	Dwelling	46.9	47.4	46.8	-0.1	Negligible Beneficial	47.8	0.9	Negligible Adverse	35.9	36.4	36.8
1, LESLIE ROAD	Dwelling	72.3	73.8	72.5	0.2	Negligible Adverse	73.6	1.3	Negligible Adverse	58.8	60.2	60.0
10, LESLIE ROAD	Dwelling	71.3	72.8	71.5	0.2	Negligible Adverse	72.5	1.2	Negligible Adverse	57.9	59.3	59.0
11, LESLIE ROAD	Dwelling	71.5	72.9	71.6	0.1	Negligible Beneficial	72.6	1.1	Negligible Adverse	58.1	59.3	59.1
12, LESLIE ROAD	Dwelling	71.6	73.0	71.7	0.1	Negligible Adverse	72.7	1.1	Negligible Adverse	58.2	59.4	59.2
13, LESLIE ROAD	Dwelling	71.5	72.9	71.6	0.1	Negligible Beneficial	72.6	1.1	Negligible Adverse	58.1	59.3	59.1
14, LESLIE ROAD	Dwelling	71.7	73.1	71.8	0.1	Negligible Beneficial	72.9	1.2	Negligible Adverse	58.3	59.5	59.3
15, LESLIE ROAD	Dwelling	71.4	72.8	71.5	0.1	Negligible Beneficial	72.5	1.1	Negligible Adverse	58.0	59.3	59.0
17, LESLIE ROAD	Dwelling	71.4	72.8	71.5	0.1	Negligible Beneficial	72.5	1.1	Negligible Adverse	58.0	59.3	59.0
19, LESLIE ROAD	Dwelling	71.6	72.9	71.7	0.1	Negligible Adverse	72.7	1.1	Negligible Adverse	58.2	59.3	59.2
21, LESLIE ROAD	Dwelling	71.6	72.9	71.7	0.1	Negligible Adverse	72.7	1.1	Negligible Adverse	58.2	59.3	59.2
22, LESLIE ROAD	Dwelling	72.0	73.3	72.1	0.1	Negligible Beneficial	73.1	1.1	Negligible Adverse	58.5	59.7	59.5
23, LESLIE ROAD	Dwelling	71.8	73.2	71.9	0.1	Negligible Adverse	72.9	1.1	Negligible Adverse	58.4	59.6	59.3
25, LESLIE ROAD	Dwelling	71.8	73.2	71.9	0.1	Negligible Adverse	72.9	1.1	Negligible Adverse	58.4	59.6	59.3
27, LESLIE ROAD	Dwelling	72.1	73.3	72.1	0.0	No Change	73.1	1.0	Negligible Adverse	58.6	59.7	59.5
29, LESLIE ROAD	Dwelling	72.3	73.4	72.4	0.1	Negligible Adverse	73.2	0.9	Negligible Adverse	58.8	59.8	59.6
29, LESLIE ROAD	Dwelling	72.3	73.4	72.4	0.1	Negligible Adverse	73.2	0.9	Negligible Adverse	58.8	59.8	59.6
29, LESLIE ROAD	Dwelling	72.3	73.4	72.4	0.1	Negligible Adverse	73.2	0.9	Negligible Adverse	58.8	59.8	59.6
31, LESLIE ROAD	Dwelling	72.5	73.3	72.5	0.0	No Change	73.2	0.7	Negligible Adverse	59.0	59.7	59.6
33, LESLIE ROAD	Dwelling	72.5	73.3	72.5	0.0	No Change	73.2	0.7	Negligible Adverse	59.0	59.7	59.6
35, LESLIE ROAD	Dwelling	72.8	73.5	72.8	0.0	No Change	73.4	0.6	Negligible Adverse	59.3	59.9	59.8
37, LESLIE ROAD	Dwelling	72.8	73.5	72.8	0.0	No Change	73.4	0.6	Negligible Adverse	59.3	59.9	59.8
39, LESLIE ROAD	Dwelling	72.8	73.5	72.8	0.0	No Change	73.4	0.6	Negligible Adverse	59.3	59.9	59.8
4, LESLIE ROAD	Dwelling	71.1	72.5	71.2	0.1	Negligible Adverse	72.2	1.1	Negligible Adverse	57.7	59.0	58.7
41, LESLIE ROAD	Dwelling	72.8	73.5	72.8	0.0	No Change	73.4	0.6	Negligible Adverse	59.3	59.9	59.8
43, LESLIE ROAD	Dwelling	73.0	73.7	73.0	0.0	No Change	73.6	0.6	Negligible Adverse	59.4	60.1	60.0
45, LESLIE ROAD	Dwelling	73.0	73.7	73.0	0.0	No Change	73.6	0.6	Negligible Adverse	59.4	60.1	60.0
47, LESLIE ROAD	Dwelling	73.0	73.6	73.0	0.0	No Change	73.5	0.5	Negligible Adverse	59.4	60.0	59.9
47, LESLIE ROAD	Dwelling	73.0	73.6	73.0	0.0	No Change	73.5	0.5	Negligible Adverse	59.4	60.0	59.9
47, LESLIE ROAD	Dwelling	73.0	73.6	73.0	0.0	No Change	73.5	0.5	Negligible Adverse	59.4	60.0	59.9
49, LESLIE ROAD	Dwelling	73.0	73.6	72.9	-0.1	Negligible Beneficial	73.5	0.5	Negligible Adverse	59.4	60.0	59.9
51, LESLIE ROAD	Dwelling	73.0	73.7	73.0	0.0	No Change	73.6	0.6	Negligible Adverse	59.4	60.1	60.0
53, LESLIE ROAD	Dwelling	73.0	73.6	73.0	0.0	No Change	73.6	0.6	Negligible Adverse	59.4	60.0	60.0
53, LESLIE ROAD	Dwelling	73.0	73.6	73.0	0.0	No Change	73.6	0.6	Negligible Adverse	59.4	60.0	60.0
53, LESLIE ROAD	Dwelling	73.0	73.6	73.0	0.0	No Change	73.6	0.6	Negligible Adverse	59.4	60.0	60.0
55, LESLIE ROAD	Dwelling	72.9	73.6	72.9	0.0	No Change	73.5	0.6	Negligible Adverse	59.3	60.0	59.9
57, LESLIE ROAD	Dwelling	72.9	73.6	72.9	0.0	No Change	73.5	0.6	Negligible Adverse	59.3	60.0	59.9
59, LESLIE ROAD	Dwelling	73.0	73.7	73.0	0.0	No Change	73.6	0.6	Negligible Adverse	59.4	60.1	60.0
6, LESLIE ROAD	Dwelling	71.1	72.5	71.2	0.1	Negligible Adverse	72.2	1.1	Negligible Adverse	57.7	59.0	58.7
61, LESLIE ROAD	Dwelling	73.0	73.7	73.0	0.0	No Change	73.6	0.6	Negligible Adverse	59.4	60.1	60.0
63, LESLIE ROAD	Dwelling	73.0	73.8	73.0	0.0	No Change	73.7	0.7	Negligible Adverse	59.4	60.2	60.1
65, LESLIE ROAD	Dwelling	73.0	73.8	73.0	0.0	No Change	73.7	0.7	Negligible Adverse	59.4	60.2	60.1
7, LESLIE ROAD	Dwelling	71.4	72.8	71.5	0.1	Negligible Beneficial	72.5	1.1	Negligible Adverse	58.0	59.3	59.0
8, LESLIE ROAD	Dwelling	71.3	72.8	71.5	0.2	Negligible Adverse	72.5	1.2	Negligible Adverse	57.9	59.3	59.0
9, LESLIE ROAD	Dwelling	71.4	72.8	71.5	0.1	Negligible Beneficial	72.5	1.1	Negligible Adverse	58.0	59.3	59.0
LINDEN, LINDEN, GRANDHOLM DRIVE	Dwelling	47.6	48.2	47.5	-0.1	Negligible Beneficial	48.7	1.1	Negligible Adverse	36.6	37.1	37.6
FLAT B, 25, LOGIE AVENUE	Dwelling	52.7	53.0	61.7	9.0	Major Adverse	63.6	10.9	Major Adverse	41.2	41.4	51.0
FLAT D, 10, LOGIE AVENUE	Dwelling	50.3	50.6	56.8	6.5	Major Adverse	57.5	7.2	Moderate Adverse	39.0	39.3	45.5
FLAT D, 12, LOGIE AVENUE	Dwelling	65.3	65.9	63.0	-2.3	Minor Beneficial	63.5	-1.8	Negligible Beneficial	52.5	53.0	50.9
FLAT D, 14, LOGIE AVENUE	Dwelling	62.5	63.4	59.7	-2.8	Minor Beneficial	60.4	-2.1	Negligible Beneficial	50.0	50.8	48.1
FLAT D, 16, LOGIE AVENUE	Dwelling	60.1	61.0	57.8	-2.3	Minor Beneficial	58.5	-1.6	Negligible Beneficial	47.8	48.6	46.4
FLAT D, 18, LOGIE AVENUE	Dwelling	47.8	48.2	52.9	5.1	Major Adverse	53.9	6.1	Moderate Adverse	36.8	37.1	42.2
FLAT D, 20, LOGIE AVENUE	Dwelling	47.3	47.9	52.6	5.3	Major Adverse	53.7	6.4	Moderate Adverse	36.3	36.8	42.1
FLAT D, 21, LOGIE AVENUE	Dwelling	46.9	47.8	55.3	8.4	Major Adverse	56.3	9.4	Moderate Adverse	35.9	36.8	44.4
FLAT D, 22, LOGIE AVENUE	Dwelling	47.3	47.9	52.4	5.1	Major Adverse	53.6	6.3	Moderate Adverse	36.3	36.8	42.0
FLAT D, 23, LOGIE AVENUE	Dwelling	46.7	47.3	53.4	6.7	Major Adverse	54.5	7.8	Moderate Adverse	35.8	36.3	42.8
FLAT D, 24, LOGIE AVENUE	Dwelling	48.0	48.7	51.4	3.4	Moderate Adverse	52.4	4.4	Minor Adverse	36.9	37.6	40.9
FLAT D, 25, LOGIE AVENUE	Dwelling	49.0	49.5	56.0	7.0	Major Adverse	57.8	8.8	Moderate Adverse	37.8	38.3	45.8
FLAT D, 26, LOGIE AVENUE	Dwelling	48.4	49.3	52.0	3.6	Moderate Adverse	53.5	5.1	Moderate Adverse	37.3	38.1	41.9
FLAT D, 28, LOGIE AVENUE	Dwelling	48.1	49.0	53.9	5.8	Major Adverse	55.6	7.5	Moderate Adverse	37.0	37.8	43.8
FLAT D, 30, LOGIE AVENUE	Dwelling	48.2	49.0	56.2	8.0	Major Adverse	58.0	9.8	Moderate Adverse	37.1	37.8	45.9
FLAT D, 32, LOGIE AVENUE	Dwelling	51.8	51.4	61.2	9.8	Major Adverse	62.4	10.6	Major Adverse	40.4	40.0	49.9
FLAT B, 10, LOGIE AVENUE	Dwelling	54.4	54.8	63.1	8.7	Major Adverse	63.8	9.4	Moderate Adverse	42.7	43.1	52.5
FLAT B, 12, LOGIE AVENUE	Dwelling	67.0	67.6	64.8	-2.2	Minor Beneficial	65.3	-1.7	Negligible Beneficial	54.0	54.6	52.5
FLAT B, 14, LOGIE AVENUE	Dwelling	66.0	66.3	63.0	-2.8	Minor Beneficial	63.0	-2.1	Negligible Beneficial	52.3	53.1	50.4
FLAT B, 16, LOGIE AVENUE	Dwelling	62.7	62.2	60.5	-2.2	Minor Beneficial	61.3	-1.4	Negligible Beneficial	50.2	51.0	48.9
FLAT B, 18, LOGIE AVENUE	Dwelling	51.9	52.4	57.3	5.4	Major Adverse	58.3	6.4	Moderate Adverse	40.4	40.9	46.2
FLAT B, 20, LOGIE AVENUE	Dwelling	51.9	52.5	56.8	4.9	Moderate Adverse	57.8	5.9	Moderate Adverse	40.4	41.0	45.8
FLAT B, 21, LOGIE AVENUE	Dwelling	51.6	52.4	59.4	7.8	Major Adverse	60.5	8.9	Moderate Adverse	40.2	40.9	48.2
FLAT B, 22, LOGIE AVENUE	Dwelling	52.2	52.8	56.4	4.2	Moderate Adverse	57.5	5.3	Moderate Adverse	40.7	41.3	45.5
FLAT B, 23, LOGIE AVENUE	Dwelling	51.4	52.0	58.0	6.6	Major Adverse	59.2	7.8	Moderate Adverse	40.0	40.5	47.0
FLAT B, 24, LOGIE AVENUE	Dwelling	52.2	52.9	54.5	2.3	Minor Adverse	55.5	3.3	Minor Adverse	40.7	41.3	43.7
FLAT B, 26, LOGIE AVENUE	Dwelling	52.9	53.6	55.7	2.8	Minor Adverse	57.1	4.2	Minor Adverse	41.3	42.0	45.1
FLAT B, 28, LOGIE AVENUE	Dwelling	51.9	52.6	57.9	6.0	Major Adverse	59.6	7.7	Moderate Adverse	40.4	41.1	47.4
FLAT B, 30, LOGIE AVENUE	Dwelling	52.2	52.9	61.0	8.8	Major Adverse	62.8	10.6	Major Adverse	40.7	41.3	50.3
FLAT B, 32, LOGIE AVENUE	Dwelling	55.1	54.7	68.8	13.7	Major Adverse	70.7	15.6	Major Adverse	43.3	43.0	57.4
FLAT F, 10, LOGIE AVENUE	Dwelling	52.1	52.4	59.8	7.7	Major Adverse	60.5	8.4	Moderate Adverse	40.6	40.9	48.2
FLAT F, 12, LOGIE AVENUE	Dwelling	64.1	64.1	62.4	-2.4	Minor Beneficial	64.7	-1.8	Negligible Beneficial	53.6	54.1	52.0
FLAT F, 14, LOGIE AVENUE	Dwelling	65.1	64.3	61.3	-2.9	Minor Beneficial	62.1	-2.1	Negligible Beneficial	51.5	52.3	49.6
FLAT F, 16, LOGIE AVENUE	Dwelling	61.8	62.7	59.4	-2.4	Minor Beneficial	60.1	-1.7	Negligible Beneficial	49.4	50.2	47.8

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
FLAT F, 18, LOGIE AVENUE	Dwelling	49.5	50.0	55.7	6.2	Major Adverse	56.6	7.1	Moderate Adverse	38.3	38.7	44.7
FLAT F, 20, LOGIE AVENUE	Dwelling	49.2	49.8	55.2	6.0	Major Adverse	56.2	7.0	Moderate Adverse	38.0	38.6	44.3
FLAT F, 21, LOGIE AVENUE	Dwelling	48.9	49.8	57.5	8.6	Major Adverse	58.5	9.6	Moderate Adverse	37.7	38.6	46.4
FLAT F, 22, LOGIE AVENUE	Dwelling	49.3	49.9	54.5	5.2	Major Adverse	55.5	6.2	Moderate Adverse	38.1	38.6	43.7
FLAT F, 23, LOGIE AVENUE	Dwelling	48.7	49.4	55.5	6.8	Major Adverse	56.7	8.0	Moderate Adverse	37.6	38.2	44.8
FLAT F, 24, LOGIE AVENUE	Dwelling	49.8	50.6	52.8	3.0	Moderate Adverse	53.8	4.0	Minor Adverse	38.6	39.3	42.2
FLAT F, 25, LOGIE AVENUE	Dwelling	50.7	51.1	58.9	8.2	Major Adverse	60.7	10.0	Major Adverse	39.4	39.7	48.4
FLAT F, 26, LOGIE AVENUE	Dwelling	50.3	51.1	53.7	3.4	Moderate Adverse	55.1	4.8	Minor Adverse	39.0	39.7	43.3
FLAT F, 28, LOGIE AVENUE	Dwelling	49.8	50.7	56.0	6.2	Major Adverse	57.7	7.9	Moderate Adverse	38.6	39.4	45.7
FLAT F, 30, LOGIE AVENUE	Dwelling	50.0	50.8	58.7	8.7	Major Adverse	60.5	10.5	Major Adverse	38.7	39.5	48.2
FLAT F, 32, LOGIE AVENUE	Dwelling	53.5	53.1	68.5	15.0	Major Adverse	70.3	16.8	Major Adverse	41.9	41.5	57.0
1, LOGIE GARDENS (3 rd rep 2)	Dwelling	48.3	48.7	56.5	8.2	Major Adverse	58.4	10.1	Major Adverse	37.2	37.6	46.3
1, LOGIE GARDENS (2 nd rep 2)	Dwelling	52.1	52.4	63.3	11.2	Major Adverse	65.2	13.1	Major Adverse	40.6	40.9	52.4
1, LOGIE GARDENS (1 st rep 2)	Dwelling	50.0	50.3	60.2	10.2	Major Adverse	62.1	12.1	Major Adverse	38.7	39.0	49.6
26, LOGIE PLACE	Dwelling	56.8	59.0	55.4	-1.4	Minor Beneficial	56.6	-0.2	Negligible Beneficial	44.9	46.8	44.7
26, LOGIE PLACE	Dwelling	61.2	63.4	58.0	-3.2	Moderate Beneficial	59.1	-2.1	Negligible Beneficial	48.8	50.8	46.9
28, LOGIE PLACE	Dwelling	55.0	56.8	54.7	-0.3	Negligible Beneficial	55.8	0.8	Negligible Adverse	43.2	44.9	44.0
28, LOGIE PLACE	Dwelling	56.2	58.2	55.2	-1.0	Minor Beneficial	56.3	0.1	Negligible Beneficial	44.3	46.1	44.4
30, LOGIE PLACE	Dwelling	51.0	51.2	51.6	0.6	Negligible Adverse	52.5	1.5	Negligible Adverse	39.6	39.8	41.0
31, LOGIE PLACE	Dwelling	53.3	54.8	53.2	-0.1	Negligible Beneficial	54.3	1.0	Negligible Adverse	41.7	43.1	42.6
32, LOGIE PLACE	Dwelling	51.1	51.8	51.6	0.5	Negligible Adverse	52.6	1.5	Negligible Adverse	39.7	39.8	41.1
33, LOGIE PLACE	Dwelling	53.6	54.6	53.8	0.2	Negligible Adverse	54.9	1.3	Negligible Adverse	42.0	42.9	43.1
34, LOGIE PLACE	Dwelling	50.8	50.9	51.2	0.4	Negligible Adverse	52.1	1.3	Negligible Adverse	39.5	39.5	40.6
35, LOGIE PLACE	Dwelling	53.6	54.6	53.8	0.2	Negligible Adverse	54.9	1.3	Negligible Adverse	42.0	42.9	43.1
36, LOGIE PLACE	Dwelling	50.8	50.9	51.2	0.4	Negligible Adverse	52.1	1.3	Negligible Adverse	39.5	39.5	40.6
37, LOGIE PLACE	Dwelling	53.6	54.6	53.8	0.2	Negligible Adverse	54.9	1.3	Negligible Adverse	42.0	42.9	43.1
38, LOGIE PLACE	Dwelling	50.4	50.6	50.9	0.5	Negligible Adverse	51.9	1.5	Negligible Adverse	39.1	39.3	40.4
39, LOGIE PLACE	Dwelling	53.6	54.6	53.8	0.2	Negligible Adverse	54.9	1.3	Negligible Adverse	42.0	42.9	43.1
40, LOGIE PLACE	Dwelling	50.4	50.6	50.9	0.5	Negligible Adverse	51.9	1.5	Negligible Adverse	39.1	39.3	40.4
41, LOGIE PLACE	Dwelling	52.3	53.0	52.9	0.6	Negligible Adverse	53.9	1.6	Negligible Adverse	40.8	41.4	42.2
42, LOGIE PLACE	Dwelling	49.9	50.2	50.5	0.6	Negligible Adverse	51.5	1.6	Negligible Adverse	38.6	38.9	40.1
43, LOGIE PLACE	Dwelling	52.3	53.0	52.9	0.6	Negligible Adverse	53.9	1.6	Negligible Adverse	40.8	41.4	42.2
44, LOGIE PLACE	Dwelling	49.9	50.2	50.5	0.6	Negligible Adverse	51.5	1.6	Negligible Adverse	38.6	38.9	40.1
45, LOGIE PLACE	Dwelling	51.3	51.8	51.8	0.5	Negligible Adverse	52.7	1.4	Negligible Adverse	39.9	40.4	41.2
47, LOGIE PLACE	Dwelling	51.3	51.8	51.8	0.5	Negligible Adverse	52.7	1.4	Negligible Adverse	39.9	40.4	41.2
49, LOGIE PLACE	Dwelling	51.3	51.6	52.3	1.0	Minor Adverse	53.2	1.9	Negligible Adverse	39.9	40.2	41.6
51, LOGIE PLACE	Dwelling	51.3	51.6	52.3	1.0	Minor Adverse	53.2	1.9	Negligible Adverse	39.9	40.2	41.6
FLAT D, 46, LOGIE PLACE	Dwelling	47.6	47.6	50.8	3.2	Moderate Adverse	51.1	3.5	Minor Adverse	36.6	36.6	39.7
FLAT D, 48, LOGIE PLACE	Dwelling	48.4	48.3	52.2	3.8	Moderate Adverse	52.4	4.0	Minor Adverse	37.3	37.2	40.9
FLAT D, 53, LOGIE PLACE	Dwelling	48.5	48.5	49.4	1.1	Minor Adverse	50.1	1.8	Negligible Adverse	37.2	37.4	38.8
FLAT D, 55, LOGIE PLACE	Dwelling	47.8	47.9	48.7	0.9	Negligible Adverse	49.3	1.5	Negligible Adverse	36.8	36.7	38.1
FLAT D, 57, LOGIE PLACE	Dwelling	52.2	50.8	52.5	0.3	Negligible Adverse	52.8	0.6	Negligible Adverse	40.7	39.5	41.3
FLAT A, 59, LOGIE PLACE	Dwelling	53.4	52.3	54.6	1.2	Minor Adverse	55.0	1.6	Negligible Adverse	41.8	40.8	43.2
FLAT D, 61, LOGIE PLACE	Dwelling	56.1	55.0	59.3	3.2	Moderate Adverse	59.4	3.3	Minor Adverse	44.2	43.2	47.2
FLAT B, 46, LOGIE PLACE	Dwelling	50.4	50.4	53.3	2.9	Minor Adverse	53.6	3.2	Minor Adverse	39.1	39.1	42.0
FLAT B, 48, LOGIE PLACE	Dwelling	51.1	51.1	55.0	3.9	Moderate Adverse	55.2	4.1	Minor Adverse	39.7	39.7	43.4
FLAT B, 53, LOGIE PLACE	Dwelling	51.7	51.7	52.8	1.1	Minor Adverse	53.5	1.8	Negligible Adverse	40.3	40.3	41.9
FLAT B, 55, LOGIE PLACE	Dwelling	51.1	50.8	51.9	0.8	Negligible Adverse	52.5	1.4	Negligible Adverse	39.7	39.5	41.0
FLAT B, 57, LOGIE PLACE	Dwelling	53.4	52.6	53.9	0.5	Negligible Adverse	54.4	1.0	Negligible Adverse	41.8	41.1	42.7
FLAT C, 59, LOGIE PLACE	Dwelling	54.5	53.8	55.9	1.4	Minor Adverse	56.5	2.0	Negligible Adverse	42.8	42.2	44.6
FLAT B, 61, LOGIE PLACE	Dwelling	57.0	56.2	60.2	3.2	Moderate Adverse	60.4	3.4	Minor Adverse	45.0	44.3	48.1
FLAT F, 46, LOGIE PLACE	Dwelling	49.0	49.0	52.3	3.3	Moderate Adverse	52.5	3.5	Minor Adverse	37.8	37.8	41.0
FLAT F, 48, LOGIE PLACE	Dwelling	50.0	49.9	54.0	4.0	Moderate Adverse	54.2	4.2	Minor Adverse	38.7	38.6	42.5
FLAT F, 53, LOGIE PLACE	Dwelling	49.8	50.0	51.0	1.2	Minor Adverse	51.7	1.9	Negligible Adverse	38.6	38.7	40.3
FLAT F, 55, LOGIE PLACE	Dwelling	49.3	49.1	50.2	0.9	Negligible Adverse	50.8	1.5	Negligible Adverse	38.1	37.9	39.5
FLAT F, 57, LOGIE PLACE	Dwelling	52.7	51.6	53.2	0.5	Negligible Adverse	53.5	0.8	Negligible Adverse	41.2	40.2	41.9
FLAT F, 59, LOGIE PLACE	Dwelling	53.9	53.1	55.3	1.4	Minor Adverse	55.8	1.9	Negligible Adverse	42.2	41.5	44.0
FLAT F, 61, LOGIE PLACE	Dwelling	56.8	55.8	60.2	3.4	Moderate Adverse	60.3	3.5	Minor Adverse	44.9	44.0	48.0
1, LOGIE TERRACE	Dwelling	60.1	62.0	61.4	1.3	Minor Adverse	62.7	2.6	Negligible Adverse	47.8	49.5	50.2
11, LOGIE TERRACE	Dwelling	59.4	62.0	57.4	-2.0	Minor Beneficial	58.8	-0.6	Negligible Beneficial	47.2	49.5	46.7
13, LOGIE TERRACE	Dwelling	59.4	62.0	57.4	-2.0	Minor Beneficial	58.8	-0.6	Negligible Beneficial	47.2	49.5	46.7
15, LOGIE TERRACE	Dwelling	59.4	62.0	57.4	-2.0	Minor Beneficial	58.8	-0.6	Negligible Beneficial	47.2	49.5	46.7
17, LOGIE TERRACE	Dwelling	59.4	62.0	57.4	-2.0	Minor Beneficial	58.8	-0.6	Negligible Beneficial	47.2	49.5	46.7
19, LOGIE TERRACE	Dwelling	59.1	61.9	56.8	-2.3	Minor Beneficial	58.0	-1.1	Negligible Beneficial	46.9	49.4	45.9
21, LOGIE TERRACE	Dwelling	59.1	61.9	56.8	-2.3	Minor Beneficial	58.0	-1.1	Negligible Beneficial	46.9	49.4	45.9
23, LOGIE TERRACE	Dwelling	59.1	61.9	56.8	-2.3	Minor Beneficial	58.0	-1.1	Negligible Beneficial	46.9	49.4	45.9
25, LOGIE TERRACE	Dwelling	59.1	61.9	56.8	-2.3	Minor Beneficial	58.0	-1.1	Negligible Beneficial	46.9	49.4	45.9
27, LOGIE TERRACE	Dwelling	59.1	61.9	56.8	-2.3	Minor Beneficial	58.0	-1.1	Negligible Beneficial	46.9	49.4	45.9
29, LOGIE TERRACE	Dwelling	58.2	61.2	55.2	-3.0	Moderate Beneficial	56.5	-1.7	Negligible Beneficial	46.1	48.8	44.7
3, LOGIE TERRACE	Dwelling	59.9	62.3	59.1	-0.8	Negligible Beneficial	60.6	0.7	Negligible Adverse	47.6	49.8	48.3
5, LOGIE TERRACE	Dwelling	59.9	62.3	59.1	-0.8	Negligible Beneficial	60.6	0.7	Negligible Adverse	47.6	49.8	48.3
7, LOGIE TERRACE	Dwelling	59.9	62.3	59.1	-0.8	Negligible Beneficial	60.6	0.7	Negligible Adverse	47.6	49.8	48.3
9, LOGIE TERRACE	Dwelling	59.9	62.3	59.1	-0.8	Negligible Beneficial	60.6	0.7	Negligible Adverse	47.6	49.8	48.3
MIDDLEFIELD COMMUNITY PROJECT YOUTH FLAT, 28, MANOR AVENUE	Community Services	51.7	52.1	60.2	8.5	Major Adverse	61.5	9.8	Moderate Adverse	40.3	40.6	49.1
FLAT A, 52, MANOR AVENUE	Dwelling	56.8	57.3	60.3	3.5	Moderate Adverse	60.7	3.9	Minor Adverse	44.9	45.3	48.4
FLAT B, 52, MANOR AVENUE	Dwelling	56.8	57.3	60.3	3.5	Moderate Adverse	60.7	3.9	Minor Adverse	44.9	45.3	48.4
FLAT C, 52, MANOR AVENUE	Dwelling	56.8	57.3	60.3	3.5	Moderate Adverse	60.7	3.9	Minor Adverse	44.9	45.3	48.4
FLAT D, 52, MANOR AVENUE	Dwelling	56.8	57.3	60.3	3.5	Moderate Adverse	60.7	3.9	Minor Adverse	44.9	45.3	48.4
FLAT A, 60, MANOR AVENUE	Dwelling	56.2	56.6	60.0	3.8	Moderate Adverse	60.3	4.1	Minor Adverse	44.3	44.7	48.0
FLAT B, 60, MANOR AVENUE	Dwelling	56.2	56.6	60.0	3.8	Moderate Adverse	60.3	4.1	Minor Adverse	44.3	44.7	48.0
FLAT C, 60, MANOR AVENUE	Dwelling	56.2	56.6	60.0	3.8	Moderate Adverse	60.3	4.1	Minor Adverse	44.3	44.7	48.0
FLAT D, 60, MANOR AVENUE	Dwelling	56.2	56.6	60.0	3.8	Moderate Adverse	60.3	4.1	Minor Adverse	44.3	44.7	48.0

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
MIDDLEFIELD PARISH CHURCH, 75, MANOR AVENUE	Church	50.9	51.8	51.3	0.4	Negligible Adverse	52.7	1.8	Negligible Adverse	39.5	40.4	41.2
1, MANOR AVENUE	Dwelling	68.4	69.0	68.8	0.4	Negligible Adverse	70.3	1.9	Negligible Adverse	55.3	55.8	57.0
101, MANOR AVENUE	Dwelling	57.1	57.4	60.5	3.4	Moderate Adverse	60.9	3.8	Minor Adverse	45.1	45.4	48.5
103, MANOR AVENUE	Dwelling	57.0	57.4	60.5	3.5	Moderate Adverse	60.9	3.9	Minor Adverse	45.0	45.4	48.5
105, MANOR AVENUE	Dwelling	56.9	57.2	60.5	3.6	Moderate Adverse	60.8	3.9	Minor Adverse	44.9	45.2	48.5
107, MANOR AVENUE	Dwelling	56.8	57.1	60.5	3.7	Moderate Adverse	60.8	4.0	Minor Adverse	44.9	45.1	48.5
109, MANOR AVENUE	Dwelling	56.8	57.1	60.5	3.7	Moderate Adverse	60.8	4.0	Minor Adverse	44.9	45.1	48.5
11, MANOR AVENUE	Dwelling	66.2	66.5	67.8	1.6	Minor Adverse	69.1	2.9	Negligible Adverse	53.3	53.6	55.9
111, MANOR AVENUE	Dwelling	56.7	57.0	60.4	3.7	Moderate Adverse	60.8	4.1	Minor Adverse	44.8	45.0	48.5
113, MANOR AVENUE	Dwelling	56.7	57.0	60.4	3.7	Moderate Adverse	60.7	4.0	Minor Adverse	44.8	45.0	48.4
115, MANOR AVENUE	Dwelling	56.6	56.9	60.3	3.7	Moderate Adverse	60.7	4.1	Minor Adverse	44.7	44.9	48.4
117, MANOR AVENUE	Dwelling	56.9	56.9	60.3	3.7	Moderate Adverse	60.7	4.1	Minor Adverse	44.7	44.9	48.4
119, MANOR AVENUE	Dwelling	56.9	56.9	60.4	3.5	Moderate Adverse	60.7	4.1	Minor Adverse	44.7	44.9	48.4
121, MANOR AVENUE	Dwelling	56.7	57.0	60.3	3.6	Moderate Adverse	60.7	4.0	Minor Adverse	44.8	45.0	48.4
123, MANOR AVENUE	Dwelling	56.7	56.9	60.3	3.6	Moderate Adverse	60.7	4.0	Minor Adverse	44.8	44.9	48.4
125, MANOR AVENUE	Dwelling	56.7	56.9	60.3	3.6	Moderate Adverse	60.6	3.9	Minor Adverse	44.8	44.9	48.3
127, MANOR AVENUE	Dwelling	56.6	56.9	60.2	3.6	Moderate Adverse	60.5	3.9	Minor Adverse	44.7	44.9	48.2
129, MANOR AVENUE	Dwelling	53.3	53.0	55.9	2.6	Minor Adverse	56.2	2.9	Negligible Adverse	41.7	41.4	44.3
13, MANOR AVENUE	Dwelling	66.2	66.5	67.8	1.6	Minor Adverse	69.1	2.9	Negligible Adverse	53.3	53.6	55.9
131, MANOR AVENUE	Dwelling	53.4	53.4	56.4	3.0	Moderate Adverse	56.7	3.3	Minor Adverse	41.8	41.8	44.8
133, MANOR AVENUE	Dwelling	53.8	53.8	56.8	3.0	Moderate Adverse	57.1	3.3	Minor Adverse	42.2	42.2	45.1
135, MANOR AVENUE	Dwelling	53.7	53.8	56.8	3.1	Moderate Adverse	57.0	3.3	Minor Adverse	42.1	42.2	45.0
137, MANOR AVENUE	Dwelling	54.7	54.3	57.0	2.3	Minor Adverse	57.3	2.6	Negligible Adverse	43.0	42.6	45.3
139, MANOR AVENUE	Dwelling	53.9	53.7	56.1	2.2	Minor Adverse	56.5	2.6	Negligible Adverse	42.2	42.1	44.6
141, MANOR AVENUE	Dwelling	56.4	56.7	58.7	2.3	Minor Adverse	59.0	2.6	Negligible Adverse	44.5	44.7	46.8
143, MANOR AVENUE	Dwelling	57.3	57.9	59.1	1.8	Minor Adverse	57.3	2.1	Negligible Adverse	45.3	45.3	48.2
145, MANOR AVENUE	Dwelling	60.6	61.7	60.7	0.1	Negligible Adverse	61.8	1.2	Negligible Adverse	48.3	49.3	49.4
15, MANOR AVENUE	Dwelling	66.2	66.5	67.8	1.6	Minor Adverse	69.1	2.9	Negligible Adverse	53.3	53.6	55.9
17, MANOR AVENUE	Dwelling	65.1	65.2	67.2	2.1	Minor Adverse	68.3	3.2	Minor Adverse	52.3	52.4	55.2
19, MANOR AVENUE	Dwelling	65.1	65.2	67.2	2.1	Minor Adverse	68.3	3.2	Minor Adverse	52.3	52.4	55.2
21, MANOR AVENUE	Dwelling	64.7	64.7	66.6	1.9	Minor Adverse	67.6	2.9	Negligible Adverse	52.0	52.0	54.6
23, MANOR AVENUE	Dwelling	64.7	64.7	66.6	1.9	Minor Adverse	67.5	2.8	Negligible Adverse	52.0	52.0	54.5
25, MANOR AVENUE	Dwelling	64.3	64.4	65.7	1.4	Minor Adverse	66.6	2.3	Negligible Adverse	51.6	51.7	53.7
27, MANOR AVENUE	Dwelling	64.3	64.4	65.7	1.4	Minor Adverse	66.6	2.3	Negligible Adverse	51.6	51.7	53.7
29, MANOR AVENUE	Dwelling	64.2	64.3	64.4	0.2	Negligible Adverse	65.3	1.1	Negligible Adverse	51.5	51.6	52.5
3, MANOR AVENUE	Dwelling	68.4	69.0	68.8	0.4	Negligible Adverse	70.3	1.9	Negligible Adverse	55.3	55.8	57.0
31, MANOR AVENUE	Dwelling	64.2	64.3	64.5	0.3	Negligible Adverse	65.4	1.2	Negligible Adverse	51.5	51.6	52.6
33, MANOR AVENUE	Dwelling	63.9	64.0	63.3	-0.6	Negligible Beneficial	64.2	0.3	Negligible Adverse	51.2	51.3	51.5
34, MANOR AVENUE	Dwelling	61.0	62.2	63.0	2.0	Minor Adverse	63.7	2.7	Negligible Adverse	48.6	49.7	51.1
35, MANOR AVENUE	Dwelling	63.9	64.0	63.3	-0.6	Negligible Beneficial	64.2	0.3	Negligible Adverse	51.2	51.3	51.5
36, MANOR AVENUE	Dwelling	61.6	62.8	63.5	1.9	Minor Adverse	64.2	2.6	Negligible Adverse	49.2	50.3	51.5
37, MANOR AVENUE	Dwelling	63.6	63.8	61.5	-2.1	Minor Beneficial	62.3	-1.3	Negligible Beneficial	51.0	51.2	49.8
38, MANOR AVENUE	Dwelling	61.6	62.8	63.5	1.9	Minor Adverse	64.2	2.6	Negligible Adverse	49.2	50.3	51.5
39, MANOR AVENUE	Dwelling	63.6	63.8	61.3	-2.3	Minor Beneficial	62.2	-1.4	Negligible Beneficial	51.0	51.2	49.7
40, MANOR AVENUE	Dwelling	61.6	62.8	63.5	1.9	Minor Adverse	64.2	2.6	Negligible Adverse	49.2	50.3	51.5
41, MANOR AVENUE	Dwelling	63.6	63.8	60.4	-3.2	Moderate Beneficial	61.2	-2.4	Negligible Beneficial	51.0	51.2	48.8
42, MANOR AVENUE	Dwelling	61.6	62.8	63.5	1.9	Minor Adverse	64.2	2.6	Negligible Adverse	49.2	50.3	51.5
43, MANOR AVENUE	Dwelling	63.6	63.8	60.4	-3.2	Moderate Beneficial	61.3	-2.3	Negligible Beneficial	51.0	51.2	48.9
44, MANOR AVENUE	Dwelling	58.7	59.6	61.1	2.4	Minor Adverse	61.6	2.9	Negligible Adverse	46.6	47.4	49.2
45, MANOR AVENUE	Dwelling	63.5	63.8	59.0	-4.5	Moderate Beneficial	59.8	-3.7	Minor Beneficial	50.9	51.2	47.6
46, MANOR AVENUE	Dwelling	58.4	59.3	60.9	2.5	Minor Adverse	61.4	3.0	Minor Adverse	46.3	47.1	49.0
47, MANOR AVENUE	Dwelling	63.5	63.8	58.9	-4.6	Moderate Beneficial	59.8	-3.7	Minor Beneficial	50.9	51.2	47.6
48, MANOR AVENUE	Dwelling	57.4	58.1	60.2	2.8	Minor Adverse	60.6	3.2	Minor Adverse	45.4	46.0	48.3
49, MANOR AVENUE	Dwelling	63.2	63.2	57.2	-6.0	Major Beneficial	58.2	-5.0	Moderate Beneficial	50.6	51.0	46.1
5, MANOR AVENUE	Dwelling	68.4	69.0	68.8	0.4	Negligible Adverse	70.3	1.9	Negligible Adverse	55.3	55.8	57.0
50, MANOR AVENUE	Dwelling	57.4	58.1	60.2	2.8	Minor Adverse	60.6	3.2	Minor Adverse	45.4	46.0	48.3
51, MANOR AVENUE	Dwelling	63.6	63.9	57.8	-5.8	Major Beneficial	58.7	-4.9	Minor Beneficial	51.0	51.2	46.6
53, MANOR AVENUE	Dwelling	63.6	64.0	56.9	-6.7	Major Beneficial	57.9	-5.7	Moderate Beneficial	51.0	51.3	45.8
55, MANOR AVENUE	Dwelling	63.6	64.0	56.9	-6.7	Major Beneficial	57.9	-5.7	Moderate Beneficial	51.0	51.3	45.8
57, MANOR AVENUE	Dwelling	64.1	64.5	58.2	-5.9	Major Beneficial	59.5	-4.6	Minor Beneficial	51.4	51.8	47.3
59, MANOR AVENUE	Dwelling	64.1	64.6	58.3	-5.8	Major Beneficial	59.6	-4.5	Minor Beneficial	51.4	51.9	47.4
61, MANOR AVENUE	Dwelling	64.1	64.6	59.1	-5.0	Moderate Beneficial	60.5	-3.6	Minor Beneficial	51.4	51.9	48.2
62, MANOR AVENUE	Dwelling	56.2	56.7	59.8	3.6	Moderate Adverse	60.2	4.0	Minor Adverse	44.3	44.8	47.9
63, MANOR AVENUE	Dwelling	64.1	64.6	59.1	-5.0	Moderate Beneficial	60.5	-3.6	Minor Beneficial	51.4	51.9	48.2
64, MANOR AVENUE	Dwelling	56.2	56.7	59.8	3.6	Moderate Adverse	60.2	4.0	Minor Adverse	44.3	44.8	47.9
65, MANOR AVENUE	Dwelling	63.4	64.0	59.7	-3.7	Moderate Beneficial	61.2	-2.2	Negligible Beneficial	50.8	51.3	48.8
66, MANOR AVENUE	Dwelling	56.2	56.6	59.8	3.6	Moderate Adverse	60.2	4.0	Minor Adverse	44.3	44.7	47.9
67, MANOR AVENUE	Dwelling	64.5	64.5	59.6	-4.4	Moderate Beneficial	61.1	-2.9	Negligible Beneficial	51.3	51.8	49.7
68, MANOR AVENUE	Dwelling	56.2	56.6	59.8	3.6	Moderate Adverse	60.2	4.0	Minor Adverse	44.3	44.7	47.9
69, MANOR AVENUE	Dwelling	63.2	63.8	59.9	-3.3	Moderate Beneficial	61.5	-1.7	Negligible Beneficial	50.6	51.2	49.1
7, MANOR AVENUE	Dwelling	68.4	69.0	68.8	0.4	Negligible Adverse	70.3	1.9	Negligible Adverse	55.3	55.8	57.0
70, MANOR AVENUE	Dwelling	56.6	57.5	57.9	1.3	Minor Adverse	58.6	2.0	Negligible Adverse	44.7	45.5	46.5
71, MANOR AVENUE	Dwelling	63.2	63.9	60.4	-2.8	Minor Beneficial	61.9	-1.3	Negligible Beneficial	50.6	51.2	49.4
72, MANOR AVENUE	Dwelling	56.7	57.6	57.4	0.7	Negligible Adverse	58.2	1.5	Negligible Adverse	44.8	45.6	46.1
73, MANOR AVENUE	Dwelling	62.7	63.7	61.5	-1.2	Minor Beneficial	63.1	0.4	Negligible Adverse	50.2	51.1	50.5
75, MANOR AVENUE	Church Hall / Religious Meeting Place / Hall	60.2	61.3	60.2	0.0	No Change	61.6	1.4	Negligible Adverse	47.9	48.9	49.2
77, MANOR AVENUE	Dwelling	57.4	58.4	59.4	2.0	Minor Adverse	60.4	3.0	Minor Adverse	45.4	46.3	48.1
79, MANOR AVENUE	Dwelling	57.4	58.3	59.3	1.9	Minor Adverse	60.2	2.8	Negligible Adverse	45.4	46.2	47.9
81, MANOR AVENUE	Dwelling	57.2	58.0	59.3	2.1	Minor Adverse	60.2	3.0	Minor Adverse	45.2	45.9	47.9
83, MANOR AVENUE	Dwelling	59.1	57.9	59.1	2.0	Minor Adverse	59.9	2.8	Negligible Adverse	45.1	45.8	47.6
85, MANOR AVENUE	Dwelling	57.0	57.7	58.8	1.8	Minor Adverse	59.7	2.7	Negligible Adverse	45.7	46.7	47.5
87, MANOR AVENUE	Dwelling	56.7	57.3	58.6	1.9	Minor Adverse	59.4	2.7	Negligible Adverse	44.8	45.3	47.2

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
89, MANOR AVENUE	Dwelling	56.3	56.8	58.2	1.9	Minor Adverse	59.0	2.7	Negligible Adverse	44.4	44.9	46.8
9, MANOR AVENUE	Dwelling	66.2	66.5	67.8	1.6	Minor Adverse	69.1	2.9	Negligible Adverse	53.3	53.6	55.9
91, MANOR AVENUE	Dwelling	55.8	56.4	57.7	1.9	Minor Adverse	58.5	2.7	Negligible Adverse	44.0	44.5	46.4
93, MANOR AVENUE	Dwelling	57.6	57.9	60.7	3.1	Moderate Adverse	61.2	3.6	Minor Adverse	45.6	45.8	48.8
95, MANOR AVENUE	Dwelling	57.5	57.8	60.7	3.2	Moderate Adverse	61.1	3.6	Minor Adverse	45.5	45.8	48.7
97, MANOR AVENUE	Dwelling	57.1	57.5	60.5	3.4	Moderate Adverse	60.9	3.8	Minor Adverse	45.1	45.5	48.5
99, MANOR AVENUE	Dwelling	57.2	57.6	60.5	3.3	Moderate Adverse	60.9	3.7	Minor Adverse	45.2	45.6	48.5
LORD PROVOST HENRY E RAE COMMUNITY CENTRE, MANOR AVENUE	Community Centre	57.7	58.9	57.7	0.0	No Change	58.9	1.2	Negligible Adverse	45.7	46.7	46.7
FLAT D, 24, MANOR AVENUE	Dwelling	52.3	52.7	63.6	11.3	Major Adverse	64.7	12.4	Major Adverse	40.8	41.2	52.0
FLAT D, 26, MANOR AVENUE	Dwelling	51.8	52.2	61.4	9.6	Major Adverse	62.7	10.9	Major Adverse	40.4	40.7	50.2
FLAT D, 28, MANOR AVENUE	Dwelling	51.4	51.8	60.3	8.9	Major Adverse	61.7	10.3	Major Adverse	40.0	40.4	49.3
FLAT D, 30, MANOR AVENUE	Dwelling	51.8	52.4	60.4	8.6	Major Adverse	61.7	9.9	Moderate Adverse	40.4	40.9	49.3
FLAT F, 54, MANOR AVENUE	Dwelling	54.4	54.8	58.0	3.6	Moderate Adverse	58.3	3.9	Minor Adverse	42.7	43.1	46.2
FLAT D, 56, MANOR AVENUE	Dwelling	53.8	54.2	57.7	3.9	Moderate Adverse	57.9	4.1	Minor Adverse	42.2	42.5	45.8
FLAT D, 58, MANOR AVENUE	Dwelling	54.4	54.8	58.1	3.7	Moderate Adverse	58.4	4.0	Minor Adverse	42.7	43.1	46.3
FLAT B, 24, MANOR AVENUE	Dwelling	55.1	55.4	65.3	10.2	Major Adverse	66.4	11.3	Major Adverse	43.3	43.6	53.5
FLAT A, 26, MANOR AVENUE	Dwelling	54.8	55.1	63.4	8.6	Major Adverse	64.6	9.8	Moderate Adverse	43.1	43.3	51.9
FLAT C, 28, MANOR AVENUE	Dwelling	54.4	54.7	62.6	8.2	Major Adverse	63.8	9.4	Moderate Adverse	42.7	43.0	51.2
FLAT B, 54, MANOR AVENUE	Dwelling	56.4	56.8	59.9	3.5	Moderate Adverse	60.2	3.8	Minor Adverse	44.5	44.9	47.9
FLAT B, 56, MANOR AVENUE	Dwelling	55.9	56.3	59.6	3.7	Moderate Adverse	59.9	4.0	Minor Adverse	44.0	44.4	47.6
FLAT B, 58, MANOR AVENUE	Dwelling	56.1	56.5	59.7	3.6	Moderate Adverse	60.0	3.9	Minor Adverse	44.2	44.6	47.7
FLAT F, 24, MANOR AVENUE	Dwelling	54.0	54.2	64.7	10.7	Major Adverse	65.8	11.8	Major Adverse	42.3	42.5	53.0
FLAT E, 26, MANOR AVENUE	Dwelling	53.5	53.8	62.6	9.1	Major Adverse	63.9	10.4	Major Adverse	41.9	42.2	51.2
FLAT F, 28, MANOR AVENUE	Dwelling	53.2	53.5	61.6	8.4	Major Adverse	62.9	9.7	Moderate Adverse	41.6	41.9	50.7
FLAT B, 30, MANOR AVENUE	Dwelling	53.6	54.1	62.7	8.6	Major Adverse	63.4	9.8	Moderate Adverse	42.0	42.4	50.8
FLAT E, 54, MANOR AVENUE	Dwelling	56.0	56.4	59.7	3.7	Moderate Adverse	60.0	4.0	Minor Adverse	44.1	44.5	47.7
FLAT F, 56, MANOR AVENUE	Dwelling	55.5	55.8	59.3	3.8	Moderate Adverse	59.6	4.1	Minor Adverse	43.7	44.0	47.4
FLAT F, 58, MANOR AVENUE	Dwelling	55.8	56.2	59.5	3.7	Moderate Adverse	59.8	4.0	Minor Adverse	44.0	44.3	47.6
MANOR PARK CARAVAN PARK, 1, MANOR DRIVE	Dwelling	59.7	59.7	61.2	1.5	Minor Adverse	62.4	2.7	Negligible Adverse	47.5	47.5	49.9
MANOR PARK CARAVAN PARK, 3, MANOR DRIVE	Dwelling	59.0	59.1	60.8	1.8	Minor Adverse	62.0	3.0	Minor Adverse	46.8	46.9	49.5
MANOR PARK CARAVAN PARK, 4, MANOR DRIVE	Dwelling	55.7	55.6	57.3	1.6	Minor Adverse	58.4	2.7	Negligible Adverse	43.9	43.8	46.3
MANOR PARK CARAVAN PARK, 12, MANOR DRIVE	Dwelling	60.2	60.1	59.9	-0.3	Negligible Beneficial	60.9	0.7	Negligible Adverse	47.9	47.8	48.5
MANOR PARK CARAVAN PARK, 15, MANOR DRIVE	Dwelling	57.6	57.3	57.9	0.3	Negligible Adverse	58.9	1.3	Negligible Adverse	45.6	45.3	46.7
MANOR PARK CARAVAN PARK, 16, MANOR DRIVE	Dwelling	57.4	57.5	59.4	2.0	Minor Adverse	60.6	3.2	Minor Adverse	45.4	45.5	48.3
MANOR PARK CARAVAN PARK, 17, MANOR DRIVE	Dwelling	54.4	54.5	55.1	0.7	Negligible Adverse	56.3	1.9	Negligible Adverse	42.7	42.8	44.4
MANOR PARK CARAVAN PARK, 20, MANOR DRIVE	Dwelling	56.5	56.3	56.6	0.1	Negligible Adverse	57.3	0.8	Negligible Adverse	44.6	44.4	45.3
10, MANOR DRIVE	Dwelling	52.4	52.8	63.1	10.7	Major Adverse	64.6	12.2	Major Adverse	40.9	41.3	51.9
11, MANOR DRIVE	Dwelling	61.1	63.3	58.9	-2.2	Minor Beneficial	60.0	-1.1	Negligible Beneficial	48.7	50.7	47.7
12, MANOR DRIVE	Dwelling	51.9	52.4	64.1	12.2	Major Adverse	65.8	13.9	Major Adverse	40.4	40.9	53.0
13, MANOR DRIVE	Dwelling	60.8	62.8	58.9	-1.9	Minor Beneficial	60.0	-0.8	Negligible Beneficial	48.5	50.3	47.0
14, MANOR DRIVE	Dwelling	51.7	52.2	64.5	12.8	Major Adverse	66.1	14.4	Major Adverse	40.3	40.7	53.2
15, MANOR DRIVE	Dwelling	61.1	63.1	58.3	-2.8	Minor Beneficial	59.5	-1.6	Negligible Beneficial	48.7	50.5	47.3
16, MANOR DRIVE	Dwelling	51.0	51.6	65.6	14.6	Major Adverse	67.3	16.3	Major Adverse	39.6	40.2	54.3
18, MANOR DRIVE	Dwelling	50.6	51.2	66.2	15.6	Major Adverse	67.9	17.3	Major Adverse	39.3	39.8	54.8
5, MANOR DRIVE	Dwelling	61.1	63.4	57.1	-4.0	Moderate Beneficial	58.3	-2.8	Negligible Beneficial	48.7	50.8	46.2
7, MANOR DRIVE	Dwelling	61.2	63.4	57.7	-3.5	Moderate Beneficial	58.9	-2.3	Negligible Beneficial	48.8	50.8	46.7
8, MANOR DRIVE	Dwelling	52.2	52.6	62.5	10.3	Major Adverse	64.0	11.8	Major Adverse	40.7	41.1	51.3
9, MANOR DRIVE	Dwelling	61.1	63.3	58.9	-2.2	Minor Beneficial	60.1	-1.0	Negligible Beneficial	48.7	50.7	47.8
MANOR DRIVE	Dwelling	58.5	58.4	58.6	0.1	Negligible Adverse	59.7	1.2	Negligible Adverse	46.4	46.3	47.5
MANOR DRIVE	Dwelling	54.7	54.6	55.0	0.3	Negligible Adverse	56.0	1.3	Negligible Adverse	43.0	42.9	44.1
MANOR DRIVE	Dwelling	55.1	55.0	57.0	1.9	Minor Adverse	57.9	2.8	Negligible Adverse	43.3	43.2	45.8
MANOR DRIVE	Dwelling	57.7	57.8	59.6	1.9	Minor Adverse	60.8	3.1	Minor Adverse	45.7	45.8	48.5
MANOR DRIVE	Dwelling	54.3	54.3	56.2	1.9	Minor Adverse	57.3	3.0	Minor Adverse	42.6	42.6	45.3
MANOR DRIVE	Dwelling	56.9	56.5	58.4	1.5	Minor Adverse	59.4	2.5	Negligible Adverse	44.9	44.6	47.2
MANOR DRIVE	Dwelling	58.3	57.8	57.9	-0.4	Negligible Beneficial	58.5	0.2	Negligible Adverse	46.2	45.8	46.4
MANOR DRIVE	Dwelling	58.4	58.5	60.3	1.9	Minor Adverse	61.5	3.1	Minor Adverse	46.3	46.4	49.1
MANOR DRIVE	Dwelling	55.4	55.3	56.7	1.3	Minor Adverse	57.8	2.4	Negligible Adverse	43.6	43.5	45.8
MANOR DRIVE	Dwelling	51.8	52.1	53.8	2.0	Minor Adverse	55.1	3.3	Minor Adverse	40.4	40.6	43.3
MANOR DRIVE	Dwelling	57.0	57.1	56.6	-0.4	Negligible Beneficial	57.6	0.6	Negligible Adverse	45.0	45.1	45.6
MANOR DRIVE	Dwelling	55.0	54.7	56.2	1.2	Minor Adverse	57.1	2.1	Negligible Adverse	43.2	43.0	45.1
MANOR DRIVE	Dwelling	53.7	53.6	54.8	1.1	Minor Adverse	55.7	2.0	Negligible Adverse	42.1	42.0	43.9
MANOR DRIVE	Dwelling	57.3	57.2	58.9	1.6	Minor Adverse	59.8	2.5	Negligible Adverse	45.3	45.2	47.6
MANOR DRIVE	Dwelling	57.5	57.3	58.7	1.2	Minor Adverse	59.7	2.2	Negligible Adverse	45.5	45.3	47.5
MANOR DRIVE	Dwelling	54.7	54.7	56.5	1.8	Minor Adverse	57.5	2.8	Negligible Adverse	43.0	43.0	45.5
MANOR DRIVE	Dwelling	57.0	56.4	56.9	-0.1	Negligible Beneficial	57.7	0.7	Negligible Adverse	45.0	44.5	45.7
FLAT D, 17, MANOR DRIVE	Dwelling	53.4	53.4	59.5	4.8	Moderate Adverse	59.4	5.4	Moderate Adverse	42.1	42.1	46.6
FLAT B, 19, MANOR DRIVE	Dwelling	60.6	61.3	61.3	0.7	Negligible Adverse	62.6	2.0	Negligible Adverse	48.3	49.1	48.9
FLAT B, 17, MANOR DRIVE	Dwelling	56.3	58.0	60.4	4.1	Moderate Adverse	61.0	4.7	Minor Adverse	44.4	45.9	46.9
FLAT B, 19, MANOR DRIVE	Dwelling	62.2	63.4	63.9	1.7	Minor Adverse	65.3	3.1	Minor Adverse	49.7	50.8	52.5
FLAT F, 17, MANOR DRIVE	Dwelling	55.3	57.1	60.0	4.7	Moderate Adverse	60.6	5.3	Moderate Adverse	43.5	45.1	48.3
FLAT F, 19, MANOR DRIVE	Dwelling	61.8	63.0	63.0	1.2	Minor Adverse	64.4	2.6	Negligible Adverse	49.4	50.4	51.7
FLAT A, 15, MANOR WALK	Dwelling	56.8	55.7	60.0	3.2	Moderate Adverse	60.1	3.3	Minor Adverse	44.9	43.9	47.8
FLAT B, 15, MANOR WALK	Dwelling	56.8	55.7	60.0	3.2	Moderate Adverse	60.1	3.3	Minor Adverse	44.9	43.9	47.8
FLAT C, 15, MANOR WALK	Dwelling	56.8	55.7	60.0	3.2	Moderate Adverse	60.1	3.3	Minor Adverse	44.9	43.9	47.8
FLAT D, 15, MANOR WALK	Dwelling	56.8	55.7	60.0	3.2	Moderate Adverse	60.1	3.3	Minor Adverse	44.9	43.9	47.8
10, MANOR WALK	Dwelling	56.2	55.5	60.1	3.9	Moderate Adverse	60.2	4.0	Minor Adverse	44.3	43.7	47.9
12, MANOR WALK	Dwelling	56.3	55.6	60.2	3.9	Moderate Adverse	60.3	4.0	Minor Adverse	44.4	43.8	48.0
14, MANOR WALK	Dwelling	56.3	55.6	60.2	3.9	Moderate Adverse	60.3	4.0	Minor Adverse	44.4	43.8	48.0
16, MANOR WALK	Dwelling	56.5	55.9	60.7	4.2	Moderate Adverse	60.8	4.3	Minor Adverse	44.6	44.0	48.5
17, MANOR WALK	Dwelling	56.2	55.3	60.7	3.4	Moderate Adverse	59.7	3.5	Minor Adverse	44.3	43.5	47.5
18, MANOR WALK	Dwelling	56.2	56.8	60.8	0	Moderate Adverse	60.9	4.1	Minor Adverse	44.9	44.3	48.5
19, MANOR WALK	Dwelling	56.3	55.3	59.6	3.3	Moderate Adverse	59.7	3.4	Minor Adverse	44.4	43.5	47.5

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
21. MANOR WALK	Dwelling	56.2	55.4	59.6	3.4	Moderate Adverse	59.7	3.5	Minor Adverse	44.3	43.6	47.5
23. MANOR WALK	Dwelling	56.3	55.5	59.7	3.4	Moderate Adverse	59.8	3.5	Minor Adverse	44.4	43.7	47.6
25. MANOR WALK	Dwelling	55.8	55.7	60.9	5.1	Major Adverse	61.1	5.3	Moderate Adverse	44.0	43.9	48.7
29. MANOR WALK	Dwelling	56.1	56.1	61.1	5.0	Major Adverse	61.3	5.2	Moderate Adverse	44.2	44.2	48.9
31. MANOR WALK	Dwelling	56.2	56.2	61.2	5.0	Major Adverse	61.3	5.1	Moderate Adverse	44.3	44.3	48.9
4. MANOR WALK	Dwelling	56.0	55.3	59.6	3.6	Moderate Adverse	59.7	3.7	Minor Adverse	44.1	43.5	47.5
6. MANOR WALK	Dwelling	56.2	55.5	60.0	3.8	Moderate Adverse	60.1	3.9	Minor Adverse	44.3	43.7	47.8
8. MANOR WALK	Dwelling	56.2	55.5	60.1	3.9	Moderate Adverse	60.2	4.0	Minor Adverse	44.3	43.7	47.9
FLAT D. 1. MANOR WALK	Dwelling	59.9	61.7	58.9	-1.0	Minor Beneficial	59.9	0.0	No Change	47.6	49.3	47.6
FLAT D. 2. MANOR WALK	Dwelling	51.8	53.1	58.1	6.3	Major Adverse	58.5	6.7	Moderate Adverse	40.4	41.5	46.4
FLAT D. 3. MANOR WALK	Dwelling	53.0	54.1	59.1	6.1	Major Adverse	59.7	6.7	Moderate Adverse	41.4	42.4	47.5
FLAT D. 5. MANOR WALK	Dwelling	53.5	53.7	58.6	5.1	Major Adverse	59.0	5.5	Moderate Adverse	41.9	42.1	46.8
FLAT D. 7. MANOR WALK	Dwelling	48.7	48.4	51.2	2.5	Minor Adverse	51.5	2.8	Negligible Adverse	37.6	37.3	40.1
FLAT D. 9. MANOR WALK	Dwelling	54.1	53.1	55.5	1.4	Minor Adverse	55.8	1.7	Negligible Adverse	42.4	41.5	44.0
FLAT D. 11. MANOR WALK	Dwelling	51.9	51.6	56.1	4.2	Moderate Adverse	56.3	4.4	Minor Adverse	40.4	40.2	44.4
FLAT D. 13. MANOR WALK	Dwelling	56.3	55.0	59.3	3.0	Moderate Adverse	59.4	3.1	Minor Adverse	44.4	43.2	47.2
FLAT B. 1. MANOR WALK	Dwelling	61.2	63.0	60.9	-0.3	Negligible Beneficial	62.1	0.9	Negligible Adverse	48.8	50.4	49.6
FLAT B. 2. MANOR WALK	Dwelling	54.7	56.0	60.1	5.4	Major Adverse	60.6	5.9	Moderate Adverse	43.0	44.1	48.3
FLAT B. 3. MANOR WALK	Dwelling	55.8	56.8	61.0	5.2	Major Adverse	61.8	6.0	Moderate Adverse	44.0	44.9	49.4
FLAT B. 5. MANOR WALK	Dwelling	55.8	55.9	60.4	4.6	Moderate Adverse	60.8	5.0	Moderate Adverse	44.0	44.0	48.5
FLAT B. 7. MANOR WALK	Dwelling	51.2	51.0	53.7	2.5	Minor Adverse	54.0	2.8	Negligible Adverse	39.8	39.6	42.3
FLAT B. 9. MANOR WALK	Dwelling	55.9	55.1	57.4	1.5	Minor Adverse	57.7	1.8	Negligible Adverse	44.0	43.3	45.7
FLAT B. 11. MANOR WALK	Dwelling	54.1	53.8	58.3	4.2	Moderate Adverse	58.4	4.3	Minor Adverse	42.4	42.2	46.3
FLAT B. 13. MANOR WALK	Dwelling	57.1	56.0	60.2	3.1	Moderate Adverse	60.4	3.3	Minor Adverse	45.1	44.1	48.1
FLAT F. 1. MANOR WALK	Dwelling	62.9	61.0	62.9	-0.9	Negligible Beneficial	61.2	0.2	Negligible Adverse	46.6	50.3	46.8
FLAT F. 2. MANOR WALK	Dwelling	53.8	54.9	59.7	6.1	Major Adverse	60.1	6.3	Moderate Adverse	42.0	43.1	47.8
FLAT F. 3. MANOR WALK	Dwelling	54.6	55.8	60.6	6.0	Major Adverse	61.2	6.6	Moderate Adverse	42.9	44.0	48.8
FLAT F. 5. MANOR WALK	Dwelling	54.9	55.1	60.0	5.1	Major Adverse	60.4	5.5	Moderate Adverse	43.1	43.3	48.1
FLAT F. 7. MANOR WALK	Dwelling	49.9	49.7	52.6	2.7	Minor Adverse	52.9	3.0	Minor Adverse	38.6	38.5	41.3
FLAT F. 9. MANOR WALK	Dwelling	55.0	54.2	56.6	1.6	Minor Adverse	56.9	1.9	Negligible Adverse	43.2	42.5	44.9
FLAT F. 11. MANOR WALK	Dwelling	53.4	53.0	57.8	4.4	Moderate Adverse	57.9	4.5	Minor Adverse	41.8	41.4	45.8
FLAT F. 13. MANOR WALK	Dwelling	56.9	55.7	60.2	3.3	Moderate Adverse	60.3	3.4	Minor Adverse	44.9	43.9	48.0
10. MARCHBURN AVENUE	Dwelling	42.7	43.2	42.5	-0.2	Negligible Beneficial	43.4	0.7	Negligible Adverse	32.2	32.6	32.8
12. MARCHBURN AVENUE	Dwelling	42.6	43.2	42.5	-0.1	Negligible Beneficial	43.4	0.8	Negligible Adverse	32.1	32.6	32.8
14. MARCHBURN AVENUE	Dwelling	42.5	43.1	42.4	-0.1	Negligible Beneficial	43.3	0.8	Negligible Adverse	32.0	32.5	32.7
16. MARCHBURN AVENUE	Dwelling	42.3	42.9	42.1	-0.2	Negligible Beneficial	43.0	0.7	Negligible Adverse	31.8	32.3	32.4
17. MARCHBURN AVENUE	Dwelling	42.8	43.1	42.7	-0.1	Negligible Beneficial	43.5	0.7	Negligible Adverse	32.3	32.5	32.9
18. MARCHBURN AVENUE	Dwelling	43.2	43.7	43.1	-0.1	Negligible Beneficial	44.0	0.8	Negligible Adverse	32.6	33.1	33.3
19. MARCHBURN AVENUE	Dwelling	42.9	43.3	42.8	-0.1	Negligible Beneficial	43.6	0.7	Negligible Adverse	32.3	32.7	33.0
20. MARCHBURN AVENUE	Dwelling	43.2	43.7	43.1	-0.1	Negligible Beneficial	44.0	0.8	Negligible Adverse	32.6	33.1	33.3
21. MARCHBURN AVENUE	Dwelling	42.0	42.5	41.8	-0.2	Negligible Beneficial	42.7	0.7	Negligible Adverse	31.5	32.0	32.2
22. MARCHBURN AVENUE	Dwelling	43.0	43.6	43.0	0.0	No Change	43.8	0.8	Negligible Adverse	32.4	33.0	33.2
23. MARCHBURN AVENUE	Dwelling	43.0	43.3	42.9	-0.1	Negligible Beneficial	43.7	0.7	Negligible Adverse	32.4	32.7	33.1
24. MARCHBURN AVENUE	Dwelling	43.0	43.6	43.0	0.0	No Change	43.9	0.9	Negligible Adverse	32.4	33.0	33.2
25. MARCHBURN AVENUE	Dwelling	42.8	43.3	42.7	-0.1	Negligible Beneficial	43.6	0.8	Negligible Adverse	32.3	32.7	33.0
26. MARCHBURN AVENUE	Dwelling	42.9	43.5	42.8	-0.1	Negligible Beneficial	43.7	0.8	Negligible Adverse	32.3	32.9	33.1
27. MARCHBURN AVENUE	Dwelling	42.8	43.4	42.7	-0.1	Negligible Beneficial	43.6	0.8	Negligible Adverse	32.3	32.8	33.0
28. MARCHBURN AVENUE	Dwelling	42.7	43.3	42.6	-0.1	Negligible Beneficial	43.5	0.8	Negligible Adverse	32.2	32.7	32.9
29. MARCHBURN AVENUE	Dwelling	42.8	43.3	42.7	-0.1	Negligible Beneficial	43.6	0.8	Negligible Adverse	32.3	32.7	33.0
30. MARCHBURN AVENUE	Dwelling	42.2	42.8	42.0	-0.2	Negligible Beneficial	43.0	0.8	Negligible Adverse	31.7	32.3	32.4
31. MARCHBURN AVENUE	Dwelling	42.7	43.3	42.6	-0.1	Negligible Beneficial	43.6	0.9	Negligible Adverse	32.2	32.7	33.0
32. MARCHBURN AVENUE	Dwelling	42.0	42.4	41.8	-0.2	Negligible Beneficial	42.7	0.7	Negligible Adverse	31.5	31.9	32.2
33. MARCHBURN AVENUE	Dwelling	42.7	43.3	42.6	-0.1	Negligible Beneficial	43.6	0.9	Negligible Adverse	32.2	32.7	33.0
34. MARCHBURN AVENUE	Dwelling	44.2	44.3	44.1	-0.1	Negligible Beneficial	44.9	0.7	Negligible Adverse	33.5	33.6	34.1
35. MARCHBURN AVENUE	Dwelling	42.7	43.3	42.6	-0.1	Negligible Beneficial	43.6	0.9	Negligible Adverse	32.2	32.7	33.0
36. MARCHBURN AVENUE	Dwelling	44.2	44.3	44.1	-0.1	Negligible Beneficial	44.9	0.7	Negligible Adverse	33.5	33.6	34.1
37. MARCHBURN AVENUE	Dwelling	42.7	43.2	42.5	-0.2	Negligible Beneficial	43.5	0.8	Negligible Adverse	32.2	32.6	32.9
38. MARCHBURN AVENUE	Dwelling	44.2	44.3	44.1	-0.1	Negligible Beneficial	44.9	0.7	Negligible Adverse	33.5	33.6	34.1
39. MARCHBURN AVENUE	Dwelling	42.1	42.7	42.0	-0.1	Negligible Beneficial	42.9	0.8	Negligible Adverse	31.6	32.2	32.3
4. MARCHBURN AVENUE	Dwelling	42.5	42.9	42.4	-0.1	Negligible Beneficial	43.2	0.7	Negligible Adverse	32.0	32.3	32.6
40. MARCHBURN AVENUE	Dwelling	44.2	44.3	44.1	-0.1	Negligible Beneficial	44.9	0.7	Negligible Adverse	33.5	33.6	34.1
41. MARCHBURN AVENUE	Dwelling	42.1	42.7	42.0	-0.1	Negligible Beneficial	42.9	0.8	Negligible Adverse	31.6	32.2	32.3
42. MARCHBURN AVENUE	Dwelling	44.2	44.3	44.1	-0.1	Negligible Beneficial	44.9	0.7	Negligible Adverse	33.5	33.6	34.1
43. MARCHBURN AVENUE	Dwelling	42.1	42.7	42.0	-0.1	Negligible Beneficial	42.9	0.8	Negligible Adverse	31.6	32.2	32.3
44. MARCHBURN AVENUE	Dwelling	44.2	44.3	44.1	-0.1	Negligible Beneficial	44.9	0.7	Negligible Adverse	33.5	33.6	34.1
45. MARCHBURN AVENUE	Dwelling	42.1	42.7	42.0	-0.1	Negligible Beneficial	42.9	0.8	Negligible Adverse	31.6	32.2	32.3
46. MARCHBURN AVENUE	Dwelling	44.1	44.5	44.0	-0.1	Negligible Beneficial	44.9	0.8	Negligible Adverse	33.4	33.8	34.1
47. MARCHBURN AVENUE	Dwelling	42.1	42.7	42.0	-0.1	Negligible Beneficial	42.9	0.8	Negligible Adverse	31.6	32.2	32.3
48. MARCHBURN AVENUE	Dwelling	44.1	44.5	44.0	-0.1	Negligible Beneficial	44.9	0.8	Negligible Adverse	33.4	33.8	34.1
49. MARCHBURN AVENUE	Dwelling	42.1	42.7	42.0	-0.1	Negligible Beneficial	42.9	0.8	Negligible Adverse	31.6	32.2	32.3
50. MARCHBURN AVENUE	Dwelling	44.1	44.5	44.0	-0.1	Negligible Beneficial	44.9	0.8	Negligible Adverse	33.4	33.8	34.1
51. MARCHBURN AVENUE	Dwelling	41.6	42.2	41.5	-0.1	Negligible Beneficial	42.4	0.8	Negligible Adverse	31.2	31.7	31.9
52. MARCHBURN AVENUE	Dwelling	44.1	44.5	44.0	-0.1	Negligible Beneficial	44.9	0.8	Negligible Adverse	33.4	33.8	34.1
53. MARCHBURN AVENUE	Dwelling	41.6	42.2	41.5	-0.1	Negligible Beneficial	42.4	0.8	Negligible Adverse	31.2	31.7	31.9
54. MARCHBURN AVENUE	Dwelling	44.1	44.5	44.0	-0.1	Negligible Beneficial	44.9	0.8	Negligible Adverse	33.4	33.8	34.1
55. MARCHBURN AVENUE	Dwelling	41.6	42.2	41.5	-0.1	Negligible Beneficial	42.4	0.8	Negligible Adverse	31.2	31.7	31.9
56. MARCHBURN AVENUE	Dwelling	44.1	44.5	44.0	-0.1	Negligible Beneficial	44.9	0.8	Negligible Adverse	33.4	33.8	34.1
57. MARCHBURN AVENUE	Dwelling	41.6	42.2	41.5	-0.1	Negligible Beneficial	42.4	0.8	Negligible Adverse	31.2	31.7	31.9
58. MARCHBURN AVENUE	Dwelling	45.6	46.1	45.9	0.3	Negligible Adverse	46.8	1.2	Negligible Adverse	34.8	35.2	35.9
59. MARCHBURN AVENUE	Dwelling	41.6	42.2	41.5	-0.1	Negligible Beneficial	42.4	0.8	Negligible Adverse	31.2	31.7	31.9
6. MARCHBURN AVENUE	Dwelling	42.4	42.9	42.3	-0.1	Negligible Beneficial	43.2	0.8	Negligible Adverse	31.9	32.3	32.6
60. MARCHBURN AVENUE	Dwelling	45.6	46.1	45.9	0.3	Negligible Adverse	46.8	1.2	Negligible Adverse	34.8	35.2	35.9
61. MARCHBURN AVENUE	Dwelling	41.6	42.2	41.5	-0.1	Negligible Beneficial	42.4	0.8	Negligible Adverse	31.2	31.7	31.9

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
62. MARCHBURN AVENUE	Dwelling	45.6	46.1	45.9	0.3	Negligible Adverse	46.8	1.2	Negligible Adverse	34.8	35.2	35.9
63. MARCHBURN AVENUE	Dwelling	45.7	46.4	46.1	0.4	Negligible Adverse	47.0	1.3	Negligible Adverse	34.9	35.5	36.0
64. MARCHBURN AVENUE	Dwelling	45.6	46.1	45.9	0.3	Negligible Adverse	46.8	1.2	Negligible Adverse	34.8	35.2	35.9
65. MARCHBURN AVENUE	Dwelling	45.7	46.4	46.1	0.4	Negligible Adverse	47.0	1.3	Negligible Adverse	34.9	35.5	36.0
66. MARCHBURN AVENUE	Dwelling	45.6	46.1	45.9	0.3	Negligible Adverse	46.8	1.2	Negligible Adverse	34.8	35.2	35.9
67. MARCHBURN AVENUE	Dwelling	45.7	46.4	46.1	0.4	Negligible Adverse	47.0	1.3	Negligible Adverse	34.9	35.5	36.0
68. MARCHBURN AVENUE	Dwelling	45.6	46.1	45.9	0.3	Negligible Adverse	46.8	1.2	Negligible Adverse	34.8	35.2	35.9
69. MARCHBURN AVENUE	Dwelling	45.7	46.4	46.1	0.4	Negligible Adverse	47.0	1.3	Negligible Adverse	34.9	35.5	36.0
71. MARCHBURN AVENUE	Dwelling	45.7	46.4	46.1	0.4	Negligible Adverse	47.0	1.3	Negligible Adverse	34.9	35.5	36.0
73. MARCHBURN AVENUE	Dwelling	45.7	46.4	46.1	0.4	Negligible Adverse	47.0	1.3	Negligible Adverse	34.9	35.5	36.0
8. MARCHBURN AVENUE	Dwelling	42.6	43.1	42.4	-0.2	Negligible Beneficial	43.3	0.7	Negligible Adverse	32.1	32.5	32.7
1. MARCHBURN CRESCENT	Dwelling	45.5	46.3	45.5	0.0	No Change	46.5	1.0	Negligible Adverse	34.7	35.4	35.6
10. MARCHBURN CRESCENT	Dwelling	45.7	45.9	45.7	0.0	No Change	46.5	0.8	Negligible Adverse	34.9	35.0	35.6
11. MARCHBURN CRESCENT	Dwelling	46.1	46.6	46.1	0.0	No Change	47.0	0.9	Negligible Adverse	35.2	35.7	36.0
12. MARCHBURN CRESCENT	Dwelling	44.2	45.1	44.3	0.1	Negligible Beneficial	45.3	1.1	Negligible Adverse	33.5	34.3	34.5
13. MARCHBURN CRESCENT	Dwelling	46.7	46.9	46.6	-0.1	Negligible Beneficial	47.4	0.7	Negligible Adverse	35.8	35.9	36.4
14. MARCHBURN CRESCENT	Dwelling	44.1	45.0	44.2	0.1	Negligible Adverse	45.2	1.1	Negligible Adverse	33.4	34.2	34.4
15. MARCHBURN CRESCENT	Dwelling	46.5	46.8	46.5	0.0	No Change	47.3	0.8	Negligible Adverse	35.6	35.9	36.3
16. MARCHBURN CRESCENT	Dwelling	44.0	44.8	44.0	0.0	No Change	45.0	1.0	Negligible Adverse	33.3	34.1	34.2
17. MARCHBURN CRESCENT	Dwelling	46.3	46.6	46.3	0.0	No Change	47.1	0.8	Negligible Adverse	35.4	35.7	36.1
18. MARCHBURN CRESCENT	Dwelling	41.9	42.5	41.8	-0.1	Negligible Beneficial	42.7	0.8	Negligible Adverse	31.4	32.0	32.2
19. MARCHBURN CRESCENT	Dwelling	46.3	46.5	46.3	0.0	No Change	47.1	0.8	Negligible Adverse	35.4	35.6	36.1
2. MARCHBURN CRESCENT	Dwelling	45.2	45.9	45.1	-0.1	Negligible Beneficial	46.0	0.8	Negligible Adverse	34.4	35.0	35.1
20. MARCHBURN CRESCENT	Dwelling	43.1	43.2	42.9	-0.2	Negligible Beneficial	43.7	0.6	Negligible Adverse	32.5	32.6	33.1
21. MARCHBURN CRESCENT	Dwelling	40.6	40.6	40.6	0.0	No Change	47.2	0.7	Negligible Adverse	35.6	36.2	36.2
22. MARCHBURN CRESCENT	Dwelling	43.1	42.9	43.1	-0.1	Negligible Beneficial	43.4	0.7	Negligible Adverse	32.4	32.5	32.1
23. MARCHBURN CRESCENT	Dwelling	46.7	46.6	46.6	-0.1	Negligible Beneficial	47.3	0.6	Negligible Adverse	35.8	35.7	36.3
24. MARCHBURN CRESCENT	Dwelling	42.9	43.0	42.8	-0.1	Negligible Beneficial	43.6	0.7	Negligible Adverse	32.3	32.4	33.0
25. MARCHBURN CRESCENT	Dwelling	43.4	44.0	43.3	-0.1	Negligible Beneficial	44.2	0.8	Negligible Adverse	32.8	33.3	33.5
26. MARCHBURN CRESCENT	Dwelling	43.3	43.5	43.2	-0.1	Negligible Beneficial	44.0	0.7	Negligible Adverse	32.7	32.9	33.3
27. MARCHBURN CRESCENT	Dwelling	44.1	44.5	44.1	0.0	No Change	44.9	0.8	Negligible Adverse	33.4	33.8	34.1
28. MARCHBURN CRESCENT	Dwelling	43.3	43.5	43.2	-0.1	Negligible Beneficial	44.0	0.7	Negligible Adverse	32.7	32.9	33.3
29. MARCHBURN CRESCENT	Dwelling	45.0	45.1	44.9	-0.1	Negligible Beneficial	45.6	0.6	Negligible Adverse	34.2	34.3	34.8
3. MARCHBURN CRESCENT	Dwelling	45.9	46.6	45.9	0.0	No Change	46.9	1.0	Negligible Adverse	35.0	35.7	35.9
30. MARCHBURN CRESCENT	Dwelling	43.2	43.4	43.1	-0.1	Negligible Beneficial	43.9	0.7	Negligible Adverse	32.6	32.8	33.2
31. MARCHBURN CRESCENT	Dwelling	45.5	45.4	45.4	-0.1	Negligible Beneficial	46.1	0.6	Negligible Adverse	34.7	34.6	35.2
32. MARCHBURN CRESCENT	Dwelling	43.2	43.4	43.0	-0.2	Negligible Beneficial	43.8	0.6	Negligible Adverse	32.6	32.8	33.2
33. MARCHBURN CRESCENT	Dwelling	45.5	45.4	45.5	0.0	No Change	46.1	0.6	Negligible Adverse	34.7	34.6	35.2
34. MARCHBURN CRESCENT	Dwelling	41.0	41.7	40.8	-0.2	Negligible Beneficial	41.8	0.8	Negligible Adverse	30.6	31.3	31.4
35. MARCHBURN CRESCENT	Dwelling	45.7	45.6	45.7	-0.1	Negligible Beneficial	46.2	0.5	Negligible Adverse	34.9	34.6	35.3
36. MARCHBURN CRESCENT	Dwelling	40.5	41.3	40.4	-0.1	Negligible Beneficial	41.4	0.9	Negligible Adverse	30.2	30.9	31.0
37. MARCHBURN CRESCENT	Dwelling	45.3	45.2	45.2	-0.1	Negligible Beneficial	45.9	0.6	Negligible Adverse	34.5	34.4	35.0
38. MARCHBURN CRESCENT	Dwelling	40.7	41.5	40.6	-0.1	Negligible Beneficial	41.5	0.8	Negligible Adverse	30.4	31.1	31.1
39. MARCHBURN CRESCENT	Dwelling	44.4	44.7	44.3	-0.1	Negligible Beneficial	45.1	0.7	Negligible Adverse	33.7	34.0	34.3
4. MARCHBURN CRESCENT	Dwelling	46.4	46.3	46.3	-0.1	Negligible Beneficial	46.9	0.5	Negligible Adverse	35.5	35.4	35.9
40. MARCHBURN CRESCENT	Dwelling	40.1	40.8	39.9	-0.2	Negligible Beneficial	40.9	0.8	Negligible Adverse	29.8	30.5	30.5
41. MARCHBURN CRESCENT	Dwelling	44.1	44.5	44.1	0.0	No Change	44.9	0.8	Negligible Adverse	33.4	33.8	34.1
42. MARCHBURN CRESCENT	Dwelling	41.9	42.5	41.8	-0.1	Negligible Beneficial	42.7	0.8	Negligible Adverse	31.4	32.0	32.2
43. MARCHBURN CRESCENT	Dwelling	44.0	44.4	44.0	0.0	No Change	44.8	0.8	Negligible Adverse	33.3	33.7	34.1
44. MARCHBURN CRESCENT	Dwelling	41.7	42.1	41.6	-0.1	Negligible Beneficial	42.4	0.7	Negligible Adverse	31.3	31.6	31.9
45. MARCHBURN CRESCENT	Dwelling	43.7	44.1	43.7	0.0	No Change	44.5	0.8	Negligible Adverse	33.1	33.4	33.8
47. MARCHBURN CRESCENT	Dwelling	43.3	43.7	43.3	0.0	No Change	44.1	0.8	Negligible Adverse	32.7	33.1	33.4
49. MARCHBURN CRESCENT	Dwelling	43.7	44.0	43.6	-0.1	Negligible Beneficial	44.3	0.8	Negligible Adverse	33.1	33.3	33.8
5. MARCHBURN CRESCENT	Dwelling	46.1	46.8	46.1	0.0	No Change	47.1	1.0	Negligible Adverse	35.2	35.9	36.1
51. MARCHBURN CRESCENT	Dwelling	43.4	43.7	43.3	-0.1	Negligible Beneficial	44.1	0.7	Negligible Adverse	32.8	33.1	33.4
53. MARCHBURN CRESCENT	Dwelling	42.9	43.4	42.7	-0.2	Negligible Beneficial	43.6	0.7	Negligible Adverse	32.3	32.8	33.0
55. MARCHBURN CRESCENT	Dwelling	42.9	43.4	42.7	-0.2	Negligible Beneficial	43.6	0.7	Negligible Adverse	32.3	32.8	33.0
57. MARCHBURN CRESCENT	Dwelling	42.9	43.3	42.7	-0.2	Negligible Beneficial	43.6	0.7	Negligible Adverse	32.3	32.7	33.0
59. MARCHBURN CRESCENT	Dwelling	42.7	43.3	42.5	-0.2	Negligible Beneficial	43.5	0.8	Negligible Adverse	32.2	32.7	32.9
6. MARCHBURN CRESCENT	Dwelling	47.9	47.0	47.8	-0.1	Negligible Beneficial	48.3	0.4	Negligible Adverse	36.8	36.0	37.2
61. MARCHBURN CRESCENT	Dwelling	42.8	43.3	42.7	-0.1	Negligible Beneficial	43.5	0.7	Negligible Adverse	32.3	32.7	32.9
63. MARCHBURN CRESCENT	Dwelling	43.1	43.5	43.0	-0.1	Negligible Beneficial	43.8	0.7	Negligible Adverse	32.5	32.9	33.2
65. MARCHBURN CRESCENT	Dwelling	43.3	43.5	43.2	-0.1	Negligible Beneficial	43.9	0.6	Negligible Adverse	32.7	32.9	33.2
67. MARCHBURN CRESCENT	Dwelling	42.7	43.1	42.6	-0.1	Negligible Beneficial	43.4	0.7	Negligible Adverse	32.2	32.5	32.8
7. MARCHBURN CRESCENT	Dwelling	46.0	46.6	46.0	0.0	No Change	46.9	0.9	Negligible Adverse	35.1	35.7	35.9
8. MARCHBURN CRESCENT	Dwelling	45.6	45.8	45.6	0.0	No Change	46.4	0.8	Negligible Adverse	34.8	35.0	35.5
9. MARCHBURN CRESCENT	Dwelling	46.0	46.6	46.0	0.0	No Change	47.0	1.0	Negligible Adverse	35.1	35.7	36.0
GRANITEHILL HOUSE, 1, MARCHBURN DRIVE	Dwelling	62.9	64.0	62.9	0.0	No Change	64.0	1.1	Negligible Adverse	50.3	51.3	51.3
HAMEWITH LODGE, H C 1, 1, MARCHBURN DRIVE	Dwelling	62.9	64.0	62.9	0.0	No Change	64.0	1.1	Negligible Adverse	50.3	51.3	51.3
10. MARCHBURN DRIVE	Dwelling	44.3	45.0	44.3	0.0	No Change	45.2	0.9	Negligible Adverse	33.6	34.2	34.4
11. MARCHBURN DRIVE	Dwelling	59.5	60.5	59.6	0.1	Negligible Adverse	60.7	1.2	Negligible Adverse	47.3	48.2	48.4
12. MARCHBURN DRIVE	Dwelling	47.8	48.9	47.8	0.0	No Change	49.0	1.2	Negligible Adverse	36.8	37.7	37.8
13. MARCHBURN DRIVE	Dwelling	59.0	59.9	59.0	0.0	No Change	60.1	1.1	Negligible Adverse	46.8	47.6	47.8
14. MARCHBURN DRIVE	Dwelling	44.3	45.0	44.3	0.0	No Change	45.2	0.9	Negligible Adverse	33.6	34.2	34.4
15. MARCHBURN DRIVE	Dwelling	58.6	59.5	58.6	0.0	No Change	59.7	1.1	Negligible Adverse	46.5	47.3	47.5
16. MARCHBURN DRIVE	Dwelling	47.7	48.9	47.7	0.0	No Change	48.9	1.2	Negligible Adverse	36.7	37.7	37.7
17. MARCHBURN DRIVE	Dwelling	53.0	54.2	53.0	0.0	No Change	54.2	1.2	Negligible Adverse	41.4	42.5	42.5
18. MARCHBURN DRIVE	Dwelling	44.3	45.0	44.3	0.0	No Change	45.2	0.9	Negligible Adverse	33.6	34.2	34.4
19. MARCHBURN DRIVE	Dwelling	53.8	54.2	53.8	0.0	No Change	54.6	0.8	Negligible Adverse	42.2	42.5	42.9
20. MARCHBURN DRIVE	Dwelling	48.6	47.4	48.5	-0.1	Negligible Beneficial	48.9	0.3	Negligible Adverse	37.5	36.4	37.7
21. MARCHBURN DRIVE	Dwelling	51.1	52.0	51.1	0.1	Negligible Adverse	52.2	1.2	Negligible Adverse	39.6	40.5	40.7
22. MARCHBURN DRIVE	Dwelling	45.8	45.4	45.7	-0.1	Negligible Beneficial	46.3	0.5	Negligible Adverse	35.0	34.6	35.4
23. MARCHBURN DRIVE	Dwelling	50.0	51.0	50.0	0.0	No Change	51.2	1.2	Negligible Adverse	38.7	39.6	39.8

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
24. MARCHBURN DRIVE	Dwelling	48.6	47.4	48.5	-0.1	Negligible Beneficial	48.9	0.3	Negligible Adverse	37.5	36.4	37.7
25. MARCHBURN DRIVE	Dwelling	48.9	49.8	49.0	0.1	Negligible Adverse	50.0	1.1	Negligible Adverse	37.7	38.6	38.7
26. MARCHBURN DRIVE	Dwelling	45.8	45.4	45.7	-0.0	Negligible Beneficial	46.3	0.5	Negligible Adverse	35.0	34.6	35.4
27. MARCHBURN DRIVE	Dwelling	48.3	49.2	48.3	0.0	No Change	49.4	1.1	Negligible Adverse	37.2	38.0	38.2
28. MARCHBURN DRIVE	Dwelling	48.6	47.4	48.5	-0.1	Negligible Beneficial	48.9	0.3	Negligible Adverse	37.5	36.4	37.7
29. MARCHBURN DRIVE	Dwelling	47.3	46.9	47.2	-0.1	Negligible Beneficial	47.8	0.5	Negligible Adverse	36.3	35.9	36.8
29. MARCHBURN DRIVE	Dwelling	43.6	44.1	43.6	0.0	No Change	44.4	0.8	Negligible Adverse	33.0	33.4	33.7
30. MARCHBURN DRIVE	Dwelling	45.8	45.7	45.7	-0.1	Negligible Beneficial	46.3	0.5	Negligible Adverse	35.0	34.6	35.4
31. MARCHBURN DRIVE	Dwelling	42.8	43.1	42.7	-0.1	Negligible Beneficial	43.5	0.7	Negligible Adverse	32.3	32.5	32.9
33. MARCHBURN DRIVE	Dwelling	42.6	43.0	42.5	-0.1	Negligible Beneficial	43.4	0.8	Negligible Adverse	32.1	32.4	32.8
35. MARCHBURN DRIVE	Dwelling	42.5	42.8	42.4	-0.1	Negligible Beneficial	43.2	0.7	Negligible Adverse	32.0	32.3	32.6
36. MARCHBURN DRIVE	Dwelling	42.1	42.9	42.0	-0.1	Negligible Beneficial	43.0	0.9	Negligible Adverse	31.6	32.3	32.4
37. MARCHBURN DRIVE	Dwelling	42.5	42.8	42.4	-0.1	Negligible Beneficial	43.2	0.7	Negligible Adverse	32.0	32.3	32.6
38. MARCHBURN DRIVE	Dwelling	42.1	42.6	42.0	-0.1	Negligible Beneficial	42.8	0.7	Negligible Adverse	31.6	32.1	32.3
39. MARCHBURN DRIVE	Dwelling	43.4	43.3	43.3	-0.1	Negligible Beneficial	44.0	0.6	Negligible Adverse	32.8	32.7	33.3
40. MARCHBURN DRIVE	Dwelling	42.1	42.9	42.0	-0.1	Negligible Beneficial	43.0	0.9	Negligible Adverse	31.6	32.3	32.4
41. MARCHBURN DRIVE	Dwelling	43.0	43.1	42.9	-0.1	Negligible Beneficial	43.7	0.7	Negligible Adverse	32.4	32.5	33.1
42. MARCHBURN DRIVE	Dwelling	42.1	42.5	41.9	-0.2	Negligible Beneficial	42.8	0.7	Negligible Adverse	31.6	32.0	32.3
43. MARCHBURN DRIVE	Dwelling	42.3	42.6	42.2	-0.1	Negligible Beneficial	43.0	0.7	Negligible Adverse	31.8	32.1	32.4
44. MARCHBURN DRIVE	Dwelling	42.1	42.9	42.0	-0.1	Negligible Beneficial	43.0	0.9	Negligible Adverse	31.6	32.3	32.4
45. MARCHBURN DRIVE	Dwelling	42.8	43.3	42.7	-0.1	Negligible Beneficial	43.6	0.8	Negligible Adverse	32.3	32.7	33.0
46. MARCHBURN DRIVE	Dwelling	42.1	42.5	41.9	-0.2	Negligible Beneficial	42.8	0.7	Negligible Adverse	31.6	32.0	32.3
47. MARCHBURN DRIVE	Dwelling	42.9	43.5	42.8	-0.1	Negligible Adverse	43.8	0.9	Negligible Adverse	32.3	32.9	33.2
48. MARCHBURN DRIVE	Dwelling	43.2	43.7	43.0	-0.1	Negligible Beneficial	44.0	0.8	Negligible Adverse	32.6	33.1	33.3
49. MARCHBURN DRIVE	Dwelling	43.1	43.8	43.0	-0.1	Negligible Beneficial	44.0	0.9	Negligible Adverse	32.5	33.2	33.3
5. MARCHBURN DRIVE	Dwelling	63.5	63.6	63.6	0.1	Negligible Adverse	64.0	1.3	Negligible Adverse	50.9	52.1	52.1
50. MARCHBURN DRIVE	Dwelling	43.2	43.7	43.1	-0.1	Negligible Beneficial	44.0	0.8	Negligible Adverse	32.6	33.1	33.3
51. MARCHBURN DRIVE	Dwelling	43.1	43.9	43.0	-0.1	Negligible Beneficial	44.1	1.0	Negligible Adverse	32.5	33.2	33.4
52. MARCHBURN DRIVE	Dwelling	43.2	43.7	43.1	-0.1	Negligible Beneficial	44.0	0.8	Negligible Adverse	32.6	33.1	33.3
53. MARCHBURN DRIVE	Dwelling	42.4	43.0	42.3	-0.1	Negligible Beneficial	43.2	0.8	Negligible Adverse	31.9	32.4	32.6
54. MARCHBURN DRIVE	Dwelling	43.2	43.7	43.1	-0.1	Negligible Beneficial	44.0	0.8	Negligible Adverse	32.6	33.1	33.3
55. MARCHBURN DRIVE	Dwelling	42.1	42.8	41.9	-0.2	Negligible Beneficial	42.9	0.8	Negligible Adverse	31.6	32.3	32.3
56. MARCHBURN DRIVE	Dwelling	43.2	43.7	43.1	-0.1	Negligible Beneficial	44.0	0.8	Negligible Adverse	32.6	33.1	33.3
57. MARCHBURN DRIVE	Dwelling	42.1	42.8	42.0	-0.1	Negligible Beneficial	42.9	0.8	Negligible Adverse	31.6	32.3	32.3
58. MARCHBURN DRIVE	Dwelling	43.2	43.7	43.1	-0.1	Negligible Beneficial	44.0	0.8	Negligible Adverse	32.6	33.1	33.3
59. MARCHBURN DRIVE	Dwelling	41.8	42.4	41.8	0.0	No Change	42.7	0.9	Negligible Adverse	31.4	31.9	32.2
60. MARCHBURN DRIVE	Dwelling	41.7	42.4	41.6	-0.1	Negligible Beneficial	42.6	0.9	Negligible Adverse	31.3	31.9	32.1
61. MARCHBURN DRIVE	Dwelling	41.7	42.3	41.6	-0.1	Negligible Beneficial	42.5	0.8	Negligible Adverse	31.3	31.8	32.0
62. MARCHBURN DRIVE	Dwelling	41.7	42.4	41.6	-0.1	Negligible Beneficial	42.6	0.9	Negligible Adverse	31.3	31.9	32.1
63. MARCHBURN DRIVE	Dwelling	41.2	41.7	41.1	-0.1	Negligible Beneficial	42.0	0.8	Negligible Adverse	30.8	31.3	31.5
64. MARCHBURN DRIVE	Dwelling	41.7	42.1	41.6	-0.1	Negligible Beneficial	42.6	0.9	Negligible Adverse	31.3	31.9	32.1
65. MARCHBURN DRIVE	Dwelling	41.1	41.6	41.1	0.0	No Change	41.9	0.8	Negligible Adverse	30.7	31.2	31.4
66. MARCHBURN DRIVE	Dwelling	41.7	42.4	41.6	-0.1	Negligible Beneficial	42.6	0.9	Negligible Adverse	31.3	31.9	32.1
68. MARCHBURN DRIVE	Dwelling	41.7	42.4	41.6	-0.1	Negligible Beneficial	42.6	0.9	Negligible Adverse	31.3	31.9	32.1
7. MARCHBURN DRIVE	Dwelling	63.1	64.3	63.1	0.0	No Change	64.4	1.3	Negligible Adverse	50.5	51.6	51.7
70. MARCHBURN DRIVE	Dwelling	41.7	42.4	41.6	-0.1	Negligible Beneficial	42.6	0.9	Negligible Adverse	31.3	31.9	32.1
8. MARCHBURN DRIVE	Dwelling	47.5	48.7	47.6	0.1	Negligible Adverse	48.8	1.3	Negligible Adverse	36.5	37.6	37.7
9. MARCHBURN DRIVE	Dwelling	59.9	61.0	60.0	0.1	Negligible Adverse	61.1	1.2	Negligible Adverse	47.6	48.6	48.7
MARCHBURN DRIVE	Dwelling	62.9	63.9	62.9	0.0	No Change	64.0	1.1	Negligible Adverse	50.3	51.2	51.3
1. MARCHBURN PLACE	Dwelling	43.0	43.3	42.8	-0.2	Negligible Beneficial	43.6	0.6	Negligible Adverse	32.4	32.7	33.0
10. MARCHBURN PLACE	Dwelling	43.5	43.8	43.7	0.2	Negligible Adverse	44.6	1.1	Negligible Adverse	32.9	33.2	33.9
11. MARCHBURN PLACE	Dwelling	43.5	43.8	43.7	0.2	Negligible Adverse	44.6	1.1	Negligible Adverse	32.9	33.2	33.9
12. MARCHBURN PLACE	Dwelling	43.5	43.8	43.7	0.2	Negligible Adverse	44.6	1.1	Negligible Adverse	32.9	33.2	33.9
15. MARCHBURN PLACE	Dwelling	40.4	40.8	40.3	-0.1	Negligible Beneficial	41.1	0.7	Negligible Adverse	30.1	30.5	30.7
16. MARCHBURN PLACE	Dwelling	42.0	42.5	41.9	-0.1	Negligible Beneficial	42.8	0.8	Negligible Adverse	31.5	32.0	32.3
17. MARCHBURN PLACE	Dwelling	42.1	42.7	42.0	-0.1	Negligible Beneficial	43.0	0.9	Negligible Adverse	31.6	32.2	32.4
2. MARCHBURN PLACE	Dwelling	43.0	43.3	42.8	-0.2	Negligible Beneficial	43.6	0.6	Negligible Adverse	32.4	32.7	33.0
3. MARCHBURN PLACE	Dwelling	43.0	43.3	42.8	-0.2	Negligible Beneficial	43.6	0.6	Negligible Adverse	32.4	32.7	33.0
4. MARCHBURN PLACE	Dwelling	43.0	43.3	42.8	-0.2	Negligible Beneficial	43.6	0.6	Negligible Adverse	32.4	32.7	33.0
5. MARCHBURN PLACE	Dwelling	43.0	43.3	42.8	-0.2	Negligible Beneficial	43.6	0.6	Negligible Adverse	32.4	32.7	33.0
6. MARCHBURN PLACE	Dwelling	43.0	43.3	42.8	-0.2	Negligible Beneficial	43.6	0.6	Negligible Adverse	32.4	32.7	33.0
7. MARCHBURN PLACE	Dwelling	43.5	43.8	43.7	0.2	Negligible Adverse	44.6	1.1	Negligible Adverse	32.9	33.2	33.9
8. MARCHBURN PLACE	Dwelling	43.5	43.8	43.7	0.2	Negligible Adverse	44.6	1.1	Negligible Adverse	32.9	33.2	33.9
9. MARCHBURN PLACE	Dwelling	43.5	43.8	43.7	0.2	Negligible Adverse	44.6	1.1	Negligible Adverse	32.9	33.2	33.9
10. MARCHBURN ROAD	Dwelling	44.7	44.4	44.6	-0.1	Negligible Beneficial	45.2	0.5	Negligible Adverse	34.0	33.7	34.4
12. MARCHBURN ROAD	Dwelling	44.5	44.4	44.4	-0.1	Negligible Beneficial	45.0	0.5	Negligible Adverse	33.8	33.7	34.2
13. MARCHBURN ROAD	Dwelling	42.6	43.0	42.4	-0.2	Negligible Beneficial	43.3	0.7	Negligible Adverse	32.1	32.4	32.7
14. MARCHBURN ROAD	Dwelling	44.5	44.5	44.5	0.0	No Change	45.2	0.6	Negligible Adverse	33.6	33.9	34.4
15. MARCHBURN ROAD	Dwelling	42.6	43.0	42.5	-0.1	Negligible Beneficial	43.3	0.7	Negligible Adverse	32.1	32.4	32.7
16. MARCHBURN ROAD	Dwelling	44.7	44.6	44.6	-0.1	Negligible Beneficial	45.2	0.5	Negligible Adverse	34.0	33.9	34.4
17. MARCHBURN ROAD	Dwelling	42.8	43.2	42.7	-0.1	Negligible Beneficial	43.5	0.7	Negligible Adverse	32.3	32.6	32.9
18. MARCHBURN ROAD	Dwelling	44.7	44.6	44.6	-0.1	Negligible Beneficial	45.3	0.6	Negligible Adverse	34.0	33.9	34.5
19. MARCHBURN ROAD	Dwelling	42.8	43.2	42.7	-0.1	Negligible Beneficial	43.5	0.7	Negligible Adverse	32.3	32.6	32.9
20. MARCHBURN ROAD	Dwelling	44.6	44.6	44.5	-0.1	Negligible Beneficial	45.2	0.6	Negligible Adverse	33.9	33.9	34.4
21. MARCHBURN ROAD	Dwelling	43.1	43.5	43.0	-0.1	Negligible Beneficial	43.8	0.7	Negligible Adverse	32.5	32.9	33.2
22. MARCHBURN ROAD	Dwelling	44.6	44.6	44.5	-0.1	Negligible Beneficial	45.2	0.6	Negligible Adverse	33.9	33.9	34.4
23. MARCHBURN ROAD	Dwelling	43.0	43.4	42.9	-0.1	Negligible Beneficial	43.7	0.7	Negligible Adverse	32.4	32.8	33.1
24. MARCHBURN ROAD	Dwelling	44.5	44.6	44.4	-0.1	Negligible Beneficial	45.1	0.6	Negligible Adverse	33.8	33.9	34.3
25. MARCHBURN ROAD	Dwelling	43.0	43.4	42.9	-0.1	Negligible Beneficial	43.7	0.7	Negligible Adverse	32.4	32.8	33.1
26. MARCHBURN ROAD	Dwelling	44.4	44.6	44.3	-0.1	Negligible Beneficial	45.0	0.6	Negligible Adverse	33.7	33.9	34.2
27. MARCHBURN ROAD	Dwelling	43.0	43.4	42.9	-0.1	Negligible Beneficial	43.7	0.7	Negligible Adverse	32.4	32.8	33.1
28. MARCHBURN ROAD	Dwelling	44.3	44.6	44.2	-0.1	Negligible Beneficial	45.0	0.7	Negligible Adverse	33.6	33.9	34.2
29. MARCHBURN ROAD	Dwelling	43.5	43.6	43.4	-0.1	Negligible Beneficial	44.1	0.6	Negligible Adverse	32.9	33.0	33.4

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
30. MARCHBURN ROAD	Dwelling	44.0	44.4	43.9	-0.1	Negligible Beneficial	44.8	0.8	Negligible Adverse	33.3	33.7	34.1
31. MARCHBURN ROAD	Dwelling	43.2	43.5	43.1	-0.1	Negligible Beneficial	43.9	0.7	Negligible Adverse	32.6	32.9	33.2
32. MARCHBURN ROAD	Dwelling	43.9	44.3	43.8	-0.1	Negligible Beneficial	44.6	0.7	Negligible Adverse	33.2	33.6	33.9
33. MARCHBURN ROAD	Dwelling	43.2	43.5	43.1	-0.1	Negligible Beneficial	43.9	0.7	Negligible Adverse	32.6	32.9	33.2
34. MARCHBURN ROAD	Dwelling	43.7	44.2	43.6	-0.1	Negligible Beneficial	44.5	0.8	Negligible Adverse	33.1	33.5	33.8
35. MARCHBURN ROAD	Dwelling	43.7	43.8	43.7	0.0	No Change	44.4	0.7	Negligible Adverse	33.1	33.2	33.7
36. MARCHBURN ROAD	Dwelling	43.5	44.1	43.4	-0.1	Negligible Beneficial	44.3	0.8	Negligible Adverse	32.9	33.4	33.6
37. MARCHBURN ROAD	Dwelling	43.4	43.8	43.2	-0.2	Negligible Beneficial	44.1	0.7	Negligible Adverse	32.8	33.2	33.4
38. MARCHBURN ROAD	Dwelling	43.4	44.0	43.3	-0.1	Negligible Beneficial	44.3	0.9	Negligible Adverse	32.8	33.3	33.6
39. MARCHBURN ROAD	Dwelling	43.5	43.9	43.3	-0.2	Negligible Beneficial	44.2	0.7	Negligible Adverse	32.9	33.2	33.5
4. MARCHBURN ROAD	Dwelling	42.7	43.1	42.5	-0.2	Negligible Beneficial	43.4	0.7	Negligible Adverse	32.2	32.5	32.8
40. MARCHBURN ROAD	Dwelling	42.6	43.3	42.5	-0.1	Negligible Beneficial	43.5	0.9	Negligible Adverse	32.1	32.7	32.9
41. MARCHBURN ROAD	Dwelling	43.5	44.0	43.4	-0.1	Negligible Beneficial	44.3	0.8	Negligible Adverse	32.9	33.3	33.6
42. MARCHBURN ROAD	Dwelling	43.9	44.2	43.8	-0.1	Negligible Beneficial	44.6	0.7	Negligible Adverse	33.2	33.5	33.9
43. MARCHBURN ROAD	Dwelling	43.6	44.1	43.5	-0.1	Negligible Beneficial	44.3	0.7	Negligible Adverse	33.0	33.4	33.6
44. MARCHBURN ROAD	Dwelling	44.0	44.4	43.8	-0.2	Negligible Beneficial	44.7	0.7	Negligible Adverse	33.3	33.7	34.0
45. MARCHBURN ROAD	Dwelling	43.2	43.8	43.1	-0.1	Negligible Beneficial	44.0	0.8	Negligible Adverse	32.6	33.2	33.3
46. MARCHBURN ROAD	Dwelling	43.9	44.4	43.8	-0.1	Negligible Beneficial	44.7	0.8	Negligible Adverse	33.2	33.7	34.0
47. MARCHBURN ROAD	Dwelling	43.0	43.6	42.9	-0.1	Negligible Beneficial	43.8	0.8	Negligible Adverse	32.4	33.0	33.2
48. MARCHBURN ROAD	Dwelling	44.0	44.5	43.8	-0.2	Negligible Beneficial	44.7	0.7	Negligible Adverse	33.3	33.8	34.0
49. MARCHBURN ROAD	Dwelling	43.0	43.6	42.9	-0.1	Negligible Beneficial	43.9	0.9	Negligible Adverse	32.4	33.0	33.2
50. MARCHBURN ROAD	Dwelling	43.6	44.2	43.5	-0.1	Negligible Beneficial	44.5	0.9	Negligible Adverse	33.0	33.5	33.8
51. MARCHBURN ROAD	Dwelling	42.9	43.5	42.8	-0.1	Negligible Beneficial	43.7	0.8	Negligible Adverse	32.3	32.9	33.1
52. MARCHBURN ROAD	Dwelling	43.3	43.0	43.2	-0.1	Negligible Beneficial	44.1	0.8	Negligible Adverse	32.7	33.3	33.4
6. MARCHBURN ROAD	Dwelling	41.9	42.5	41.8	-0.1	Negligible Beneficial	42.7	0.8	Negligible Adverse	31.4	32.0	32.2
7. MARCHBURN TERRACE	Dwelling	52.7	52.7	52.6	-0.1	Negligible Beneficial	53.6	1.1	Negligible Adverse	41.2	42.1	42.2
10. MARCHBURN TERRACE	Dwelling	48.8	49.4	48.7	-0.1	Negligible Beneficial	49.7	0.9	Negligible Adverse	37.7	38.2	38.5
11. MARCHBURN TERRACE	Dwelling	51.7	51.1	51.7	0.0	No Change	52.1	0.4	Negligible Adverse	40.3	39.7	40.6
12. MARCHBURN TERRACE	Dwelling	52.1	51.5	52.0	-0.1	Negligible Beneficial	52.5	0.4	Negligible Adverse	40.6	40.1	41.0
13. MARCHBURN TERRACE	Dwelling	52.8	52.6	52.8	0.0	No Change	53.4	0.6	Negligible Adverse	41.3	41.1	41.8
14. MARCHBURN TERRACE	Dwelling	53.4	53.3	53.4	0.0	No Change	54.0	0.6	Negligible Adverse	41.8	41.7	42.3
15. MARCHBURN TERRACE	Dwelling	54.0	54.0	53.9	-0.1	Negligible Beneficial	54.7	0.7	Negligible Adverse	42.3	42.3	43.0
16. MARCHBURN TERRACE	Dwelling	53.8	54.5	53.8	0.0	No Change	54.7	0.9	Negligible Adverse	42.2	42.8	43.0
2. MARCHBURN TERRACE	Dwelling	51.6	52.7	51.6	0.0	No Change	52.8	1.2	Negligible Adverse	40.2	41.2	41.3
3. MARCHBURN TERRACE	Dwelling	50.5	51.5	50.5	0.0	No Change	51.6	1.1	Negligible Adverse	39.2	40.1	40.2
4. MARCHBURN TERRACE	Dwelling	50.1	51.0	50.1	0.0	No Change	51.2	1.1	Negligible Adverse	38.8	39.6	39.8
5. MARCHBURN TERRACE	Dwelling	51.9	51.5	51.8	-0.1	Negligible Beneficial	52.4	0.5	Negligible Adverse	40.4	40.1	40.9
6. MARCHBURN TERRACE	Dwelling	50.0	50.6	50.0	0.0	No Change	50.9	0.9	Negligible Adverse	38.7	39.3	39.5
7. MARCHBURN TERRACE	Dwelling	47.1	48.0	47.1	0.0	No Change	48.2	1.1	Negligible Adverse	36.1	36.9	37.1
8. MARCHBURN TERRACE	Dwelling	47.3	48.0	47.2	-0.1	Negligible Beneficial	48.3	1.0	Negligible Adverse	36.3	36.9	37.2
9. MARCHBURN TERRACE	Dwelling	47.9	48.6	47.8	-0.1	Negligible Beneficial	48.8	0.9	Negligible Adverse	36.8	37.5	37.7
FLAT A, 14, MARQUIS ROAD	Dwelling	67.5	67.9	67.8	0.3	Negligible Adverse	68.0	0.5	Negligible Adverse	54.5	54.8	54.9
FLAT B, 14, MARQUIS ROAD	Dwelling	67.5	67.9	67.8	0.3	Negligible Adverse	68.0	0.5	Negligible Adverse	54.5	54.8	54.9
FLAT C, 14, MARQUIS ROAD	Dwelling	67.5	67.9	67.8	0.3	Negligible Adverse	68.0	0.5	Negligible Adverse	54.5	54.8	54.9
FLAT D, 14, MARQUIS ROAD	Dwelling	67.5	67.9	67.8	0.3	Negligible Adverse	68.0	0.5	Negligible Adverse	54.5	54.8	54.9
FLAT E, 14, MARQUIS ROAD	Dwelling	67.5	67.9	67.8	0.3	Negligible Adverse	68.0	0.5	Negligible Adverse	54.5	54.8	54.9
FLAT F, 14, MARQUIS ROAD	Dwelling	67.5	67.9	67.8	0.3	Negligible Adverse	68.0	0.5	Negligible Adverse	54.5	54.8	54.9
FLAT G, 14, MARQUIS ROAD	Dwelling	67.5	67.9	67.8	0.3	Negligible Adverse	68.0	0.5	Negligible Adverse	54.5	54.8	54.9
FLAT H, 14, MARQUIS ROAD	Dwelling	67.5	67.9	67.8	0.3	Negligible Adverse	68.0	0.5	Negligible Adverse	54.5	54.8	54.9
FLAT A, 16, MARQUIS ROAD	Dwelling	65.8	66.2	66.1	0.3	Negligible Adverse	66.3	0.5	Negligible Adverse	53.0	53.3	53.4
FLAT B, 16, MARQUIS ROAD	Dwelling	65.8	66.2	66.1	0.3	Negligible Adverse	66.3	0.5	Negligible Adverse	53.0	53.3	53.4
FLAT C, 16, MARQUIS ROAD	Dwelling	65.8	66.2	66.1	0.3	Negligible Adverse	66.3	0.5	Negligible Adverse	53.0	53.3	53.4
FLAT D, 16, MARQUIS ROAD	Dwelling	65.8	66.2	66.1	0.3	Negligible Adverse	66.3	0.5	Negligible Adverse	53.0	53.3	53.4
FLAT E, 16, MARQUIS ROAD	Dwelling	65.8	66.2	66.1	0.3	Negligible Adverse	66.3	0.5	Negligible Adverse	53.0	53.3	53.4
FLAT F, 16, MARQUIS ROAD	Dwelling	65.8	66.2	66.1	0.3	Negligible Adverse	66.3	0.5	Negligible Adverse	53.0	53.3	53.4
FLAT G, 16, MARQUIS ROAD	Dwelling	65.8	66.2	66.1	0.3	Negligible Adverse	66.3	0.5	Negligible Adverse	53.0	53.3	53.4
FLAT H, 16, MARQUIS ROAD	Dwelling	65.8	66.2	66.1	0.3	Negligible Adverse	66.3	0.5	Negligible Adverse	53.0	53.3	53.4
FLAT A, 18, MARQUIS ROAD	Dwelling	65.8	66.2	66.1	0.3	Negligible Adverse	66.3	0.5	Negligible Adverse	53.0	53.3	53.4
FLAT B, 18, MARQUIS ROAD	Dwelling	63.3	63.7	63.6	0.3	Negligible Adverse	63.7	0.4	Negligible Adverse	50.7	51.1	51.1
FLAT C, 18, MARQUIS ROAD	Dwelling	63.3	63.7	63.6	0.3	Negligible Adverse	63.7	0.4	Negligible Adverse	50.7	51.1	51.1
FLAT D, 18, MARQUIS ROAD	Dwelling	63.3	63.7	63.6	0.3	Negligible Adverse	63.7	0.4	Negligible Adverse	50.7	51.1	51.1
FLAT E, 18, MARQUIS ROAD	Dwelling	63.3	63.7	63.6	0.3	Negligible Adverse	63.7	0.4	Negligible Adverse	50.7	51.1	51.1
FLAT F, 18, MARQUIS ROAD	Dwelling	63.3	63.7	63.6	0.3	Negligible Adverse	63.7	0.4	Negligible Adverse	50.7	51.1	51.1
FLAT A, 20, MARQUIS ROAD	Dwelling	59.9	60.4	60.2	0.3	Negligible Adverse	60.4	0.5	Negligible Adverse	47.6	48.1	48.1
FLAT B, 20, MARQUIS ROAD	Dwelling	59.9	60.4	60.2	0.3	Negligible Adverse	60.4	0.5	Negligible Adverse	47.6	48.1	48.1
FLAT C, 20, MARQUIS ROAD	Dwelling	59.9	60.4	60.2	0.3	Negligible Adverse	60.4	0.5	Negligible Adverse	47.6	48.1	48.1
FLAT D, 20, MARQUIS ROAD	Dwelling	59.9	60.4	60.2	0.3	Negligible Adverse	60.4	0.5	Negligible Adverse	47.6	48.1	48.1
FLAT E, 20, MARQUIS ROAD	Dwelling	59.9	60.4	60.2	0.3	Negligible Adverse	60.4	0.5	Negligible Adverse	47.6	48.1	48.1
FLAT F, 20, MARQUIS ROAD	Dwelling	59.9	60.4	60.2	0.3	Negligible Adverse	60.4	0.5	Negligible Adverse	47.6	48.1	48.1
FLAT G, 20, MARQUIS ROAD	Dwelling	59.9	60.4	60.2	0.3	Negligible Adverse	60.4	0.5	Negligible Adverse	47.6	48.1	48.1
FLAT H, 20, MARQUIS ROAD	Dwelling	59.9	60.4	60.2	0.3	Negligible Adverse	60.4	0.5	Negligible Adverse	47.6	48.1	48.1
FLAT A, 22, MARQUIS ROAD	Dwelling	59.7	60.2	60.0	0.3	Negligible Adverse	60.2	0.5	Negligible Adverse	47.5	47.9	47.9
FLAT B, 22, MARQUIS ROAD	Dwelling	59.7	60.2	60.0	0.3	Negligible Adverse	60.2	0.5	Negligible Adverse	47.5	47.9	47.9
FLAT C, 22, MARQUIS ROAD	Dwelling	59.7	60.2	60.0	0.3	Negligible Adverse	60.2	0.5	Negligible Adverse	47.5	47.9	47.9
FLAT D, 22, MARQUIS ROAD	Dwelling	59.7	60.2	60.0	0.3	Negligible Adverse	60.2	0.5	Negligible Adverse	47.5	47.9	47.9
FLAT E, 22, MARQUIS ROAD	Dwelling	59.7	60.2	60.0	0.3	Negligible Adverse	60.2	0.5	Negligible Adverse	47.5	47.9	47.9
FLAT F, 22, MARQUIS ROAD	Dwelling	59.7	60.2	60.0	0.3	Negligible Adverse	60.2	0.5	Negligible Adverse	47.5	47.9	47.9
FLAT G, 22, MARQUIS ROAD	Dwelling	59.7	60.2	60.0	0.3	Negligible Adverse	60.2	0.5	Negligible Adverse	47.5	47.9	47.9
FLAT H, 22, MARQUIS ROAD	Dwelling	59.7	60.2	60.0	0.3	Negligible Adverse	60.2	0.5	Negligible Adverse	47.5	47.9	47.9
FLAT A, 24, MARQUIS ROAD	Dwelling	58.8	59.3	59.1	0.3	Negligible Adverse	59.3	0.5	Negligible Adverse	46.7	47.1	47.1
FLAT B, 24, MARQUIS ROAD	Dwelling	58.8	59.3	59.1	0.3	Negligible Adverse	59.3	0.5	Negligible Adverse	46.7	47.1	47.1
FLAT C, 24, MARQUIS ROAD	Dwelling	58.8	59.3	59.1	0.3	Negligible Adverse	59.3	0.5	Negligible Adverse	46.7	47.1	47.1
FLAT D, 24, MARQUIS ROAD	Dwelling	58.8	59.3	59.1	0.3	Negligible Adverse	59.3	0.5	Negligible Adverse	46.7	47.1	47.1

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
113, MIDDLEFIELD PLACE	Dwelling	56.6	57.7	56.4	-0.2	Negligible Beneficial	57.5	0.9	Negligible Adverse	44.7	45.7	45.5
114, MIDDLEFIELD PLACE	Dwelling	62.9	64.6	62.7	-0.2	Negligible Beneficial	64.6	1.7	Negligible Adverse	50.3	51.9	51.9
115, MIDDLEFIELD PLACE	Dwelling	65.9	67.1	65.7	-0.2	Negligible Beneficial	66.7	0.8	Negligible Adverse	53.0	54.1	53.8
116, MIDDLEFIELD PLACE	Dwelling	61.5	63.3	61.3	-0.2	Negligible Beneficial	63.4	1.9	Negligible Adverse	49.1	50.7	50.8
117, MIDDLEFIELD PLACE	Dwelling	65.9	67.1	65.7	-0.2	Negligible Beneficial	66.7	0.8	Negligible Adverse	53.0	54.1	53.8
118, MIDDLEFIELD PLACE	Dwelling	59.9	61.7	59.7	-0.2	Negligible Beneficial	61.7	1.8	Negligible Adverse	47.6	49.3	49.3
119, MIDDLEFIELD PLACE	Dwelling	65.8	66.9	65.5	-0.3	Negligible Beneficial	66.5	0.7	Negligible Adverse	53.0	53.9	53.6
12, MIDDLEFIELD PLACE	Dwelling	57.6	58.3	57.6	0.0	No Change	58.8	1.2	Negligible Adverse	45.6	46.2	46.7
120, MIDDLEFIELD PLACE	Dwelling	58.2	59.7	58.1	-0.1	Negligible Beneficial	59.8	1.6	Negligible Adverse	46.1	47.5	47.6
121, MIDDLEFIELD PLACE	Dwelling	68.7	69.8	68.5	-0.2	Negligible Beneficial	69.7	1.0	Negligible Adverse	55.6	56.6	56.5
123, MIDDLEFIELD PLACE	Dwelling	68.7	69.8	68.5	-0.2	Negligible Beneficial	69.7	1.0	Negligible Adverse	55.6	56.6	56.5
125, MIDDLEFIELD PLACE	Dwelling	68.7	69.8	68.5	-0.2	Negligible Beneficial	69.7	1.0	Negligible Adverse	55.6	56.6	56.5
127, MIDDLEFIELD PLACE	Dwelling	68.7	69.8	68.5	-0.2	Negligible Beneficial	69.7	1.0	Negligible Adverse	55.6	56.6	56.5
129, MIDDLEFIELD PLACE	Dwelling	62.7	64.3	62.6	-0.1	Negligible Beneficial	64.3	1.6	Negligible Adverse	50.2	51.6	51.6
13, MIDDLEFIELD PLACE	Dwelling	52.7	53.3	52.8	0.1	Negligible Beneficial	53.7	1.0	Negligible Adverse	41.2	41.7	42.1
131, MIDDLEFIELD PLACE	Dwelling	62.0	63.7	61.9	-0.1	Negligible Beneficial	63.7	1.7	Negligible Adverse	49.5	51.1	51.1
133, MIDDLEFIELD PLACE	Dwelling	59.9	61.5	59.7	-0.2	Negligible Beneficial	61.5	1.6	Negligible Adverse	47.6	49.1	49.1
135, MIDDLEFIELD PLACE	Dwelling	58.3	59.6	58.2	-0.1	Negligible Beneficial	59.6	1.3	Negligible Adverse	46.2	47.4	47.4
14, MIDDLEFIELD PLACE	Dwelling	57.6	58.3	57.6	0.0	No Change	58.8	1.2	Negligible Adverse	45.6	46.2	46.7
15, MIDDLEFIELD PLACE	Dwelling	52.7	53.3	52.8	0.1	Negligible Beneficial	53.7	1.0	Negligible Adverse	41.2	41.7	42.1
16, MIDDLEFIELD PLACE	Dwelling	57.6	58.3	57.6	0.0	No Change	58.8	1.2	Negligible Adverse	45.6	46.2	46.7
17, MIDDLEFIELD PLACE	Dwelling	51.7	52.1	51.7	0.0	No Change	52.7	1.0	Negligible Adverse	40.3	40.6	41.2
18, MIDDLEFIELD PLACE	Dwelling	52.6	53.2	52.6	0.0	No Change	53.7	1.1	Negligible Adverse	41.1	41.6	42.1
19, MIDDLEFIELD PLACE	Dwelling	51.7	52.1	51.7	0.0	No Change	52.7	1.0	Negligible Adverse	40.3	40.6	41.2
2, MIDDLEFIELD PLACE	Dwelling	62.1	63.0	62.2	0.1	Negligible Adverse	63.5	1.4	Negligible Adverse	49.6	50.4	50.9
20, MIDDLEFIELD PLACE	Dwelling	52.6	52.6	52.6	0.0	No Change	52.7	1.0	Negligible Adverse	41.1	41.6	42.1
21, MIDDLEFIELD PLACE	Dwelling	51.7	52.1	51.7	0.0	No Change	52.7	1.0	Negligible Adverse	40.3	40.6	41.2
22, MIDDLEFIELD PLACE	Dwelling	52.6	53.2	52.6	0.0	No Change	53.7	1.1	Negligible Adverse	41.1	41.6	42.1
23, MIDDLEFIELD PLACE	Dwelling	51.7	52.1	51.7	0.0	No Change	52.7	1.0	Negligible Adverse	40.3	40.6	41.2
24, MIDDLEFIELD PLACE	Dwelling	52.6	53.2	52.6	0.0	No Change	53.7	1.1	Negligible Adverse	41.1	41.6	42.1
25, MIDDLEFIELD PLACE	Dwelling	50.3	50.8	50.3	0.0	No Change	51.3	1.0	Negligible Adverse	39.0	39.5	39.9
26, MIDDLEFIELD PLACE	Dwelling	51.6	52.0	51.4	-0.2	Negligible Beneficial	52.3	0.7	Negligible Adverse	40.2	40.5	40.8
27, MIDDLEFIELD PLACE	Dwelling	50.3	50.8	50.3	0.0	No Change	51.3	1.0	Negligible Adverse	39.0	39.5	39.9
28, MIDDLEFIELD PLACE	Dwelling	51.6	52.0	51.4	-0.2	Negligible Beneficial	52.3	0.7	Negligible Adverse	40.2	40.5	40.8
29, MIDDLEFIELD PLACE	Dwelling	50.3	50.8	50.3	0.0	No Change	51.3	1.0	Negligible Adverse	39.0	39.5	39.9
3, MIDDLEFIELD PLACE	Dwelling	57.8	58.5	57.9	0.1	Negligible Adverse	59.0	1.2	Negligible Adverse	45.8	46.4	46.8
30, MIDDLEFIELD PLACE	Dwelling	51.6	52.0	51.4	-0.2	Negligible Beneficial	52.3	0.7	Negligible Adverse	40.2	40.5	40.8
31, MIDDLEFIELD PLACE	Dwelling	50.3	50.8	50.3	0.0	No Change	51.3	1.0	Negligible Adverse	39.0	39.5	39.9
32, MIDDLEFIELD PLACE	Dwelling	51.6	52.0	51.4	-0.2	Negligible Beneficial	52.3	0.7	Negligible Adverse	40.2	40.5	40.8
33, MIDDLEFIELD PLACE	Dwelling	50.8	51.2	50.7	-0.1	Negligible Beneficial	51.6	0.8	Negligible Adverse	39.5	39.8	40.2
34, MIDDLEFIELD PLACE	Dwelling	50.7	51.2	50.5	-0.2	Negligible Beneficial	51.5	0.8	Negligible Adverse	39.4	40.4	40.1
35, MIDDLEFIELD PLACE	Dwelling	50.8	51.2	50.7	-0.1	Negligible Beneficial	51.6	0.8	Negligible Adverse	39.5	39.8	40.2
36, MIDDLEFIELD PLACE	Dwelling	50.7	51.8	50.5	-0.2	Negligible Beneficial	51.5	0.8	Negligible Adverse	39.4	40.4	40.1
37, MIDDLEFIELD PLACE	Dwelling	50.8	51.2	50.7	-0.1	Negligible Beneficial	51.6	0.8	Negligible Adverse	39.5	39.8	40.2
38, MIDDLEFIELD PLACE	Dwelling	50.7	51.8	50.5	-0.2	Negligible Beneficial	51.5	0.8	Negligible Adverse	39.4	40.4	40.1
39, MIDDLEFIELD PLACE	Dwelling	50.8	51.2	50.7	-0.1	Negligible Beneficial	51.6	0.8	Negligible Adverse	39.5	39.8	40.2
4, MIDDLEFIELD PLACE	Dwelling	62.1	63.0	62.2	0.1	Negligible Adverse	63.5	1.4	Negligible Adverse	49.6	50.4	50.9
40, MIDDLEFIELD PLACE	Dwelling	50.7	51.8	50.5	-0.2	Negligible Beneficial	51.5	0.8	Negligible Adverse	39.4	40.4	40.1
41, MIDDLEFIELD PLACE	Dwelling	50.9	51.2	50.8	-0.1	Negligible Beneficial	51.7	0.8	Negligible Adverse	39.5	39.8	40.3
42, MIDDLEFIELD PLACE	Dwelling	51.6	52.8	51.4	-0.2	Negligible Beneficial	52.2	0.6	Negligible Adverse	40.2	41.3	40.7
43, MIDDLEFIELD PLACE	Dwelling	50.9	51.2	50.8	-0.1	Negligible Beneficial	51.7	0.8	Negligible Adverse	39.5	39.8	40.3
44, MIDDLEFIELD PLACE	Dwelling	51.6	52.8	51.4	-0.2	Negligible Beneficial	52.2	0.6	Negligible Adverse	40.2	41.3	40.7
45, MIDDLEFIELD PLACE	Dwelling	50.9	51.2	50.8	-0.1	Negligible Beneficial	51.7	0.8	Negligible Adverse	39.5	39.8	40.3
46, MIDDLEFIELD PLACE	Dwelling	51.6	52.8	51.4	-0.2	Negligible Beneficial	52.2	0.6	Negligible Adverse	40.2	41.3	40.7
47, MIDDLEFIELD PLACE	Dwelling	50.9	51.2	50.8	-0.1	Negligible Beneficial	51.7	0.8	Negligible Adverse	39.5	39.8	40.3
48, MIDDLEFIELD PLACE	Dwelling	51.6	52.8	51.4	-0.2	Negligible Beneficial	52.2	0.6	Negligible Adverse	40.2	41.3	40.7
49, MIDDLEFIELD PLACE	Dwelling	50.8	51.1	50.8	0.0	No Change	51.6	0.8	Negligible Adverse	39.5	39.7	40.2
5, MIDDLEFIELD PLACE	Dwelling	57.8	58.5	57.9	0.1	Negligible Adverse	59.0	1.2	Negligible Adverse	45.8	46.4	46.8
50, MIDDLEFIELD PLACE	Dwelling	52.8	54.1	52.6	-0.2	Negligible Beneficial	53.3	0.5	Negligible Adverse	41.3	42.4	41.7
51, MIDDLEFIELD PLACE	Dwelling	50.8	51.1	50.8	0.0	No Change	51.6	0.8	Negligible Adverse	39.5	39.7	40.2
52, MIDDLEFIELD PLACE	Dwelling	52.8	54.1	52.6	-0.2	Negligible Beneficial	53.3	0.5	Negligible Adverse	41.3	42.4	41.7
53, MIDDLEFIELD PLACE	Dwelling	50.8	51.1	50.8	0.0	No Change	51.6	0.8	Negligible Adverse	39.5	39.7	40.2
54, MIDDLEFIELD PLACE	Dwelling	52.8	54.1	52.6	-0.2	Negligible Beneficial	53.3	0.5	Negligible Adverse	41.3	42.4	41.7
55, MIDDLEFIELD PLACE	Dwelling	50.8	51.1	50.8	0.0	No Change	51.6	0.8	Negligible Adverse	39.5	39.7	40.2
56, MIDDLEFIELD PLACE	Dwelling	52.8	54.1	52.6	-0.2	Negligible Beneficial	53.3	0.5	Negligible Adverse	41.3	42.4	41.7
57, MIDDLEFIELD PLACE	Dwelling	51.5	52.2	51.4	-0.1	Negligible Beneficial	52.2	0.7	Negligible Adverse	40.1	40.7	40.7
58, MIDDLEFIELD PLACE	Dwelling	54.0	56.0	53.5	-0.5	Negligible Beneficial	54.4	0.4	Negligible Adverse	42.3	44.1	42.7
59, MIDDLEFIELD PLACE	Dwelling	51.5	52.2	51.4	-0.1	Negligible Beneficial	52.2	0.7	Negligible Adverse	40.1	40.7	40.7
6, MIDDLEFIELD PLACE	Dwelling	62.1	63.0	62.2	0.1	Negligible Adverse	63.5	1.4	Negligible Adverse	49.6	50.4	50.9
60, MIDDLEFIELD PLACE	Dwelling	54.0	56.0	53.5	-0.5	Negligible Beneficial	54.4	0.4	Negligible Adverse	42.3	44.1	42.7
61, MIDDLEFIELD PLACE	Dwelling	51.5	52.2	51.4	-0.1	Negligible Beneficial	52.2	0.7	Negligible Adverse	40.1	40.7	40.7
62, MIDDLEFIELD PLACE	Dwelling	54.0	56.0	53.5	-0.5	Negligible Beneficial	54.4	0.4	Negligible Adverse	42.3	44.1	42.7
63, MIDDLEFIELD PLACE	Dwelling	51.5	52.2	51.4	-0.1	Negligible Beneficial	52.2	0.7	Negligible Adverse	40.1	40.7	40.7
64, MIDDLEFIELD PLACE	Dwelling	54.0	56.0	53.5	-0.5	Negligible Beneficial	54.4	0.4	Negligible Adverse	42.3	44.1	42.7
65, MIDDLEFIELD PLACE	Dwelling	52.2	52.9	52.0	-0.2	Negligible Beneficial	52.7	0.5	Negligible Adverse	40.7	41.3	41.2
66, MIDDLEFIELD PLACE	Dwelling	56.0	58.8	55.2	-0.8	Negligible Beneficial	56.3	0.3	Negligible Adverse	44.1	46.7	44.4
67, MIDDLEFIELD PLACE	Dwelling	52.2	52.9	52.0	-0.2	Negligible Beneficial	52.7	0.5	Negligible Adverse	40.7	41.3	41.2
68, MIDDLEFIELD PLACE	Dwelling	56.0	58.8	55.2	-0.8	Negligible Beneficial	56.3	0.3	Negligible Adverse	44.1	46.7	44.4
69, MIDDLEFIELD PLACE	Dwelling	52.2	52.9	52.0	-0.2	Negligible Beneficial	52.7	0.5	Negligible Adverse	40.7	41.3	41.2
7, MIDDLEFIELD PLACE	Dwelling	57.8	58.5	57.9	0.1	Negligible Adverse	59.0	1.2	Negligible Adverse	45.8	46.4	46.8
70, MIDDLEFIELD PLACE	Dwelling	56.0	58.8	55.2	-0.8	Negligible Beneficial	56.3	0.3	Negligible Adverse	44.1	46.7	44.4
71, MIDDLEFIELD PLACE	Dwelling	52.2	52.9	52.0	-0.2	Negligible Beneficial	52.7	0.5	Negligible Adverse	40.7	41.3	41.2
72, MIDDLEFIELD PLACE	Dwelling	56.0	58.8	55.2	-0.8	Negligible Beneficial	56.3	0.3	Negligible Adverse	44.1	46.7	44.4

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
16. MILL COURT	Dwelling	47.9	48.4	48.0	0.1	Negligible Adverse	48.7	0.8	Negligible Adverse	36.8	37.3	37.6
17. MILL COURT	Dwelling	47.9	48.4	48.0	0.1	Negligible Adverse	48.7	0.8	Negligible Adverse	36.8	37.3	37.6
18. MILL COURT	Dwelling	47.9	48.4	48.0	0.1	Negligible Adverse	48.7	0.8	Negligible Adverse	36.8	37.3	37.6
19. MILL COURT	Dwelling	47.7	48.1	47.7	0.0	No Change	48.4	0.7	Negligible Adverse	36.7	37.0	37.3
2. MILL COURT	Dwelling	46.6	47.1	46.6	0.0	No Change	47.3	0.7	Negligible Adverse	35.7	36.1	36.3
20. MILL COURT	Dwelling	47.7	48.1	47.7	0.0	No Change	48.4	0.7	Negligible Adverse	36.7	37.0	37.3
21. MILL COURT	Dwelling	47.7	48.1	47.7	0.0	No Change	48.4	0.7	Negligible Adverse	36.7	37.0	37.3
22. MILL COURT	Dwelling	47.7	48.1	47.7	0.0	No Change	48.4	0.7	Negligible Adverse	36.7	37.0	37.3
23. MILL COURT	Dwelling	47.7	48.1	47.7	0.0	No Change	48.4	0.7	Negligible Adverse	36.7	37.0	37.3
24. MILL COURT	Dwelling	47.7	48.1	47.7	0.0	No Change	48.4	0.7	Negligible Adverse	36.7	37.0	37.3
25. MILL COURT	Dwelling	47.7	48.1	47.7	0.0	No Change	48.4	0.7	Negligible Adverse	36.7	37.0	37.3
26. MILL COURT	Dwelling	47.7	48.1	47.7	0.0	No Change	48.4	0.7	Negligible Adverse	36.7	37.0	37.3
27. MILL COURT	Dwelling	47.7	48.1	47.7	0.0	No Change	48.4	0.7	Negligible Adverse	36.7	37.0	37.3
28. MILL COURT	Dwelling	48.8	49.2	48.8	0.0	No Change	49.5	0.7	Negligible Adverse	37.7	38.0	38.3
29. MILL COURT	Dwelling	48.8	49.2	48.8	0.0	No Change	49.5	0.7	Negligible Adverse	37.7	38.0	38.3
3. MILL COURT	Dwelling	46.6	47.1	46.6	0.0	No Change	47.3	0.7	Negligible Adverse	35.7	36.1	36.3
30. MILL COURT	Dwelling	48.8	49.2	48.8	0.0	No Change	49.5	0.7	Negligible Adverse	37.7	38.0	38.3
31. MILL COURT	Dwelling	48.8	49.2	48.8	0.0	No Change	49.5	0.7	Negligible Adverse	37.7	38.0	38.3
32. MILL COURT	Dwelling	48.8	49.2	48.8	0.0	No Change	49.5	0.7	Negligible Adverse	37.7	38.0	38.3
33. MILL COURT	Dwelling	48.8	49.2	48.8	0.0	No Change	49.5	0.7	Negligible Adverse	37.7	38.0	38.3
34. MILL COURT	Dwelling	48.8	49.2	48.8	0.0	No Change	49.5	0.7	Negligible Adverse	37.7	38.0	38.3
35. MILL COURT	Dwelling	48.8	49.2	48.8	0.0	No Change	49.5	0.7	Negligible Adverse	37.7	38.0	38.3
36. MILL COURT	Dwelling	48.8	49.2	48.8	0.0	No Change	49.5	0.7	Negligible Adverse	37.7	38.0	38.3
4. MILL COURT	Dwelling	46.6	47.1	46.6	0.0	No Change	47.3	0.7	Negligible Adverse	35.7	36.1	36.3
5. MILL COURT	Dwelling	46.6	47.1	46.6	0.0	No Change	47.3	0.7	Negligible Adverse	35.7	36.1	36.3
6. MILL COURT	Dwelling	46.6	47.1	46.6	0.0	No Change	47.3	0.7	Negligible Adverse	35.7	36.1	36.3
7. MILL COURT	Dwelling	46.6	47.1	46.6	0.0	No Change	47.3	0.7	Negligible Adverse	35.7	36.1	36.3
8. MILL COURT	Dwelling	46.6	47.1	46.6	0.0	No Change	47.3	0.7	Negligible Adverse	35.7	36.1	36.3
9. MILL COURT	Dwelling	46.6	47.1	46.6	0.0	No Change	47.3	0.7	Negligible Adverse	35.7	36.1	36.3
MILL HOUSE, 5. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.7	44.1
MILL HOUSE, 6. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.7	44.1
MILL HOUSE, 7. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.7	44.1
MILL HOUSE, 8. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.7	44.1
MILL HOUSE, 9. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.7	44.1
MILL HOUSE, 10. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.7	44.1
MILL HOUSE, 11. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.7	44.1
MILL HOUSE, 12. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.7	44.1
MILL HOUSE, 14. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.7	44.1
MILL HOUSE, 15. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.7	44.1
MILL HOUSE, 16. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.7	44.1
MILL HOUSE, 17. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.5	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.7	44.1
1. MILL LADE WYND, DANESTONE	Dwelling	65.9	67.9	65.4	-0.5	Negligible Beneficial	67.3	1.4	Negligible Adverse	53.0	54.8	54.3
10. MILL LADE WYND, DANESTONE	Dwelling	62.4	65.1	61.4	-1.0	Minor Beneficial	63.8	1.4	Negligible Adverse	49.9	52.3	51.2
11. MILL LADE WYND, DANESTONE	Dwelling	64.0	66.9	62.6	-1.4	Minor Beneficial	65.4	1.4	Negligible Adverse	51.3	53.9	52.6
2. MILL LADE WYND, DANESTONE	Dwelling	65.6	67.5	65.1	-0.5	Negligible Beneficial	67.1	1.5	Negligible Adverse	52.8	54.7	54.1
3. MILL LADE WYND, DANESTONE	Dwelling	66.2	68.3	65.6	-0.6	Negligible Beneficial	67.6	1.4	Negligible Adverse	53.3	55.2	54.6
4. MILL LADE WYND, DANESTONE	Dwelling	63.6	65.8	63.0	-0.6	Negligible Beneficial	65.1	1.5	Negligible Adverse	51.0	53.0	52.3
5. MILL LADE WYND, DANESTONE	Dwelling	53.9	55.1	53.5	-0.4	Negligible Beneficial	54.9	1.0	Negligible Adverse	42.2	43.3	43.1
6. MILL LADE WYND, DANESTONE	Dwelling	54.3	55.5	53.9	-0.4	Negligible Beneficial	55.2	0.9	Negligible Adverse	42.6	43.7	43.4
7. MILL LADE WYND, DANESTONE	Dwelling	65.3	68.0	64.7	-0.6	Negligible Beneficial	66.9	1.6	Negligible Adverse	52.5	54.9	53.9
8. MILL LADE WYND, DANESTONE	Dwelling	61.4	64.1	60.7	-0.7	Negligible Beneficial	63.0	1.6	Negligible Adverse	49.0	51.4	50.4
9. MILL LADE WYND, DANESTONE	Dwelling	61.3	64.0	60.5	-0.8	Negligible Beneficial	62.8	1.5	Negligible Adverse	48.9	51.3	50.3
MILLBANK VIEW, 17. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.4	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.6	44.1
MILLBANK VIEW, 18. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.4	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.6	44.1
MILLBANK VIEW, 19. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.4	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.6	44.1
MILLBANK VIEW, 20. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.4	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.6	44.1
MILLBANK VIEW, 21. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.4	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.6	44.1
MILLBANK VIEW, 22. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.4	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.6	44.1
MILLBANK VIEW, 23. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.4	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.6	44.1
MILLBANK VIEW, 24. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.4	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.6	44.1
MILLBANK VIEW, 25. GRANDHOLM CRESCENT, GRANDHOLM	Dwelling	54.9	55.4	54.7	-0.2	Negligible Beneficial	56.0	1.1	Negligible Adverse	43.1	43.6	44.1
1. MOIR AVENUE	Dwelling	60.3	61.6	60.2	-0.1	Negligible Beneficial	61.4	1.1	Negligible Adverse	48.0	49.2	49.0
10. MOIR AVENUE	Dwelling	52.7	53.8	52.5	-0.2	Negligible Beneficial	53.8	1.1	Negligible Adverse	41.2	42.2	42.2
11. MOIR AVENUE	Dwelling	54.9	55.7	54.9	0.0	No Change	55.6	0.7	Negligible Adverse	43.1	43.9	43.8
12. MOIR AVENUE	Dwelling	52.6	53.8	52.5	-0.1	Negligible Beneficial	53.7	1.1	Negligible Adverse	41.1	42.2	42.1
13. MOIR AVENUE	Dwelling	53.4	54.6	53.2	-0.2	Negligible Beneficial	54.5	1.1	Negligible Adverse	41.8	42.9	42.8
14. MOIR AVENUE	Dwelling	49.7	50.9	49.6	-0.1	Negligible Beneficial	50.8	1.1	Negligible Adverse	38.5	39.5	39.5
15. MOIR AVENUE	Dwelling	53.1	54.3	52.9	-0.2	Negligible Beneficial	54.2	1.1	Negligible Adverse	41.5	42.6	42.5
16. MOIR AVENUE	Dwelling	49.3	50.4	49.2	-0.1	Negligible Beneficial	50.3	1.0	Negligible Adverse	38.1	39.1	39.0
17. MOIR AVENUE	Dwelling	52.5	53.8	52.3	-0.2	Negligible Beneficial	53.5	1.1	Negligible Adverse	41.0	42.2	42.0
18. MOIR AVENUE	Dwelling	49.2	49.1	49.1	-0.1	Negligible Beneficial	50.2	1.0	Negligible Adverse	38.0	39.0	38.9
19. MOIR AVENUE	Dwelling	52.3	53.5	52.1	-0.2	Negligible Beneficial	53.4	1.1	Negligible Adverse	40.8	41.9	41.8
2. MOIR AVENUE	Dwelling	60.1	61.3	60.0	-0.1	Negligible Beneficial	61.2	1.1	Negligible Adverse	47.8	48.9	48.8
20. MOIR AVENUE	Dwelling	49.3	50.3	49.2	-0.1	Negligible Beneficial	50.3	1.0	Negligible Adverse	38.1	39.0	39.0

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
21. MOIR AVENUE	Dwelling	52.0	53.3	51.9	-0.1	Negligible Beneficial	53.1	1.1	Negligible Adverse	40.5	41.7	41.5
22. MOIR AVENUE	Dwelling	49.6	50.7	49.5	-0.1	Negligible Beneficial	50.6	1.0	Negligible Adverse	38.4	39.4	39.3
23. MOIR AVENUE	Dwelling	51.7	52.9	51.5	-0.2	Negligible Beneficial	52.8	1.1	Negligible Adverse	40.3	41.3	41.3
24. MOIR AVENUE	Dwelling	49.1	50.1	49.0	-0.1	Negligible Beneficial	50.0	0.9	Negligible Adverse	37.9	38.8	38.7
25. MOIR AVENUE	Dwelling	51.2	52.4	51.0	-0.2	Negligible Beneficial	52.3	1.1	Negligible Adverse	39.8	40.9	40.8
26. MOIR AVENUE	Dwelling	49.4	50.5	49.3	-0.1	Negligible Beneficial	50.4	1.0	Negligible Adverse	38.2	39.2	39.1
27. MOIR AVENUE	Dwelling	50.8	52.1	50.7	-0.1	Negligible Beneficial	52.0	1.2	Negligible Adverse	39.5	40.6	40.5
28. MOIR AVENUE	Dwelling	49.0	50.0	48.9	-0.1	Negligible Beneficial	49.9	0.9	Negligible Adverse	37.8	38.7	38.6
3. MOIR AVENUE	Dwelling	57.5	58.5	57.5	0.0	No Change	58.4	0.9	Negligible Adverse	45.5	46.4	46.3
4. MOIR AVENUE	Dwelling	53.2	54.4	53.0	-0.2	Negligible Beneficial	54.3	1.1	Negligible Adverse	41.6	42.7	42.6
5. MOIR AVENUE	Dwelling	56.8	57.8	56.8	0.0	No Change	57.6	0.8	Negligible Adverse	44.9	45.8	45.6
6. MOIR AVENUE	Dwelling	52.5	53.7	52.4	-0.1	Negligible Beneficial	53.6	1.1	Negligible Adverse	41.0	42.1	42.0
7. MOIR AVENUE	Dwelling	56.4	57.4	56.4	0.0	No Change	57.2	0.8	Negligible Adverse	44.5	45.4	45.2
8. MOIR AVENUE	Dwelling	52.3	53.4	52.2	-0.1	Negligible Beneficial	53.4	1.1	Negligible Adverse	40.8	41.8	41.8
9. MOIR AVENUE	Dwelling	55.3	56.2	55.4	0.1	Negligible Adverse	56.1	0.8	Negligible Adverse	43.5	44.3	44.2
CUMMINGS PARK HOUSE, 41, MOIR CRESCENT	Dwelling	51.1	52.0	51.0	-0.1	Negligible Beneficial	52.0	0.9	Negligible Adverse	39.7	40.5	40.5
1. MOIR CRESCENT	Dwelling	68.4	68.4	68.5	0.1	Negligible Beneficial	68.5	0.1	Negligible Beneficial	55.3	55.3	55.4
10. MOIR CRESCENT	Dwelling	56.0	56.4	56.1	0.1	Negligible Adverse	56.4	0.4	Negligible Adverse	44.1	44.5	44.5
11. MOIR CRESCENT	Dwelling	54.3	54.6	54.3	0.0	No Change	54.7	0.4	Negligible Adverse	42.6	42.9	43.0
11. MOIR CRESCENT	Dwelling	54.7	55.1	54.8	0.1	Negligible Beneficial	55.1	0.4	Negligible Adverse	43.0	43.3	43.3
12. MOIR CRESCENT	Dwelling	51.7	52.3	51.7	0.0	No Change	52.3	0.6	Negligible Adverse	40.3	40.8	40.8
13. MOIR CRESCENT	Dwelling	52.5	53.0	52.6	0.1	Negligible Adverse	53.0	0.5	Negligible Adverse	41.0	41.4	41.4
14. MOIR CRESCENT	Dwelling	51.5	52.2	51.5	0.0	No Change	52.1	0.6	Negligible Adverse	40.1	40.7	40.6
15. MOIR CRESCENT	Dwelling	52.4	52.8	52.4	0.0	No Change	52.9	0.5	Negligible Adverse	40.9	41.3	41.3
16. MOIR CRESCENT	Dwelling	51.5	51.5	51.5	0.0	No Change	52.2	0.7	Negligible Adverse	40.1	40.8	40.7
18. MOIR CRESCENT	Dwelling	51.6	52.4	51.6	0.0	No Change	52.3	0.7	Negligible Adverse	40.2	40.8	40.8
19. MOIR CRESCENT	Dwelling	50.8	51.4	50.9	0.1	Negligible Adverse	51.4	0.6	Negligible Adverse	39.5	40.0	40.0
2. MOIR CRESCENT	Dwelling	68.3	68.3	68.4	0.1	Negligible Adverse	68.4	0.1	Negligible Adverse	55.2	55.2	55.3
20. MOIR CRESCENT	Dwelling	51.7	52.6	51.7	0.0	No Change	52.5	0.8	Negligible Adverse	40.3	41.1	41.0
22. MOIR CRESCENT	Dwelling	51.6	52.3	51.6	0.0	No Change	52.3	0.7	Negligible Adverse	40.2	40.8	40.8
24. MOIR CRESCENT	Dwelling	51.5	52.3	51.5	0.0	No Change	52.3	0.8	Negligible Adverse	40.1	40.8	40.8
26. MOIR CRESCENT	Dwelling	51.5	52.3	51.5	0.0	No Change	52.3	0.8	Negligible Adverse	40.1	40.8	40.8
28. MOIR CRESCENT	Dwelling	51.6	52.4	51.6	0.0	No Change	52.3	0.7	Negligible Adverse	40.2	40.9	40.8
3. MOIR CRESCENT	Dwelling	64.0	64.0	64.1	0.1	Negligible Beneficial	64.1	0.1	Negligible Beneficial	51.3	51.3	51.4
30. MOIR CRESCENT	Dwelling	50.0	51.0	49.9	-0.1	Negligible Beneficial	50.9	0.9	Negligible Adverse	38.7	39.6	39.5
32. MOIR CRESCENT	Dwelling	50.4	51.4	50.3	-0.1	Negligible Beneficial	51.3	0.9	Negligible Adverse	39.1	40.0	39.9
33. MOIR CRESCENT	Dwelling	50.7	51.5	50.6	-0.1	Negligible Beneficial	51.5	0.8	Negligible Adverse	39.4	40.1	40.1
34. MOIR CRESCENT	Dwelling	50.6	51.6	50.5	-0.1	Negligible Beneficial	51.5	0.9	Negligible Adverse	39.3	40.2	40.1
35. MOIR CRESCENT	Dwelling	50.6	51.4	50.5	-0.1	Negligible Beneficial	51.5	0.9	Negligible Adverse	39.3	40.0	40.1
36. MOIR CRESCENT	Dwelling	50.7	50.6	50.7	0.0	Negligible Beneficial	50.7	0.1	Negligible Adverse	39.4	40.2	40.2
37. MOIR CRESCENT	Dwelling	50.8	51.6	50.7	-0.1	Negligible Beneficial	51.7	0.9	Negligible Adverse	39.5	40.2	40.3
38. MOIR CRESCENT	Dwelling	51.3	52.3	51.2	-0.1	Negligible Beneficial	52.2	0.9	Negligible Adverse	39.9	40.8	40.7
39. MOIR CRESCENT	Dwelling	51.0	51.9	51.0	0.0	No Change	52.0	1.0	Negligible Adverse	39.6	40.4	40.5
4. MOIR CRESCENT	Dwelling	64.4	64.4	64.5	0.1	Negligible Beneficial	64.5	0.1	Negligible Beneficial	51.7	51.7	51.8
40. MOIR CRESCENT	Dwelling	51.1	52.1	51.0	-0.1	Negligible Beneficial	52.0	0.9	Negligible Adverse	39.7	40.6	40.5
42. MOIR CRESCENT	Dwelling	50.9	51.9	50.8	-0.1	Negligible Beneficial	51.8	0.9	Negligible Adverse	39.5	40.4	40.4
43. MOIR CRESCENT	Dwelling	53.6	54.7	53.5	-0.1	Negligible Beneficial	54.8	1.2	Negligible Adverse	42.0	43.0	43.1
44. MOIR CRESCENT	Dwelling	50.8	51.7	50.7	-0.1	Negligible Beneficial	51.7	0.9	Negligible Adverse	39.5	40.3	40.3
45. MOIR CRESCENT	Dwelling	53.8	55.0	53.8	0.0	No Change	55.0	1.2	Negligible Adverse	42.2	43.2	43.2
46. MOIR CRESCENT	Dwelling	50.4	51.4	50.4	0.0	No Change	51.4	1.0	Negligible Adverse	39.1	40.0	40.0
47. MOIR CRESCENT	Dwelling	54.7	55.9	54.7	0.0	No Change	56.0	1.3	Negligible Adverse	43.0	44.0	44.1
48. MOIR CRESCENT	Dwelling	50.8	51.7	50.7	-0.1	Negligible Beneficial	51.7	0.9	Negligible Adverse	39.5	40.3	40.3
49. MOIR CRESCENT	Dwelling	55.6	56.8	55.6	0.0	No Change	56.9	1.3	Negligible Adverse	43.8	44.9	44.9
5. MOIR CRESCENT	Dwelling	62.0	62.0	62.1	0.1	Negligible Adverse	62.1	0.1	Negligible Adverse	49.5	49.5	49.6
50. MOIR CRESCENT	Dwelling	60.7	60.8	60.8	0.0	Negligible Beneficial	60.9	0.2	Negligible Adverse	48.4	48.5	48.5
50. MOIR CRESCENT	Dwelling	52.1	53.2	52.0	-0.1	Negligible Beneficial	53.2	1.1	Negligible Adverse	40.6	41.6	41.6
51. MOIR CRESCENT	Dwelling	56.3	57.7	56.3	0.0	No Change	57.7	1.4	Negligible Adverse	44.4	45.7	45.7
52. MOIR CRESCENT	Dwelling	52.4	53.5	52.3	-0.1	Negligible Beneficial	53.5	1.1	Negligible Adverse	40.9	41.9	41.9
53. MOIR CRESCENT	Dwelling	55.6	57.0	55.6	0.0	No Change	57.0	1.4	Negligible Adverse	43.8	45.0	45.0
54. MOIR CRESCENT	Dwelling	52.4	53.6	52.3	-0.1	Negligible Beneficial	53.6	1.2	Negligible Adverse	40.9	42.0	42.0
55. MOIR CRESCENT	Dwelling	55.8	57.1	55.7	-0.1	Negligible Beneficial	57.1	1.3	Negligible Adverse	44.0	45.1	45.1
56. MOIR CRESCENT	Dwelling	52.7	53.9	52.6	-0.1	Negligible Beneficial	53.9	1.2	Negligible Adverse	41.2	42.2	42.2
57. MOIR CRESCENT	Dwelling	57.3	58.7	57.3	0.0	No Change	58.7	1.4	Negligible Adverse	45.3	46.6	46.6
58. MOIR CRESCENT	Dwelling	50.1	51.3	50.1	0.0	No Change	51.3	1.2	Negligible Adverse	38.8	39.9	39.9
59. MOIR CRESCENT	Dwelling	58.4	59.8	58.4	0.0	No Change	59.8	1.4	Negligible Adverse	46.3	47.6	47.6
6. MOIR CRESCENT	Dwelling	61.4	61.1	61.1	0.1	Negligible Adverse	61.2	0.2	Negligible Adverse	48.6	48.7	48.8
60. MOIR CRESCENT	Dwelling	61.4	62.8	61.4	0.0	No Change	62.8	1.4	Negligible Adverse	49.0	50.3	50.3
61. MOIR CRESCENT	Dwelling	59.9	61.3	59.9	0.0	No Change	61.3	1.4	Negligible Adverse	47.6	48.9	48.9
7. MOIR CRESCENT	Dwelling	58.2	58.4	58.4	0.2	Negligible Adverse	58.5	0.3	Negligible Adverse	46.1	46.3	46.4
7. MOIR CRESCENT	Dwelling	57.5	57.7	57.6	0.1	Negligible Adverse	57.7	0.2	Negligible Adverse	45.5	45.7	45.7
8. MOIR CRESCENT	Dwelling	61.9	61.9	62.0	0.1	Negligible Adverse	62.0	0.1	Negligible Adverse	49.4	49.4	49.5
9. MOIR CRESCENT	Dwelling	56.7	56.9	56.8	0.1	Negligible Beneficial	57.0	0.3	Negligible Adverse	44.8	44.9	45.0
9. MOIR CRESCENT	Dwelling	55.7	56.0	55.8	0.1	Negligible Beneficial	56.1	0.4	Negligible Adverse	43.9	44.1	44.2
18. MOIR DRIVE	Dwelling	54.4	54.8	54.3	-0.1	Negligible Beneficial	54.8	0.4	Negligible Adverse	42.7	43.1	43.1
20. MOIR DRIVE	Dwelling	54.4	54.8	54.3	-0.1	Negligible Beneficial	54.8	0.4	Negligible Adverse	42.7	43.1	43.1
22. MOIR DRIVE	Dwelling	54.4	54.8	54.3	-0.1	Negligible Beneficial	54.8	0.4	Negligible Adverse	42.7	43.1	43.1
24. MOIR DRIVE	Dwelling	54.4	54.8	54.3	-0.1	Negligible Beneficial	54.8	0.4	Negligible Adverse	42.7	43.1	43.1
26. MOIR DRIVE	Dwelling	54.4	54.8	54.3	-0.1	Negligible Beneficial	54.8	0.4	Negligible Adverse	42.7	43.1	43.1
28. MOIR DRIVE	Dwelling	54.4	54.8	54.3	-0.1	Negligible Beneficial	54.8	0.4	Negligible Adverse	42.7	43.1	43.1
29. MOIR DRIVE	Dwelling	52.0	52.8	51.9	-0.1	Negligible Beneficial	52.8	0.8	Negligible Adverse	40.5	41.3	41.3
30. MOIR DRIVE	Dwelling	53.8	54.3	53.7	-0.1	Negligible Beneficial	54.3	0.5	Negligible Adverse	42.2	42.6	42.6
31. MOIR DRIVE	Dwelling	51.6	52.4	51.6	0.0	No Change	52.4	0.8	Negligible Adverse	40.2	40.9	40.9
32. MOIR DRIVE	Dwelling	53.8	54.3	53.7	-0.1	Negligible Beneficial	54.3	0.5	Negligible Adverse	42.2	42.6	42.6

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
34. MOIR DRIVE	Dwelling	53.8	54.3	53.7	-0.1	Negligible Beneficial	54.3	0.5	Negligible Adverse	42.2	42.6	42.6
36. MOIR DRIVE	Dwelling	53.8	54.3	53.7	-0.1	Negligible Beneficial	54.3	0.5	Negligible Adverse	42.2	42.6	42.6
38. MOIR DRIVE	Dwelling	53.8	54.3	53.7	-0.1	Negligible Beneficial	54.3	0.5	Negligible Adverse	42.2	42.6	42.6
40. MOIR DRIVE	Dwelling	53.8	54.3	53.7	-0.1	Negligible Beneficial	54.3	0.5	Negligible Adverse	42.2	42.6	42.6
42. MOIR DRIVE	Dwelling	52.7	53.3	52.7	0.0	No Change	53.3	0.6	Negligible Adverse	41.2	41.7	41.7
44. MOIR DRIVE	Dwelling	52.7	53.3	52.7	0.0	No Change	53.3	0.6	Negligible Adverse	41.2	41.7	41.7
46. MOIR DRIVE	Dwelling	52.7	53.3	52.7	0.0	No Change	53.3	0.6	Negligible Adverse	41.2	41.7	41.7
48. MOIR DRIVE	Dwelling	52.7	53.3	52.7	0.0	No Change	53.3	0.6	Negligible Adverse	41.2	41.7	41.7
50. MOIR DRIVE	Dwelling	52.7	53.3	52.7	0.0	No Change	53.3	0.6	Negligible Adverse	41.2	41.7	41.7
52. MOIR DRIVE	Dwelling	52.7	53.3	52.7	0.0	No Change	53.3	0.6	Negligible Adverse	41.2	41.7	41.7
54. MOIR DRIVE	Dwelling	49.9	50.6	49.8	-0.1	Negligible Beneficial	50.5	0.6	Negligible Adverse	38.6	39.3	39.2
56. MOIR GREEN	Dwelling	49.7	50.4	49.7	0.0	No Change	50.4	0.7	Negligible Adverse	38.5	39.1	39.1
1. MOIR GREEN	Dwelling	49.8	50.8	49.7	-0.1	Negligible Beneficial	50.7	0.9	Negligible Adverse	38.6	39.5	39.4
10. MOIR GREEN	Dwelling	48.7	49.7	48.6	-0.1	Negligible Beneficial	49.5	0.8	Negligible Adverse	37.6	38.5	38.3
11. MOIR GREEN	Dwelling	48.7	49.6	48.6	-0.1	Negligible Beneficial	49.5	0.8	Negligible Adverse	37.6	38.4	38.3
12. MOIR GREEN	Dwelling	48.7	49.7	48.6	-0.1	Negligible Beneficial	49.6	0.9	Negligible Adverse	37.6	38.5	38.4
13. MOIR GREEN	Dwelling	48.4	49.4	48.3	-0.1	Negligible Beneficial	49.3	0.9	Negligible Adverse	37.3	38.2	38.1
14. MOIR GREEN	Dwelling	48.3	49.2	48.2	-0.1	Negligible Beneficial	49.1	0.8	Negligible Adverse	37.2	38.0	37.9
15. MOIR GREEN	Dwelling	48.2	49.2	48.1	-0.1	Negligible Beneficial	49.1	0.9	Negligible Adverse	37.1	38.0	37.9
16. MOIR GREEN	Dwelling	48.2	49.2	48.1	-0.1	Negligible Beneficial	49.1	0.9	Negligible Adverse	37.1	38.0	37.9
17. MOIR GREEN	Dwelling	48.4	49.4	48.3	-0.1	Negligible Beneficial	49.2	0.8	Negligible Adverse	37.3	38.2	38.0
18. MOIR GREEN	Dwelling	48.3	49.3	48.3	0.0	No Change	49.2	0.9	Negligible Adverse	37.2	38.1	38.0
2. MOIR GREEN	Dwelling	49.7	50.7	49.7	0.0	No Change	50.7	1.0	Negligible Adverse	38.5	39.4	39.4
23. MOIR GREEN	Dwelling	48.1	49.0	48.0	-0.1	Negligible Beneficial	48.9	0.8	Negligible Adverse	37.0	37.8	37.7
24. MOIR GREEN	Dwelling	47.9	48.8	47.8	-0.1	Negligible Beneficial	48.7	0.8	Negligible Adverse	36.8	37.7	37.6
25. MOIR GREEN	Dwelling	47.3	48.2	47.2	-0.1	Negligible Beneficial	48.1	0.8	Negligible Adverse	36.3	37.1	37.0
26. MOIR GREEN	Dwelling	47.2	48.1	47.1	-0.1	Negligible Beneficial	48.0	0.8	Negligible Adverse	36.2	37.0	36.9
27. MOIR GREEN	Dwelling	47.1	48.0	47.0	-0.1	Negligible Beneficial	47.9	0.8	Negligible Adverse	36.1	36.9	36.8
28. MOIR GREEN	Dwelling	47.1	48.0	47.1	0.0	No Change	47.9	0.8	Negligible Adverse	36.1	36.9	36.8
3. MOIR GREEN	Dwelling	49.6	50.5	49.5	-0.1	Negligible Beneficial	50.5	0.9	Negligible Adverse	38.4	39.2	39.2
33. MOIR GREEN	Dwelling	48.0	48.9	47.9	-0.1	Negligible Beneficial	48.8	0.8	Negligible Adverse	36.9	37.7	37.7
34. MOIR GREEN	Dwelling	47.8	48.6	47.7	-0.1	Negligible Beneficial	48.6	0.8	Negligible Adverse	36.8	37.5	37.5
35. MOIR GREEN	Dwelling	48.2	49.1	48.2	0.0	No Change	49.0	0.8	Negligible Adverse	37.1	37.9	37.8
36. MOIR GREEN	Dwelling	48.4	49.2	48.4	0.0	No Change	49.2	0.8	Negligible Adverse	37.3	38.0	38.0
37. MOIR GREEN	Dwelling	50.6	51.3	50.6	0.0	No Change	51.3	0.7	Negligible Adverse	39.3	39.9	39.9
38. MOIR GREEN	Dwelling	50.7	51.4	50.7	0.0	No Change	51.4	0.7	Negligible Adverse	39.4	40.0	40.0
39. MOIR GREEN	Dwelling	50.7	51.4	50.6	-0.1	Negligible Beneficial	51.4	0.7	Negligible Adverse	39.4	40.0	40.0
4. MOIR GREEN	Dwelling	49.6	50.5	49.5	-0.1	Negligible Beneficial	50.5	0.9	Negligible Adverse	38.4	39.2	39.2
40. MOIR GREEN	Dwelling	50.7	51.5	50.7	0.0	No Change	51.4	0.7	Negligible Adverse	39.4	40.1	40.0
43. MOIR GREEN	Dwelling	49.5	50.6	49.4	-0.1	Negligible Beneficial	50.5	1.0	Negligible Adverse	38.3	39.2	39.2
5. MOIR GREEN	Dwelling	48.8	49.7	48.7	-0.1	Negligible Beneficial	49.6	0.8	Negligible Adverse	37.7	38.5	38.4
6. MOIR GREEN	Dwelling	48.6	49.6	48.6	0.0	No Change	49.5	0.9	Negligible Adverse	37.5	38.4	38.3
7. MOIR GREEN	Dwelling	48.7	49.6	48.6	-0.1	Negligible Beneficial	49.5	0.8	Negligible Adverse	37.6	38.4	38.3
8. MOIR GREEN	Dwelling	48.6	49.6	48.6	0.0	No Change	49.5	0.9	Negligible Adverse	37.5	38.4	38.3
9. MOIR GREEN	Dwelling	48.6	49.6	48.5	-0.1	Negligible Beneficial	49.5	0.9	Negligible Adverse	37.5	38.4	38.3
1. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	51.5	49.9	-0.1	Negligible Beneficial	51.3	1.3	Negligible Adverse	38.7	40.1	39.9
10. MONTGOMERY ROAD, HAYTON	Dwelling	45.6	46.9	45.5	-0.1	Negligible Beneficial	46.7	1.1	Negligible Adverse	34.8	35.9	35.8
11. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	51.5	49.9	-0.1	Negligible Beneficial	51.3	1.3	Negligible Adverse	38.7	40.1	39.9
12. MONTGOMERY ROAD, HAYTON	Dwelling	45.5	46.8	45.4	-0.1	Negligible Beneficial	46.6	1.1	Negligible Adverse	34.7	35.9	35.7
13. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	51.5	49.9	-0.1	Negligible Beneficial	51.3	1.3	Negligible Adverse	38.7	40.1	39.9
14. MONTGOMERY ROAD, HAYTON	Dwelling	45.3	46.5	45.2	-0.1	Negligible Beneficial	46.4	1.1	Negligible Adverse	34.5	35.6	35.5
15. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	51.5	49.9	-0.1	Negligible Beneficial	51.3	1.3	Negligible Adverse	38.7	40.1	39.9
16. MONTGOMERY ROAD, HAYTON	Dwelling	45.1	46.3	45.1	0.0	No Change	46.1	1.0	Negligible Adverse	34.3	35.4	35.2
17. MONTGOMERY ROAD, HAYTON	Dwelling	49.2	49.4	49.1	-0.1	Negligible Beneficial	50.1	0.9	Negligible Adverse	38.0	38.2	38.8
18. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.3	44.1	-0.1	Negligible Beneficial	45.1	0.9	Negligible Adverse	33.5	34.5	34.3
19. MONTGOMERY ROAD, HAYTON	Dwelling	49.2	49.4	49.1	-0.1	Negligible Beneficial	50.1	0.9	Negligible Adverse	38.0	38.2	38.8
2. MONTGOMERY ROAD, HAYTON	Dwelling	50.7	51.8	50.5	-0.2	Negligible Beneficial	51.9	1.2	Negligible Adverse	39.4	40.4	40.4
20. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.3	44.1	-0.1	Negligible Beneficial	45.1	0.9	Negligible Adverse	33.5	34.5	34.3
21. MONTGOMERY ROAD, HAYTON	Dwelling	49.2	49.4	49.1	-0.1	Negligible Beneficial	50.1	0.9	Negligible Adverse	38.0	38.2	38.8
22. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.3	44.1	-0.1	Negligible Beneficial	45.1	0.9	Negligible Adverse	33.5	34.5	34.3
23. MONTGOMERY ROAD, HAYTON	Dwelling	49.2	49.4	49.1	-0.1	Negligible Beneficial	50.1	0.9	Negligible Adverse	38.0	38.2	38.8
24. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.3	44.1	-0.1	Negligible Beneficial	45.1	0.9	Negligible Adverse	33.5	34.5	34.3
25. MONTGOMERY ROAD, HAYTON	Dwelling	49.2	49.4	49.1	-0.1	Negligible Beneficial	50.1	0.9	Negligible Adverse	38.0	38.2	38.8
26. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.3	44.1	-0.1	Negligible Beneficial	45.1	0.9	Negligible Adverse	33.5	34.5	34.3
27. MONTGOMERY ROAD, HAYTON	Dwelling	49.2	49.4	49.1	-0.1	Negligible Beneficial	50.1	0.9	Negligible Adverse	38.0	38.2	38.8
28. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.3	44.1	-0.1	Negligible Beneficial	45.1	0.9	Negligible Adverse	33.5	34.5	34.3
29. MONTGOMERY ROAD, HAYTON	Dwelling	49.2	49.4	49.1	-0.1	Negligible Beneficial	50.1	0.9	Negligible Adverse	38.0	38.2	38.8
30. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	51.5	49.9	-0.1	Negligible Beneficial	50.1	1.3	Negligible Adverse	38.7	40.1	39.9
31. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.3	44.1	-0.1	Negligible Beneficial	45.1	0.9	Negligible Adverse	33.5	34.5	34.3
32. MONTGOMERY ROAD, HAYTON	Dwelling	49.2	49.4	49.1	-0.1	Negligible Beneficial	50.1	0.9	Negligible Adverse	38.0	38.2	38.8
33. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.3	44.1	-0.1	Negligible Beneficial	45.1	0.9	Negligible Adverse	33.5	34.5	34.3
34. MONTGOMERY ROAD, HAYTON	Dwelling	49.7	49.8	49.6	0.0	Negligible Beneficial	50.6	0.9	Negligible Adverse	38.5	38.6	39.3
35. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.4	44.2	0.0	No Change	45.2	1.0	Negligible Adverse	33.5	34.6	34.4
36. MONTGOMERY ROAD, HAYTON	Dwelling	49.7	49.8	49.6	0.0	Negligible Beneficial	50.6	0.9	Negligible Adverse	38.5	38.6	39.3
37. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.4	44.2	0.0	No Change	45.2	1.0	Negligible Adverse	33.5	34.6	34.4
38. MONTGOMERY ROAD, HAYTON	Dwelling	49.7	49.8	49.6	0.0	Negligible Beneficial	50.6	0.9	Negligible Adverse	38.5	38.6	39.3
39. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.4	44.2	0.0	No Change	45.2	1.0	Negligible Adverse	33.5	34.6	34.4
40. MONTGOMERY ROAD, HAYTON	Dwelling	49.7	49.8	49.6	0.0	Negligible Beneficial	50.6	0.9	Negligible Adverse	38.5	38.6	39.3
41. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.4	44.2	0.0	No Change	45.2	1.0	Negligible Adverse	33.5	34.6	34.4
42. MONTGOMERY ROAD, HAYTON	Dwelling	49.7	49.8	49.6	-0.1	Negligible Beneficial	50.6	0.9	Negligible Adverse	38.5	38.6	39.3
43. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.4	44.2	0.0	No Change	45.2	1.0	Negligible Adverse	33.5	34.6	34.4
43. MONTGOMERY ROAD, HAYTON	Dwelling	49.7	49.8	49.6	-0.1	Negligible Beneficial	50.6	0.9	Negligible Adverse	38.5	38.6	39.3

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
44. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.4	44.2	0.0	No Change	45.2	1.0	Negligible Adverse	33.5	34.6	34.4
45. MONTGOMERY ROAD, HAYTON	Dwelling	49.7	49.8	49.6	-0.1	Negligible Beneficial	50.6	0.9	Negligible Adverse	38.5	38.6	39.3
46. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.4	44.2	0.0	No Change	45.2	1.0	Negligible Adverse	33.5	34.6	34.4
47. MONTGOMERY ROAD, HAYTON	Dwelling	49.7	49.8	49.6	-0.1	Negligible Beneficial	50.6	0.9	Negligible Adverse	38.5	38.6	39.3
48. MONTGOMERY ROAD, HAYTON	Dwelling	44.2	45.4	44.2	0.0	No Change	45.2	1.0	Negligible Adverse	33.5	34.6	34.4
49. MONTGOMERY ROAD, HAYTON	Dwelling	50.2	50.3	50.1	-0.1	Negligible Beneficial	51.1	0.9	Negligible Adverse	38.9	39.0	39.7
5. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	51.5	49.9	-0.1	Negligible Beneficial	51.3	1.3	Negligible Adverse	38.7	40.1	39.9
50. MONTGOMERY ROAD, HAYTON	Dwelling	44.3	45.5	44.3	0.0	No Change	45.3	1.0	Negligible Adverse	33.6	34.7	34.5
51. MONTGOMERY ROAD, HAYTON	Dwelling	50.2	50.3	50.1	-0.1	Negligible Beneficial	51.1	0.9	Negligible Adverse	38.9	39.0	39.7
52. MONTGOMERY ROAD, HAYTON	Dwelling	44.3	45.5	44.3	0.0	No Change	45.3	1.0	Negligible Adverse	33.6	34.7	34.5
53. MONTGOMERY ROAD, HAYTON	Dwelling	50.2	50.3	50.1	-0.1	Negligible Beneficial	51.1	0.9	Negligible Adverse	38.9	39.0	39.7
54. MONTGOMERY ROAD, HAYTON	Dwelling	44.3	45.5	44.3	0.0	No Change	45.3	1.0	Negligible Adverse	33.6	34.7	34.5
55. MONTGOMERY ROAD, HAYTON	Dwelling	50.2	50.3	50.1	-0.1	Negligible Beneficial	51.1	0.9	Negligible Adverse	38.9	39.0	39.7
56. MONTGOMERY ROAD, HAYTON	Dwelling	44.3	45.5	44.3	0.0	No Change	45.3	1.0	Negligible Adverse	33.6	34.7	34.5
57. MONTGOMERY ROAD, HAYTON	Dwelling	50.2	50.3	50.1	-0.1	Negligible Beneficial	51.1	0.9	Negligible Adverse	38.9	39.0	39.7
58. MONTGOMERY ROAD, HAYTON	Dwelling	44.3	45.5	44.3	0.0	No Change	45.3	1.0	Negligible Adverse	33.6	34.7	34.5
59. MONTGOMERY ROAD, HAYTON	Dwelling	50.2	50.3	50.1	-0.1	Negligible Beneficial	51.1	0.9	Negligible Adverse	38.9	39.0	39.7
6. MONTGOMERY ROAD, HAYTON	Dwelling	45.7	47.2	45.7	0.0	No Change	46.9	1.2	Negligible Adverse	34.9	36.2	35.9
60. MONTGOMERY ROAD, HAYTON	Dwelling	44.3	45.5	44.3	0.0	No Change	45.3	1.0	Negligible Adverse	33.6	34.7	34.5
61. MONTGOMERY ROAD, HAYTON	Dwelling	50.2	50.3	50.1	-0.1	Negligible Beneficial	51.1	0.9	Negligible Adverse	38.9	39.0	39.7
62. MONTGOMERY ROAD, HAYTON	Dwelling	44.3	45.5	44.3	0.0	No Change	45.3	1.0	Negligible Adverse	33.6	34.7	34.5
63. MONTGOMERY ROAD, HAYTON	Dwelling	50.2	50.3	50.1	-0.1	Negligible Beneficial	51.1	0.9	Negligible Adverse	38.9	39.0	39.7
64. MONTGOMERY ROAD, HAYTON	Dwelling	44.3	45.5	44.3	0.0	No Change	45.3	1.0	Negligible Adverse	33.6	34.7	34.5
65. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	50.3	49.9	-0.1	Negligible Beneficial	51.0	1.0	Negligible Adverse	38.7	39.0	39.6
67. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	50.3	49.9	-0.1	Negligible Beneficial	51.0	1.0	Negligible Adverse	38.7	39.0	39.6
69. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	50.3	49.9	-0.1	Negligible Beneficial	51.0	1.0	Negligible Adverse	38.7	39.0	39.6
7. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	51.5	49.9	-0.1	Negligible Beneficial	51.3	1.3	Negligible Adverse	38.7	40.1	39.9
71. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	50.3	49.9	-0.1	Negligible Beneficial	51.0	1.0	Negligible Adverse	38.7	39.0	39.6
73. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	50.3	49.9	-0.1	Negligible Beneficial	51.0	1.0	Negligible Adverse	38.7	39.0	39.6
75. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	50.3	49.9	-0.1	Negligible Beneficial	51.0	1.0	Negligible Adverse	38.7	39.0	39.6
77. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	50.3	49.9	-0.1	Negligible Beneficial	51.0	1.0	Negligible Adverse	38.7	39.0	39.6
79. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	50.3	49.9	-0.1	Negligible Beneficial	51.0	1.0	Negligible Adverse	38.7	39.0	39.6
8. MONTGOMERY ROAD, HAYTON	Dwelling	45.7	47.0	45.6	-0.1	Negligible Beneficial	46.8	1.1	Negligible Adverse	34.9	36.0	35.9
9. MONTGOMERY ROAD, HAYTON	Dwelling	50.0	50.3	49.9	-0.1	Negligible Beneficial	51.3	1.3	Negligible Adverse	38.7	40.1	39.9
1. MORGAN ROAD	Dwelling	49.4	50.5	49.1	-0.3	Negligible Beneficial	50.1	0.7	Negligible Adverse	38.2	39.2	38.8
10. MORGAN ROAD	Dwelling	52.1	52.8	51.7	-0.4	Negligible Beneficial	52.6	0.5	Negligible Adverse	40.6	41.3	41.1
11. MORGAN ROAD	Dwelling	48.5	49.3	48.2	-0.3	Negligible Beneficial	49.2	0.7	Negligible Adverse	37.4	38.1	38.0
12. MORGAN ROAD	Dwelling	51.1	51.8	50.7	-0.4	Negligible Beneficial	51.6	0.5	Negligible Adverse	39.7	40.4	40.2
13. MORGAN ROAD	Dwelling	48.5	49.3	48.2	-0.3	Negligible Beneficial	49.1	0.6	Negligible Adverse	37.4	38.1	37.9
14. MORGAN ROAD	Dwelling	49.8	50.4	49.4	-0.4	Negligible Beneficial	50.4	0.5	Negligible Adverse	38.6	39.2	39.0
15. MORGAN ROAD	Dwelling	48.7	49.5	48.4	-0.3	Negligible Beneficial	49.3	0.6	Negligible Adverse	37.6	38.3	38.1
16. MORGAN ROAD	Dwelling	49.6	50.3	49.2	-0.4	Negligible Beneficial	50.1	0.5	Negligible Adverse	38.4	39.0	38.8
17. MORGAN ROAD	Dwelling	48.5	49.3	48.2	-0.3	Negligible Beneficial	49.1	0.6	Negligible Adverse	37.4	38.1	37.9
18. MORGAN ROAD	Dwelling	49.5	50.2	49.1	-0.4	Negligible Beneficial	50.0	0.5	Negligible Adverse	38.3	38.9	38.7
19. MORGAN ROAD	Dwelling	50.0	50.7	49.7	-0.3	Negligible Beneficial	50.6	0.6	Negligible Adverse	38.7	39.4	39.3
2. MORGAN ROAD	Dwelling	56.3	57.2	55.9	-0.4	Negligible Beneficial	56.9	0.6	Negligible Adverse	44.4	45.2	44.9
20. MORGAN ROAD	Dwelling	49.3	50.0	48.9	-0.4	Negligible Beneficial	49.8	0.5	Negligible Adverse	38.1	38.7	38.6
21. MORGAN ROAD	Dwelling	50.7	51.4	50.4	-0.3	Negligible Beneficial	51.3	0.6	Negligible Adverse	39.4	40.0	39.9
22. MORGAN ROAD	Dwelling	49.4	50.1	49.0	-0.4	Negligible Beneficial	49.9	0.5	Negligible Adverse	38.2	38.8	38.6
23. MORGAN ROAD	Dwelling	52.0	52.5	51.6	-0.4	Negligible Beneficial	52.4	0.4	Negligible Adverse	40.5	41.0	40.9
24. MORGAN ROAD	Dwelling	49.3	50.0	48.9	-0.4	Negligible Beneficial	49.8	0.5	Negligible Adverse	38.1	38.7	38.6
26. MORGAN ROAD	Dwelling	51.4	52.0	51.0	-0.4	Negligible Beneficial	51.9	0.5	Negligible Adverse	40.0	40.5	40.4
28. MORGAN ROAD	Dwelling	52.7	53.3	52.3	-0.4	Negligible Beneficial	53.2	0.5	Negligible Adverse	41.2	41.7	41.6
3. MORGAN ROAD	Dwelling	49.5	50.3	49.2	-0.3	Negligible Beneficial	50.1	0.6	Negligible Adverse	38.3	39.0	38.8
30. MORGAN ROAD	Dwelling	51.3	51.9	51.0	-0.3	Negligible Beneficial	51.8	0.5	Negligible Adverse	39.9	40.4	40.4
32. MORGAN ROAD	Dwelling	54.1	54.5	53.7	-0.4	Negligible Beneficial	54.5	0.4	Negligible Adverse	42.4	42.8	42.8
4. MORGAN ROAD	Dwelling	54.5	55.1	54.0	-0.5	Negligible Beneficial	54.9	0.4	Negligible Adverse	42.8	43.3	43.1
5. MORGAN ROAD	Dwelling	49.6	50.4	49.2	-0.4	Negligible Beneficial	50.2	0.6	Negligible Adverse	38.4	39.1	38.9
6. MORGAN ROAD	Dwelling	51.2	51.9	50.8	-0.4	Negligible Beneficial	51.7	0.5	Negligible Adverse	39.8	40.4	40.3
7. MORGAN ROAD	Dwelling	49.4	50.2	49.1	-0.3	Negligible Beneficial	50.0	0.6	Negligible Adverse	38.2	38.9	38.7
8. MORGAN ROAD	Dwelling	50.0	50.8	49.6	-0.4	Negligible Beneficial	50.5	0.5	Negligible Adverse	38.7	39.5	39.2
9. MORGAN ROAD	Dwelling	48.5	49.3	48.2	-0.3	Negligible Beneficial	49.1	0.6	Negligible Adverse	37.4	38.1	37.9
1. MOSMAN GARDENS	Dwelling	51.8	54.1	51.4	-0.4	Negligible Beneficial	53.2	1.4	Negligible Adverse	40.4	42.4	41.6
10. MOSMAN GARDENS	Dwelling	47.9	49.7	47.6	-0.3	Negligible Beneficial	49.0	1.1	Negligible Adverse	36.8	38.5	37.8
11. MOSMAN GARDENS	Dwelling	47.9	49.7	47.6	-0.3	Negligible Beneficial	49.0	1.1	Negligible Adverse	36.8	38.5	37.8
12. MOSMAN GARDENS	Dwelling	49.9	50.6	48.6	-0.3	Negligible Beneficial	50.1	1.2	Negligible Adverse	37.7	39.3	38.8
13. MOSMAN GARDENS	Dwelling	49.9	50.6	48.6	-0.3	Negligible Beneficial	50.1	1.2	Negligible Adverse	37.7	39.3	38.8
14. MOSMAN GARDENS	Dwelling	49.9	50.6	48.6	-0.3	Negligible Beneficial	50.1	1.2	Negligible Adverse	37.7	39.3	38.8
15. MOSMAN GARDENS	Dwelling	48.9	50.6	48.6	-0.3	Negligible Beneficial	50.1	1.2	Negligible Adverse	37.7	39.3	38.8
16. MOSMAN GARDENS	Dwelling	48.1	49.6	47.8	-0.3	Negligible Beneficial	49.1	1.0	Negligible Adverse	37.0	38.4	37.9
17. MOSMAN GARDENS	Dwelling	48.1	49.6	47.8	-0.3	Negligible Beneficial	49.1	1.0	Negligible Adverse	37.0	38.4	37.9
18. MOSMAN GARDENS	Dwelling	48.1	49.6	47.8	-0.3	Negligible Beneficial	49.1	1.0	Negligible Adverse	37.0	38.4	37.9
19. MOSMAN GARDENS	Dwelling	48.1	49.6	47.8	-0.3	Negligible Beneficial	49.1	1.0	Negligible Adverse	37.0	38.4	37.9
2. MOSMAN GARDENS	Dwelling	49.4	51.7	49.1	-0.3	Negligible Beneficial	50.8	1.4	Negligible Adverse	38.2	40.3	39.5
20. MOSMAN GARDENS	Dwelling	48.3	50.2	48.0	-0.3	Negligible Beneficial	49.5	1.2	Negligible Adverse	37.2	38.9	38.3
21. MOSMAN GARDENS	Dwelling	48.3	50.2	48.0	-0.3	Negligible Beneficial	49.5	1.2	Negligible Adverse	37.2	38.9	38.3
22. MOSMAN GARDENS	Dwelling	50.3	52.1	50.0	-0.3	Negligible Beneficial	51.5	1.2	Negligible Adverse	39.0	40.6	40.1
3. MOSMAN GARDENS	Dwelling	49.4	51.7	49.0	-0.4	Negligible Beneficial	50.7	1.3	Negligible Adverse	38.2	40.3	39.4
4. MOSMAN GARDENS	Dwelling	48.4	50.3	48.1	-0.3	Negligible Beneficial	49.6	1.2	Negligible Adverse	37.3	39.0	38.4
5. MOSMAN GARDENS	Dwelling	48.4	50.3	48.1	-0.3	Negligible Beneficial	49.6	1.2	Negligible Adverse	37.3	39.0	38.4
6. MOSMAN GARDENS	Dwelling	48.4	50.3	48.1	-0.3	Negligible Beneficial	49.6	1.2	Negligible Adverse	37.3	39.0	38.4
7. MOSMAN GARDENS	Dwelling	48.4	50.3	48.1	-0.3	Negligible Beneficial	49.6	1.2	Negligible Adverse	37.3	39.0	38.4
8. MOSMAN GARDENS	Dwelling	48.7	50.5	48.4	-0.3	Negligible Beneficial	49.9	1.2	Negligible Adverse	37.6	39.2	38.6

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
9. MOSMAN GARDENS	Dwelling	48.7	50.5	48.4	-0.3	Negligible Beneficial	49.9	1.2	Negligible Adverse	37.6	39.2	38.6
1. MOSMAN PLACE	Dwelling	48.3	50.5	48.2	-0.1	Negligible Beneficial	50.0	1.7	Negligible Adverse	37.2	39.2	38.7
10. MOSMAN PLACE	Dwelling	46.4	47.7	46.2	-0.2	Negligible Beneficial	47.4	1.0	Negligible Adverse	35.5	36.7	36.4
11. MOSMAN PLACE	Dwelling	46.6	48.3	46.5	-0.1	Negligible Beneficial	47.9	1.3	Negligible Adverse	35.7	37.2	36.8
12. MOSMAN PLACE	Dwelling	46.4	47.7	46.3	-0.1	Negligible Beneficial	47.4	1.0	Negligible Adverse	35.5	36.7	36.4
13. MOSMAN PLACE	Dwelling	46.5	47.9	46.4	-0.1	Negligible Beneficial	47.6	1.1	Negligible Adverse	35.6	36.8	36.6
14. MOSMAN PLACE	Dwelling	47.3	48.4	47.2	-0.1	Negligible Beneficial	48.2	0.9	Negligible Adverse	36.3	37.3	37.1
15. MOSMAN PLACE	Dwelling	46.0	47.5	45.9	-0.1	Negligible Beneficial	47.1	1.1	Negligible Adverse	35.1	36.5	36.1
16. MOSMAN PLACE	Dwelling	46.4	47.8	46.3	-0.1	Negligible Beneficial	47.5	1.1	Negligible Adverse	35.5	36.8	36.5
17. MOSMAN PLACE	Dwelling	46.5	48.0	46.4	-0.1	Negligible Beneficial	47.6	1.1	Negligible Adverse	35.6	36.9	36.6
18. MOSMAN PLACE	Dwelling	46.6	47.9	46.4	-0.2	Negligible Beneficial	47.6	1.0	Negligible Adverse	35.7	36.8	36.6
19. MOSMAN PLACE	Dwelling	46.6	48.0	46.5	-0.1	Negligible Beneficial	47.7	1.1	Negligible Adverse	35.7	36.9	36.7
2. MOSMAN PLACE	Dwelling	49.5	51.3	49.4	-0.1	Negligible Beneficial	50.9	1.4	Negligible Adverse	38.3	39.9	39.5
20. MOSMAN PLACE	Dwelling	47.0	48.4	46.9	-0.1	Negligible Beneficial	48.1	1.1	Negligible Adverse	36.0	37.3	37.0
21. MOSMAN PLACE	Dwelling	46.5	48.0	46.4	-0.1	Negligible Beneficial	47.6	1.1	Negligible Adverse	35.6	36.9	36.6
22. MOSMAN PLACE	Dwelling	46.8	48.3	46.7	-0.1	Negligible Beneficial	47.9	1.1	Negligible Adverse	35.9	37.2	36.8
23. MOSMAN PLACE	Dwelling	46.5	47.9	46.4	-0.1	Negligible Beneficial	47.6	1.1	Negligible Adverse	35.6	36.8	36.6
24. MOSMAN PLACE	Dwelling	46.7	48.2	46.5	-0.2	Negligible Beneficial	47.8	1.1	Negligible Adverse	35.8	37.1	36.8
3. MOSMAN PLACE	Dwelling	47.6	49.6	47.5	-0.1	Negligible Beneficial	49.2	1.6	Negligible Adverse	36.6	38.4	38.0
4. MOSMAN PLACE	Dwelling	46.2	47.6	46.1	-0.1	Negligible Beneficial	47.3	1.1	Negligible Adverse	35.3	36.6	36.3
5. MOSMAN PLACE	Dwelling	47.2	49.1	47.1	-0.1	Negligible Beneficial	48.7	1.5	Negligible Adverse	36.2	37.9	37.6
6. MOSMAN PLACE	Dwelling	46.2	47.6	46.1	-0.1	Negligible Beneficial	47.3	1.1	Negligible Adverse	35.3	36.6	36.3
7. MOSMAN PLACE	Dwelling	46.9	48.7	46.8	-0.1	Negligible Beneficial	48.3	1.4	Negligible Adverse	35.9	37.6	37.2
8. MOSMAN PLACE	Dwelling	46.3	47.6	46.2	-0.1	Negligible Beneficial	47.4	1.1	Negligible Adverse	35.4	36.6	36.4
9. MOSMAN PLACE	Dwelling	46.8	48.5	46.7	-0.1	Negligible Beneficial	48.1	1.3	Negligible Adverse	35.9	37.4	37.0
9. MOSMAN PLACE	Dwelling	69.1	69.8	69.2	0.1	Negligible Adverse	69.2	0.1	Negligible Adverse	56.6	56.9	56.9
9. MOSMAN PLACE	Dwelling	68.4	69.2	68.5	0.1	Negligible Beneficial	69.5	1.1	Negligible Adverse	55.3	56.0	56.3
9. MOSMAN PLACE	Dwelling	67.3	68.1	67.3	0.0	No Change	68.3	1.0	Negligible Adverse	54.3	55.0	55.2
9. MOSMAN PLACE	Dwelling	65.5	66.2	65.5	0.0	No Change	66.4	0.9	Negligible Adverse	52.7	53.3	53.5
9. MOSMAN PLACE	Dwelling	63.8	64.4	63.7	-0.1	Negligible Beneficial	64.6	0.8	Negligible Adverse	51.2	51.7	51.9
9. MOSMAN PLACE	Dwelling	71.4	72.4	71.5	0.1	Negligible Beneficial	72.4	1.0	Negligible Adverse	58.0	58.9	58.9
9. MOSMAN PLACE	Dwelling	63.4	64.2	63.4	0.0	No Change	64.3	0.9	Negligible Adverse	50.8	51.5	51.6
9. MOSMAN PLACE	Dwelling	71.9	72.9	71.9	0.0	No Change	72.8	0.9	Negligible Adverse	58.4	59.3	59.3
9. MOSMAN PLACE	Dwelling	63.0	63.8	63.0	0.0	No Change	63.9	0.9	Negligible Adverse	50.4	51.2	51.2
9. MOSMAN PLACE	Dwelling	70.9	72.0	71.0	0.1	Negligible Beneficial	71.9	1.0	Negligible Adverse	57.5	58.5	58.4
9. MOSMAN PLACE	Dwelling	63.7	64.7	63.7	0.0	No Change	64.7	1.0	Negligible Adverse	51.1	52.0	52.0
9. MOSMAN PLACE	Dwelling	71.7	72.7	71.7	0.0	No Change	72.6	0.9	Negligible Adverse	58.3	59.2	59.1
9. MOSMAN PLACE	Dwelling	64.0	65.1	64.0	0.0	No Change	65.0	1.0	Negligible Adverse	51.3	52.3	52.2
9. MOSMAN PLACE	Dwelling	71.1	72.2	71.2	0.1	Negligible Adverse	72.1	1.0	Negligible Adverse	57.7	58.7	58.6
9. MOSMAN PLACE	Dwelling	64.7	65.8	64.7	0.0	No Change	65.8	1.1	Negligible Adverse	52.0	53.0	53.0
9. MOSMAN PLACE	Dwelling	63.7	64.5	63.7	0.0	Negligible Beneficial	64.5	0.8	Negligible Adverse	51.1	51.8	51.8
9. MOSMAN PLACE	Dwelling	65.1	65.9	65.1	0.0	No Change	66.0	0.9	Negligible Adverse	52.3	53.0	53.1
9. MOSMAN PLACE	Dwelling	71.0	71.4	71.2	0.2	Negligible Adverse	72.1	1.1	Negligible Adverse	57.6	58.0	58.6
9. MOSMAN PLACE	Dwelling	69.5	70.5	69.6	0.1	Negligible Beneficial	70.6	1.1	Negligible Adverse	56.3	57.2	57.3
9. MOSMAN PLACE	Dwelling	70.8	71.3	70.6	-0.2	Negligible Beneficial	72.0	1.2	Negligible Adverse	57.5	57.9	58.5
9. MOSMAN PLACE	Dwelling	70.8	71.3	70.6	-0.2	Negligible Beneficial	72.1	1.3	Negligible Adverse	57.5	57.9	58.6
9. MOSMAN PLACE	Dwelling	64.7	65.1	64.5	-0.2	Negligible Beneficial	65.9	1.2	Negligible Adverse	52.0	52.3	53.0
9. MOSMAN PLACE	Dwelling	69.9	70.4	69.8	-0.1	Negligible Beneficial	71.2	1.3	Negligible Adverse	56.6	57.1	57.8
9. MOSMAN PLACE	Dwelling	69.9	70.3	69.7	-0.2	Negligible Beneficial	71.1	1.2	Negligible Adverse	56.6	57.0	57.7
9. MOSMAN PLACE	Dwelling	69.8	70.3	69.6	-0.2	Negligible Beneficial	71.1	1.3	Negligible Adverse	56.6	57.0	57.7
9. MOSMAN PLACE	Dwelling	69.9	70.3	69.7	-0.2	Negligible Beneficial	71.1	1.2	Negligible Adverse	56.6	57.0	57.7
9. MOSMAN PLACE	Dwelling	69.9	70.4	69.7	-0.2	Negligible Beneficial	71.2	1.3	Negligible Adverse	56.6	57.1	57.8
9. MOSMAN PLACE	Dwelling	69.9	70.4	69.8	-0.1	Negligible Beneficial	71.2	1.3	Negligible Adverse	56.6	57.1	57.8
9. MOSMAN PLACE	Dwelling	70.0	70.5	69.8	-0.2	Negligible Beneficial	71.3	1.3	Negligible Adverse	56.7	57.2	57.9
9. MOSMAN PLACE	Dwelling	70.2	70.6	70.0	-0.2	Negligible Beneficial	71.5	1.3	Negligible Adverse	56.9	57.3	58.1
9. MOSMAN PLACE	Dwelling	70.1	70.6	69.9	-0.2	Negligible Beneficial	71.4	1.3	Negligible Adverse	56.8	57.3	58.0
9. MOSMAN PLACE	Dwelling	70.2	70.6	70.0	-0.2	Negligible Beneficial	71.5	1.3	Negligible Adverse	56.9	57.3	58.1
9. MOSMAN PLACE	Dwelling	70.2	70.7	70.0	-0.2	Negligible Beneficial	71.5	1.3	Negligible Adverse	56.9	57.4	58.1
9. MOSMAN PLACE	Dwelling	70.3	70.7	70.1	-0.2	Negligible Beneficial	71.6	1.3	Negligible Adverse	57.0	57.4	58.2
9. MOSMAN PLACE	Dwelling	70.6	71.0	70.4	-0.2	Negligible Beneficial	71.9	1.3	Negligible Adverse	57.3	57.6	58.4
9. MOSMAN PLACE	Dwelling	70.5	71.0	70.3	-0.2	Negligible Beneficial	71.8	1.3	Negligible Adverse	57.2	57.6	58.4
9. MOSMAN PLACE	Dwelling	70.5	70.9	70.3	-0.2	Negligible Beneficial	71.8	1.3	Negligible Adverse	57.2	57.5	58.4
9. MOSMAN PLACE	Dwelling	61.7	62.1	61.4	-0.3	Negligible Beneficial	62.3	0.6	Negligible Adverse	49.3	49.6	49.8
9. MOSMAN PLACE	Dwelling	68.1	69.3	68.2	0.1	Negligible Adverse	69.3	1.2	Negligible Adverse	55.0	56.1	56.1
9. MOSMAN PLACE	Dwelling	53.8	54.2	53.4	-0.4	Negligible Beneficial	54.2	0.4	Negligible Adverse	42.2	42.5	42.5
9. MOSMAN PLACE	Dwelling	59.5	59.6	59.4	-0.1	Negligible Beneficial	60.1	0.6	Negligible Adverse	47.3	47.4	47.8
9. MOSMAN PLACE	Dwelling	62.4	63.6	62.5	0.1	Negligible Beneficial	63.6	1.2	Negligible Adverse	49.9	51.0	51.0
9. MOSMAN PLACE	Dwelling	47.4	47.9	47.2	-0.2	Negligible Beneficial	48.4	1.0	Negligible Adverse	36.4	36.8	37.3
9. MOSMAN PLACE	Dwelling	71.5	71.4	71.4	0.0	Negligible Beneficial	72.8	1.3	Negligible Adverse	58.1	58.6	59.3
9. MOSMAN PLACE	Dwelling	62.2	62.9	62.2	0.0	No Change	63.2	1.0	Negligible Adverse	49.7	50.3	50.6
9. MOSMAN PLACE	Dwelling	51.4	51.9	51.2	-0.2	Negligible Beneficial	52.0	0.6	Negligible Adverse	40.0	40.4	40.5
9. MOSMAN PLACE	Dwelling	47.4	47.4	47.3	-0.1	Negligible Beneficial	48.0	0.6	Negligible Adverse	36.4	36.4	36.9
9. MOSMAN PLACE	Dwelling	49.2	50.0	49.1	-0.1	Negligible Beneficial	50.3	1.1	Negligible Adverse	38.0	38.7	39.0
9. MOSMAN PLACE	Dwelling	51.8	52.1	51.7	-0.1	Negligible Beneficial	52.4	0.6	Negligible Adverse	40.4	40.6	40.9
9. MOSMAN PLACE	Dwelling	52.6	53.2	52.5	-0.1	Negligible Beneficial	53.4	0.7	Negligible Adverse	41.1	41.6	41.7
9. MOSMAN PLACE	Dwelling	53.7	53.8	53.4	-0.3	Negligible Beneficial	54.0	0.3	Negligible Adverse	42.1	42.2	42.3
9. MOSMAN PLACE	Dwelling	52.6	53.2	52.5	-0.1	Negligible Beneficial	53.3	0.7	Negligible Adverse	41.1	41.6	41.7
9. MOSMAN PLACE	Dwelling	53.7	53.8	53.4	-0.3	Negligible Beneficial	54.0	0.3	Negligible Adverse	42.1	42.2	42.3
9. MOSMAN PLACE	Dwelling	53.7	53.8	53.4	-0.3	Negligible Beneficial	54.0	0.3	Negligible Adverse	42.1	42.2	42.3
9. MOSMAN PLACE	Dwelling	52.6	53.2	52.5	-0.1	Negligible Beneficial	53.3	0.7	Negligible Adverse	41.1	41.6	41.7
9. MOSMAN PLACE	Dwelling	52.7	52.8	52.7	0.0	No Change	53.2	0.5	Negligible Adverse	41.2	41.3	41.6
9. MOSMAN PLACE	Dwelling	52.5	53.1	52.4	-0.1	Negligible Beneficial	53.2	0.7	Negligible Adverse	41.0	41.5	41.6

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
19. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.7	52.8	52.7	0.0	No Change	53.2	0.5	Negligible Adverse	41.2	41.3	41.6
2. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.5	53.1	52.4	-0.1	Negligible Beneficial	53.3	0.8	Negligible Adverse	41.0	41.5	41.7
20. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.5	53.1	52.4	-0.1	Negligible Beneficial	53.2	0.7	Negligible Adverse	41.0	41.5	41.6
21. NEWTON ROAD, MIDDLEFIELD	Dwelling	51.9	52.0	52.0	0.1	Negligible Adverse	52.6	0.7	Negligible Adverse	40.4	40.5	41.1
22. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.5	53.1	52.4	-0.1	Negligible Beneficial	53.2	0.7	Negligible Adverse	41.0	41.5	41.6
23. NEWTON ROAD, MIDDLEFIELD	Dwelling	51.9	52.0	52.0	0.1	Negligible Adverse	52.6	0.7	Negligible Adverse	40.4	40.5	41.1
24. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.5	53.1	52.4	-0.1	Negligible Beneficial	53.2	0.7	Negligible Adverse	41.0	41.5	41.6
25. NEWTON ROAD, MIDDLEFIELD	Dwelling	51.6	51.9	51.5	-0.1	Negligible Beneficial	52.3	0.7	Negligible Adverse	40.2	40.4	40.8
26. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.4	53.0	52.3	-0.1	Negligible Beneficial	53.1	0.7	Negligible Adverse	40.9	41.4	41.5
27. NEWTON ROAD, MIDDLEFIELD	Dwelling	51.6	51.9	51.5	-0.1	Negligible Beneficial	52.3	0.7	Negligible Adverse	40.2	40.4	40.8
28. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.4	53.0	52.3	-0.1	Negligible Beneficial	53.1	0.7	Negligible Adverse	40.9	41.4	41.5
29. NEWTON ROAD, MIDDLEFIELD	Dwelling	51.6	51.9	51.5	-0.1	Negligible Beneficial	52.3	0.7	Negligible Adverse	40.2	40.4	40.8
3. NEWTON ROAD, MIDDLEFIELD	Dwelling	51.8	52.1	51.7	-0.1	Negligible Beneficial	52.4	0.6	Negligible Adverse	40.4	40.6	40.9
30. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.4	53.0	52.3	-0.1	Negligible Beneficial	53.1	0.7	Negligible Adverse	40.9	41.4	41.5
31. NEWTON ROAD, MIDDLEFIELD	Dwelling	51.6	51.9	51.5	-0.1	Negligible Beneficial	52.3	0.7	Negligible Adverse	40.2	40.4	40.8
32. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.4	53.0	52.3	-0.1	Negligible Beneficial	53.1	0.7	Negligible Adverse	40.9	41.4	41.5
34. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.9	53.4	52.7	-0.2	Negligible Beneficial	53.4	0.5	Negligible Adverse	41.3	41.8	41.8
36. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.9	53.4	52.7	-0.2	Negligible Beneficial	53.4	0.5	Negligible Adverse	41.3	41.8	41.8
38. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.9	53.4	52.7	-0.2	Negligible Beneficial	53.4	0.5	Negligible Adverse	41.3	41.8	41.8
4. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.5	53.1	52.4	-0.1	Negligible Beneficial	53.3	0.8	Negligible Adverse	41.0	41.5	41.7
40. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.9	53.4	52.7	-0.2	Negligible Beneficial	53.4	0.5	Negligible Adverse	41.3	41.8	41.8
42. NEWTON ROAD, MIDDLEFIELD	Dwelling	53.4	53.9	53.2	-0.2	Negligible Beneficial	53.7	0.3	Negligible Adverse	41.8	42.2	42.1
44. NEWTON ROAD, MIDDLEFIELD	Dwelling	53.4	53.9	53.2	-0.2	Negligible Beneficial	53.7	0.3	Negligible Adverse	41.8	42.2	42.1
46. NEWTON ROAD, MIDDLEFIELD	Dwelling	53.4	53.9	53.2	-0.2	Negligible Beneficial	53.7	0.3	Negligible Adverse	41.8	42.2	42.1
48. NEWTON ROAD, MIDDLEFIELD	Dwelling	53.4	53.9	53.2	-0.2	Negligible Beneficial	53.7	0.3	Negligible Adverse	41.8	42.2	42.1
5. NEWTON ROAD, MIDDLEFIELD	Dwelling	51.8	52.1	51.7	-0.1	Negligible Beneficial	52.4	0.6	Negligible Adverse	40.4	40.6	40.9
50. NEWTON ROAD, MIDDLEFIELD	Dwelling	51.9	52.6	51.8	-0.1	Negligible Beneficial	52.4	0.5	Negligible Adverse	40.4	41.1	40.9
52. NEWTON ROAD, MIDDLEFIELD	Dwelling	51.9	52.6	51.8	-0.1	Negligible Beneficial	52.4	0.5	Negligible Adverse	40.4	41.1	40.9
54. NEWTON ROAD, MIDDLEFIELD	Dwelling	51.5	52.2	51.4	-0.1	Negligible Beneficial	52.1	0.6	Negligible Adverse	40.1	40.7	40.6
56. NEWTON ROAD, MIDDLEFIELD	Dwelling	51.5	52.2	51.4	-0.1	Negligible Beneficial	52.0	0.5	Negligible Adverse	40.1	40.7	40.5
6. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.5	53.0	52.3	-0.2	Negligible Beneficial	53.2	0.7	Negligible Adverse	41.0	41.4	41.6
7. NEWTON ROAD, MIDDLEFIELD	Dwelling	51.8	52.1	51.7	-0.1	Negligible Beneficial	52.4	0.6	Negligible Adverse	40.4	40.6	40.9
8. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.5	53.0	52.3	-0.2	Negligible Beneficial	53.2	0.7	Negligible Adverse	41.0	41.4	41.6
9. NEWTON ROAD, MIDDLEFIELD	Dwelling	53.7	53.8	53.4	-0.3	Negligible Beneficial	54.0	0.3	Negligible Adverse	42.1	42.2	42.3
58. NEWTON ROAD, MIDDLEFIELD	Dwelling	52.2	52.7	51.6	-0.6	Negligible Beneficial	52.3	0.1	Negligible Beneficial	40.7	41.2	40.8
70. NEWTON ROAD, MIDDLEFIELD	Dwelling	50.4	51.0	50.0	-0.4	Negligible Adverse	50.5	0.1	Negligible Adverse	39.1	39.6	39.2
68. NEWTON ROAD, MIDDLEFIELD	Dwelling	54.5	55.0	54.0	-0.5	Negligible Beneficial	54.7	0.2	Negligible Adverse	42.8	43.2	43.0
78. NEWTON ROAD, MIDDLEFIELD	Dwelling	53.1	53.8	52.7	-0.4	Negligible Beneficial	53.2	0.1	Negligible Adverse	41.5	42.2	41.6
82. NEWTON ROAD, MIDDLEFIELD	Dwelling	54.5	55.1	54.1	-0.4	Negligible Beneficial	54.7	0.2	Negligible Adverse	42.8	43.3	43.0
62. NEWTON ROAD, MIDDLEFIELD	Dwelling	53.4	53.9	52.9	-0.5	Negligible Beneficial	53.5	0.1	Negligible Adverse	41.8	42.2	41.9
74. NEWTON ROAD, MIDDLEFIELD	Dwelling	51.9	52.5	51.5	-0.4	Negligible Beneficial	52.0	0.1	Negligible Adverse	40.4	41.0	40.5
291. NORTH ANDERSON DRIVE	Dwelling	70.3	70.6	70.3	0.0	No Change	70.7	0.4	Negligible Adverse	57.0	57.3	57.4
293. NORTH ANDERSON DRIVE	Dwelling	69.9	70.2	69.9	0.0	No Change	70.3	0.4	Negligible Adverse	56.6	56.9	57.0
295. NORTH ANDERSON DRIVE	Dwelling	69.5	69.7	69.4	-0.1	Negligible Beneficial	69.8	0.3	Negligible Adverse	56.3	56.5	56.6
297. NORTH ANDERSON DRIVE	Dwelling	68.8	69.0	68.7	-0.1	Negligible Beneficial	69.1	0.3	Negligible Adverse	55.7	55.8	55.9
299. NORTH ANDERSON DRIVE	Dwelling	70.4	70.6	70.4	0.0	No Change	70.7	0.3	Negligible Adverse	57.1	57.3	57.4
301. NORTH ANDERSON DRIVE	Dwelling	70.1	70.3	70.1	0.0	No Change	70.4	0.3	Negligible Adverse	56.8	57.0	57.1
303. NORTH ANDERSON DRIVE	Dwelling	69.7	69.9	69.7	0.0	No Change	70.0	0.3	Negligible Adverse	56.5	56.6	56.7
305. NORTH ANDERSON DRIVE	Dwelling	69.1	69.3	69.1	0.0	No Change	69.4	0.3	Negligible Adverse	55.9	56.1	56.2
307. NORTH ANDERSON DRIVE	Dwelling	70.7	70.8	70.8	0.1	Negligible Beneficial	70.9	0.2	Negligible Adverse	57.4	57.5	57.5
309. NORTH ANDERSON DRIVE	Dwelling	70.4	70.5	70.5	0.1	Negligible Beneficial	70.6	0.2	Negligible Adverse	57.1	57.2	57.3
311. NORTH ANDERSON DRIVE	Dwelling	70.1	70.1	70.2	0.1	Negligible Adverse	70.2	0.1	Negligible Adverse	56.8	56.8	56.9
313. NORTH ANDERSON DRIVE	Dwelling	69.8	69.8	69.8	0.0	No Change	69.9	0.1	Negligible Adverse	56.6	56.6	56.6
315. NORTH ANDERSON DRIVE	Dwelling	70.6	70.6	70.8	0.2	Negligible Adverse	70.8	0.2	Negligible Adverse	57.3	57.3	57.5
317. NORTH ANDERSON DRIVE	Dwelling	69.7	69.7	69.9	0.2	Negligible Adverse	69.8	0.1	Negligible Beneficial	56.5	56.5	56.6
319. NORTH ANDERSON DRIVE	Dwelling	70.4	70.4	70.6	0.2	Negligible Adverse	70.5	0.1	Negligible Beneficial	57.1	57.1	57.2
321. NORTH ANDERSON DRIVE	Dwelling	69.7	69.7	69.8	0.1	Negligible Beneficial	69.8	0.1	Negligible Beneficial	56.5	56.5	56.6
323. NORTH ANDERSON DRIVE	Dwelling	70.2	70.2	70.3	0.1	Negligible Beneficial	70.3	0.1	Negligible Beneficial	56.9	56.9	57.0
325. NORTH ANDERSON DRIVE	Dwelling	69.5	69.6	69.7	0.2	Negligible Adverse	69.7	0.2	Negligible Adverse	56.3	56.4	56.5
327. NORTH ANDERSON DRIVE	Dwelling	70.2	70.4	70.4	0.2	Negligible Adverse	70.5	0.3	Negligible Adverse	56.9	57.1	57.2
329. NORTH ANDERSON DRIVE	Dwelling	69.2	69.4	69.4	0.2	Negligible Adverse	69.5	0.3	Negligible Adverse	56.0	56.2	56.3
331. NORTH ANDERSON DRIVE	Dwelling	69.9	70.3	70.1	0.2	Negligible Adverse	70.3	0.4	Negligible Adverse	56.6	57.0	57.0
333. NORTH ANDERSON DRIVE	Dwelling	69.3	69.8	69.5	0.2	Negligible Adverse	69.7	0.4	Negligible Adverse	56.1	56.6	56.5
335. NORTH ANDERSON DRIVE	Dwelling	69.9	70.4	70.0	0.1	Negligible Beneficial	70.4	0.5	Negligible Adverse	56.6	57.1	57.1
337. NORTH ANDERSON DRIVE	Dwelling	69.1	69.8	69.2	0.1	Negligible Adverse	69.7	0.6	Negligible Adverse	55.9	56.6	56.5
342. NORTH ANDERSON DRIVE	Dwelling	70.0	70.9	70.1	0.1	Negligible Beneficial	70.9	0.9	Negligible Adverse	56.7	57.5	57.5
344. NORTH ANDERSON DRIVE	Dwelling	69.9	70.8	69.9	0.0	No Change	70.7	0.8	Negligible Adverse	56.6	57.5	57.4
346. NORTH ANDERSON DRIVE	Dwelling	69.9	70.8	69.9	0.0	No Change	70.7	0.8	Negligible Adverse	56.6	57.5	57.4
347. NORTH ANDERSON DRIVE	Dwelling	63.8	64.9	63.8	0.0	No Change	64.8	1.0	Negligible Adverse	52.1	52.1	52.1
348. NORTH ANDERSON DRIVE	Dwelling	69.6	70.5	69.6	0.0	No Change	70.4	0.8	Negligible Adverse	56.4	57.2	57.1
349. NORTH ANDERSON DRIVE	Dwelling	63.4	64.5	63.3	-0.1	Negligible Beneficial	64.4	1.0	Negligible Adverse	50.8	51.8	51.7
350. NORTH ANDERSON DRIVE	Dwelling	69.6	70.6	69.6	0.0	No Change	70.5	0.9	Negligible Adverse	56.4	57.3	57.2
351. NORTH ANDERSON DRIVE	Dwelling	65.0	66.3	64.8	-0.2	Negligible Beneficial	66.1	1.1	Negligible Adverse	52.2	53.4	53.2
352. NORTH ANDERSON DRIVE	Dwelling	69.7	70.7	69.7	0.0	No Change	70.6	0.9	Negligible Adverse	56.5	57.4	57.3
353. NORTH ANDERSON DRIVE	Dwelling	65.0	66.3	64.8	-0.2	Negligible Beneficial	66.1	1.1	Negligible Adverse	52.2	53.4	53.2
354. NORTH ANDERSON DRIVE	Dwelling	69.7	70.7	69.7	0.0	No Change	70.6	0.9	Negligible Adverse	56.5	57.4	57.3
355. NORTH ANDERSON DRIVE	Dwelling	65.0	66.3	64.8	-0.2	Negligible Beneficial	66.1	1.1	Negligible Adverse	52.2	53.4	53.2
356. NORTH ANDERSON DRIVE	Dwelling	69.6	70.6	69.5	-0.1	Negligible Beneficial	70.5	0.9	Negligible Adverse	56.4	57.3	57.2
357. NORTH ANDERSON DRIVE	Dwelling	65.0	66.3	64.8	-0.2	Negligible Beneficial	66.1	1.1	Negligible Adverse	52.2	53.4	53.2
358. NORTH ANDERSON DRIVE	Dwelling	69.5	70.6	69.4	-0.1	Negligible Beneficial	70.5	1.0	Negligible Adverse	56.3	57.3	57.2
359. NORTH ANDERSON DRIVE	Dwelling	69.4	70.6	69.4	-0.1	Negligible Beneficial	70.5	1.0	Negligible Adverse	56.3	57.3	57.2
358. NORTH ANDERSON DRIVE	Dwelling	69.5	70.6	69.4	-0.1	Negligible Beneficial	70.5	1.0	Negligible Adverse	56.3	57.3	57.2
358. NORTH ANDERSON DRIVE	Dwelling	69.5	70.6	69.4	-0.1	Negligible Beneficial	70.5	1.0	Negligible Adverse	56.3	57.3	57.2

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
529. NORTH ANDERSON DRIVE	Dwelling	72.8	73.0	71.9	-0.9	Negligible Beneficial	72.3	-0.5	Negligible Beneficial	59.3	59.4	58.8
531. NORTH ANDERSON DRIVE	Dwelling	75.3	74.8	73.1	-2.2	Minor Beneficial	74.1	-1.2	Negligible Beneficial	61.5	61.1	60.4
533. NORTH ANDERSON DRIVE	Dwelling	75.3	74.8	73.1	-2.2	Minor Beneficial	74.1	-1.2	Negligible Beneficial	61.5	61.1	60.4
535. NORTH ANDERSON DRIVE	Dwelling	74.9	74.8	73.0	-1.9	Minor Beneficial	74.2	-0.7	Negligible Beneficial	61.1	61.1	60.5
537. NORTH ANDERSON DRIVE	Dwelling	74.9	74.8	73.0	-1.9	Minor Beneficial	74.2	-0.7	Negligible Beneficial	61.1	61.1	60.5
539. NORTH ANDERSON DRIVE	Dwelling	72.6	73.1	71.3	-1.3	Minor Beneficial	72.7	0.1	Negligible Adverse	59.1	59.5	59.2
541. NORTH ANDERSON DRIVE	Dwelling	71.9	72.5	70.7	-1.2	Minor Beneficial	72.2	0.3	Negligible Adverse	58.4	59.0	58.7
543. NORTH ANDERSON DRIVE	Dwelling	70.0	70.7	69.2	-0.8	Negligible Beneficial	70.7	0.7	Negligible Adverse	56.7	57.4	57.4
545. NORTH ANDERSON DRIVE	Dwelling	69.9	70.6	69.2	-0.7	Negligible Beneficial	70.7	0.8	Negligible Adverse	56.6	57.3	57.4
551. NORTH ANDERSON DRIVE	Dwelling	53.7	54.6	62.1	8.4	Major Adverse	63.0	9.3	Moderate Adverse	42.1	42.9	50.4
553. NORTH ANDERSON DRIVE	Dwelling	53.7	54.6	62.1	8.4	Major Adverse	63.0	9.3	Moderate Adverse	42.1	42.9	50.4
555. NORTH ANDERSON DRIVE	Dwelling	53.7	54.6	62.1	8.4	Major Adverse	63.0	9.3	Moderate Adverse	42.1	42.9	50.4
557. NORTH ANDERSON DRIVE	Dwelling	53.7	54.6	62.1	8.4	Major Adverse	63.0	9.3	Moderate Adverse	42.1	42.9	50.4
FLAT D, 559. NORTH ANDERSON DRIVE	Dwelling	70.9	71.7	68.0	-2.9	Minor Beneficial	68.7	-2.2	Negligible Beneficial	57.5	58.3	55.6
FLAT D, 561. NORTH ANDERSON DRIVE	Dwelling	70.7	71.4	68.1	-2.6	Minor Beneficial	68.7	-2.0	Negligible Beneficial	57.4	58.0	55.6
FLAT D, 563. NORTH ANDERSON DRIVE	Dwelling	73.1	73.8	70.7	-2.4	Minor Beneficial	71.3	-1.8	Negligible Beneficial	59.5	60.2	57.9
FLAT B, 559. NORTH ANDERSON DRIVE	Dwelling	72.3	73.2	69.4	-2.9	Minor Beneficial	70.1	-2.2	Negligible Beneficial	58.8	59.6	56.8
FLAT B, 561. NORTH ANDERSON DRIVE	Dwelling	72.5	73.2	69.8	-2.7	Minor Beneficial	70.4	-2.1	Negligible Beneficial	59.0	59.6	57.1
FLAT B, 563. NORTH ANDERSON DRIVE	Dwelling	74.2	74.9	71.8	-2.4	Minor Beneficial	72.4	-1.8	Negligible Beneficial	60.5	61.1	58.9
FLAT F, 559. NORTH ANDERSON DRIVE	Dwelling	71.9	72.8	69.0	-2.9	Minor Beneficial	69.7	-2.2	Negligible Beneficial	58.4	59.3	56.5
FLAT F, 561. NORTH ANDERSON DRIVE	Dwelling	72.1	72.7	69.4	-2.7	Minor Beneficial	70.0	-2.1	Negligible Beneficial	58.6	59.2	56.7
FLAT F, 563. NORTH ANDERSON DRIVE	Dwelling	74.1	74.7	71.6	-2.5	Minor Beneficial	72.3	-1.8	Negligible Beneficial	60.4	61.0	58.8
NORTHFIELD ACADEMY JANITOR'S LODGE, CUMMINGS PARK CIRCLE, NORTHFIELD	Dwelling	48.8	49.6	48.7	-0.1	Negligible Beneficial	49.5	0.7	Negligible Adverse	37.7	38.4	38.3
1. OLDTOWN PLACE	Dwelling	58.0	58.3	58.9	0.1	Negligible Beneficial	59.6	0.6	Negligible Adverse	28.8	29.1	29.4
10. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
11. OLDTOWN PLACE	Dwelling	39.3	39.6	39.1	-0.2	Negligible Beneficial	39.3	0.6	Negligible Adverse	29.1	29.4	29.6
12. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
13. OLDTOWN PLACE	Dwelling	39.4	39.7	39.2	-0.2	Negligible Beneficial	40.0	0.6	Negligible Adverse	29.2	29.5	29.7
14. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
15. OLDTOWN PLACE	Dwelling	53.4	53.9	53.4	0.0	No Change	54.4	1.0	Negligible Adverse	41.8	42.2	42.7
16. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
17. OLDTOWN PLACE	Dwelling	39.4	39.7	39.2	-0.2	Negligible Beneficial	40.0	0.6	Negligible Adverse	29.2	29.5	29.7
18. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
19. OLDTOWN PLACE	Dwelling	54.0	54.5	54.0	0.0	No Change	55.0	1.0	Negligible Adverse	42.3	42.8	43.2
2. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
20. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
21. OLDTOWN PLACE	Dwelling	39.4	39.7	39.2	-0.2	Negligible Beneficial	40.0	0.6	Negligible Adverse	29.2	29.5	29.7
22. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
23. OLDTOWN PLACE	Dwelling	54.8	55.2	54.9	0.1	Negligible Adverse	55.7	0.9	Negligible Adverse	43.1	43.4	43.9
24. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
26. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
28. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
3. OLDTOWN PLACE	Dwelling	39.3	39.6	39.1	-0.2	Negligible Beneficial	39.9	0.6	Negligible Adverse	29.1	29.4	29.6
30. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
32. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
34. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
36. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
38. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
4. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
40. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
42. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
44. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
46. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
48. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
5. OLDTOWN PLACE	Dwelling	39.0	39.3	38.9	-0.1	Negligible Beneficial	39.6	0.6	Negligible Adverse	28.8	29.1	29.4
6. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
7. OLDTOWN PLACE	Dwelling	39.3	39.6	39.1	-0.2	Negligible Beneficial	39.9	0.6	Negligible Adverse	29.1	29.4	29.6
8. OLDTOWN PLACE	Dwelling	56.2	57.2	56.2	0.0	No Change	57.3	1.1	Negligible Adverse	44.3	45.2	45.3
9. OLDTOWN PLACE	Dwelling	39.0	39.3	38.9	-0.1	Negligible Beneficial	39.6	0.6	Negligible Adverse	28.8	29.1	29.4
1. OLDTOWN TERRACE	Dwelling	45.2	46.0	45.1	-0.1	Negligible Beneficial	46.2	1.0	Negligible Adverse	34.4	35.1	35.3
10. OLDTOWN TERRACE	Dwelling	46.0	46.0	45.9	-0.1	Negligible Beneficial	46.7	0.7	Negligible Adverse	35.1	35.1	35.8
11. OLDTOWN TERRACE	Dwelling	45.4	46.3	45.4	0.0	No Change	46.4	1.0	Negligible Adverse	34.6	35.4	35.5
12. OLDTOWN TERRACE	Dwelling	46.1	46.0	45.9	-0.2	Negligible Beneficial	46.7	0.6	Negligible Adverse	35.2	35.1	35.8
13. OLDTOWN TERRACE	Dwelling	44.6	45.2	44.5	-0.1	Negligible Beneficial	45.4	0.8	Negligible Adverse	33.9	34.4	34.6
14. OLDTOWN TERRACE	Dwelling	46.3	46.3	46.4	0.1	Negligible Adverse	47.2	0.9	Negligible Adverse	35.4	35.4	36.2
15. OLDTOWN TERRACE	Dwelling	45.8	45.4	45.8	0.1	Negligible Beneficial	46.4	0.6	Negligible Adverse	35.0	34.6	35.5
16. OLDTOWN TERRACE	Dwelling	47.3	47.3	47.3	0.0	No Change	48.1	0.8	Negligible Adverse	36.3	36.3	37.0
17. OLDTOWN TERRACE	Dwelling	44.6	45.2	44.5	-0.1	Negligible Beneficial	45.4	0.8	Negligible Adverse	33.9	34.4	34.6
18. OLDTOWN TERRACE	Dwelling	46.4	46.4	46.5	0.1	Negligible Adverse	47.2	0.8	Negligible Adverse	35.5	35.5	36.2
19. OLDTOWN TERRACE	Dwelling	45.9	45.4	45.8	-0.1	Negligible Beneficial	46.4	0.5	Negligible Adverse	35.0	34.6	35.5
2. OLDTOWN TERRACE	Dwelling	46.0	45.9	45.9	-0.1	Negligible Beneficial	46.6	0.6	Negligible Adverse	35.1	35.0	35.7
20. OLDTOWN TERRACE	Dwelling	47.6	47.9	47.7	0.1	Negligible Adverse	48.6	1.0	Negligible Adverse	36.6	36.8	37.5
21. OLDTOWN TERRACE	Dwelling	44.6	45.2	44.5	-0.1	Negligible Beneficial	45.4	0.8	Negligible Adverse	33.9	34.4	34.6
22. OLDTOWN TERRACE	Dwelling	46.4	46.4	46.5	0.1	Negligible Adverse	47.2	0.8	Negligible Adverse	35.5	35.5	36.2
23. OLDTOWN TERRACE	Dwelling	45.9	45.4	45.8	-0.1	Negligible Beneficial	46.4	0.5	Negligible Adverse	35.0	34.6	35.5
24. OLDTOWN TERRACE	Dwelling	48.2	48.7	48.4	0.2	Negligible Adverse	49.3	1.1	Negligible Adverse	37.1	37.6	38.1
25. OLDTOWN TERRACE	Dwelling	45.1	45.4	45.2	0.1	Negligible Adverse	46.0	0.9	Negligible Adverse	34.3	34.6	35.1
27. OLDTOWN TERRACE	Dwelling	46.7	47.3	47.0	0.3	Negligible Adverse	47.9	1.2	Negligible Adverse	35.8	36.3	36.8
29. OLDTOWN TERRACE	Dwelling	45.1	45.4	45.2	0.1	Negligible Adverse	46.0	0.9	Negligible Adverse	34.3	34.6	35.1
30. OLDTOWN TERRACE	Dwelling	45.4	46.3	45.4	0.0	No Change	46.4	1.0	Negligible Adverse	34.6	35.4	35.5
31. OLDTOWN TERRACE	Dwelling	46.7	46.7	46.4	0.2	Negligible Adverse	47.3	0.6	Negligible Adverse	35.3	35.3	36.3
33. OLDTOWN TERRACE	Dwelling	45.1	45.4	45.2	0.1	Negligible Adverse	46.0	0.9	Negligible Adverse	34.3	34.6	35.1

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
35. OLDTOWN TERRACE	Dwelling	45.5	45.9	45.8	0.3	Negligible Adverse	46.6	1.1	Negligible Adverse	34.7	35.0	35.7
4. OLDTOWN TERRACE	Dwelling	46.1	46.0	45.9	-0.2	Negligible Beneficial	46.7	0.6	Negligible Adverse	35.2	35.1	35.8
5. OLDTOWN TERRACE	Dwelling	45.5	46.3	45.4	-0.1	Negligible Beneficial	46.4	0.9	Negligible Adverse	34.7	35.4	35.5
6. OLDTOWN TERRACE	Dwelling	46.0	45.9	45.9	-0.1	Negligible Beneficial	46.6	0.6	Negligible Adverse	35.1	35.0	35.7
7. OLDTOWN TERRACE	Dwelling	45.4	46.3	45.4	-0.0	No Change	46.4	1.0	Negligible Adverse	34.6	35.4	35.5
8. OLDTOWN TERRACE	Dwelling	46.1	46.1	45.9	-0.2	Negligible Beneficial	46.7	0.6	Negligible Adverse	35.2	35.2	35.8
9. OLDTOWN TERRACE	Dwelling	45.2	46.0	45.2	0.0	No Change	46.2	1.0	Negligible Adverse	34.4	35.1	35.3
1. PERSLEY CRESCENT	Dwelling	52.0	52.5	51.9	-0.1	Negligible Beneficial	52.8	0.8	Negligible Adverse	40.5	41.0	41.3
10. PERSLEY CRESCENT	Dwelling	50.5	51.2	50.3	-0.2	Negligible Beneficial	51.3	0.8	Negligible Adverse	39.2	39.8	39.9
11. PERSLEY CRESCENT	Dwelling	50.4	51.3	50.3	-0.1	Negligible Beneficial	51.2	0.8	Negligible Adverse	39.1	39.9	39.8
12. PERSLEY CRESCENT	Dwelling	50.4	51.2	50.2	-0.2	Negligible Beneficial	51.2	0.8	Negligible Adverse	39.1	39.8	39.8
13. PERSLEY CRESCENT	Dwelling	50.1	51.1	50.0	-0.1	Negligible Beneficial	51.0	0.9	Negligible Adverse	38.8	39.7	39.6
14. PERSLEY CRESCENT	Dwelling	50.0	51.0	49.9	-0.1	Negligible Beneficial	50.9	0.9	Negligible Adverse	38.7	39.6	39.5
15. PERSLEY CRESCENT	Dwelling	50.0	51.0	49.9	-0.1	Negligible Beneficial	51.0	1.0	Negligible Adverse	38.7	39.6	39.6
16. PERSLEY CRESCENT	Dwelling	50.0	51.0	49.9	-0.1	Negligible Beneficial	50.9	0.9	Negligible Adverse	38.7	39.6	39.5
17. PERSLEY CRESCENT	Dwelling	51.0	51.6	50.9	-0.1	Negligible Beneficial	51.7	0.7	Negligible Adverse	39.6	40.2	40.3
18. PERSLEY CRESCENT	Dwelling	51.0	51.6	50.9	-0.1	Negligible Beneficial	51.7	0.7	Negligible Adverse	39.6	40.2	40.3
19. PERSLEY CRESCENT	Dwelling	51.0	51.6	50.9	-0.1	Negligible Beneficial	51.7	0.7	Negligible Adverse	39.6	40.2	40.3
2. PERSLEY CRESCENT	Dwelling	51.8	52.3	51.7	-0.1	Negligible Beneficial	52.6	0.8	Negligible Adverse	40.4	40.8	41.1
20. PERSLEY CRESCENT	Dwelling	51.0	51.6	50.9	-0.1	Negligible Beneficial	51.7	0.7	Negligible Adverse	39.6	40.2	40.3
3. PERSLEY CRESCENT	Dwelling	51.9	52.5	51.8	-0.1	Negligible Beneficial	52.7	0.8	Negligible Adverse	40.4	41.0	41.2
4. PERSLEY CRESCENT	Dwelling	52.1	52.7	51.9	-0.2	Negligible Beneficial	52.9	0.8	Negligible Adverse	40.6	41.2	41.3
5. PERSLEY CRESCENT	Dwelling	51.8	52.4	51.6	-0.2	Negligible Beneficial	52.6	0.8	Negligible Adverse	40.4	40.9	41.1
6. PERSLEY CRESCENT	Dwelling	51.7	52.4	51.6	-0.1	Negligible Beneficial	52.6	0.9	Negligible Adverse	40.3	40.9	41.1
7. PERSLEY CRESCENT	Dwelling	51.4	52.2	51.4	-0.1	Negligible Beneficial	52.4	0.9	Negligible Adverse	40.1	40.7	40.9
8. PERSLEY CRESCENT	Dwelling	50.8	51.4	50.7	-0.1	Negligible Beneficial	51.6	0.8	Negligible Adverse	39.5	40.2	40.2
9. PERSLEY CRESCENT	Dwelling	50.8	51.5	50.7	-0.1	Negligible Beneficial	51.6	0.8	Negligible Adverse	39.5	40.1	40.2
PERSLEY CROFT, PERSLEY CROFT, PARKWAY	Dwelling	78.7	79.6	78.6	-0.1	Negligible Beneficial	77.5	-1.2	Negligible Beneficial	64.6	61.8	63.5
PERSLEY DEN LODGE, PERSLEY DEN LODGE, GRANDHOLM DRIVE	Dwelling	48.0	48.3	47.8	-0.2	Negligible Beneficial	48.7	0.7	Negligible Adverse	36.9	37.2	37.6
1. PIRIE'S COURT	Dwelling	72.3	72.7	72.6	0.3	Negligible Adverse	72.8	0.5	Negligible Adverse	58.8	59.2	59.3
10. PIRIE'S COURT	Dwelling	72.2	72.5	72.4	0.2	Negligible Adverse	72.5	0.3	Negligible Adverse	58.7	59.0	59.0
11. PIRIE'S COURT	Dwelling	72.2	72.5	72.4	0.2	Negligible Adverse	72.5	0.3	Negligible Adverse	58.7	59.0	59.0
12. PIRIE'S COURT	Dwelling	72.2	72.5	72.4	0.2	Negligible Adverse	72.5	0.3	Negligible Adverse	58.7	59.0	59.0
13. PIRIE'S COURT	Dwelling	72.2	72.5	72.4	0.2	Negligible Adverse	72.5	0.3	Negligible Adverse	58.7	59.0	59.0
14. PIRIE'S COURT	Dwelling	72.2	72.5	72.4	0.2	Negligible Adverse	72.5	0.3	Negligible Adverse	58.7	59.0	59.0
15. PIRIE'S COURT	Dwelling	72.2	72.5	72.4	0.2	Negligible Adverse	72.5	0.3	Negligible Adverse	58.7	59.0	59.0
2. PIRIE'S COURT	Dwelling	72.3	72.7	72.6	0.3	Negligible Adverse	72.8	0.5	Negligible Adverse	58.8	59.2	59.3
3. PIRIE'S COURT	Dwelling	72.3	72.7	72.6	0.3	Negligible Adverse	72.8	0.5	Negligible Adverse	58.8	59.2	59.3
4. PIRIE'S COURT	Dwelling	72.3	72.7	72.6	0.3	Negligible Adverse	72.8	0.5	Negligible Adverse	58.8	59.2	59.3
5. PIRIE'S COURT	Dwelling	72.3	72.7	72.6	0.3	Negligible Adverse	72.8	0.5	Negligible Adverse	58.8	59.2	59.3
6. PIRIE'S COURT	Dwelling	72.3	72.7	72.6	0.3	Negligible Adverse	72.8	0.5	Negligible Adverse	58.8	59.2	59.3
7. PIRIE'S COURT	Dwelling	72.2	72.5	72.4	0.2	Negligible Adverse	72.5	0.3	Negligible Adverse	58.7	59.0	59.0
8. PIRIE'S COURT	Dwelling	72.2	72.5	72.4	0.2	Negligible Adverse	72.5	0.3	Negligible Adverse	58.7	59.0	59.0
9. PIRIE'S COURT	Dwelling	72.2	72.5	72.4	0.2	Negligible Adverse	72.5	0.3	Negligible Adverse	58.7	59.0	59.0
FLAT 1, 12, PIRIE'S LANE	Dwelling	58.1	58.6	58.3	0.2	Negligible Adverse	58.6	0.5	Negligible Adverse	46.0	46.5	46.5
FLAT 1, 14, PIRIE'S LANE	Dwelling	53.1	53.6	53.4	0.3	Negligible Adverse	53.7	0.6	Negligible Adverse	41.5	42.0	42.1
FLAT 2, 14, PIRIE'S LANE	Dwelling	53.1	53.6	53.4	0.3	Negligible Adverse	53.7	0.6	Negligible Adverse	41.5	42.0	42.1
FLAT 3, 14, PIRIE'S LANE	Dwelling	53.1	53.6	53.4	0.3	Negligible Adverse	53.7	0.6	Negligible Adverse	41.5	42.0	42.1
FLAT 4, 14, PIRIE'S LANE	Dwelling	53.1	53.6	53.4	0.3	Negligible Adverse	53.7	0.6	Negligible Adverse	41.5	42.0	42.1
12. PIRIE'S LANE	Dwelling	54.7	55.1	54.9	0.2	Negligible Adverse	55.2	0.5	Negligible Adverse	43.0	43.3	43.4
16. PIRIE'S LANE	Dwelling	53.1	53.6	53.4	0.3	Negligible Adverse	53.7	0.6	Negligible Adverse	41.5	42.0	42.1
18. PIRIE'S LANE	Dwelling	53.1	53.6	53.4	0.3	Negligible Adverse	53.7	0.6	Negligible Adverse	41.5	42.0	42.1
2. PIRIE'S LANE	Dwelling	62.6	63.0	62.9	0.3	Negligible Adverse	63.0	0.4	Negligible Adverse	50.1	50.4	50.4
4. PIRIE'S LANE	Dwelling	58.1	58.6	58.3	0.2	Negligible Adverse	58.6	0.5	Negligible Adverse	46.0	46.5	46.5
6. PIRIE'S LANE	Dwelling	58.1	58.6	58.3	0.2	Negligible Adverse	58.6	0.5	Negligible Adverse	46.0	46.5	46.5
PLAY AREA, PIRIE'S LANE	Play Area	43.6	45.2	44.0	0.4	Negligible Adverse	45.3	1.7	Negligible Adverse	33.0	34.4	34.5
1. PLANE TREE ROAD	Dwelling	70.2	70.4	70.3	0.1	Negligible Beneficial	70.5	0.3	Negligible Adverse	56.9	57.1	57.2
11. PLANE TREE ROAD	Dwelling	70.2	70.4	70.3	0.1	Negligible Beneficial	70.5	0.3	Negligible Adverse	56.9	57.1	57.2
13. PLANE TREE ROAD	Dwelling	70.2	70.4	70.3	0.1	Negligible Beneficial	70.5	0.3	Negligible Adverse	56.9	57.1	57.2
15. PLANE TREE ROAD	Dwelling	70.2	70.4	70.3	0.1	Negligible Beneficial	70.5	0.3	Negligible Adverse	56.9	57.1	57.2
17. PLANE TREE ROAD	Dwelling	59.0	59.2	59.0	0.0	No Change	59.3	0.3	Negligible Adverse	46.8	47.0	47.1
19. PLANE TREE ROAD	Dwelling	59.7	60.1	59.7	0.0	No Change	60.1	0.4	Negligible Adverse	47.5	47.8	47.8
21. PLANE TREE ROAD	Dwelling	59.2	59.6	59.2	0.0	No Change	59.6	0.4	Negligible Adverse	47.0	47.4	47.4
23. PLANE TREE ROAD	Dwelling	59.1	59.5	59.0	-0.1	Negligible Beneficial	59.5	0.4	Negligible Adverse	46.9	47.3	47.3
25. PLANE TREE ROAD	Dwelling	58.5	59.1	58.5	0.0	No Change	59.1	0.6	Negligible Adverse	46.4	46.9	46.9
27. PLANE TREE ROAD	Dwelling	57.5	58.2	57.4	-0.1	Negligible Beneficial	58.2	0.7	Negligible Adverse	45.5	46.1	46.1
29. PLANE TREE ROAD	Dwelling	54.1	56.8	54.1	0.0	No Change	55.3	1.2	Negligible Adverse	42.4	44.0	43.5
3. PLANE TREE ROAD	Dwelling	70.2	70.4	70.3	0.1	Negligible Beneficial	70.5	0.3	Negligible Adverse	56.9	57.1	57.2
30. PLANE TREE ROAD	Dwelling	55.7	57.0	55.7	0.0	No Change	56.7	1.0	Negligible Adverse	43.9	45.0	44.8
31. PLANE TREE ROAD	Dwelling	59.4	60.4	59.4	0.0	No Change	60.3	0.9	Negligible Adverse	47.2	48.1	48.0
32. PLANE TREE ROAD	Dwelling	56.6	57.9	56.6	0.0	No Change	57.6	1.0	Negligible Adverse	44.7	45.8	45.6
33. PLANE TREE ROAD	Dwelling	60.3	61.4	60.3	0.0	No Change	61.2	0.9	Negligible Adverse	48.0	49.0	48.8
34. PLANE TREE ROAD	Dwelling	57.3	58.5	57.3	0.0	No Change	58.3	1.0	Negligible Adverse	45.3	46.4	46.2
35. PLANE TREE ROAD	Dwelling	61.3	62.4	61.3	0.0	No Change	62.3	1.0	Negligible Adverse	48.9	49.9	49.8
36. PLANE TREE ROAD	Dwelling	58.5	59.7	58.4	-0.1	Negligible Beneficial	59.5	1.0	Negligible Adverse	46.4	47.5	47.3
37. PLANE TREE ROAD	Dwelling	62.5	63.7	62.5	0.0	No Change	63.5	1.0	Negligible Adverse	50.0	51.1	50.9
39. PLANE TREE ROAD	Dwelling	63.4	64.6	63.3	-0.1	Negligible Beneficial	64.4	1.0	Negligible Adverse	50.8	51.9	51.7
5. PLANE TREE ROAD	Dwelling	70.2	70.4	70.3	0.1	Negligible Beneficial	70.5	0.3	Negligible Adverse	56.9	57.1	57.2
7. PLANE TREE ROAD	Dwelling	70.2	70.4	70.3	0.1	Negligible Beneficial	70.5	0.3	Negligible Adverse	56.9	57.1	57.2
9. PLANE TREE ROAD	Dwelling	70.3	70.3	70.3	0.1	Negligible Beneficial	70.5	0.3	Negligible Adverse	56.9	57.1	57.2
1. PRIMROSEHILL DRIVE	Dwelling	58.7	58.7	58.7	-0.1	Negligible Beneficial	59.3	0.7	Negligible Adverse	46.7	47.5	47.3
10. PRIMROSEHILL DRIVE	Dwelling	52.3	53.2	52.4	0.1	Negligible Adverse	53.2	0.9	Negligible Adverse	40.8	41.6	41.6

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
11. PRIMROSEHILL DRIVE	Dwelling	49.6	50.2	49.7	0.1	Negligible Adverse	50.0	0.4	Negligible Adverse	38.4	38.9	38.7
12. PRIMROSEHILL DRIVE	Dwelling	52.4	53.3	52.5	0.1	Negligible Adverse	53.3	0.9	Negligible Adverse	40.9	41.7	41.7
14. PRIMROSEHILL DRIVE	Dwelling	53.1	53.7	53.2	0.1	Negligible Adverse	53.7	0.6	Negligible Adverse	41.5	42.1	42.1
15. PRIMROSEHILL DRIVE	Dwelling	46.6	47.2	46.8	0.2	Negligible Adverse	47.6	1.0	Negligible Adverse	35.7	36.7	36.6
16. PRIMROSEHILL DRIVE	Dwelling	52.1	52.8	52.2	0.1	Negligible Adverse	52.8	0.7	Negligible Adverse	40.6	41.3	41.3
17. PRIMROSEHILL DRIVE	Dwelling	46.8	47.9	47.0	0.2	Negligible Adverse	47.8	1.0	Negligible Adverse	35.9	36.8	36.8
18. PRIMROSEHILL DRIVE	Dwelling	53.3	53.8	53.5	0.2	Negligible Adverse	53.8	0.5	Negligible Adverse	41.7	42.2	42.2
19. PRIMROSEHILL DRIVE	Dwelling	46.9	48.1	47.2	0.3	Negligible Adverse	48.0	1.1	Negligible Adverse	35.9	37.0	36.9
2. PRIMROSEHILL DRIVE	Dwelling	50.5	51.3	50.7	0.2	Negligible Adverse	51.3	0.8	Negligible Adverse	39.2	39.9	39.9
20. PRIMROSEHILL DRIVE	Dwelling	51.9	52.3	52.1	0.2	Negligible Adverse	52.3	0.4	Negligible Adverse	40.4	40.8	40.8
21. PRIMROSEHILL DRIVE	Dwelling	46.9	48.0	47.1	0.2	Negligible Adverse	47.9	1.0	Negligible Adverse	35.9	36.9	36.8
22. PRIMROSEHILL DRIVE	Dwelling	51.6	52.0	51.8	0.2	Negligible Adverse	52.0	0.4	Negligible Adverse	40.2	40.5	40.5
23. PRIMROSEHILL DRIVE	Dwelling	46.9	48.1	47.2	0.3	Negligible Adverse	48.0	1.1	Negligible Adverse	35.9	37.0	36.9
24. PRIMROSEHILL DRIVE	Dwelling	50.9	51.4	51.1	0.2	Negligible Adverse	51.4	0.5	Negligible Adverse	39.5	40.0	40.0
25. PRIMROSEHILL DRIVE	Dwelling	46.7	47.9	46.9	0.2	Negligible Adverse	47.8	1.1	Negligible Adverse	35.8	36.8	36.8
26. PRIMROSEHILL DRIVE	Dwelling	51.3	51.7	51.5	0.2	Negligible Adverse	51.8	0.5	Negligible Adverse	39.9	40.3	40.4
27. PRIMROSEHILL DRIVE	Dwelling	46.9	48.2	47.2	0.3	Negligible Adverse	48.1	1.2	Negligible Adverse	35.9	37.1	37.0
28. PRIMROSEHILL DRIVE	Dwelling	50.8	51.3	51.0	0.2	Negligible Adverse	51.4	0.6	Negligible Adverse	39.5	39.9	40.0
29. PRIMROSEHILL DRIVE	Dwelling	46.8	47.9	47.1	0.3	Negligible Adverse	47.9	1.1	Negligible Adverse	35.9	36.8	36.8
3. PRIMROSEHILL DRIVE	Dwelling	58.9	59.7	58.8	-0.1	Negligible Beneficial	59.5	0.6	Negligible Adverse	46.7	47.5	47.3
30. PRIMROSEHILL DRIVE	Dwelling	49.2	49.7	49.3	0.1	Negligible Beneficial	49.8	0.6	Negligible Adverse	38.0	38.5	38.6
31. PRIMROSEHILL DRIVE	Dwelling	46.7	47.9	46.9	0.2	Negligible Adverse	47.8	1.1	Negligible Adverse	35.8	36.8	36.8
33. PRIMROSEHILL DRIVE	Dwelling	48.2	49.6	48.5	0.3	Negligible Adverse	49.7	1.5	Negligible Adverse	37.1	38.4	38.5
34. PRIMROSEHILL DRIVE	Dwelling	50.4	50.8	50.6	0.2	Negligible Adverse	50.9	0.5	Negligible Adverse	39.1	39.5	39.5
36. PRIMROSEHILL DRIVE	Dwelling	51.0	51.0	50.8	0.2	Negligible Adverse	51.1	0.5	Negligible Adverse	39.3	39.6	39.7
38. PRIMROSEHILL DRIVE	Dwelling	50.5	50.9	50.7	0.2	Negligible Adverse	50.7	0.5	Negligible Adverse	39.2	39.6	39.6
4. PRIMROSEHILL DRIVE	Dwelling	57.8	58.6	57.8	0.0	No Change	58.6	0.8	Negligible Adverse	45.8	46.5	46.5
40. PRIMROSEHILL DRIVE	Dwelling	50.4	50.7	50.5	0.1	Negligible Adverse	50.8	0.4	Negligible Adverse	39.1	39.4	39.5
42. PRIMROSEHILL DRIVE	Dwelling	50.6	50.9	50.8	0.2	Negligible Adverse	51.0	0.4	Negligible Adverse	39.3	39.5	39.6
44. PRIMROSEHILL DRIVE	Dwelling	50.7	51.1	50.9	0.2	Negligible Adverse	51.2	0.5	Negligible Adverse	39.4	39.7	39.8
46. PRIMROSEHILL DRIVE	Dwelling	50.8	51.2	51.0	0.2	Negligible Adverse	51.3	0.5	Negligible Adverse	39.5	39.8	39.9
48. PRIMROSEHILL DRIVE	Dwelling	50.9	51.4	51.2	0.3	Negligible Adverse	51.4	0.5	Negligible Adverse	39.5	40.0	40.0
5. PRIMROSEHILL DRIVE	Dwelling	49.7	50.1	49.7	0.0	No Change	50.0	0.3	Negligible Adverse	38.5	38.8	38.7
5. PRIMROSEHILL DRIVE	Dwelling	49.9	50.3	49.9	0.0	No Change	50.2	0.3	Negligible Adverse	38.6	39.0	38.9
50. PRIMROSEHILL DRIVE	Dwelling	50.0	50.5	50.2	0.2	Negligible Adverse	50.5	0.5	Negligible Adverse	38.7	39.2	39.2
52. PRIMROSEHILL DRIVE	Dwelling	50.0	50.5	50.2	0.2	Negligible Adverse	50.5	0.5	Negligible Adverse	38.7	39.2	39.2
54. PRIMROSEHILL DRIVE	Dwelling	54.9	55.3	55.0	0.1	Negligible Adverse	55.3	0.4	Negligible Adverse	43.1	43.5	43.5
56. PRIMROSEHILL DRIVE	Dwelling	50.4	50.8	50.5	0.1	Negligible Adverse	50.9	0.5	Negligible Adverse	39.1	39.5	39.5
6. PRIMROSEHILL DRIVE	Dwelling	52.8	53.5	52.9	0.1	Negligible Adverse	53.5	0.7	Negligible Adverse	41.3	41.9	41.9
7. PRIMROSEHILL DRIVE	Dwelling	51.5	51.9	51.5	0.0	No Change	51.9	0.3	Negligible Adverse	40.1	40.4	40.4
8. PRIMROSEHILL DRIVE	Dwelling	53.4	53.5	53.5	0.0	Negligible Adverse	54.5	1.1	Negligible Adverse	41.8	42.9	42.8
9. PRIMROSEHILL DRIVE	Dwelling	49.0	49.5	49.1	0.1	Negligible Adverse	49.3	0.3	Negligible Adverse	37.8	38.3	38.1
1. PRIMROSEHILL GARDENS	Dwelling	55.0	57.7	55.8	0.8	Negligible Adverse	57.8	2.8	Negligible Adverse	43.2	45.7	45.8
10. PRIMROSEHILL GARDENS	Dwelling	49.3	50.2	49.5	0.2	Negligible Adverse	50.1	0.8	Negligible Adverse	38.1	38.9	38.8
12. PRIMROSEHILL GARDENS	Dwelling	49.3	50.2	49.5	0.2	Negligible Adverse	50.1	0.8	Negligible Adverse	38.1	38.9	38.8
14. PRIMROSEHILL GARDENS	Dwelling	49.7	50.5	49.8	0.1	Negligible Beneficial	50.3	0.6	Negligible Adverse	38.5	39.2	39.0
15. PRIMROSEHILL GARDENS	Dwelling	50.5	52.1	50.8	0.3	Negligible Adverse	52.1	1.6	Negligible Adverse	39.2	40.6	40.6
16. PRIMROSEHILL GARDENS	Dwelling	49.5	50.3	49.6	0.1	Negligible Adverse	50.1	0.6	Negligible Adverse	38.3	39.0	38.8
17. PRIMROSEHILL GARDENS	Dwelling	50.2	51.6	50.5	0.3	Negligible Adverse	51.6	1.4	Negligible Adverse	38.9	40.2	40.2
18. PRIMROSEHILL GARDENS	Dwelling	49.7	50.4	49.8	0.1	Negligible Beneficial	50.3	0.6	Negligible Adverse	38.5	39.1	39.0
19. PRIMROSEHILL GARDENS	Dwelling	49.7	51.0	50.0	0.3	Negligible Adverse	51.0	1.3	Negligible Adverse	38.5	39.6	39.6
2. PRIMROSEHILL GARDENS	Dwelling	50.3	51.7	50.6	0.3	Negligible Adverse	51.6	1.3	Negligible Adverse	39.0	40.3	40.2
20. PRIMROSEHILL GARDENS	Dwelling	49.3	49.9	49.4	0.1	Negligible Adverse	49.8	0.5	Negligible Adverse	38.1	38.6	38.6
21. PRIMROSEHILL GARDENS	Dwelling	49.5	50.7	49.8	0.3	Negligible Adverse	50.7	1.2	Negligible Adverse	38.3	39.4	39.4
22. PRIMROSEHILL GARDENS	Dwelling	47.2	47.6	47.3	0.1	Negligible Beneficial	47.5	0.3	Negligible Adverse	36.2	36.6	36.5
3. PRIMROSEHILL GARDENS	Dwelling	54.3	56.4	54.8	0.5	Negligible Adverse	56.5	2.2	Negligible Adverse	42.6	44.5	44.6
4. PRIMROSEHILL GARDENS	Dwelling	49.9	51.4	50.2	0.3	Negligible Adverse	51.2	1.3	Negligible Adverse	38.6	40.0	39.8
6. PRIMROSEHILL GARDENS	Dwelling	50.0	51.2	50.2	0.2	Negligible Adverse	51.1	1.1	Negligible Adverse	38.7	39.8	39.7
8. PRIMROSEHILL GARDENS	Dwelling	49.9	51.0	50.1	0.2	Negligible Adverse	50.9	1.0	Negligible Adverse	38.6	39.6	39.5
10. PRIMROSEHILL PLACE	Dwelling	46.3	47.6	46.6	0.3	Negligible Adverse	47.5	1.2	Negligible Adverse	35.4	36.6	36.5
11. PRIMROSEHILL PLACE	Dwelling	46.7	48.5	47.4	0.4	Negligible Adverse	48.4	1.7	Negligible Adverse	35.8	37.4	37.3
12. PRIMROSEHILL PLACE	Dwelling	46.2	47.4	46.1	0.2	Negligible Adverse	47.3	1.1	Negligible Adverse	35.3	36.4	36.3
13. PRIMROSEHILL PLACE	Dwelling	46.0	47.6	46.3	0.3	Negligible Adverse	47.5	1.5	Negligible Adverse	35.1	36.6	36.5
14. PRIMROSEHILL PLACE	Dwelling	46.2	47.5	46.4	0.2	Negligible Adverse	47.4	1.2	Negligible Adverse	35.3	36.5	36.4
15. PRIMROSEHILL PLACE	Dwelling	46.6	48.4	47.0	0.4	Negligible Adverse	48.4	1.8	Negligible Adverse	35.7	37.3	37.3
16. PRIMROSEHILL PLACE	Dwelling	45.9	47.3	46.2	0.3	Negligible Adverse	47.2	1.3	Negligible Adverse	35.0	36.3	36.2
17. PRIMROSEHILL PLACE	Dwelling	46.7	46.9	47.1	0.4	Negligible Adverse	48.7	2.0	Negligible Adverse	35.8	37.7	37.6
18. PRIMROSEHILL PLACE	Dwelling	47.2	47.2	47.2	0.0	Negligible Adverse	47.2	1.3	Negligible Adverse	35.0	36.2	36.2
19. PRIMROSEHILL PLACE	Dwelling	46.8	47.3	46.8	0.5	Negligible Adverse	48.8	2.0	Negligible Adverse	35.9	37.7	37.7
20. PRIMROSEHILL PLACE	Dwelling	47.5	49.2	47.8	0.3	Negligible Adverse	49.1	1.6	Negligible Adverse	36.5	38.0	37.9
21. PRIMROSEHILL PLACE	Dwelling	47.0	48.9	47.4	0.4	Negligible Adverse	48.9	1.9	Negligible Adverse	36.0	37.7	37.7
22. PRIMROSEHILL PLACE	Dwelling	50.0	51.3	50.3	0.3	Negligible Adverse	51.4	1.4	Negligible Adverse	38.7	39.9	40.0
23. PRIMROSEHILL PLACE	Dwelling	50.9	53.0	51.5	0.6	Negligible Adverse	53.2	2.3	Negligible Adverse	39.5	41.4	41.6
4. PRIMROSEHILL PLACE	Dwelling	47.8	49.0	48.0	0.2	Negligible Adverse	49.0	1.2	Negligible Adverse	36.8	37.8	37.8
5. PRIMROSEHILL PLACE	Dwelling	50.6	53.4	51.4	0.8	Negligible Adverse	53.3	2.7	Negligible Adverse	39.3	41.8	41.7
6. PRIMROSEHILL PLACE	Dwelling	47.6	48.8	47.8	0.2	Negligible Adverse	48.8	1.2	Negligible Adverse	36.6	37.7	37.7
7. PRIMROSEHILL PLACE	Dwelling	50.2	52.7	50.9	0.7	Negligible Adverse	52.7	2.5	Negligible Adverse	38.9	41.2	41.2
8. PRIMROSEHILL PLACE	Dwelling	46.3	47.5	46.5	0.2	Negligible Adverse	47.4	1.1	Negligible Adverse	35.4	36.5	36.4
9. PRIMROSEHILL PLACE	Dwelling	46.9	48.9	47.4	0.5	Negligible Adverse	48.8	1.9	Negligible Adverse	35.9	37.7	37.7
FLAT A, 1. PRINTFIELD TERRACE	Dwelling	47.0	49.7	47.7	0.7	Negligible Adverse	49.6	2.6	Negligible Adverse	36.0	38.5	38.4
FLAT B, 1. PRINTFIELD TERRACE	Dwelling	47.0	49.7	47.7	0.7	Negligible Adverse	49.6	2.6	Negligible Adverse	36.0	38.5	38.4
FLAT C, 1. PRINTFIELD TERRACE	Dwelling	47.0	49.7	47.7	0.7	Negligible Adverse	49.6	2.6	Negligible Adverse	36.0	38.5	38.4
FLAT D, 1. PRINTFIELD TERRACE	Dwelling	47.0	49.7	47.7	0.7	Negligible Adverse	49.6	2.6	Negligible Adverse	36.0	38.5	38.4

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
135. PROVOST RUST DRIVE	Dwelling	64.3	65.8	64.4	0.1	Negligible Adverse	65.9	1.6	Negligible Adverse	51.6	53.0	53.0
136. PROVOST RUST DRIVE	Dwelling	49.8	50.5	49.9	0.1	Negligible Adverse	50.9	1.1	Negligible Adverse	38.6	39.2	39.5
137. PROVOST RUST DRIVE	Dwelling	64.1	65.7	64.2	0.1	Negligible Adverse	65.7	1.6	Negligible Adverse	51.4	52.9	52.9
138. PROVOST RUST DRIVE	Dwelling	52.5	52.0	52.6	0.1	Negligible Adverse	53.2	0.7	Negligible Adverse	41.0	40.5	41.6
139. PROVOST RUST DRIVE	Dwelling	64.1	65.7	64.2	0.1	Negligible Adverse	65.7	1.6	Negligible Adverse	51.4	52.9	52.9
14. PROVOST RUST DRIVE	Dwelling	64.4	65.8	64.4	0.0	No Change	65.8	1.4	Negligible Adverse	51.7	53.0	53.0
140. PROVOST RUST DRIVE	Dwelling	52.5	52.0	52.6	0.1	Negligible Adverse	53.2	0.7	Negligible Adverse	41.0	40.5	41.6
141. PROVOST RUST DRIVE	Dwelling	64.4	65.9	64.5	0.1	Negligible Beneficial	65.9	1.5	Negligible Adverse	51.7	53.0	53.0
142. PROVOST RUST DRIVE	Dwelling	52.5	52.0	52.6	0.1	Negligible Adverse	53.2	0.7	Negligible Adverse	41.0	40.5	41.6
143. PROVOST RUST DRIVE	Dwelling	64.5	66.0	64.6	0.1	Negligible Beneficial	66.0	1.5	Negligible Adverse	51.8	53.1	53.1
144. PROVOST RUST DRIVE	Dwelling	52.5	52.0	52.6	0.1	Negligible Adverse	53.2	0.7	Negligible Adverse	41.0	40.5	41.6
145. PROVOST RUST DRIVE	Dwelling	64.4	65.9	64.5	0.1	Negligible Beneficial	65.9	1.5	Negligible Adverse	51.7	53.0	53.0
146. PROVOST RUST DRIVE	Dwelling	53.0	52.4	53.3	0.3	Negligible Adverse	53.9	0.9	Negligible Adverse	41.4	40.9	42.2
147. PROVOST RUST DRIVE	Dwelling	64.4	65.9	64.5	0.1	Negligible Beneficial	65.9	1.5	Negligible Adverse	51.7	53.0	53.0
148. PROVOST RUST DRIVE	Dwelling	53.0	52.4	53.3	0.3	Negligible Adverse	53.9	0.9	Negligible Adverse	41.4	40.9	42.2
149. PROVOST RUST DRIVE	Dwelling	64.2	65.8	64.3	0.1	Negligible Beneficial	65.8	1.6	Negligible Adverse	51.5	53.0	53.0
15. PROVOST RUST DRIVE	Dwelling	64.3	65.6	64.2	-0.1	Negligible Beneficial	65.6	1.3	Negligible Adverse	51.6	52.8	52.8
150. PROVOST RUST DRIVE	Dwelling	53.0	52.4	53.3	0.3	Negligible Adverse	53.9	0.9	Negligible Adverse	41.4	40.9	42.2
151. PROVOST RUST DRIVE	Dwelling	64.2	65.8	64.3	0.1	Negligible Beneficial	65.8	1.6	Negligible Adverse	51.5	53.0	53.0
152. PROVOST RUST DRIVE	Dwelling	53.0	52.4	53.3	0.3	Negligible Adverse	53.9	0.9	Negligible Adverse	41.4	40.9	42.2
153. PROVOST RUST DRIVE	Dwelling	64.0	65.5	64.1	0.1	Negligible Beneficial	65.5	1.5	Negligible Adverse	51.3	52.7	52.7
154. PROVOST RUST DRIVE	Dwelling	51.2	51.2	51.6	0.4	Negligible Adverse	52.3	1.1	Negligible Adverse	39.8	39.8	40.8
155. PROVOST RUST DRIVE	Dwelling	64.0	65.5	64.1	0.1	Negligible Beneficial	65.5	1.5	Negligible Adverse	51.3	52.7	52.7
156. PROVOST RUST DRIVE	Dwelling	51.2	51.2	51.6	0.4	Negligible Adverse	52.3	1.1	Negligible Adverse	39.8	39.8	40.8
157. PROVOST RUST DRIVE	Dwelling	63.9	65.4	64.0	0.1	Negligible Adverse	65.4	1.5	Negligible Adverse	51.2	52.6	52.6
158. PROVOST RUST DRIVE	Dwelling	51.8	51.8	51.8	0.2	Negligible Adverse	51.0	1.0	Negligible Adverse	40.2	40.1	41.1
159. PROVOST RUST DRIVE	Dwelling	63.9	65.4	64.0	0.1	Negligible Adverse	65.4	1.5	Negligible Adverse	51.2	52.6	52.6
16. PROVOST RUST DRIVE	Dwelling	64.4	65.8	64.4	0.0	No Change	65.8	1.4	Negligible Adverse	51.7	53.0	53.0
160. PROVOST RUST DRIVE	Dwelling	51.6	51.5	51.8	0.2	Negligible Adverse	52.6	1.0	Negligible Adverse	40.2	40.1	41.1
161. PROVOST RUST DRIVE	Dwelling	63.3	64.8	63.4	0.1	Negligible Adverse	64.8	1.5	Negligible Adverse	50.7	52.1	52.1
162. PROVOST RUST DRIVE	Dwelling	50.9	51.0	51.2	0.3	Negligible Adverse	51.9	1.0	Negligible Adverse	39.5	39.6	40.4
163. PROVOST RUST DRIVE	Dwelling	63.3	64.7	63.4	0.1	Negligible Adverse	64.8	1.5	Negligible Adverse	50.7	52.0	52.1
164. PROVOST RUST DRIVE	Dwelling	50.9	51.0	51.2	0.3	Negligible Adverse	51.9	1.0	Negligible Adverse	39.5	39.6	40.4
165. PROVOST RUST DRIVE	Dwelling	64.0	65.4	64.1	0.1	Negligible Beneficial	65.5	1.5	Negligible Adverse	51.3	52.6	52.7
166. PROVOST RUST DRIVE	Dwelling	50.9	51.0	51.2	0.3	Negligible Adverse	51.9	1.0	Negligible Adverse	39.5	39.6	40.4
167. PROVOST RUST DRIVE	Dwelling	64.0	65.5	64.1	0.1	Negligible Beneficial	65.5	1.5	Negligible Adverse	51.3	52.7	52.7
168. PROVOST RUST DRIVE	Dwelling	50.9	51.0	51.2	0.3	Negligible Adverse	51.9	1.0	Negligible Adverse	39.5	39.6	40.4
169. PROVOST RUST DRIVE	Dwelling	63.4	64.8	63.5	0.1	Negligible Adverse	64.9	1.5	Negligible Adverse	50.8	52.1	52.1
17. PROVOST RUST DRIVE	Dwelling	63.9	65.3	63.9	0.0	No Change	65.3	1.4	Negligible Adverse	51.2	52.5	52.5
170. PROVOST RUST DRIVE	Dwelling	50.6	50.6	50.6	0.0	No Change	51.4	0.8	Negligible Adverse	39.3	39.5	40.0
171. PROVOST RUST DRIVE	Dwelling	63.4	64.8	63.5	0.1	Negligible Adverse	64.9	1.5	Negligible Adverse	50.8	52.1	52.1
172. PROVOST RUST DRIVE	Dwelling	50.6	50.8	50.6	0.0	No Change	51.4	0.8	Negligible Adverse	39.3	39.5	40.0
173. PROVOST RUST DRIVE	Dwelling	64.1	65.6	64.2	0.1	Negligible Adverse	65.6	1.5	Negligible Adverse	51.4	52.8	52.8
174. PROVOST RUST DRIVE	Dwelling	50.6	50.8	50.6	0.0	No Change	51.4	0.8	Negligible Adverse	39.3	39.5	40.0
175. PROVOST RUST DRIVE	Dwelling	64.1	65.6	64.2	0.1	Negligible Adverse	65.6	1.5	Negligible Adverse	51.4	52.8	52.8
176. PROVOST RUST DRIVE	Dwelling	50.6	50.8	50.6	0.0	No Change	51.4	0.8	Negligible Adverse	39.3	39.5	40.0
177. PROVOST RUST DRIVE	Dwelling	63.7	65.1	63.7	0.0	No Change	65.1	1.4	Negligible Adverse	51.1	52.3	52.3
178. PROVOST RUST DRIVE	Dwelling	59.0	59.9	59.2	0.2	Negligible Adverse	60.2	1.2	Negligible Adverse	46.8	47.6	47.9
179. PROVOST RUST DRIVE	Dwelling	63.7	65.1	63.7	0.0	No Change	65.1	1.4	Negligible Adverse	51.1	52.3	52.3
18. PROVOST RUST DRIVE	Dwelling	64.6	66.0	64.6	0.0	No Change	66.0	1.4	Negligible Adverse	51.9	53.1	53.1
181. PROVOST RUST DRIVE	Dwelling	62.2	63.7	62.3	0.1	Negligible Beneficial	63.7	1.5	Negligible Adverse	49.7	51.1	51.1
183. PROVOST RUST DRIVE	Dwelling	62.2	63.7	62.3	0.1	Negligible Beneficial	63.7	1.5	Negligible Adverse	49.7	51.1	51.1
185. PROVOST RUST DRIVE	Dwelling	60.5	61.8	60.6	0.1	Negligible Adverse	61.9	1.4	Negligible Adverse	48.2	49.4	49.4
187. PROVOST RUST DRIVE	Dwelling	60.6	61.9	60.6	0.0	No Change	62.0	1.4	Negligible Adverse	48.3	49.4	49.4
19. PROVOST RUST DRIVE	Dwelling	64.3	65.7	64.3	0.0	No Change	65.7	1.4	Negligible Adverse	51.6	52.9	52.9
2. PROVOST RUST DRIVE	Dwelling	61.2	62.5	61.1	-0.1	Negligible Beneficial	62.4	1.2	Negligible Adverse	48.8	50.0	49.9
20. PROVOST RUST DRIVE	Dwelling	64.1	65.6	64.1	0.0	No Change	65.6	1.5	Negligible Adverse	51.4	52.8	52.8
21. PROVOST RUST DRIVE	Dwelling	64.0	65.4	64.0	0.0	No Change	65.4	1.4	Negligible Adverse	51.3	52.6	52.6
22. PROVOST RUST DRIVE	Dwelling	64.8	66.3	64.8	0.0	No Change	66.2	1.4	Negligible Adverse	52.1	53.4	53.3
23. PROVOST RUST DRIVE	Dwelling	64.1	65.5	64.0	-0.1	Negligible Beneficial	65.5	1.4	Negligible Adverse	51.4	52.7	52.7
24. PROVOST RUST DRIVE	Dwelling	64.8	66.3	64.8	0.0	No Change	66.2	1.4	Negligible Adverse	52.1	53.4	53.3
25. PROVOST RUST DRIVE	Dwelling	64.1	65.5	64.0	-0.1	Negligible Beneficial	65.5	1.4	Negligible Adverse	51.4	52.7	52.7
26. PROVOST RUST DRIVE	Dwelling	64.3	65.8	64.3	0.0	No Change	65.8	1.5	Negligible Adverse	51.6	53.0	53.0
27. PROVOST RUST DRIVE	Dwelling	64.1	65.5	64.1	0.0	No Change	65.5	1.4	Negligible Adverse	51.4	52.7	52.7
28. PROVOST RUST DRIVE	Dwelling	64.3	65.8	64.3	0.0	No Change	65.8	1.5	Negligible Adverse	51.6	53.0	53.0
29. PROVOST RUST DRIVE	Dwelling	63.8	65.2	63.8	0.0	No Change	65.2	1.4	Negligible Adverse	51.2	52.4	52.4
3. PROVOST RUST DRIVE	Dwelling	61.8	63.0	61.7	-0.1	Negligible Beneficial	62.9	1.1	Negligible Adverse	49.4	50.4	50.3
30. PROVOST RUST DRIVE	Dwelling	64.2	65.6	64.2	0.0	No Change	65.6	1.4	Negligible Adverse	51.4	52.8	52.8
31. PROVOST RUST DRIVE	Dwelling	64.1	65.5	64.0	-0.1	Negligible Beneficial	65.5	1.4	Negligible Adverse	51.4	52.7	52.7
32. PROVOST RUST DRIVE	Dwelling	64.2	65.6	64.2	0.0	No Change	65.6	1.4	Negligible Adverse	51.5	52.8	52.8
33. PROVOST RUST DRIVE	Dwelling	63.8	65.2	63.8	0.0	No Change	65.2	1.4	Negligible Adverse	51.2	52.4	52.4
34. PROVOST RUST DRIVE	Dwelling	53.9	54.8	53.9	0.0	No Change	55.0	1.1	Negligible Adverse	42.2	43.1	43.2
35. PROVOST RUST DRIVE	Dwelling	64.0	65.4	64.0	0.0	No Change	65.4	1.4	Negligible Adverse	51.3	52.6	52.6
350. PROVOST RUST DRIVE	Dwelling	46.5	47.4	46.5	0.0	No Change	47.5	1.0	Negligible Adverse	35.6	36.4	36.5
352. PROVOST RUST DRIVE	Dwelling	46.3	47.2	46.4	0.1	Negligible Adverse	47.4	1.1	Negligible Adverse	35.4	36.2	36.4
354. PROVOST RUST DRIVE	Dwelling	46.2	47.1	46.3	0.1	Negligible Beneficial	47.3	1.1	Negligible Adverse	35.3	36.1	36.3
356. PROVOST RUST DRIVE	Dwelling	46.0	46.9	46.1	0.1	Negligible Adverse	47.2	1.2	Negligible Adverse	35.1	35.9	36.2
358. PROVOST RUST DRIVE	Dwelling	45.9	46.8	46.1	0.2	Negligible Adverse	47.1	1.2	Negligible Adverse	35.0	35.9	36.1
36. PROVOST RUST DRIVE	Dwelling	53.9	54.8	53.8	-0.1	Negligible Beneficial	54.9	1.0	Negligible Adverse	42.2	43.1	43.1
360. PROVOST RUST DRIVE	Dwelling	42.9	43.4	42.8	-0.1	Negligible Beneficial	43.7	0.8	Negligible Adverse	32.3	32.8	33.1
362. PROVOST RUST DRIVE	Dwelling	41.9	42.7	41.9	0.0	No Change	42.9	1.0	Negligible Adverse	31.4	32.3	32.3
37. PROVOST RUST DRIVE	Dwelling	63.8	65.2	63.8	0.0	No Change	65.2	1.4	Negligible Adverse	51.2	52.4	52.4
38. PROVOST RUST DRIVE	Dwelling	52.0	52.6	51.9	-0.1	Negligible Beneficial	52.8	0.8	Negligible Adverse	40.5	41.1	41.3

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DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
39. PROVOST RUST DRIVE	Dwelling	64.0	65.4	64.0	0.0	No Change	65.4	1.4	Negligible Adverse	51.3	52.6	52.6
4. PROVOST RUST DRIVE	Dwelling	61.2	62.5	61.1	-0.1	Negligible Beneficial	62.4	1.2	Negligible Adverse	48.8	50.0	49.9
40. PROVOST RUST DRIVE	Dwelling	52.0	52.6	51.9	-0.1	Negligible Beneficial	52.8	0.8	Negligible Adverse	40.5	41.1	41.3
41. PROVOST RUST DRIVE	Dwelling	63.7	65.1	63.7	0.0	No Change	65.1	1.4	Negligible Adverse	51.1	52.3	52.3
42. PROVOST RUST DRIVE	Dwelling	51.6	52.1	51.5	-0.1	Negligible Beneficial	52.4	0.8	Negligible Adverse	40.2	40.6	40.9
43. PROVOST RUST DRIVE	Dwelling	64.0	65.4	64.0	0.0	No Change	65.4	1.4	Negligible Adverse	51.3	52.6	52.6
44. PROVOST RUST DRIVE	Dwelling	51.6	52.1	51.5	-0.1	Negligible Beneficial	52.4	0.8	Negligible Adverse	40.2	40.6	40.9
45. PROVOST RUST DRIVE	Dwelling	63.8	65.2	63.8	0.0	No Change	65.2	1.4	Negligible Adverse	51.2	52.4	52.4
46. PROVOST RUST DRIVE	Dwelling	51.5	52.1	51.4	-0.1	Negligible Beneficial	52.4	0.9	Negligible Adverse	40.1	40.6	40.9
47. PROVOST RUST DRIVE	Dwelling	64.2	65.6	64.2	0.0	No Change	65.6	1.4	Negligible Adverse	51.5	52.8	52.8
48. PROVOST RUST DRIVE	Dwelling	51.5	52.1	51.4	-0.1	Negligible Beneficial	52.4	0.9	Negligible Adverse	40.1	40.6	40.9
49. PROVOST RUST DRIVE	Dwelling	64.2	65.6	64.2	0.0	No Change	65.6	1.4	Negligible Adverse	51.5	52.8	52.8
5. PROVOST RUST DRIVE	Dwelling	63.3	64.5	63.2	-0.1	Negligible Beneficial	64.5	1.2	Negligible Adverse	50.7	51.8	51.8
50. PROVOST RUST DRIVE	Dwelling	51.6	52.2	51.5	-0.1	Negligible Beneficial	52.5	0.9	Negligible Adverse	40.2	40.7	41.0
51. PROVOST RUST DRIVE	Dwelling	64.2	65.6	64.2	0.0	No Change	65.7	1.5	Negligible Adverse	51.5	52.8	52.9
52. PROVOST RUST DRIVE	Dwelling	51.5	52.1	51.5	0.0	No Change	52.4	0.9	Negligible Adverse	40.1	40.6	40.9
53. PROVOST RUST DRIVE	Dwelling	64.6	66.0	64.6	0.0	No Change	66.0	1.4	Negligible Adverse	51.9	53.1	53.1
54. PROVOST RUST DRIVE	Dwelling	51.0	51.8	50.9	-0.1	Negligible Beneficial	51.9	0.9	Negligible Adverse	39.6	40.4	40.4
55. PROVOST RUST DRIVE	Dwelling	64.5	65.9	64.5	0.0	No Change	65.9	1.4	Negligible Adverse	51.8	53.0	53.0
56. PROVOST RUST DRIVE	Dwelling	54.9	56.2	54.9	0.0	No Change	56.2	1.3	Negligible Adverse	43.1	44.3	44.3
57. PROVOST RUST DRIVE	Dwelling	64.6	66.0	64.6	0.0	No Change	66.0	1.4	Negligible Adverse	51.9	53.1	53.1
58. PROVOST RUST DRIVE	Dwelling	53.7	54.6	53.6	-0.1	Negligible Beneficial	54.8	1.1	Negligible Adverse	42.1	42.9	43.1
59. PROVOST RUST DRIVE	Dwelling	64.7	66.1	64.7	0.0	No Change	66.1	1.4	Negligible Adverse	52.0	53.2	53.2
6. PROVOST RUST DRIVE	Dwelling	64.9	66.3	64.9	0.0	No Change	66.3	1.4	Negligible Adverse	52.1	53.4	53.4
60. PROVOST RUST DRIVE	Dwelling	51.1	51.5	51.0	-0.1	Negligible Beneficial	51.9	0.8	Negligible Adverse	39.7	40.1	40.4
61. PROVOST RUST DRIVE	Dwelling	64.8	66.2	64.8	0.0	No Change	66.2	1.4	Negligible Adverse	52.1	53.3	53.3
62. PROVOST RUST DRIVE	Dwelling	50.9	51.4	50.9	0.0	No Change	51.8	0.9	Negligible Adverse	39.5	40.0	40.4
63. PROVOST RUST DRIVE	Dwelling	64.8	66.2	64.8	0.0	No Change	66.2	1.4	Negligible Adverse	52.1	53.3	53.3
64. PROVOST RUST DRIVE	Dwelling	51.2	51.7	51.1	-0.1	Negligible Beneficial	52.1	0.9	Negligible Adverse	39.8	40.3	40.6
65. PROVOST RUST DRIVE	Dwelling	64.8	66.2	64.8	0.0	No Change	66.2	1.4	Negligible Adverse	52.1	53.3	53.3
66. PROVOST RUST DRIVE	Dwelling	50.8	51.3	50.7	-0.1	Negligible Beneficial	51.7	0.9	Negligible Adverse	39.5	39.9	40.3
67. PROVOST RUST DRIVE	Dwelling	64.9	66.3	64.9	0.0	No Change	66.3	1.4	Negligible Adverse	52.1	53.4	53.4
68. PROVOST RUST DRIVE	Dwelling	50.8	51.3	50.7	-0.1	Negligible Beneficial	51.7	0.9	Negligible Adverse	39.5	39.9	40.3
69. PROVOST RUST DRIVE	Dwelling	64.8	66.2	64.8	0.0	No Change	66.3	1.5	Negligible Adverse	52.1	53.3	53.4
7. PROVOST RUST DRIVE	Dwelling	63.6	64.9	63.6	0.0	No Change	64.8	1.2	Negligible Adverse	51.0	52.1	52.1
70. PROVOST RUST DRIVE	Dwelling	50.9	51.4	50.9	0.0	No Change	51.8	0.9	Negligible Adverse	39.5	40.0	40.4
71. PROVOST RUST DRIVE	Dwelling	65.0	66.4	65.0	0.0	No Change	66.4	1.4	Negligible Adverse	52.2	53.5	53.5
72. PROVOST RUST DRIVE	Dwelling	50.9	51.4	50.9	0.0	No Change	51.8	0.9	Negligible Adverse	39.5	40.0	40.4
73. PROVOST RUST DRIVE	Dwelling	64.9	66.3	64.9	0.0	No Change	66.3	1.4	Negligible Adverse	52.1	53.4	53.4
74. PROVOST RUST DRIVE	Dwelling	50.6	51.1	50.6	0.0	No Change	51.6	1.0	Negligible Adverse	39.3	39.7	40.2
75. PROVOST RUST DRIVE	Dwelling	64.9	66.3	64.9	0.0	No Change	66.3	1.4	Negligible Adverse	52.1	53.4	53.4
76. PROVOST RUST DRIVE	Dwelling	50.6	51.1	50.6	0.0	No Change	51.6	1.0	Negligible Adverse	39.3	39.7	40.2
77. PROVOST RUST DRIVE	Dwelling	64.9	66.4	64.9	0.0	No Change	66.4	1.5	Negligible Adverse	52.1	53.5	53.5
78. PROVOST RUST DRIVE	Dwelling	50.2	50.8	50.2	0.0	No Change	51.2	1.0	Negligible Adverse	38.9	39.5	39.8
79. PROVOST RUST DRIVE	Dwelling	65.0	66.5	65.0	0.0	No Change	66.5	1.5	Negligible Adverse	52.2	53.6	53.6
8. PROVOST RUST DRIVE	Dwelling	65.0	66.4	65.0	0.0	No Change	66.4	1.4	Negligible Adverse	52.2	53.5	53.5
80. PROVOST RUST DRIVE	Dwelling	50.2	50.8	50.2	0.0	No Change	51.2	1.0	Negligible Adverse	38.9	39.5	39.8
81. PROVOST RUST DRIVE	Dwelling	65.0	66.4	65.0	0.0	No Change	66.4	1.4	Negligible Adverse	52.2	53.5	53.5
82. PROVOST RUST DRIVE	Dwelling	50.6	51.0	50.6	0.0	No Change	51.5	0.9	Negligible Adverse	39.3	39.6	40.1
83. PROVOST RUST DRIVE	Dwelling	65.0	66.5	65.1	0.1	Negligible Beneficial	66.5	1.5	Negligible Adverse	52.2	53.6	53.6
84. PROVOST RUST DRIVE	Dwelling	50.5	51.2	50.5	0.0	No Change	51.5	1.0	Negligible Adverse	39.2	39.8	40.1
85. PROVOST RUST DRIVE	Dwelling	64.9	66.3	64.9	0.0	No Change	66.3	1.4	Negligible Adverse	52.1	53.4	53.4
86. PROVOST RUST DRIVE	Dwelling	51.0	50.7	50.7	0.0	No Change	51.5	0.8	Negligible Adverse	39.4	39.6	40.1
87. PROVOST RUST DRIVE	Dwelling	64.9	66.4	64.9	0.0	No Change	66.4	1.5	Negligible Adverse	52.1	53.5	53.5
88. PROVOST RUST DRIVE	Dwelling	54.9	56.2	55.0	0.1	Negligible Adverse	56.3	1.4	Negligible Adverse	43.1	44.3	44.4
89. PROVOST RUST DRIVE	Dwelling	65.0	66.4	65.0	0.0	No Change	66.4	1.4	Negligible Adverse	52.2	53.5	53.5
9. PROVOST RUST DRIVE	Dwelling	64.6	65.9	64.5	-0.1	Negligible Beneficial	65.8	1.2	Negligible Adverse	51.9	53.0	53.0
90. PROVOST RUST DRIVE	Dwelling	51.2	51.3	51.2	0.0	No Change	52.0	0.8	Negligible Adverse	39.8	39.9	40.5
91. PROVOST RUST DRIVE	Dwelling	65.1	66.6	65.1	0.0	No Change	66.6	1.5	Negligible Adverse	52.3	53.7	53.7
92. PROVOST RUST DRIVE	Dwelling	51.2	51.3	51.2	0.0	No Change	52.0	0.8	Negligible Adverse	39.8	39.9	40.5
93. PROVOST RUST DRIVE	Dwelling	65.1	66.6	65.2	0.1	Negligible Adverse	66.6	1.5	Negligible Adverse	52.3	53.7	53.7
94. PROVOST RUST DRIVE	Dwelling	51.2	51.3	51.2	0.0	No Change	52.0	0.8	Negligible Adverse	39.8	39.9	40.5
95. PROVOST RUST DRIVE	Dwelling	65.1	66.6	65.2	0.1	Negligible Adverse	66.6	1.5	Negligible Adverse	52.3	53.7	53.7
96. PROVOST RUST DRIVE	Dwelling	51.2	51.3	51.2	0.0	No Change	52.0	0.8	Negligible Adverse	39.8	39.9	40.5
97. PROVOST RUST DRIVE	Dwelling	65.0	66.5	65.1	0.1	Negligible Beneficial	66.6	1.6	Negligible Adverse	52.2	53.6	53.7
98. PROVOST RUST DRIVE	Dwelling	51.0	51.2	51.1	0.1	Negligible Adverse	51.9	0.9	Negligible Adverse	39.6	39.8	40.4
99. PROVOST RUST DRIVE	Dwelling	65.0	66.5	65.1	0.1	Negligible Beneficial	66.6	1.6	Negligible Adverse	52.2	53.6	53.7
10. QUARRY ROAD, NORTHFIELD	Dwelling	42.8	43.1	42.7	-0.1	Negligible Beneficial	43.5	0.7	Negligible Adverse	32.3	32.5	32.9
12. QUARRY ROAD, NORTHFIELD	Dwelling	42.6	43.0	42.5	-0.1	Negligible Beneficial	43.3	0.7	Negligible Adverse	32.1	32.4	32.7
NORTHFIELD & MASTRICK MEDICAL PRACTICE, QUARRY ROAD, NORTHFIELD	Health Centre	41.7	42.2	41.6	-0.1	Negligible Beneficial	42.4	0.7	Negligible Adverse	31.3	31.7	31.9
THE ABERDEEN LARCHES HOTEL, 12, QUEEN STREET, WOODSIDE	Hotel	53.3	54.3	53.5	0.2	Negligible Adverse	54.2	0.9	Negligible Adverse	41.7	42.6	42.5
1. QUEEN STREET, WOODSIDE	Dwelling	73.2	74.0	73.5	0.3	Negligible Adverse	74.2	1.0	Negligible Adverse	59.6	60.3	60.5
11. QUEEN STREET, WOODSIDE	Dwelling	51.9	51.9	51.2	0.0	No Change	51.9	0.7	Negligible Adverse	39.8	40.4	40.4
11. QUEEN STREET, WOODSIDE	Dwelling	50.5	51.3	50.5	0.0	No Change	51.3	0.8	Negligible Adverse	39.2	39.9	39.9
13. QUEEN STREET, WOODSIDE	Dwelling	48.1	49.1	48.2	0.1	Negligible Adverse	49.2	1.1	Negligible Adverse	37.0	37.9	38.0
14. QUEEN STREET, WOODSIDE	Dwelling	52.5	53.5	52.7	0.2	Negligible Adverse	53.5	1.0	Negligible Adverse	41.0	41.9	41.9
16. QUEEN STREET, WOODSIDE	Dwelling	50.7	53.7	51.0	0.3	Negligible Adverse	53.4	2.7	Negligible Adverse	39.4	42.1	41.8
17. QUEEN STREET, WOODSIDE	Dwelling	50.3	51.6	50.5	0.2	Negligible Adverse	51.9	1.6	Negligible Adverse	39.0	40.2	40.4
9. QUEEN STREET, WOODSIDE	Dwelling	56.6	57.4	56.6	0.0	No Change	57.4	0.7	Negligible Adverse	44.7	45.4	45.4
10. RITCHIE PLACE	Dwelling	44.0	45.3	43.9	-0.1	Negligible Beneficial	45.0	1.0	Negligible Adverse	33.3	34.5	34.2
12. RITCHIE PLACE	Dwelling	44.0	45.3	43.9	-0.1	Negligible Beneficial	45.0	1.0	Negligible Adverse	33.3	34.5	34.2

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
21. ROSEHILL CRESCENT	Dwelling	48.3	49.2	48.1	-0.2	Negligible Beneficial	49.0	0.7	Negligible Adverse	37.2	38.0	37.8
22. ROSEHILL CRESCENT	Dwelling	49.8	50.8	49.7	-0.1	Negligible Beneficial	50.6	0.8	Negligible Adverse	38.6	39.5	39.3
23. ROSEHILL CRESCENT	Dwelling	48.2	49.1	48.0	-0.2	Negligible Beneficial	48.9	0.7	Negligible Adverse	37.1	37.9	37.7
25. ROSEHILL CRESCENT	Dwelling	48.2	49.1	48.0	-0.2	Negligible Beneficial	48.9	0.7	Negligible Adverse	37.1	37.9	37.7
27. ROSEHILL CRESCENT	Dwelling	48.0	49.1	47.9	-0.1	Negligible Beneficial	48.9	0.9	Negligible Adverse	36.9	37.9	37.7
29. ROSEHILL CRESCENT	Dwelling	48.4	49.4	48.3	-0.1	Negligible Beneficial	49.3	0.9	Negligible Adverse	37.3	38.2	38.1
3. ROSEHILL CRESCENT	Dwelling	56.2	56.8	55.7	-0.5	Negligible Beneficial	56.6	0.4	Negligible Adverse	44.3	44.9	44.7
31. ROSEHILL CRESCENT	Dwelling	48.8	49.8	48.7	-0.1	Negligible Beneficial	49.6	0.8	Negligible Adverse	37.7	38.6	38.4
33. ROSEHILL CRESCENT	Dwelling	48.7	49.7	48.7	0.0	No Change	49.6	0.9	Negligible Adverse	37.6	38.5	38.4
4. ROSEHILL CRESCENT	Dwelling	55.0	55.5	54.4	-0.6	Negligible Beneficial	55.3	0.3	Negligible Adverse	43.2	43.7	43.5
5. ROSEHILL CRESCENT	Dwelling	54.2	54.8	53.7	-0.5	Negligible Beneficial	54.6	0.4	Negligible Adverse	42.5	43.1	42.9
6. ROSEHILL CRESCENT	Dwelling	53.7	53.1	53.1	0.6	Negligible Beneficial	54.0	0.3	Negligible Adverse	42.1	42.5	42.3
7. ROSEHILL CRESCENT	Dwelling	53.6	54.3	53.1	-0.5	Negligible Beneficial	54.0	0.4	Negligible Adverse	42.0	42.6	42.3
8. ROSEHILL CRESCENT	Dwelling	48.5	49.3	48.2	-0.3	Negligible Beneficial	49.2	0.7	Negligible Adverse	37.4	38.1	38.0
9. ROSEHILL CRESCENT	Dwelling	53.5	54.1	53.0	-0.5	Negligible Beneficial	53.9	0.4	Negligible Adverse	41.9	42.4	42.2
10. ROSEHILL DRIVE	Dwelling	68.9	69.2	68.2	-0.7	Negligible Beneficial	68.9	0.0	No Change	55.7	56.0	55.7
103. ROSEHILL DRIVE	Dwelling	67.0	67.7	66.6	-0.4	Negligible Beneficial	67.7	0.7	Negligible Adverse	54.0	54.7	54.7
105. ROSEHILL DRIVE	Dwelling	67.0	67.7	66.6	-0.4	Negligible Beneficial	67.7	0.7	Negligible Adverse	54.0	54.7	54.7
107. ROSEHILL DRIVE	Dwelling	67.0	67.7	66.6	-0.4	Negligible Beneficial	67.7	0.7	Negligible Adverse	54.0	54.7	54.7
109. ROSEHILL DRIVE	Dwelling	66.9	67.6	66.5	-0.4	Negligible Beneficial	67.7	0.8	Negligible Adverse	53.9	54.6	54.7
111. ROSEHILL DRIVE	Dwelling	66.9	67.6	66.5	-0.4	Negligible Beneficial	67.7	0.8	Negligible Adverse	53.9	54.6	54.7
113. ROSEHILL DRIVE	Dwelling	66.9	67.6	66.5	-0.4	Negligible Beneficial	67.7	0.8	Negligible Adverse	53.9	54.6	54.7
115. ROSEHILL DRIVE	Dwelling	66.9	67.6	66.5	-0.4	Negligible Beneficial	67.7	0.8	Negligible Adverse	53.9	54.6	54.7
117. ROSEHILL DRIVE	Dwelling	66.9	67.6	66.5	-0.4	Negligible Beneficial	67.7	0.8	Negligible Adverse	53.9	54.6	54.7
119. ROSEHILL DRIVE	Dwelling	66.9	67.6	66.5	-0.4	Negligible Beneficial	67.7	0.8	Negligible Adverse	53.9	54.6	54.7
12. ROSEHILL DRIVE	Dwelling	69.0	69.5	68.4	-0.6	Negligible Beneficial	69.2	0.2	Negligible Adverse	55.8	56.3	56.0
121. ROSEHILL DRIVE	Dwelling	66.7	67.5	66.4	-0.3	Negligible Beneficial	67.6	0.9	Negligible Adverse	53.8	54.5	54.6
123. ROSEHILL DRIVE	Dwelling	66.7	67.5	66.4	-0.3	Negligible Beneficial	67.6	0.9	Negligible Adverse	53.8	54.5	54.6
125. ROSEHILL DRIVE	Dwelling	66.7	67.5	66.4	-0.3	Negligible Beneficial	67.6	0.9	Negligible Adverse	53.8	54.5	54.6
127. ROSEHILL DRIVE	Dwelling	66.7	67.5	66.4	-0.3	Negligible Beneficial	67.6	0.9	Negligible Adverse	53.8	54.5	54.6
129. ROSEHILL DRIVE	Dwelling	66.7	67.5	66.4	-0.3	Negligible Beneficial	67.6	0.9	Negligible Adverse	53.8	54.5	54.6
131. ROSEHILL DRIVE	Dwelling	66.7	67.5	66.4	-0.3	Negligible Beneficial	67.6	0.9	Negligible Adverse	53.8	54.5	54.6
133. ROSEHILL DRIVE	Dwelling	66.2	67.0	65.9	-0.3	Negligible Beneficial	67.1	0.9	Negligible Adverse	53.3	54.0	54.1
135. ROSEHILL DRIVE	Dwelling	66.2	67.0	65.9	-0.3	Negligible Beneficial	67.1	0.9	Negligible Adverse	53.3	54.0	54.1
137. ROSEHILL DRIVE	Dwelling	66.2	67.0	65.9	-0.3	Negligible Beneficial	67.1	0.9	Negligible Adverse	53.3	54.0	54.1
139. ROSEHILL DRIVE	Dwelling	66.2	67.0	65.9	-0.3	Negligible Beneficial	67.1	0.9	Negligible Adverse	53.3	54.0	54.1
14. ROSEHILL DRIVE	Dwelling	68.9	69.4	68.3	-0.6	Negligible Beneficial	69.1	0.2	Negligible Adverse	55.7	56.2	55.9
141. ROSEHILL DRIVE	Dwelling	66.2	67.0	65.9	-0.3	Negligible Beneficial	67.1	0.9	Negligible Adverse	53.3	54.0	54.1
143. ROSEHILL DRIVE	Dwelling	66.2	67.0	65.9	-0.3	Negligible Beneficial	67.1	0.9	Negligible Adverse	53.3	54.0	54.1
145. ROSEHILL DRIVE	Dwelling	66.3	67.0	66.0	-0.3	Negligible Beneficial	67.1	0.8	Negligible Adverse	53.4	54.0	54.1
147. ROSEHILL DRIVE	Dwelling	66.3	67.0	66.0	-0.3	Negligible Beneficial	67.1	0.8	Negligible Adverse	53.4	54.0	54.1
149. ROSEHILL DRIVE	Dwelling	66.3	67.0	66.0	-0.3	Negligible Beneficial	67.1	0.8	Negligible Adverse	53.4	54.0	54.1
151. ROSEHILL DRIVE	Dwelling	66.3	67.0	66.0	-0.3	Negligible Beneficial	67.1	0.8	Negligible Adverse	53.4	54.0	54.1
153. ROSEHILL DRIVE	Dwelling	66.3	67.0	66.0	-0.3	Negligible Beneficial	67.1	0.8	Negligible Adverse	53.4	54.0	54.1
155. ROSEHILL DRIVE	Dwelling	66.3	67.0	66.0	-0.3	Negligible Beneficial	67.1	0.8	Negligible Adverse	53.4	54.0	54.1
157. ROSEHILL DRIVE	Dwelling	66.1	66.9	65.9	-0.2	Negligible Beneficial	67.0	0.9	Negligible Adverse	53.2	53.9	54.0
159. ROSEHILL DRIVE	Dwelling	66.1	66.9	65.9	-0.2	Negligible Beneficial	67.0	0.9	Negligible Adverse	53.2	53.9	54.0
16. ROSEHILL DRIVE	Dwelling	69.0	69.5	68.4	-0.6	Negligible Beneficial	69.2	0.2	Negligible Adverse	55.8	56.3	56.0
161. ROSEHILL DRIVE	Dwelling	66.1	66.9	65.9	-0.2	Negligible Beneficial	67.0	0.9	Negligible Adverse	53.2	53.9	54.0
163. ROSEHILL DRIVE	Dwelling	66.1	66.9	65.9	-0.2	Negligible Beneficial	67.0	0.9	Negligible Adverse	53.2	53.9	54.0
165. ROSEHILL DRIVE	Dwelling	66.1	66.9	65.9	-0.2	Negligible Beneficial	67.0	0.9	Negligible Adverse	53.2	53.9	54.0
167. ROSEHILL DRIVE	Dwelling	66.1	66.9	65.9	-0.2	Negligible Beneficial	67.0	0.9	Negligible Adverse	53.2	53.9	54.0
169. ROSEHILL DRIVE	Dwelling	66.4	67.3	66.2	-0.2	Negligible Beneficial	67.3	0.9	Negligible Adverse	53.5	54.3	54.3
171. ROSEHILL DRIVE	Dwelling	66.4	67.3	66.2	-0.2	Negligible Beneficial	67.3	0.9	Negligible Adverse	53.5	54.3	54.3
173. ROSEHILL DRIVE	Dwelling	66.4	67.3	66.2	-0.2	Negligible Beneficial	67.3	0.9	Negligible Adverse	53.5	54.3	54.3
175. ROSEHILL DRIVE	Dwelling	66.4	67.3	66.2	-0.2	Negligible Beneficial	67.3	0.9	Negligible Adverse	53.5	54.3	54.3
177. ROSEHILL DRIVE	Dwelling	66.4	67.3	66.2	-0.2	Negligible Beneficial	67.3	0.9	Negligible Adverse	53.5	54.3	54.3
179. ROSEHILL DRIVE	Dwelling	66.4	67.3	66.2	-0.2	Negligible Beneficial	67.3	0.9	Negligible Adverse	53.5	54.3	54.3
18. ROSEHILL DRIVE	Dwelling	69.0	69.5	68.4	-0.6	Negligible Beneficial	69.2	0.2	Negligible Adverse	55.8	56.3	56.0
181. ROSEHILL DRIVE	Dwelling	67.1	68.0	66.9	-0.2	Negligible Beneficial	68.0	0.9	Negligible Adverse	54.1	54.9	54.9
183. ROSEHILL DRIVE	Dwelling	67.1	68.0	66.9	-0.2	Negligible Beneficial	68.0	0.9	Negligible Adverse	54.1	54.9	54.9
185. ROSEHILL DRIVE	Dwelling	67.1	68.0	66.9	-0.2	Negligible Beneficial	68.0	0.9	Negligible Adverse	54.1	54.9	54.9
187. ROSEHILL DRIVE	Dwelling	67.1	68.0	66.9	-0.2	Negligible Beneficial	68.0	0.9	Negligible Adverse	54.1	54.9	54.9
189. ROSEHILL DRIVE	Dwelling	67.1	68.0	66.9	-0.2	Negligible Beneficial	68.0	0.9	Negligible Adverse	54.1	54.9	54.9
191. ROSEHILL DRIVE	Dwelling	67.1	68.0	66.9	-0.2	Negligible Beneficial	68.0	0.9	Negligible Adverse	54.1	54.9	54.9
20. ROSEHILL DRIVE	Dwelling	69.2	69.7	68.6	-0.6	Negligible Beneficial	69.4	0.2	Negligible Adverse	56.0	56.5	56.2
21. ROSEHILL DRIVE	Dwelling	68.3	68.6	67.6	-0.7	Negligible Beneficial	68.3	0.0	No Change	55.2	55.5	55.2
22. ROSEHILL DRIVE	Dwelling	68.8	69.6	68.6	-0.6	Negligible Beneficial	69.2	0.3	Negligible Adverse	56.0	56.3	56.0
23. ROSEHILL DRIVE	Dwelling	68.3	68.6	67.7	-0.6	Negligible Beneficial	68.4	0.1	Negligible Adverse	55.3	55.5	55.3
24. ROSEHILL DRIVE	Dwelling	69.4	70.0	68.8	-0.6	Negligible Beneficial	69.7	0.3	Negligible Adverse	56.2	56.7	56.5
25. ROSEHILL DRIVE	Dwelling	67.0	67.4	66.4	-0.6	Negligible Beneficial	67.1	0.1	Negligible Beneficial	54.0	54.4	54.1
26. ROSEHILL DRIVE	Dwelling	69.4	69.9	68.8	-0.6	Negligible Beneficial	69.7	0.3	Negligible Adverse	56.2	56.6	56.5
27. ROSEHILL DRIVE	Dwelling	68.7	69.1	68.1	-0.6	Negligible Beneficial	68.8	0.1	Negligible Beneficial	55.6	55.9	55.7
28. ROSEHILL DRIVE	Dwelling	69.4	69.9	68.8	-0.6	Negligible Beneficial	69.7	0.3	Negligible Adverse	56.2	56.6	56.5
29. ROSEHILL DRIVE	Dwelling	68.7	69.2	68.1	-0.6	Negligible Beneficial	68.9	0.2	Negligible Adverse	55.6	56.0	55.7
30. ROSEHILL DRIVE	Dwelling	69.4	69.9	68.8	-0.6	Negligible Beneficial	69.7	0.3	Negligible Adverse	56.2	56.6	56.5
31. ROSEHILL DRIVE	Dwelling	67.0	67.6	66.4	-0.6	Negligible Beneficial	67.2	0.2	Negligible Adverse	54.0	54.6	54.2
32. ROSEHILL DRIVE	Dwelling	69.3	69.8	68.7	-0.6	Negligible Beneficial	69.6	0.3	Negligible Adverse	56.1	56.6	56.4
33. ROSEHILL DRIVE	Dwelling	67.1	67.6	66.5	-0.6	Negligible Beneficial	67.3	0.2	Negligible Adverse	54.1	54.6	54.3
34. ROSEHILL DRIVE	Dwelling	69.2	69.8	68.6	-0.6	Negligible Beneficial	69.5	0.3	Negligible Adverse	56.0	56.3	56.3
35. ROSEHILL DRIVE	Dwelling	68.3	68.3	68.1	-0.6	Negligible Beneficial	68.9	0.2	Negligible Adverse	55.6	56.1	55.7
36. ROSEHILL DRIVE	Dwelling	69.1	69.6	68.5	-0.6	Negligible Beneficial	69.4	0.3	Negligible Adverse	55.9	56.4	56.2
37. ROSEHILL DRIVE	Dwelling	68.7	69.2	68.1	-0.6	Negligible Beneficial	68.9	0.2	Negligible Adverse	55.6	56.0	55.7

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
38. ROSEHILL DRIVE	Dwelling	69.1	69.6	68.5	-0.6	Negligible Beneficial	69.4	0.3	Negligible Adverse	55.9	56.4	56.2
39. ROSEHILL DRIVE	Dwelling	68.6	69.1	68.0	-0.6	Negligible Beneficial	68.8	0.2	Negligible Adverse	55.5	55.9	55.7
4. ROSEHILL DRIVE	Dwelling	68.6	68.9	68.0	-0.6	Negligible Beneficial	68.6	0.0	No Change	55.5	55.7	55.5
40. ROSEHILL DRIVE	Dwelling	69.1	69.6	68.5	-0.6	Negligible Beneficial	69.4	0.3	Negligible Adverse	55.9	56.4	56.2
41. ROSEHILL DRIVE	Dwelling	68.5	69.0	67.9	-0.6	Negligible Beneficial	68.7	0.2	Negligible Adverse	55.4	55.8	55.6
42. ROSEHILL DRIVE	Dwelling	69.1	69.5	68.5	-0.6	Negligible Beneficial	69.4	0.3	Negligible Adverse	55.9	56.3	56.2
43. ROSEHILL DRIVE	Dwelling	69.1	69.6	68.5	-0.6	Negligible Beneficial	69.3	0.2	Negligible Adverse	55.9	56.4	56.1
44. ROSEHILL DRIVE	Dwelling	69.2	69.7	68.7	-0.5	Negligible Beneficial	69.5	0.3	Negligible Adverse	56.0	56.5	56.3
45. ROSEHILL DRIVE	Dwelling	67.4	67.9	66.8	-0.6	Negligible Beneficial	67.7	0.3	Negligible Adverse	54.4	54.8	54.7
46. ROSEHILL DRIVE	Dwelling	69.4	69.8	68.8	-0.6	Negligible Beneficial	69.7	0.3	Negligible Adverse	56.2	56.6	56.5
47. ROSEHILL DRIVE	Dwelling	69.0	69.6	68.4	-0.6	Negligible Beneficial	69.3	0.3	Negligible Adverse	55.8	56.4	56.1
48. ROSEHILL DRIVE	Dwelling	71.0	71.5	70.5	-0.5	Negligible Beneficial	71.3	0.3	Negligible Adverse	57.6	58.1	57.9
49. ROSEHILL DRIVE	Dwelling	69.0	69.5	68.4	-0.6	Negligible Beneficial	69.3	0.3	Negligible Adverse	55.8	56.3	56.1
50. ROSEHILL DRIVE	Dwelling	71.0	71.5	70.5	-0.5	Negligible Beneficial	71.3	0.3	Negligible Adverse	57.6	58.1	57.9
51. ROSEHILL DRIVE	Dwelling	68.9	69.5	68.3	-0.6	Negligible Beneficial	69.2	0.3	Negligible Adverse	55.7	56.3	56.0
52. ROSEHILL DRIVE	Dwelling	71.0	71.5	70.5	-0.5	Negligible Beneficial	71.3	0.3	Negligible Adverse	57.6	58.1	57.9
53. ROSEHILL DRIVE	Dwelling	68.8	69.3	68.2	-0.6	Negligible Beneficial	69.1	0.3	Negligible Adverse	55.7	56.1	55.9
54. ROSEHILL DRIVE	Dwelling	71.0	71.5	70.5	-0.5	Negligible Beneficial	71.3	0.3	Negligible Adverse	57.6	58.1	57.9
55. ROSEHILL DRIVE	Dwelling	69.0	69.4	68.4	-0.6	Negligible Beneficial	69.3	0.3	Negligible Adverse	55.8	56.2	56.1
56. ROSEHILL DRIVE	Dwelling	70.5	70.9	70.0	-0.5	Negligible Beneficial	70.8	0.3	Negligible Adverse	57.2	57.5	57.5
57. ROSEHILL DRIVE	Dwelling	68.9	69.4	68.4	-0.5	Negligible Beneficial	69.2	0.3	Negligible Adverse	55.7	56.2	56.0
58. ROSEHILL DRIVE	Dwelling	70.5	70.9	70.0	-0.5	Negligible Beneficial	70.8	0.3	Negligible Adverse	57.2	57.5	57.5
59. ROSEHILL DRIVE	Dwelling	68.9	69.3	68.3	-0.6	Negligible Beneficial	69.2	0.3	Negligible Adverse	55.7	56.1	56.0
6. ROSEHILL DRIVE	Dwelling	68.7	69.0	68.1	-0.6	Negligible Beneficial	68.7	0.0	No Change	55.6	55.8	55.6
60. ROSEHILL DRIVE	Dwelling	70.9	70.9	70.0	-0.5	Negligible Beneficial	70.8	0.3	Negligible Adverse	57.2	57.5	57.5
61. ROSEHILL DRIVE	Dwelling	68.5	68.5	68.5	-0.5	Negligible Beneficial	69.0	0.3	Negligible Adverse	55.8	56.3	56.1
62. ROSEHILL DRIVE	Dwelling	70.5	70.9	70.0	-0.5	Negligible Beneficial	70.8	0.3	Negligible Adverse	57.2	57.5	57.5
63. ROSEHILL DRIVE	Dwelling	69.0	69.5	68.4	-0.6	Negligible Beneficial	69.3	0.3	Negligible Adverse	55.8	56.3	56.1
64. ROSEHILL DRIVE	Dwelling	68.6	69.3	68.2	-0.4	Negligible Beneficial	69.4	0.8	Negligible Adverse	55.5	56.1	56.2
65. ROSEHILL DRIVE	Dwelling	68.9	69.3	68.3	-0.6	Negligible Beneficial	69.2	0.3	Negligible Adverse	55.7	56.1	56.0
66. ROSEHILL DRIVE	Dwelling	68.6	69.3	68.2	-0.4	Negligible Beneficial	69.4	0.8	Negligible Adverse	55.5	56.1	56.2
67. ROSEHILL DRIVE	Dwelling	68.7	69.2	68.1	-0.6	Negligible Beneficial	69.0	0.3	Negligible Adverse	55.6	56.0	55.8
68. ROSEHILL DRIVE	Dwelling	68.6	69.3	68.2	-0.4	Negligible Beneficial	69.4	0.8	Negligible Adverse	55.5	56.1	56.2
69. ROSEHILL DRIVE	Dwelling	68.8	69.2	68.2	-0.6	Negligible Beneficial	69.1	0.3	Negligible Adverse	55.7	56.0	55.9
70. ROSEHILL DRIVE	Dwelling	68.6	69.3	68.2	-0.4	Negligible Beneficial	69.4	0.8	Negligible Adverse	55.5	56.1	56.2
71. ROSEHILL DRIVE	Dwelling	68.6	69.1	68.1	-0.5	Negligible Beneficial	69.0	0.4	Negligible Adverse	55.5	55.9	55.8
73. ROSEHILL DRIVE	Dwelling	68.6	69.1	68.1	-0.5	Negligible Beneficial	69.0	0.4	Negligible Adverse	55.5	55.9	55.8
75. ROSEHILL DRIVE	Dwelling	68.5	69.0	68.0	-0.5	Negligible Beneficial	68.8	0.3	Negligible Adverse	55.4	55.8	55.7
77. ROSEHILL DRIVE	Dwelling	68.6	69.1	68.0	-0.6	Negligible Beneficial	68.9	0.3	Negligible Adverse	55.5	55.9	55.7
79. ROSEHILL DRIVE	Dwelling	68.4	68.9	67.9	-0.5	Negligible Beneficial	68.7	0.3	Negligible Adverse	55.3	55.7	55.6
8. ROSEHILL DRIVE	Dwelling	68.8	69.2	68.6	-0.6	Negligible Beneficial	68.8	0.0	No Change	55.7	55.7	55.6
81. ROSEHILL DRIVE	Dwelling	68.4	68.9	67.8	-0.6	Negligible Beneficial	68.7	0.3	Negligible Adverse	55.3	55.7	55.6
83. ROSEHILL DRIVE	Dwelling	68.4	68.9	67.9	-0.5	Negligible Beneficial	68.8	0.4	Negligible Adverse	55.3	55.7	55.7
85. ROSEHILL DRIVE	Dwelling	68.4	68.8	67.8	-0.6	Negligible Beneficial	68.7	0.3	Negligible Adverse	55.3	55.7	55.6
87. ROSEHILL DRIVE	Dwelling	68.0	68.4	67.5	-0.5	Negligible Beneficial	68.4	0.4	Negligible Adverse	54.9	55.3	55.3
89. ROSEHILL DRIVE	Dwelling	67.9	68.3	67.5	-0.4	Negligible Beneficial	68.3	0.4	Negligible Adverse	54.8	55.2	55.2
1. ROSEHILL PLACE	Dwelling	49.4	50.7	49.3	-0.1	Negligible Beneficial	50.5	1.1	Negligible Adverse	38.2	39.4	39.2
10. ROSEHILL PLACE	Dwelling	49.1	50.1	49.0	-0.1	Negligible Beneficial	49.9	0.8	Negligible Adverse	37.9	38.8	38.6
11. ROSEHILL PLACE	Dwelling	48.5	49.8	48.4	-0.1	Negligible Beneficial	49.5	1.0	Negligible Adverse	37.4	38.6	38.3
12. ROSEHILL PLACE	Dwelling	49.0	50.1	48.9	-0.1	Negligible Beneficial	49.9	0.9	Negligible Adverse	37.8	38.8	38.6
13. ROSEHILL PLACE	Dwelling	46.8	48.4	46.7	-0.1	Negligible Beneficial	48.0	1.2	Negligible Adverse	35.9	37.3	36.9
14. ROSEHILL PLACE	Dwelling	47.4	48.5	47.3	-0.1	Negligible Beneficial	48.3	0.9	Negligible Adverse	36.4	37.4	37.2
15. ROSEHILL PLACE	Dwelling	48.3	49.7	48.2	-0.1	Negligible Beneficial	49.4	1.1	Negligible Adverse	37.2	38.5	38.2
16. ROSEHILL PLACE	Dwelling	49.7	50.8	49.7	0.0	No Change	50.6	0.9	Negligible Adverse	38.5	39.5	39.3
17. ROSEHILL PLACE	Dwelling	48.4	49.7	48.3	-0.1	Negligible Beneficial	49.4	1.0	Negligible Adverse	37.3	38.5	38.2
18. ROSEHILL PLACE	Dwelling	50.2	51.2	50.1	-0.1	Negligible Beneficial	51.1	0.9	Negligible Adverse	38.9	39.8	39.7
19. ROSEHILL PLACE	Dwelling	48.5	49.7	48.4	-0.1	Negligible Beneficial	49.5	1.0	Negligible Adverse	37.4	38.5	38.3
2. ROSEHILL PLACE	Dwelling	49.1	50.1	48.8	-0.3	Negligible Beneficial	49.9	0.8	Negligible Adverse	37.9	38.8	38.6
20. ROSEHILL PLACE	Dwelling	51.3	52.4	51.2	-0.1	Negligible Beneficial	52.2	0.9	Negligible Adverse	39.9	40.9	40.7
21. ROSEHILL PLACE	Dwelling	48.4	49.7	48.4	0.0	No Change	49.5	1.1	Negligible Adverse	37.3	38.5	38.3
22. ROSEHILL PLACE	Dwelling	52.3	53.4	52.3	0.0	No Change	53.2	0.9	Negligible Adverse	40.8	41.8	41.6
23. ROSEHILL PLACE	Dwelling	48.0	49.3	47.9	-0.1	Negligible Beneficial	49.1	1.1	Negligible Adverse	36.9	38.1	37.9
24. ROSEHILL PLACE	Dwelling	54.1	55.2	54.1	0.0	No Change	55.0	0.9	Negligible Adverse	42.4	43.4	43.2
25. ROSEHILL PLACE	Dwelling	49.3	50.6	49.3	0.0	No Change	50.3	1.0	Negligible Adverse	38.1	39.3	39.0
26. ROSEHILL PLACE	Dwelling	56.0	57.1	56.0	0.0	No Change	56.9	0.9	Negligible Adverse	44.1	45.1	44.9
27. ROSEHILL PLACE	Dwelling	49.9	51.2	49.8	-0.1	Negligible Beneficial	51.0	1.1	Negligible Adverse	38.6	39.8	39.6
3. ROSEHILL PLACE	Dwelling	48.8	50.0	48.6	-0.2	Negligible Beneficial	49.6	1.0	Negligible Adverse	37.7	38.7	38.6
4. ROSEHILL PLACE	Dwelling	49.2	50.2	49.9	-0.2	Negligible Beneficial	49.9	0.7	Negligible Adverse	38.0	38.9	38.8
5. ROSEHILL PLACE	Dwelling	48.7	49.9	48.5	-0.2	Negligible Beneficial	49.7	1.0	Negligible Adverse	37.6	38.6	38.5
6. ROSEHILL PLACE	Dwelling	48.3	49.3	48.2	-0.1	Negligible Beneficial	49.2	0.9	Negligible Adverse	37.2	38.1	38.0
7. ROSEHILL PLACE	Dwelling	48.6	49.9	48.4	-0.2	Negligible Beneficial	49.6	1.0	Negligible Adverse	37.5	38.6	38.4
8. ROSEHILL PLACE	Dwelling	48.8	49.8	48.6	-0.2	Negligible Beneficial	49.6	0.8	Negligible Adverse	37.7	38.6	38.4
9. ROSEHILL PLACE	Dwelling	48.3	49.6	48.2	-0.1	Negligible Beneficial	49.4	1.1	Negligible Adverse	37.2	38.4	38.2
1. ROSEHILL TERRACE	Dwelling	51.5	52.2	51.1	-0.4	Negligible Beneficial	52.1	0.6	Negligible Adverse	40.1	40.7	40.6
2. ROSEHILL TERRACE	Dwelling	51.5	52.2	51.1	-0.4	Negligible Beneficial	52.1	0.6	Negligible Adverse	40.1	40.7	40.6
3. ROSEHILL TERRACE	Dwelling	50.9	51.7	50.9	-0.3	Negligible Beneficial	51.5	0.6	Negligible Adverse	39.5	40.3	40.1
4. ROSEHILL TERRACE	Dwelling	51.3	52.1	50.6	-0.4	Negligible Beneficial	51.9	0.6	Negligible Adverse	39.9	40.6	40.4
5. ROSEHILL TERRACE	Dwelling	50.3	51.2	50.0	-0.3	Negligible Beneficial	51.0	0.7	Negligible Adverse	39.0	39.8	39.6
6. ROSEHILL TERRACE	Dwelling	48.9	49.8	48.6	-0.3	Negligible Beneficial	49.6	0.7	Negligible Adverse	37.7	38.6	38.4
7. ROSEHILL TERRACE	Dwelling	49.4	50.3	49.1	-0.3	Negligible Beneficial	50.1	0.7	Negligible Adverse	38.2	39.0	38.8
8. ROSEHILL TERRACE	Dwelling	49.5	50.4	49.2	-0.3	Negligible Beneficial	50.2	0.7	Negligible Adverse	38.3	39.1	38.9
9. ROSEHILL TERRACE	Dwelling	49.1	50.0	48.8	-0.3	Negligible Beneficial	49.8	0.7	Negligible Adverse	37.9	38.7	38.6
1. ROWAN ROAD	Dwelling	56.8	57.3	56.6	-0.2	Negligible Beneficial	57.3	0.5	Negligible Adverse	44.9	45.3	45.3

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
10. ROWAN ROAD	Dwelling	58.5	59.3	58.2	-0.3	Negligible Beneficial	59.2	0.7	Negligible Adverse	46.4	47.1	47.0
11. ROWAN ROAD	Dwelling	53.8	54.4	53.7	-0.1	Negligible Beneficial	54.3	0.5	Negligible Adverse	42.2	42.7	42.6
12. ROWAN ROAD	Dwelling	57.2	57.9	57.0	-0.2	Negligible Beneficial	57.8	0.6	Negligible Adverse	45.2	45.8	45.8
13. ROWAN ROAD	Dwelling	53.2	53.8	53.2	0.0	No Change	53.8	0.6	Negligible Adverse	41.6	42.2	42.2
14. ROWAN ROAD	Dwelling	65.2	65.9	64.8	-0.4	Negligible Beneficial	65.8	0.6	Negligible Adverse	52.4	53.0	53.0
15. ROWAN ROAD	Dwelling	53.0	53.6	52.9	-0.1	Negligible Beneficial	53.6	0.6	Negligible Adverse	41.4	42.0	42.0
16. ROWAN ROAD	Dwelling	62.3	63.0	62.0	-0.3	Negligible Beneficial	62.9	0.6	Negligible Adverse	49.8	50.4	50.3
17. ROWAN ROAD	Dwelling	52.7	53.3	52.6	-0.1	Negligible Beneficial	53.2	0.5	Negligible Adverse	41.2	41.7	41.6
18. ROWAN ROAD	Dwelling	60.7	61.3	60.3	-0.4	Negligible Beneficial	61.3	0.6	Negligible Adverse	48.4	48.9	48.9
19. ROWAN ROAD	Dwelling	52.5	53.1	52.5	0.0	No Change	53.1	0.6	Negligible Adverse	41.0	41.5	41.5
2. ROWAN ROAD	Dwelling	65.2	65.9	64.8	-0.4	Negligible Beneficial	65.8	0.6	Negligible Adverse	52.4	53.0	53.0
20. ROWAN ROAD	Dwelling	59.1	59.8	58.8	-0.3	Negligible Beneficial	59.7	0.6	Negligible Adverse	46.9	47.6	47.5
21. ROWAN ROAD	Dwelling	52.4	53.0	52.4	0.0	No Change	53.0	0.6	Negligible Adverse	40.9	41.4	41.4
22. ROWAN ROAD	Dwelling	58.5	59.3	58.2	-0.3	Negligible Beneficial	59.2	0.7	Negligible Adverse	46.4	47.1	47.0
23. ROWAN ROAD	Dwelling	52.5	53.1	52.5	0.0	No Change	53.0	0.5	Negligible Adverse	41.0	41.5	41.4
24. ROWAN ROAD	Dwelling	57.2	57.9	57.0	-0.2	Negligible Beneficial	57.8	0.6	Negligible Adverse	45.2	45.8	45.8
25. ROWAN ROAD	Dwelling	52.6	53.1	52.5	-0.1	Negligible Beneficial	53.1	0.5	Negligible Adverse	41.1	41.5	41.5
26. ROWAN ROAD	Dwelling	56.5	57.2	56.3	-0.2	Negligible Beneficial	57.1	0.6	Negligible Adverse	44.6	45.2	45.1
26. ROWAN ROAD	Dwelling	52.6	53.5	52.4	-0.2	Negligible Beneficial	53.3	0.7	Negligible Adverse	41.1	41.9	41.7
27. ROWAN ROAD	Dwelling	52.5	53.1	52.5	0.0	No Change	53.1	0.6	Negligible Adverse	41.0	41.5	41.5
28. ROWAN ROAD	Dwelling	51.4	52.0	51.4	0.0	No Change	52.0	0.6	Negligible Adverse	40.0	40.5	40.5
29. ROWAN ROAD	Dwelling	52.6	53.2	52.6	0.0	No Change	53.1	0.5	Negligible Adverse	41.1	41.6	41.5
3. ROWAN ROAD	Dwelling	56.1	56.6	56.0	-0.1	Negligible Beneficial	56.6	0.5	Negligible Adverse	44.2	44.7	44.7
30. ROWAN ROAD	Dwelling	51.6	52.1	51.6	0.0	No Change	52.1	0.5	Negligible Adverse	40.2	40.6	40.6
31. ROWAN ROAD	Dwelling	52.6	53.2	52.6	0.0	No Change	53.1	0.5	Negligible Adverse	41.1	41.6	41.5
32. ROWAN ROAD	Dwelling	51.4	52.0	51.4	0.0	Negligible Adverse	52.0	0.6	Negligible Adverse	40.5	40.5	40.5
33. ROWAN ROAD	Dwelling	52.3	52.8	52.3	0.0	No Change	52.8	0.5	Negligible Adverse	40.8	41.3	41.3
34. ROWAN ROAD	Dwelling	51.5	52.0	51.5	0.0	No Change	52.0	0.5	Negligible Adverse	40.1	40.5	40.5
35. ROWAN ROAD	Dwelling	52.8	53.2	52.8	0.0	No Change	53.2	0.4	Negligible Adverse	41.3	41.6	41.6
36. ROWAN ROAD	Dwelling	51.5	52.0	51.6	0.1	Negligible Adverse	52.0	0.5	Negligible Adverse	40.1	40.5	40.5
37. ROWAN ROAD	Dwelling	53.0	53.4	53.0	0.0	No Change	53.4	0.4	Negligible Adverse	41.4	41.8	41.8
38. ROWAN ROAD	Dwelling	51.7	52.2	51.8	0.1	Negligible Beneficial	52.2	0.5	Negligible Adverse	40.3	40.7	40.7
39. ROWAN ROAD	Dwelling	53.2	53.6	53.2	0.0	No Change	53.6	0.4	Negligible Adverse	41.6	42.0	42.0
4. ROWAN ROAD	Dwelling	62.3	63.0	62.0	-0.3	Negligible Beneficial	62.9	0.6	Negligible Adverse	49.8	50.4	50.3
40. ROWAN ROAD	Dwelling	51.8	52.3	51.9	0.1	Negligible Adverse	52.3	0.5	Negligible Adverse	40.4	40.8	40.8
41. ROWAN ROAD	Dwelling	53.2	53.7	53.3	0.1	Negligible Beneficial	53.7	0.5	Negligible Adverse	41.6	42.1	42.1
42. ROWAN ROAD	Dwelling	52.0	52.4	52.1	0.1	Negligible Adverse	52.4	0.4	Negligible Adverse	40.5	40.9	40.9
43. ROWAN ROAD	Dwelling	53.4	53.8	53.4	0.0	No Change	53.8	0.4	Negligible Adverse	41.8	42.2	42.2
44. ROWAN ROAD	Dwelling	52.1	52.6	52.2	0.1	Negligible Adverse	52.6	0.5	Negligible Adverse	40.6	41.1	41.1
45. ROWAN ROAD	Dwelling	53.4	53.8	53.5	0.1	Negligible Adverse	53.8	0.4	Negligible Adverse	41.8	42.2	42.2
46. ROWAN ROAD	Dwelling	52.4	52.9	52.5	0.1	Negligible Adverse	52.9	0.5	Negligible Adverse	40.9	41.3	41.3
47. ROWAN ROAD	Dwelling	53.4	53.8	53.5	0.1	Negligible Adverse	53.8	0.4	Negligible Adverse	41.8	42.2	42.2
48. ROWAN ROAD	Dwelling	52.3	52.7	52.3	0.0	No Change	52.7	0.4	Negligible Adverse	40.8	41.2	41.2
49. ROWAN ROAD	Dwelling	52.9	53.4	53.0	0.1	Negligible Adverse	53.4	0.5	Negligible Adverse	41.3	41.8	41.8
5. ROWAN ROAD	Dwelling	55.6	56.1	55.4	-0.2	Negligible Beneficial	56.1	0.5	Negligible Adverse	43.8	44.2	44.2
50. ROWAN ROAD	Dwelling	51.9	52.4	52.0	0.1	Negligible Adverse	52.4	0.5	Negligible Adverse	40.4	40.9	40.9
51. ROWAN ROAD	Dwelling	50.6	51.3	50.6	0.0	No Change	51.3	0.6	Negligible Adverse	39.3	39.9	39.8
52. ROWAN ROAD	Dwelling	51.3	51.9	51.3	0.0	No Change	51.9	0.6	Negligible Adverse	39.9	40.4	40.4
53. ROWAN ROAD	Dwelling	50.5	51.2	50.5	0.0	No Change	51.1	0.6	Negligible Adverse	39.2	39.8	39.7
54. ROWAN ROAD	Dwelling	51.2	51.9	51.2	0.0	No Change	51.9	0.7	Negligible Adverse	39.8	40.4	40.4
55. ROWAN ROAD	Dwelling	49.9	50.7	49.9	0.0	No Change	50.6	0.7	Negligible Adverse	38.6	39.4	39.3
56. ROWAN ROAD	Dwelling	51.1	51.8	51.1	0.0	No Change	51.7	0.6	Negligible Adverse	39.7	40.4	40.3
57. ROWAN ROAD	Dwelling	52.1	53.4	52.0	-0.1	Negligible Beneficial	53.1	1.0	Negligible Adverse	40.6	41.8	41.5
58. ROWAN ROAD	Dwelling	51.0	51.8	51.0	0.0	No Change	51.7	0.7	Negligible Adverse	39.6	40.4	40.3
59. ROWAN ROAD	Dwelling	52.3	53.7	52.2	-0.1	Negligible Beneficial	53.3	1.0	Negligible Adverse	40.8	42.1	41.7
6. ROWAN ROAD	Dwelling	60.7	61.3	60.3	-0.4	Negligible Beneficial	61.3	0.6	Negligible Adverse	48.4	48.9	48.9
60. ROWAN ROAD	Dwelling	51.0	51.8	51.0	0.0	No Change	51.7	0.7	Negligible Adverse	39.6	40.4	40.3
61. ROWAN ROAD	Dwelling	52.5	53.9	52.4	-0.1	Negligible Beneficial	53.6	1.1	Negligible Adverse	41.0	42.2	42.0
62. ROWAN ROAD	Dwelling	51.0	51.8	51.0	0.0	No Change	51.7	0.7	Negligible Adverse	39.6	40.4	40.3
63. ROWAN ROAD	Dwelling	53.1	54.5	53.0	-0.1	Negligible Beneficial	54.1	1.0	Negligible Adverse	41.5	42.8	42.4
64. ROWAN ROAD	Dwelling	50.9	51.8	50.9	0.0	No Change	51.6	0.7	Negligible Adverse	39.5	40.4	40.2
65. ROWAN ROAD	Dwelling	53.5	55.0	53.4	-0.1	Negligible Beneficial	54.6	1.1	Negligible Adverse	41.9	43.2	42.9
66. ROWAN ROAD	Dwelling	50.9	51.8	50.8	-0.1	Negligible Beneficial	51.6	0.7	Negligible Adverse	39.5	40.4	40.2
67. ROWAN ROAD	Dwelling	53.9	55.4	53.8	-0.1	Negligible Beneficial	55.0	1.1	Negligible Adverse	42.2	43.6	43.2
68. ROWAN ROAD	Dwelling	54.0	55.7	53.8	-0.2	Negligible Beneficial	55.2	1.2	Negligible Adverse	42.3	43.9	43.4
69. ROWAN ROAD	Dwelling	54.5	56.0	54.3	-0.2	Negligible Beneficial	55.6	1.1	Negligible Adverse	42.8	44.1	43.8
7. ROWAN ROAD	Dwelling	55.2	56.7	55.1	-0.1	Negligible Beneficial	55.7	0.5	Negligible Adverse	43.4	43.9	43.9
70. ROWAN ROAD	Dwelling	56.2	58.2	56.2	0.0	Negligible Beneficial	57.6	1.3	Negligible Adverse	44.2	46.1	45.6
71. ROWAN ROAD	Dwelling	54.9	56.5	54.8	-0.1	Negligible Beneficial	56.1	1.2	Negligible Adverse	43.1	44.6	44.2
72. ROWAN ROAD	Dwelling	56.8	58.7	56.7	-0.1	Negligible Beneficial	58.1	1.3	Negligible Adverse	44.9	46.6	46.0
73. ROWAN ROAD	Dwelling	56.0	57.6	55.8	-0.2	Negligible Beneficial	57.1	1.1	Negligible Adverse	44.1	45.6	45.1
74. ROWAN ROAD	Dwelling	58.4	60.2	58.2	-0.2	Negligible Beneficial	59.6	1.2	Negligible Adverse	46.3	47.9	47.4
75. ROWAN ROAD	Dwelling	55.6	57.3	55.5	-0.1	Negligible Beneficial	56.8	1.2	Negligible Adverse	43.8	45.3	44.9
76. ROWAN ROAD	Dwelling	59.9	61.8	59.8	-0.1	Negligible Beneficial	61.2	1.3	Negligible Adverse	47.6	49.4	48.8
77. ROWAN ROAD	Dwelling	57.6	59.5	57.5	-0.1	Negligible Beneficial	58.9	1.3	Negligible Adverse	45.6	47.3	46.7
78. ROWAN ROAD	Dwelling	61.0	62.8	60.8	-0.2	Negligible Beneficial	62.3	1.3	Negligible Adverse	48.6	50.3	49.8
79. ROWAN ROAD	Dwelling	57.6	59.5	57.5	-0.1	Negligible Beneficial	58.9	1.3	Negligible Adverse	45.6	47.3	46.7
8. ROWAN ROAD	Dwelling	59.1	59.8	58.8	-0.3	Negligible Beneficial	59.7	0.6	Negligible Adverse	46.9	47.6	47.5
80. ROWAN ROAD	Dwelling	62.5	64.4	62.3	-0.2	Negligible Beneficial	63.8	1.3	Negligible Adverse	50.0	51.7	51.2
81. ROWAN ROAD	Dwelling	57.6	59.5	57.5	-0.1	Negligible Beneficial	58.9	1.3	Negligible Adverse	45.6	47.3	46.7
82. ROWAN ROAD	Dwelling	64.9	66.8	64.7	-0.2	Negligible Beneficial	66.2	1.3	Negligible Adverse	52.1	53.9	53.3
83. ROWAN ROAD	Dwelling	57.6	59.5	57.5	-0.1	Negligible Beneficial	58.9	1.3	Negligible Adverse	45.6	47.3	46.7
84. ROWAN ROAD	Dwelling	70.5	72.4	70.4	-0.1	Negligible Beneficial	71.9	1.4	Negligible Adverse	57.2	58.9	58.4

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
FLAT D, 26, SANDILANDS DRIVE	Dwelling	52.1	52.5	52.2	0.1	Negligible Adverse	52.5	0.4	Negligible Adverse	40.6	41.0	41.0
FLAT E, 26, SANDILANDS DRIVE	Dwelling	52.1	52.5	52.2	0.1	Negligible Adverse	52.5	0.4	Negligible Adverse	40.6	41.0	41.0
FLAT F, 26, SANDILANDS DRIVE	Dwelling	52.1	52.5	52.2	0.1	Negligible Adverse	52.5	0.4	Negligible Adverse	40.6	41.0	41.0
FLAT A, 27, SANDILANDS DRIVE	Dwelling	55.3	55.7	55.6	0.3	Negligible Adverse	55.7	0.4	Negligible Adverse	43.5	43.9	43.9
FLAT B, 27, SANDILANDS DRIVE	Dwelling	55.3	55.7	55.6	0.3	Negligible Adverse	55.7	0.4	Negligible Adverse	43.5	43.9	43.9
FLAT C, 27, SANDILANDS DRIVE	Dwelling	55.3	55.7	55.6	0.3	Negligible Adverse	55.7	0.4	Negligible Adverse	43.5	43.9	43.9
FLAT D, 27, SANDILANDS DRIVE	Dwelling	55.3	55.7	55.6	0.3	Negligible Adverse	55.7	0.4	Negligible Adverse	43.5	43.9	43.9
FLAT E, 27, SANDILANDS DRIVE	Dwelling	55.3	55.7	55.6	0.3	Negligible Adverse	55.7	0.4	Negligible Adverse	43.5	43.9	43.9
FLAT F, 27, SANDILANDS DRIVE	Dwelling	55.3	55.7	55.6	0.3	Negligible Adverse	55.7	0.4	Negligible Adverse	43.5	43.9	43.9
FLAT A, 28, SANDILANDS DRIVE	Dwelling	49.3	49.7	49.5	0.2	Negligible Adverse	49.8	0.5	Negligible Adverse	38.1	38.5	38.6
FLAT B, 28, SANDILANDS DRIVE	Dwelling	49.3	49.7	49.5	0.2	Negligible Adverse	49.8	0.5	Negligible Adverse	38.1	38.5	38.6
FLAT C, 28, SANDILANDS DRIVE	Dwelling	49.3	49.7	49.5	0.2	Negligible Adverse	49.8	0.5	Negligible Adverse	38.1	38.5	38.6
FLAT D, 28, SANDILANDS DRIVE	Dwelling	49.3	49.7	49.5	0.2	Negligible Adverse	49.8	0.5	Negligible Adverse	38.1	38.5	38.6
FLAT A, 29, SANDILANDS DRIVE	Dwelling	55.2	55.5	55.4	0.2	Negligible Adverse	55.6	0.4	Negligible Adverse	43.4	43.7	43.8
FLAT B, 29, SANDILANDS DRIVE	Dwelling	55.2	55.5	55.4	0.2	Negligible Adverse	55.6	0.4	Negligible Adverse	43.4	43.7	43.8
FLAT C, 29, SANDILANDS DRIVE	Dwelling	55.2	55.5	55.4	0.2	Negligible Adverse	55.6	0.4	Negligible Adverse	43.4	43.7	43.8
FLAT D, 29, SANDILANDS DRIVE	Dwelling	55.2	55.5	55.4	0.2	Negligible Adverse	55.6	0.4	Negligible Adverse	43.4	43.7	43.8
FLAT A, 30, SANDILANDS DRIVE	Dwelling	48.3	48.8	48.4	0.1	Negligible Adverse	48.8	0.5	Negligible Adverse	37.2	37.7	37.7
FLAT B, 30, SANDILANDS DRIVE	Dwelling	48.3	48.8	48.4	0.1	Negligible Adverse	48.8	0.5	Negligible Adverse	37.2	37.7	37.7
FLAT C, 30, SANDILANDS DRIVE	Dwelling	48.3	48.8	48.4	0.1	Negligible Adverse	48.8	0.5	Negligible Adverse	37.2	37.7	37.7
FLAT D, 30, SANDILANDS DRIVE	Dwelling	48.3	48.8	48.4	0.1	Negligible Adverse	48.8	0.5	Negligible Adverse	37.2	37.7	37.7
FLAT E, 30, SANDILANDS DRIVE	Dwelling	48.3	48.8	48.4	0.1	Negligible Adverse	48.8	0.5	Negligible Adverse	37.2	37.7	37.7
FLAT F, 30, SANDILANDS DRIVE	Dwelling	48.3	48.8	48.4	0.1	Negligible Adverse	48.8	0.5	Negligible Adverse	37.2	37.7	37.7
FLAT A, 31, SANDILANDS DRIVE	Dwelling	51.5	52.0	51.8	0.3	Negligible Adverse	52.0	0.5	Negligible Adverse	40.1	40.5	40.5
FLAT B, 31, SANDILANDS DRIVE	Dwelling	51.5	52.0	51.8	0.3	Negligible Adverse	52.0	0.5	Negligible Adverse	40.1	40.5	40.5
FLAT C, 31, SANDILANDS DRIVE	Dwelling	51.5	52.0	51.8	0.3	Negligible Adverse	52.0	0.5	Negligible Adverse	40.1	40.5	40.5
FLAT D, 31, SANDILANDS DRIVE	Dwelling	51.5	52.0	51.8	0.3	Negligible Adverse	52.0	0.5	Negligible Adverse	40.1	40.5	40.5
FLAT E, 31, SANDILANDS DRIVE	Dwelling	51.5	52.0	51.8	0.3	Negligible Adverse	52.0	0.5	Negligible Adverse	40.1	40.5	40.5
FLAT F, 31, SANDILANDS DRIVE	Dwelling	51.5	52.0	51.8	0.3	Negligible Adverse	52.0	0.5	Negligible Adverse	40.1	40.5	40.5
FLAT A, 32, SANDILANDS DRIVE	Dwelling	47.8	48.4	48.0	0.2	Negligible Adverse	48.4	0.6	Negligible Adverse	36.8	37.3	37.3
FLAT B, 32, SANDILANDS DRIVE	Dwelling	47.8	48.4	48.0	0.2	Negligible Adverse	48.4	0.6	Negligible Adverse	36.8	37.3	37.3
FLAT C, 32, SANDILANDS DRIVE	Dwelling	47.8	48.4	48.0	0.2	Negligible Adverse	48.4	0.6	Negligible Adverse	36.8	37.3	37.3
FLAT D, 32, SANDILANDS DRIVE	Dwelling	47.8	48.4	48.0	0.2	Negligible Adverse	48.4	0.6	Negligible Adverse	36.8	37.3	37.3
FLAT E, 32, SANDILANDS DRIVE	Dwelling	47.8	48.4	48.0	0.2	Negligible Adverse	48.4	0.6	Negligible Adverse	36.8	37.3	37.3
FLAT F, 32, SANDILANDS DRIVE	Dwelling	47.8	48.4	48.0	0.2	Negligible Adverse	48.4	0.6	Negligible Adverse	36.8	37.3	37.3
Scheduled Monument (Aberdeenshire Canal remains of)	National Cycle Route	65.6	66.5	65.8	0.2	Negligible Adverse	66.6	1.0	Negligible Adverse	52.8	53.6	53.7
1, SMITHFIELD DRIVE	Dwelling	58.5	59.7	58.4	-0.1	Negligible Beneficial	59.6	1.1	Negligible Adverse	46.4	47.5	47.4
10, SMITHFIELD DRIVE	Dwelling	58.8	59.9	58.8	0.0	No Change	59.9	1.1	Negligible Adverse	46.7	47.6	47.6
101, SMITHFIELD DRIVE	Dwelling	59.9	56.5	55.7	-0.2	Negligible Beneficial	56.4	0.5	Negligible Adverse	44.0	44.6	44.5
103, SMITHFIELD DRIVE	Dwelling	56.4	56.0	55.2	-0.2	Negligible Beneficial	55.4	0.4	Negligible Adverse	43.6	44.1	44.0
105, SMITHFIELD DRIVE	Dwelling	55.9	55.8	55.1	-0.1	Negligible Beneficial	56.2	0.3	Negligible Adverse	44.0	44.6	44.0
107, SMITHFIELD DRIVE	Dwelling	57.0	57.5	56.6	-0.4	Negligible Beneficial	57.1	0.1	Negligible Adverse	45.0	45.5	45.1
109, SMITHFIELD DRIVE	Dwelling	57.3	57.8	56.9	-0.4	Negligible Beneficial	57.2	-0.1	Negligible Beneficial	45.3	45.8	45.2
11, SMITHFIELD DRIVE	Dwelling	56.2	57.3	56.0	-0.2	Negligible Beneficial	57.2	1.0	Negligible Adverse	44.3	45.3	45.2
12, SMITHFIELD DRIVE	Dwelling	58.8	59.9	58.8	0.0	No Change	59.9	1.1	Negligible Adverse	46.7	47.6	47.6
13, SMITHFIELD DRIVE	Dwelling	55.7	56.8	55.5	-0.2	Negligible Beneficial	56.7	1.0	Negligible Adverse	43.9	44.9	44.8
14, SMITHFIELD DRIVE	Dwelling	58.8	59.9	58.8	0.0	No Change	59.9	1.1	Negligible Adverse	46.7	47.6	47.6
15, SMITHFIELD DRIVE	Dwelling	55.2	56.2	55.0	-0.2	Negligible Beneficial	56.2	1.0	Negligible Adverse	43.4	44.3	44.3
16, SMITHFIELD DRIVE	Dwelling	58.8	59.9	58.8	0.0	No Change	59.9	1.1	Negligible Adverse	46.7	47.6	47.6
18, SMITHFIELD DRIVE	Dwelling	57.6	58.8	57.6	0.0	No Change	58.7	1.1	Negligible Adverse	45.6	46.7	46.6
18, SMITHFIELD DRIVE	Dwelling	57.6	58.8	57.6	0.0	No Change	58.7	1.1	Negligible Adverse	45.6	46.7	46.6
2, SMITHFIELD DRIVE	Dwelling	61.3	62.4	61.3	0.0	No Change	62.4	1.1	Negligible Adverse	48.9	49.9	49.9
20, SMITHFIELD DRIVE	Dwelling	56.4	57.4	56.3	-0.1	Negligible Beneficial	57.4	1.0	Negligible Adverse	44.5	45.4	45.4
20, SMITHFIELD DRIVE	Dwelling	56.4	57.4	56.3	-0.1	Negligible Beneficial	57.4	1.0	Negligible Adverse	44.5	45.4	45.4
22, SMITHFIELD DRIVE	Dwelling	54.6	55.7	54.3	-0.3	Negligible Beneficial	55.5	0.9	Negligible Adverse	42.9	43.9	43.7
24, SMITHFIELD DRIVE	Dwelling	54.8	55.9	54.6	-0.2	Negligible Beneficial	55.8	1.0	Negligible Adverse	43.1	44.0	44.0
26, SMITHFIELD DRIVE	Dwelling	54.9	56.0	54.6	-0.3	Negligible Beneficial	55.8	0.9	Negligible Adverse	43.1	44.1	44.0
28, SMITHFIELD DRIVE	Dwelling	54.8	55.9	54.6	-0.2	Negligible Beneficial	55.8	1.0	Negligible Adverse	43.1	44.0	44.0
3, SMITHFIELD DRIVE	Dwelling	57.3	58.6	57.2	-0.1	Negligible Beneficial	58.4	1.1	Negligible Adverse	45.3	46.5	46.3
30, SMITHFIELD DRIVE	Dwelling	53.4	54.5	53.3	-0.1	Negligible Beneficial	54.4	1.0	Negligible Adverse	41.8	42.8	42.7
32, SMITHFIELD DRIVE	Dwelling	53.5	54.6	53.3	-0.2	Negligible Beneficial	54.5	1.0	Negligible Adverse	41.9	42.9	42.8
34, SMITHFIELD DRIVE	Dwelling	56.7	57.8	56.5	-0.2	Negligible Beneficial	57.6	0.9	Negligible Adverse	44.8	45.8	45.6
36, SMITHFIELD DRIVE	Dwelling	56.6	57.7	56.4	-0.2	Negligible Beneficial	57.5	0.9	Negligible Adverse	44.7	45.7	45.5
38, SMITHFIELD DRIVE	Dwelling	56.2	57.3	56.0	-0.2	Negligible Beneficial	57.2	1.0	Negligible Adverse	44.3	45.3	45.2
4, SMITHFIELD DRIVE	Dwelling	61.3	62.4	61.3	0.0	No Change	62.4	1.1	Negligible Adverse	48.9	49.9	49.9
40, SMITHFIELD DRIVE	Dwelling	56.1	57.2	55.9	-0.2	Negligible Beneficial	57.1	1.0	Negligible Adverse	44.2	45.2	45.1
42, SMITHFIELD DRIVE	Dwelling	56.4	57.4	56.2	-0.2	Negligible Beneficial	57.3	0.9	Negligible Adverse	44.5	45.4	45.3
44, SMITHFIELD DRIVE	Dwelling	56.6	57.6	56.4	-0.2	Negligible Beneficial	57.5	0.9	Negligible Adverse	44.7	45.6	45.5
46, SMITHFIELD DRIVE	Dwelling	54.8	55.8	54.6	-0.2	Negligible Beneficial	55.7	0.9	Negligible Adverse	43.1	44.0	43.9
48, SMITHFIELD DRIVE	Dwelling	53.4	54.4	53.3	-0.1	Negligible Beneficial	54.4	1.0	Negligible Adverse	41.8	42.7	42.7
5, SMITHFIELD DRIVE	Dwelling	56.7	57.7	56.5	-0.2	Negligible Beneficial	57.7	1.0	Negligible Adverse	44.8	45.7	45.7
50, SMITHFIELD DRIVE	Dwelling	54.1	55.1	54.0	-0.1	Negligible Beneficial	55.0	0.9	Negligible Adverse	42.4	43.3	43.2
52, SMITHFIELD DRIVE	Dwelling	54.0	55.0	53.8	-0.2	Negligible Beneficial	54.9	0.9	Negligible Adverse	42.3	43.2	43.1
54, SMITHFIELD DRIVE	Dwelling	53.8	54.8	53.6	-0.2	Negligible Beneficial	54.7	0.9	Negligible Adverse	42.2	43.1	43.0
56, SMITHFIELD DRIVE	Dwelling	53.8	54.8	53.6	-0.2	Negligible Beneficial	54.7	0.9	Negligible Adverse	42.2	43.1	43.0
58, SMITHFIELD DRIVE	Dwelling	54.5	55.3	54.4	-0.1	Negligible Beneficial	55.3	0.8	Negligible Adverse	42.8	43.5	43.5
6, SMITHFIELD DRIVE	Dwelling	61.3	62.4	61.3	0.0	No Change	62.4	1.1	Negligible Adverse	48.9	49.9	49.9
60, SMITHFIELD DRIVE	Dwelling	55.1	55.9	54.9	-0.2	Negligible Beneficial	55.9	0.8	Negligible Adverse	43.3	44.0	44.0
62, SMITHFIELD DRIVE	Dwelling	55.3	56.2	55.2	-0.1	Negligible Beneficial	56.2	0.9	Negligible Adverse	43.5	44.3	44.3
64, SMITHFIELD DRIVE	Dwelling	55.6	56.5	55.4	-0.2	Negligible Beneficial	56.4	0.8	Negligible Adverse	43.8	44.6	44.5
66, SMITHFIELD DRIVE	Dwelling	55.8	56.8	55.8	-0.2	Negligible Beneficial	56.8	0.8	Negligible Adverse	44.1	44.9	44.9
68, SMITHFIELD DRIVE	Dwelling	55.4	56.4	55.4	-0.1	Negligible Beneficial	56.3	0.8	Negligible Adverse	43.7	44.5	44.4
7, SMITHFIELD DRIVE	Dwelling	56.2	57.3	56.1	-0.1	Negligible Beneficial	57.2	1.0	Negligible Adverse	44.3	45.3	45.2

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
70. SMITHFIELD DRIVE	Dwelling	56.2	57.0	56.0	-0.2	Negligible Beneficial	56.9	0.7	Negligible Adverse	44.3	45.0	44.9
72. SMITHFIELD DRIVE	Dwelling	56.1	56.8	56.0	-0.1	Negligible Beneficial	56.7	0.6	Negligible Adverse	44.2	44.9	44.8
74. SMITHFIELD DRIVE	Dwelling	56.4	57.0	56.4	0.0	No Change	56.9	0.5	Negligible Adverse	44.5	45.0	44.9
76. SMITHFIELD DRIVE	Dwelling	56.4	57.0	56.4	0.0	No Change	56.8	0.4	Negligible Adverse	44.5	45.0	44.9
77. SMITHFIELD DRIVE	Dwelling	53.6	54.4	53.5	-0.1	Negligible Beneficial	54.4	0.8	Negligible Adverse	42.0	42.7	42.7
78. SMITHFIELD DRIVE	Dwelling	56.3	56.9	56.3	0.0	No Change	56.8	0.5	Negligible Adverse	44.4	44.9	44.9
79. SMITHFIELD DRIVE	Dwelling	53.5	54.2	53.3	-0.2	Negligible Beneficial	54.2	0.7	Negligible Adverse	41.9	42.5	42.5
8. SMITHFIELD DRIVE	Dwelling	61.3	62.4	61.3	0.0	No Change	62.4	1.1	Negligible Adverse	48.9	49.9	49.9
80. SMITHFIELD DRIVE	Dwelling	56.9	57.4	56.9	0.0	No Change	57.3	0.4	Negligible Adverse	44.9	45.4	45.3
81. SMITHFIELD DRIVE	Dwelling	53.5	54.2	53.4	-0.1	Negligible Beneficial	54.2	0.7	Negligible Adverse	41.9	42.5	42.5
82. SMITHFIELD DRIVE	Dwelling	57.4	58.0	57.5	0.1	Negligible Adverse	57.7	0.3	Negligible Adverse	45.4	45.9	45.7
83. SMITHFIELD DRIVE	Dwelling	53.8	53.6	54.4	-0.2	Negligible Beneficial	54.5	0.7	Negligible Adverse	42.2	42.7	42.8
84. SMITHFIELD DRIVE	Dwelling	57.1	57.2	57.2	0.1	Negligible Adverse	57.4	0.3	Negligible Adverse	45.1	45.6	45.4
85. SMITHFIELD DRIVE	Dwelling	55.3	56.0	55.1	-0.2	Negligible Beneficial	56.0	0.7	Negligible Adverse	43.5	44.1	44.1
86. SMITHFIELD DRIVE	Dwelling	59.5	60.1	59.4	-0.1	Negligible Beneficial	59.7	0.2	Negligible Adverse	47.3	47.8	47.5
87. SMITHFIELD DRIVE	Dwelling	55.2	56.0	55.1	-0.1	Negligible Beneficial	55.9	0.7	Negligible Adverse	43.4	44.1	44.0
88. SMITHFIELD DRIVE	Dwelling	60.3	60.8	60.0	-0.3	Negligible Beneficial	60.3	0.0	No Change	48.0	48.5	48.0
89. SMITHFIELD DRIVE	Dwelling	55.1	55.8	54.9	-0.2	Negligible Beneficial	55.7	0.6	Negligible Adverse	43.3	44.0	43.9
9. SMITHFIELD DRIVE	Dwelling	56.5	57.6	56.3	-0.2	Negligible Beneficial	57.5	1.0	Negligible Adverse	44.6	45.6	45.5
91. SMITHFIELD DRIVE	Dwelling	54.9	55.6	54.7	-0.2	Negligible Beneficial	55.5	0.6	Negligible Adverse	43.1	43.8	43.7
93. SMITHFIELD DRIVE	Dwelling	55.3	56.0	55.2	-0.1	Negligible Beneficial	55.9	0.6	Negligible Adverse	43.5	44.1	44.0
94. SMITHFIELD DRIVE	Dwelling	64.9	64.9	63.5	-1.4	Minor Beneficial	64.2	-0.7	Negligible Beneficial	52.1	52.1	51.5
95. SMITHFIELD DRIVE	Dwelling	55.1	55.7	54.9	-0.2	Negligible Beneficial	55.6	0.5	Negligible Adverse	43.3	43.9	43.8
96. SMITHFIELD DRIVE	Dwelling	65.1	65.1	63.7	-1.4	Minor Beneficial	64.4	-0.7	Negligible Beneficial	52.3	52.3	51.7
97. SMITHFIELD DRIVE	Dwelling	55.4	56.0	55.2	-0.2	Negligible Beneficial	55.9	0.5	Negligible Adverse	43.6	44.1	44.0
99. SMITHFIELD DRIVE	Dwelling	55.9	56.1	55.1	-0.2	Negligible Beneficial	56.2	0.3	Negligible Adverse	43.1	44.0	44.0
SMITHFIELD COURT, 14, SMITHFIELD DRIVE	Dwelling	60.8	61.2	60.3	-0.5	Negligible Beneficial	60.8	-0.2	Negligible Beneficial	48.5	48.8	48.3
SMITHFIELD COURT, 16, SMITHFIELD DRIVE	Dwelling	63.0	63.4	62.7	-0.3	Negligible Beneficial	62.9	-0.1	Negligible Beneficial	50.4	50.8	50.3
SMITHFIELD COURT, 25, SMITHFIELD DRIVE	Dwelling	63.6	64.1	63.3	-0.3	Negligible Beneficial	63.6	0.0	No Change	51.0	51.4	51.0
SMITHFIELD COURT, 15, SMITHFIELD DRIVE	Dwelling	62.4	62.8	62.1	-0.3	Negligible Beneficial	62.3	-0.1	Negligible Beneficial	49.9	50.3	49.8
SMITHFIELD COURT, 21, SMITHFIELD DRIVE	Dwelling	65.6	66.2	65.1	-0.5	Negligible Beneficial	65.6	0.0	No Change	52.8	53.3	52.8
SMITHFIELD COURT, 22, SMITHFIELD DRIVE	Dwelling	65.9	66.5	65.4	-0.5	Negligible Beneficial	65.9	0.0	No Change	53.0	53.6	53.0
SMITHFIELD COURT, 23, SMITHFIELD DRIVE	Dwelling	66.2	66.8	65.7	-0.5	Negligible Beneficial	66.3	0.1	Negligible Beneficial	53.3	53.9	53.4
SMITHFIELD COURT, 26, SMITHFIELD DRIVE	Dwelling	64.4	64.9	63.9	-0.5	Negligible Beneficial	64.3	-0.1	Negligible Beneficial	51.7	52.1	51.6
SMITHFIELD COURT, 27, SMITHFIELD DRIVE	Dwelling	64.8	65.4	64.4	-0.4	Negligible Beneficial	64.8	0.0	No Change	52.1	52.6	52.1
SMITHFIELD COURT, 28, SMITHFIELD DRIVE	Dwelling	65.2	65.8	64.8	-0.4	Negligible Beneficial	65.2	0.0	No Change	52.4	53.0	52.4
ALLOTMENTS, SMITHFIELD LANE	Allotments	52.3	53.1	52.2	-0.1	Negligible Beneficial	53.1	0.8	Negligible Adverse	40.8	41.5	41.5
SMITHFIELD LODGE, SMITHFIELD LODGE, CLARKE STREET	Dwelling	53.3	54.1	53.2	-0.1	Negligible Beneficial	54.2	0.9	Negligible Adverse	41.7	42.4	42.5
ST JOHN'S CHURCH FOR DEAF PEOPLE, 13, SMITHFIELD ROAD	Church	49.3	51.2	49.4	0.1	Negligible Adverse	51.3	2.0	Negligible Adverse	38.1	39.8	39.9
10. SMITHFIELD ROAD	Dwelling	50.1	51.4	50.1	0.0	No Change	51.6	1.5	Negligible Adverse	38.8	40.0	40.2
12. SMITHFIELD ROAD	Dwelling	50.1	51.4	50.1	0.0	No Change	51.6	1.5	Negligible Adverse	38.8	40.0	40.2
14. SMITHFIELD ROAD	Dwelling	50.1	51.4	50.1	0.0	No Change	51.6	1.5	Negligible Adverse	38.8	40.0	40.2
16. SMITHFIELD ROAD	Dwelling	50.1	51.4	50.1	0.0	No Change	51.6	1.5	Negligible Adverse	38.8	40.0	40.2
17. SMITHFIELD ROAD	Dwelling	50.5	51.8	50.6	0.1	Negligible Adverse	52.1	1.6	Negligible Adverse	39.2	40.4	40.6
18. SMITHFIELD ROAD	Dwelling	53.2	54.5	53.3	0.1	Negligible Beneficial	54.8	1.6	Negligible Adverse	41.6	42.8	43.1
19. SMITHFIELD ROAD	Dwelling	50.5	51.8	50.6	0.1	Negligible Adverse	52.1	1.6	Negligible Adverse	39.2	40.4	40.6
2. SMITHFIELD ROAD	Dwelling	48.8	50.2	48.9	0.1	Negligible Adverse	50.3	1.5	Negligible Adverse	37.7	38.9	39.0
20. SMITHFIELD ROAD	Dwelling	53.2	54.5	53.9	0.1	Negligible Beneficial	54.8	1.6	Negligible Adverse	41.6	42.8	43.1
21. SMITHFIELD ROAD	Dwelling	51.3	52.3	51.3	0.0	No Change	52.7	1.4	Negligible Adverse	39.9	40.8	41.2
22. SMITHFIELD ROAD	Dwelling	53.2	54.5	53.3	0.1	Negligible Beneficial	54.8	1.6	Negligible Adverse	41.6	42.8	43.1
23. SMITHFIELD ROAD	Dwelling	51.2	52.3	51.2	0.0	No Change	52.6	1.4	Negligible Adverse	39.8	40.8	41.1
24. SMITHFIELD ROAD	Dwelling	53.2	54.5	53.3	0.1	Negligible Beneficial	54.8	1.6	Negligible Adverse	41.6	42.8	43.1
25. SMITHFIELD ROAD	Dwelling	51.6	52.9	51.8	0.0	No Change	53.2	1.4	Negligible Adverse	40.4	41.3	41.6
26. SMITHFIELD ROAD	Dwelling	61.1	62.3	61.2	0.1	Negligible Adverse	62.7	1.6	Negligible Adverse	48.7	49.8	50.2
27. SMITHFIELD ROAD	Dwelling	51.9	52.9	51.9	0.0	No Change	53.3	1.4	Negligible Adverse	40.4	41.3	41.7
28. SMITHFIELD ROAD	Dwelling	61.1	62.3	61.2	0.1	Negligible Adverse	62.7	1.6	Negligible Adverse	48.7	49.8	50.2
29. SMITHFIELD ROAD	Dwelling	52.5	53.6	52.6	0.1	Negligible Adverse	54.0	1.5	Negligible Adverse	41.0	42.0	42.3
30. SMITHFIELD ROAD	Dwelling	61.1	62.3	61.2	0.1	Negligible Adverse	62.7	1.6	Negligible Adverse	48.7	49.8	50.2
31. SMITHFIELD ROAD	Dwelling	52.7	53.7	52.7	0.0	No Change	54.1	1.4	Negligible Adverse	41.2	42.1	42.4
32. SMITHFIELD ROAD	Dwelling	61.1	62.3	61.2	0.1	Negligible Adverse	62.7	1.6	Negligible Adverse	48.7	49.8	50.2
33. SMITHFIELD ROAD	Dwelling	54.8	55.8	54.8	0.0	No Change	56.3	1.5	Negligible Adverse	43.1	44.0	44.4
34. SMITHFIELD ROAD	Dwelling	62.7	63.9	62.8	0.1	Negligible Beneficial	64.4	1.7	Negligible Adverse	50.2	51.2	51.7
35. SMITHFIELD ROAD	Dwelling	54.9	56.0	54.9	0.0	No Change	56.4	1.5	Negligible Adverse	43.1	44.1	44.5
36. SMITHFIELD ROAD	Dwelling	52.0	52.6	52.0	0.0	No Change	53.1	1.1	Negligible Adverse	40.5	41.5	41.5
37. SMITHFIELD ROAD	Dwelling	57.0	58.1	57.0	0.0	No Change	58.6	1.6	Negligible Adverse	45.0	46.0	46.5
38. SMITHFIELD ROAD	Dwelling	52.0	52.6	52.0	0.0	No Change	53.1	1.1	Negligible Adverse	40.5	41.5	41.5
39. SMITHFIELD ROAD	Dwelling	57.4	58.5	57.4	0.0	No Change	58.9	1.5	Negligible Adverse	45.4	46.4	46.7
4. SMITHFIELD ROAD	Dwelling	48.8	50.2	48.9	0.1	Negligible Adverse	50.3	1.5	Negligible Adverse	37.7	38.9	39.0
40. SMITHFIELD ROAD	Dwelling	52.0	52.6	52.0	0.0	No Change	53.1	1.1	Negligible Adverse	40.5	41.1	41.5
41. SMITHFIELD ROAD	Dwelling	54.8	55.8	54.8	0.0	No Change	56.3	1.5	Negligible Adverse	43.1	44.0	44.4
42. SMITHFIELD ROAD	Dwelling	52.0	52.6	52.0	0.0	No Change	53.1	1.1	Negligible Adverse	40.5	41.1	41.5
43. SMITHFIELD ROAD	Dwelling	54.8	55.8	54.8	0.0	No Change	56.3	1.5	Negligible Adverse	43.1	44.0	44.4
44. SMITHFIELD ROAD	Dwelling	51.9	52.5	51.9	0.0	No Change	53.0	1.1	Negligible Adverse	40.4	41.0	41.4
45. SMITHFIELD ROAD	Dwelling	54.8	55.8	54.8	0.0	No Change	56.3	1.5	Negligible Adverse	43.1	44.0	44.4
46. SMITHFIELD ROAD	Dwelling	51.9	52.5	51.9	0.0	No Change	53.0	1.1	Negligible Adverse	40.4	41.0	41.4
47. SMITHFIELD ROAD	Dwelling	54.8	55.8	54.8	0.0	No Change	56.3	1.5	Negligible Adverse	43.1	44.0	44.4
48. SMITHFIELD ROAD	Dwelling	51.9	52.5	51.9	0.0	No Change	53.0	1.1	Negligible Adverse	40.4	41.0	41.4
49. SMITHFIELD ROAD	Dwelling	51.3	52.2	51.3	0.0	No Change	52.6	1.3	Negligible Adverse	39.9	40.7	41.1
50. SMITHFIELD ROAD	Dwelling	51.9	52.5	51.9	0.0	No Change	53.0	1.1	Negligible Adverse	40.4	41.0	41.4
51. SMITHFIELD ROAD	Dwelling	51.3	52.2	51.3	0.0	No Change	52.6	1.3	Negligible Adverse	40.2	40.7	41.1
52. SMITHFIELD ROAD	Dwelling	51.6	52.2	51.6	0.0	No Change	52.7	1.1	Negligible Adverse	40.6	41.2	41.2
53. SMITHFIELD ROAD	Dwelling	51.3	52.2	51.3	0.0	No Change	52.6	1.3	Negligible Adverse	39.9	40.7	41.1

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Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
STEWART PARK COURT, 35, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 36, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 37, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 38, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 39, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 40, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 41, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 42, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 43, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 44, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 45, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 46, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 47, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 48, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 49, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 50, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 51, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 52, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 53, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 54, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 55, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 56, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 57, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Adverse	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
STEWART PARK COURT, 58, STEWART PARK PLACE	Dwelling	66.1	67.2	65.9	-0.2	Negligible Beneficial	67.1	1.0	Negligible Adverse	53.2	54.2	54.1
1, STEWART PARK PLACE	Dwelling	63.7	65.2	63.4	-0.3	Negligible Beneficial	65.0	1.3	Negligible Adverse	51.1	52.4	52.2
10, STEWART PARK PLACE	Dwelling	60.1	61.2	59.9	-0.2	Negligible Beneficial	61.2	1.0	Negligible Adverse	47.9	48.8	47.7
11, STEWART PARK PLACE	Dwelling	59.4	60.6	59.2	-0.2	Negligible Beneficial	60.4	1.0	Negligible Adverse	47.2	48.3	48.1
12, STEWART PARK PLACE	Dwelling	58.9	60.2	58.7	-0.2	Negligible Beneficial	60.0	1.1	Negligible Adverse	46.7	47.9	47.7
13, STEWART PARK PLACE	Dwelling	58.8	60.1	58.6	-0.2	Negligible Beneficial	59.9	1.1	Negligible Adverse	46.7	47.8	47.6
14, STEWART PARK PLACE	Dwelling	60.5	61.8	60.3	-0.2	Negligible Beneficial	61.7	1.2	Negligible Adverse	48.2	49.4	49.3
15, STEWART PARK PLACE	Dwelling	57.4	58.6	57.2	-0.2	Negligible Beneficial	58.6	1.2	Negligible Adverse	45.4	46.5	46.5
16, STEWART PARK PLACE	Dwelling	56.9	58.0	56.7	-0.2	Negligible Beneficial	58.0	1.1	Negligible Adverse	44.9	45.9	45.9
17, STEWART PARK PLACE	Dwelling	54.0	54.8	53.8	-0.2	Negligible Beneficial	54.8	0.8	Negligible Adverse	42.3	43.1	43.1
18, STEWART PARK PLACE	Dwelling	54.5	55.3	54.3	-0.2	Negligible Beneficial	55.4	0.9	Negligible Adverse	42.8	43.5	43.6
2, STEWART PARK PLACE	Dwelling	63.2	64.6	62.9	-0.3	Negligible Beneficial	64.5	1.3	Negligible Adverse	50.6	51.9	51.8
3, STEWART PARK PLACE	Dwelling	62.1	63.6	61.9	-0.2	Negligible Beneficial	63.4	1.3	Negligible Adverse	49.6	51.0	50.8
4, STEWART PARK PLACE	Dwelling	62.1	63.6	61.8	-0.3	Negligible Beneficial	63.5	1.4	Negligible Adverse	49.6	51.0	50.9
5, STEWART PARK PLACE	Dwelling	56.4	58.0	56.1	-0.3	Negligible Beneficial	57.7	1.3	Negligible Adverse	44.5	45.9	45.7
6, STEWART PARK PLACE	Dwelling	59.8	60.9	59.5	-0.3	Negligible Beneficial	60.7	0.9	Negligible Adverse	47.6	48.5	48.4
7, STEWART PARK PLACE	Dwelling	60.4	61.5	60.1	-0.3	Negligible Beneficial	61.3	0.9	Negligible Adverse	48.1	49.1	48.9
8, STEWART PARK PLACE	Dwelling	60.3	61.5	60.0	-0.3	Negligible Beneficial	61.3	1.0	Negligible Adverse	48.0	49.1	48.9
9, STEWART PARK PLACE	Dwelling	54.9	56.1	54.6	-0.3	Negligible Beneficial	55.9	1.0	Negligible Adverse	43.1	44.2	44.0
STEWART PARK, LODGE, STEWART PARK, HILTON ROAD	Dwelling	48.4	48.9	48.4	0.0	No Change	49.4	1.0	Negligible Adverse	37.3	37.7	38.2
1, STRACHAN PLACE	Dwelling	49.8	49.7	49.9	0.1	Negligible Adverse	50.6	0.8	Negligible Adverse	38.6	38.5	39.3
10, STRACHAN PLACE	Dwelling	51.3	51.1	51.4	0.1	Negligible Adverse	52.1	0.8	Negligible Adverse	39.9	39.7	40.6
11, STRACHAN PLACE	Dwelling	51.3	51.0	51.4	0.1	Negligible Adverse	52.1	0.8	Negligible Adverse	39.9	39.6	40.6
12, STRACHAN PLACE	Dwelling	51.4	51.1	51.5	0.1	Negligible Adverse	52.2	0.8	Negligible Adverse	40.0	39.7	40.7
2, STRACHAN PLACE	Dwelling	49.4	50.0	49.5	0.1	Negligible Adverse	50.5	1.1	Negligible Adverse	38.2	38.7	39.2
3, STRACHAN PLACE	Dwelling	50.2	50.7	50.3	0.1	Negligible Beneficial	51.2	1.0	Negligible Adverse	38.9	39.4	39.8
4, STRACHAN PLACE	Dwelling	50.5	51.0	50.6	0.1	Negligible Adverse	51.6	1.1	Negligible Adverse	39.2	39.6	40.2
5, STRACHAN PLACE	Dwelling	50.6	50.3	50.7	0.1	Negligible Adverse	51.3	0.7	Negligible Adverse	39.3	39.0	39.9
6, STRACHAN PLACE	Dwelling	50.4	50.1	50.5	0.1	Negligible Adverse	51.1	0.7	Negligible Adverse	39.1	38.8	39.7
7, STRACHAN PLACE	Dwelling	51.0	50.7	51.1	0.1	Negligible Adverse	51.8	0.8	Negligible Adverse	39.6	39.4	40.4
8, STRACHAN PLACE	Dwelling	51.0	50.7	51.1	0.1	Negligible Adverse	51.7	0.7	Negligible Adverse	39.6	39.4	40.3
9, STRACHAN PLACE	Dwelling	51.5	51.3	51.6	0.1	Negligible Adverse	52.3	0.8	Negligible Adverse	40.1	39.9	40.8
1, SUMMER STREET, WOODSIDE	Dwelling	51.2	52.3	51.3	0.1	Negligible Beneficial	52.2	1.0	Negligible Adverse	39.8	40.8	40.7
11, SUMMER STREET, WOODSIDE	Dwelling	50.6	52.6	50.7	0.1	Negligible Adverse	52.0	1.4	Negligible Adverse	39.3	41.1	40.5
13, SUMMER STREET, WOODSIDE	Dwelling	50.5	52.4	50.6	0.1	Negligible Adverse	51.9	1.4	Negligible Adverse	39.2	40.9	40.4
15, SUMMER STREET, WOODSIDE	Dwelling	50.3	51.9	50.4	0.1	Negligible Adverse	51.5	1.2	Negligible Adverse	39.0	40.4	40.1
15, SUMMER STREET, WOODSIDE	Dwelling	50.7	52.4	50.9	0.2	Negligible Adverse	52.0	1.3	Negligible Adverse	39.4	40.9	40.5
15, SUMMER STREET, WOODSIDE	Dwelling	50.7	52.4	50.9	0.2	Negligible Adverse	52.0	1.3	Negligible Adverse	39.4	40.9	40.5
19, SUMMER STREET, WOODSIDE	Dwelling	60.6	66.0	60.8	0.2	Negligible Adverse	64.2	3.6	Minor Adverse	48.3	53.1	51.5
2, SUMMER STREET, WOODSIDE	Dwelling	50.0	51.0	50.2	0.2	Negligible Adverse	50.8	0.8	Negligible Adverse	38.7	39.6	39.5
7, SUMMER STREET, WOODSIDE	Dwelling	49.4	50.8	49.5	0.1	Negligible Adverse	50.6	1.2	Negligible Adverse	38.2	39.5	39.3
8, SUMMER STREET, WOODSIDE	Dwelling	57.6	62.2	57.7	0.1	Negligible Adverse	60.6	3.0	Minor Adverse	45.6	49.7	48.3
9, SUMMER STREET, WOODSIDE	Dwelling	50.3	51.9	50.4	0.1	Negligible Adverse	51.5	1.2	Negligible Adverse	39.0	40.4	40.1
SUNNYBRAE COTTAGES, 2, MILL LADE WYND, DANESTONE	Dwelling	59.9	59.0	56.4	-0.5	Negligible Beneficial	59.2	1.3	Negligible Adverse	44.9	46.8	46.1
SUNNYBRAE COTTAGES, 4, MILL LADE WYND, DANESTONE	Dwelling	56.4	56.8	54.8	-0.6	Negligible Beneficial	56.7	1.3	Negligible Adverse	44.3	46.3	45.7
SUNNYBRAE COTTAGES, 6, MILL LADE WYND, DANESTONE	Dwelling	55.6	57.4	55.1	-0.5	Negligible Beneficial	56.9	1.3	Negligible Adverse	43.8	45.6	44.9
SUNNYBRAE COTTAGES, 8, MILL LADE WYND, DANESTONE	Dwelling	54.0	55.6	53.5	-0.5	Negligible Beneficial	55.1	1.1	Negligible Adverse	42.3	43.8	43.3
1, TAILOR PLACE	Dwelling	48.1	49.7	48.0	-0.1	Negligible Beneficial	49.3	1.2	Negligible Adverse	37.0	38.5	38.1
10, TAILOR PLACE	Dwelling	42.4	44.2	42.3	-0.1	Negligible Beneficial	43.7	1.3	Negligible Adverse	31.9	33.5	33.1
11, TAILOR PLACE	Dwelling	48.1	49.7	48.0	-0.1	Negligible Beneficial	49.3	1.2	Negligible Adverse	37.0	38.5	38.1
12, TAILOR PLACE	Dwelling	42.4	44.2	42.3	-0.1	Negligible Beneficial	43.7	1.3	Negligible Adverse	31.9	33.5	33.1
14, TAILOR PLACE	Dwelling	42.4	44.2	42.3	-0.1	Negligible Beneficial	43.7	1.3	Negligible Adverse	31.9	33.5	33.1
15, TAILOR PLACE	Dwelling	47.6	50.2	47.5	-0.1	Negligible Beneficial	49.5	1.9	Negligible Adverse	36.6	38.9	38.3
16, TAILOR PLACE	Dwelling	42.4	44.2	42.3	-0.1	Negligible Beneficial	43.7	1.3	Negligible Adverse	31.9	33.5	33.1
17, TAILOR PLACE	Dwelling	47.6	50.2	47.5	-0.1	Negligible Beneficial	49.5	1.9	Negligible Adverse	36.6	38.9	38.3
18, TAILOR PLACE	Dwelling	42.4	44.2	42.3	-0.1	Negligible Beneficial	43.7	1.3	Negligible Adverse	31.9	33.5	33.1
19, TAILOR PLACE	Dwelling	47.6	50.2	47.5	-0.1	Negligible Beneficial	49.5	1.9	Negligible Adverse	36.6	38.9	38.3
2, TAILOR PLACE	Dwelling	42.4	44.2	42.3	-0.1	Negligible Beneficial	43.7	1.3	Negligible Adverse	31.9	33.5	33.1
20, TAILOR PLACE	Dwelling	42.4	44.2	42.3	-0.1	Negligible Beneficial	43.7	1.3	Negligible Adverse	31.9	33.5	33.1
21, TAILOR PLACE	Dwelling	47.6	50.2	47.5	-0.1	Negligible Beneficial	49.5	1.9	Negligible Adverse	36.6	38.9	38.3

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Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
22, TAILOR PLACE	Dwelling	42.4	44.2	42.3	-0.1	Negligible Beneficial	43.7	1.3	Negligible Adverse	31.9	33.5	33.1
23, TAILOR PLACE	Dwelling	47.6	50.2	47.5	-0.1	Negligible Beneficial	49.5	1.9	Negligible Adverse	36.6	38.9	38.3
24, TAILOR PLACE	Dwelling	42.4	44.2	42.3	-0.1	Negligible Beneficial	43.7	1.3	Negligible Adverse	31.9	33.5	33.1
25, TAILOR PLACE	Dwelling	47.6	50.2	47.5	-0.1	Negligible Beneficial	49.5	1.9	Negligible Adverse	36.6	38.9	38.3
26, TAILOR PLACE	Dwelling	44.1	46.2	44.0	-0.1	Negligible Beneficial	45.7	1.6	Negligible Adverse	33.4	35.3	34.9
28, TAILOR PLACE	Dwelling	44.1	46.2	44.0	-0.1	Negligible Beneficial	45.7	1.6	Negligible Adverse	33.4	35.3	34.9
3, TAILOR PLACE	Dwelling	48.1	49.7	48.0	-0.1	Negligible Beneficial	49.3	1.2	Negligible Adverse	37.0	38.5	38.1
30, TAILOR PLACE	Dwelling	44.1	46.2	44.0	-0.1	Negligible Beneficial	45.7	1.6	Negligible Adverse	33.4	35.3	34.9
32, TAILOR PLACE	Dwelling	44.1	46.2	44.0	-0.1	Negligible Beneficial	45.7	1.6	Negligible Adverse	33.4	35.3	34.9
34, TAILOR PLACE	Dwelling	44.1	46.2	44.0	-0.1	Negligible Beneficial	45.7	1.6	Negligible Adverse	33.4	35.3	34.9
36, TAILOR PLACE	Dwelling	44.1	46.2	44.0	-0.1	Negligible Beneficial	45.7	1.6	Negligible Adverse	33.4	35.3	34.9
38, TAILOR PLACE	Dwelling	44.1	46.2	44.0	-0.1	Negligible Beneficial	45.7	1.6	Negligible Adverse	33.4	35.3	34.9
4, TAILOR PLACE	Dwelling	42.4	44.2	42.3	-0.1	Negligible Beneficial	43.7	1.3	Negligible Adverse	31.9	33.5	33.1
40, TAILOR PLACE	Dwelling	44.1	46.2	44.0	-0.1	Negligible Beneficial	45.7	1.6	Negligible Adverse	33.4	35.3	34.9
42, TAILOR PLACE	Dwelling	46.9	50.7	46.9	0.0	No Change	49.7	2.8	Negligible Adverse	35.9	39.4	38.5
44, TAILOR PLACE	Dwelling	46.9	50.7	46.9	0.0	No Change	49.7	2.8	Negligible Adverse	35.9	39.4	38.5
46, TAILOR PLACE	Dwelling	46.9	50.7	46.9	0.0	No Change	49.7	2.8	Negligible Adverse	35.9	39.4	38.5
48, TAILOR PLACE	Dwelling	46.9	50.7	46.9	0.0	No Change	49.7	2.8	Negligible Adverse	35.9	39.4	38.5
5, TAILOR PLACE	Dwelling	48.1	49.7	48.0	-0.1	Negligible Beneficial	49.3	1.2	Negligible Adverse	37.0	38.5	38.1
50, TAILOR PLACE	Dwelling	46.9	50.7	46.9	0.0	No Change	49.7	2.8	Negligible Adverse	35.9	39.4	38.5
52, TAILOR PLACE	Dwelling	46.9	50.7	46.9	0.0	No Change	49.7	2.8	Negligible Adverse	35.9	39.4	38.5
54, TAILOR PLACE	Dwelling	46.9	50.7	46.9	0.0	No Change	49.7	2.8	Negligible Adverse	35.9	39.4	38.5
56, TAILOR PLACE	Dwelling	46.9	50.7	46.9	0.0	No Change	49.7	2.8	Negligible Adverse	35.9	39.4	38.5
58, TAILOR PLACE	Dwelling	44.3	47.5	44.3	0.0	No Change	46.6	2.3	Negligible Adverse	33.6	36.5	35.7
6, TAILOR PLACE	Dwelling	42.4	44.2	42.3	-0.1	Negligible Beneficial	43.7	1.3	Negligible Adverse	31.9	33.5	33.1
60, TAILOR PLACE	Dwelling	44.3	47.5	44.3	0.0	No Change	46.6	2.3	Negligible Adverse	33.6	36.5	35.7
62, TAILOR PLACE	Dwelling	44.3	47.5	44.3	0.0	No Change	46.6	2.3	Negligible Adverse	33.6	36.5	35.7
64, TAILOR PLACE	Dwelling	44.3	47.5	44.3	0.0	No Change	46.6	2.3	Negligible Adverse	33.6	36.5	35.7
66, TAILOR PLACE	Dwelling	44.3	47.5	44.3	0.0	No Change	46.6	2.3	Negligible Adverse	33.6	36.5	35.7
68, TAILOR PLACE	Dwelling	44.3	47.5	44.3	0.0	No Change	46.6	2.3	Negligible Adverse	33.6	36.5	35.7
7, TAILOR PLACE	Dwelling	48.1	49.7	48.0	-0.1	Negligible Beneficial	49.3	1.2	Negligible Adverse	37.0	38.5	38.1
70, TAILOR PLACE	Dwelling	44.3	47.5	44.3	0.0	No Change	46.6	2.3	Negligible Adverse	33.6	36.5	35.7
72, TAILOR PLACE	Dwelling	44.3	47.5	44.3	0.0	No Change	46.6	2.3	Negligible Adverse	33.6	36.5	35.7
74, TAILOR PLACE	Dwelling	44.3	47.5	44.3	0.0	No Change	46.6	2.3	Negligible Adverse	33.6	36.5	35.7
8, TAILOR PLACE	Dwelling	42.4	44.2	42.3	-0.1	Negligible Beneficial	43.7	1.3	Negligible Adverse	31.9	33.5	33.1
9, TAILOR PLACE	Dwelling	48.1	49.7	48.0	-0.1	Negligible Beneficial	49.3	1.2	Negligible Adverse	37.0	38.5	38.1
1, TANFIELD AVENUE	Dwelling	58.8	59.7	59.0	0.2	Negligible Adverse	59.5	0.7	Negligible Adverse	46.7	47.5	47.3
2, TANFIELD AVENUE	Dwelling	53.5	54.4	53.7	0.2	Negligible Adverse	54.3	0.8	Negligible Adverse	41.9	42.7	42.6
3, TANFIELD AVENUE	Dwelling	56.4	57.5	56.6	0.2	Negligible Adverse	57.2	0.8	Negligible Adverse	44.5	45.5	45.2
4, TANFIELD AVENUE	Dwelling	49.3	50.3	49.5	0.2	Negligible Adverse	50.2	0.9	Negligible Adverse	38.1	39.0	38.9
5, TANFIELD AVENUE	Dwelling	48.7	49.7	48.9	0.2	Negligible Adverse	49.6	0.9	Negligible Adverse	37.6	38.0	38.4
6, TANFIELD AVENUE	Dwelling	49.1	50.0	49.3	0.2	Negligible Adverse	50.0	0.9	Negligible Adverse	37.9	38.7	38.7
7, TANFIELD AVENUE	Dwelling	51.8	52.6	52.1	0.3	Negligible Adverse	52.6	0.8	Negligible Adverse	40.4	41.1	41.1
8, TANFIELD AVENUE	Dwelling	48.9	49.9	49.1	0.2	Negligible Adverse	49.8	0.9	Negligible Adverse	37.7	38.6	38.6
1, TANFIELD COURT	Dwelling	50.0	51.3	50.2	0.2	Negligible Adverse	51.4	1.4	Negligible Adverse	38.7	39.9	40.0
2, TANFIELD COURT	Dwelling	50.0	51.3	50.2	0.2	Negligible Adverse	51.4	1.4	Negligible Adverse	38.7	39.9	40.0
3, TANFIELD COURT	Dwelling	47.5	48.7	47.7	0.2	Negligible Adverse	48.7	1.2	Negligible Adverse	36.5	37.6	37.6
4, TANFIELD COURT	Dwelling	45.4	46.9	45.7	0.3	Negligible Adverse	47.0	1.6	Negligible Adverse	34.6	35.9	36.0
5, TANFIELD COURT	Dwelling	45.4	46.9	45.7	0.3	Negligible Adverse	47.3	1.9	Negligible Adverse	34.6	36.1	36.3
6, TANFIELD COURT	Dwelling	46.2	48.3	46.7	0.5	Negligible Adverse	48.6	2.4	Negligible Adverse	35.3	37.2	37.5
7, TANFIELD COURT	Dwelling	45.0	46.7	45.3	0.3	Negligible Adverse	46.8	1.8	Negligible Adverse	34.2	35.8	35.9
8, TANFIELD COURT	Dwelling	44.6	46.1	44.9	0.3	Negligible Adverse	46.1	1.5	Negligible Adverse	33.9	35.2	35.2
9, TANFIELD COURT	Dwelling	45.7	47.3	46.0	0.3	Negligible Adverse	47.5	1.8	Negligible Adverse	34.9	36.3	36.5
ST JOSEPH'S PRESBYTERY, 2, TANFIELD WALK	Dwelling	67.3	68.1	67.6	0.3	Negligible Adverse	68.0	0.7	Negligible Adverse	54.3	55.0	54.9
FLAT 1, 3, TANFIELD WALK	Dwelling	66.4	67.4	66.6	0.2	Negligible Adverse	67.2	0.8	Negligible Adverse	53.5	54.4	54.2
FLAT 2, 3, TANFIELD WALK	Dwelling	66.4	67.4	66.6	0.2	Negligible Adverse	67.2	0.8	Negligible Adverse	53.5	54.4	54.2
FLAT 3, 3, TANFIELD WALK	Dwelling	66.4	67.4	66.6	0.2	Negligible Adverse	67.2	0.8	Negligible Adverse	53.5	54.4	54.2
FLAT 2, 9, TANFIELD WALK	Dwelling	58.5	59.3	58.7	0.2	Negligible Adverse	59.1	0.6	Negligible Adverse	46.4	47.1	46.9
11, TANFIELD WALK	Dwelling	58.5	59.3	58.7	0.2	Negligible Adverse	59.1	0.6	Negligible Adverse	46.4	47.1	46.9
13, TANFIELD WALK	Dwelling	58.5	59.3	58.7	0.2	Negligible Adverse	59.1	0.6	Negligible Adverse	46.4	47.1	46.9
15, TANFIELD WALK	Dwelling	56.8	57.6	57.1	0.3	Negligible Adverse	57.5	0.7	Negligible Adverse	44.9	45.6	45.5
17, TANFIELD WALK	Dwelling	56.8	57.6	57.1	0.3	Negligible Adverse	57.5	0.7	Negligible Adverse	44.9	45.6	45.5
19, TANFIELD WALK	Dwelling	56.2	57.0	56.4	0.2	Negligible Adverse	56.9	0.7	Negligible Adverse	44.3	45.0	44.9
21, TANFIELD WALK	Dwelling	56.2	57.0	56.4	0.2	Negligible Adverse	56.9	0.7	Negligible Adverse	44.3	45.0	44.9
22, TANFIELD WALK	Dwelling	53.2	54.2	53.4	0.2	Negligible Adverse	54.1	0.9	Negligible Adverse	41.6	42.5	42.4
22, TANFIELD WALK	Dwelling	53.2	54.2	53.4	0.2	Negligible Adverse	54.1	0.9	Negligible Adverse	41.6	42.5	42.4
22, TANFIELD WALK	Dwelling	53.2	54.2	53.4	0.2	Negligible Adverse	54.1	0.9	Negligible Adverse	41.6	42.5	42.4
22, TANFIELD WALK	Dwelling	53.2	54.2	53.4	0.2	Negligible Adverse	54.1	0.9	Negligible Adverse	41.6	42.5	42.4
23, TANFIELD WALK	Dwelling	53.7	54.5	53.9	0.2	Negligible Adverse	54.4	0.7	Negligible Adverse	42.1	42.8	42.7
24, TANFIELD WALK	Dwelling	52.4	53.4	52.6	0.2	Negligible Adverse	53.4	1.0	Negligible Adverse	40.9	41.8	41.8
24, TANFIELD WALK	Dwelling	52.4	53.4	52.6	0.2	Negligible Adverse	53.4	1.0	Negligible Adverse	40.9	41.8	41.8
24, TANFIELD WALK	Dwelling	52.4	53.4	52.6	0.2	Negligible Adverse	53.4	1.0	Negligible Adverse	40.9	41.8	41.8
24, TANFIELD WALK	Dwelling	52.4	53.4	52.6	0.2	Negligible Adverse	53.4	1.0	Negligible Adverse	40.9	41.8	41.8
25, TANFIELD WALK	Dwelling	52.3	53.2	52.6	0.3	Negligible Adverse	53.1	0.8	Negligible Adverse	40.8	41.6	41.5
26, TANFIELD WALK	Dwelling	52.6	53.6	52.8	0.2	Negligible Adverse	53.6	1.0	Negligible Adverse	41.1	42.0	42.0
27, TANFIELD WALK	Dwelling	50.8	51.7	51.0	0.2	Negligible Adverse	51.6	0.8	Negligible Adverse	39.5	40.3	40.2
28, TANFIELD WALK	Dwelling	46.7	47.9	46.9	0.2	Negligible Adverse	47.9	1.2	Negligible Adverse	35.8	36.8	36.8
31, TANFIELD WALK	Dwelling	50.0	51.0	50.2	0.2	Negligible Adverse	50.8	0.8	Negligible Adverse	38.7	39.6	39.5
34, TANFIELD WALK	Dwelling	50.0	51.9	50.5	0.5	Negligible Adverse	52.4	2.4	Negligible Adverse	38.7	40.4	40.9
36, TANFIELD WALK	Dwelling	52.8	55.1	53.5	0.7	Negligible Adverse	55.8	3.0	Minor Adverse	41.3	43.3	44.0
4, TANFIELD WALK	Dwelling	65.4	66.0	65.2	0.2	Negligible Adverse	65.9	0.7	Negligible Adverse	52.4	53.1	53.0
5, TANFIELD WALK	Dwelling	62.5	63.2	62.7	0.2	Negligible Adverse	63.1	0.6	Negligible Adverse	50.0	50.6	50.5
7, TANFIELD WALK	Dwelling	62.5	63.2	62.7	0.2	Negligible Adverse	63.1	0.6	Negligible Adverse	50.0	50.6	50.5

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
7, TANFIELD WALK	Dwelling	62.5	63.2	62.8	0.3	Negligible Adverse	63.1	0.6	Negligible Adverse	50.0	50.6	50.5
7, TANFIELD WALK	Dwelling	62.5	63.2	62.8	0.3	Negligible Adverse	63.1	0.6	Negligible Adverse	50.0	50.6	50.5
7, TANFIELD WALK	Dwelling	62.5	63.2	62.8	0.3	Negligible Adverse	63.1	0.6	Negligible Adverse	50.0	50.6	50.5
7, TANFIELD WALK	Dwelling	62.5	63.2	62.8	0.3	Negligible Adverse	63.1	0.6	Negligible Adverse	50.0	50.6	50.5
9, TANFIELD WALK	Dwelling	58.6	59.4	58.9	0.3	Negligible Adverse	59.3	0.7	Negligible Adverse	46.5	47.2	47.1
9, TANFIELD WALK	Dwelling	58.6	59.4	58.9	0.3	Negligible Adverse	59.3	0.7	Negligible Adverse	46.5	47.2	47.1
ST JOSEPH'S CHURCH, TANFIELD WALK	Church	64.7	65.5	64.9	0.2	Negligible Adverse	65.4	0.7	Negligible Adverse	52.0	52.7	52.6
THE LODGE, THE LODGE, GRANITEHILL ROAD, NORTHFIELD	Dwelling	48.6	49.5	48.6	0.0	No Change	49.7	1.1	Negligible Adverse	37.5	38.3	38.5
THE NEUK, THE NEUK, LAUREL LANE, BRIDGE OF DON	Dwelling	63.3	63.5	63.2	-0.1	Negligible Beneficial	63.9	0.6	Negligible Adverse	50.7	50.9	51.2
THE QUARRY CENTRE, CUMMINGS PARK CRESCENT, NORTHFIELD	Council	46.2	46.7	46.2	0.0	No Change	47.1	0.9	Negligible Adverse	35.3	35.8	36.1
NORTH COURT HILLHEAD, 147, DON STREET, OLD ABERDEEN	Dwelling	55.0	55.5	55.2	0.2	Negligible Adverse	55.9	0.9	Negligible Adverse	43.2	43.7	44.0
NORTH COURT HILLHEAD, 155, DON STREET, OLD ABERDEEN	Dwelling	55.0	55.5	55.2	0.2	Negligible Adverse	55.9	0.9	Negligible Adverse	43.2	43.7	44.0
GRANITEHILL TERRACE, 1, UPPER PERSLEY ROAD	Dwelling	59.4	59.4	59.7	0.3	Negligible Adverse	60.0	0.6	Negligible Adverse	47.2	47.2	47.7
GRANITEHILL TERRACE, 2, UPPER PERSLEY ROAD	Dwelling	59.4	59.4	59.7	0.3	Negligible Adverse	60.0	0.6	Negligible Adverse	47.2	47.2	47.7
GRANITEHILL TERRACE, 3, UPPER PERSLEY ROAD	Dwelling	59.4	59.4	59.7	0.3	Negligible Adverse	60.0	0.6	Negligible Adverse	47.2	47.2	47.7
GRANITEHILL TERRACE, 4, UPPER PERSLEY ROAD	Dwelling	59.4	59.4	59.7	0.3	Negligible Adverse	60.0	0.6	Negligible Adverse	47.2	47.2	47.7
GRANITEHILL TERRACE, 5, UPPER PERSLEY ROAD	Dwelling	59.4	59.4	59.7	0.3	Negligible Adverse	60.0	0.6	Negligible Adverse	47.2	47.2	47.7
GRANITEHILL TERRACE, 6, UPPER PERSLEY ROAD	Dwelling	59.4	59.4	59.7	0.3	Negligible Adverse	60.0	0.6	Negligible Adverse	47.2	47.2	47.7
GRANITEHILL TERRACE, 7, UPPER PERSLEY ROAD	Dwelling	56.9	57.2	56.8	-0.1	Negligible Beneficial	57.7	0.8	Negligible Adverse	44.9	45.2	45.7
GRANITEHILL TERRACE, 8, UPPER PERSLEY ROAD	Dwelling	56.9	57.2	56.8	-0.1	Negligible Beneficial	57.7	0.8	Negligible Adverse	44.9	45.2	45.7
GRANITEHILL TERRACE, 9, UPPER PERSLEY ROAD	Dwelling	56.9	57.2	56.8	-0.1	Negligible Beneficial	57.7	0.8	Negligible Adverse	44.9	45.2	45.7
GRANITEHILL TERRACE, 10, UPPER PERSLEY ROAD	Dwelling	56.8	57.2	56.8	-0.1	Negligible Beneficial	57.7	0.8	Negligible Adverse	44.9	45.2	45.7
GRANITEHILL TERRACE, 11, UPPER PERSLEY ROAD	Dwelling	56.9	57.2	56.8	-0.1	Negligible Beneficial	57.7	0.8	Negligible Adverse	44.9	45.2	45.7
GRANITEHILL TERRACE, 12, UPPER PERSLEY ROAD	Dwelling	56.9	57.2	56.8	-0.1	Negligible Beneficial	57.7	0.8	Negligible Adverse	44.9	45.2	45.7
GRANITEHILL TERRACE, 14, UPPER PERSLEY ROAD	Dwelling	57.6	57.8	57.6	0.0	No Change	58.3	0.7	Negligible Adverse	45.6	45.8	46.2
GRANITEHILL TERRACE, 15, UPPER PERSLEY ROAD	Dwelling	56.8	57.0	56.7	-0.1	Negligible Beneficial	57.5	0.7	Negligible Adverse	44.9	45.0	45.5
22, VALENTINE DRIVE	Dwelling	69.8	68.2	69.9	0.1	Negligible Adverse	68.6	-1.2	Negligible Beneficial	56.6	55.1	55.5
24, VALENTINE DRIVE	Dwelling	71.8	69.8	71.9	0.1	Negligible Adverse	70.3	-1.5	Negligible Beneficial	58.4	56.6	57.0
VIEW COTTAGE, VIEW COTTAGE, GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	55.3	56.3	55.2	-0.1	Negligible Beneficial	55.9	0.6	Negligible Adverse	43.5	44.4	44.0
THE LARCHES, 1, WALLACEBRAE AVENUE, DANESTONE	Dwelling	53.7	52.2	53.6	-0.1	Negligible Beneficial	54.2	0.5	Negligible Adverse	42.1	40.7	42.5
10, WALLACEBRAE AVENUE, DANESTONE	Dwelling	57.4	59.1	57.1	-0.3	Negligible Beneficial	58.4	1.0	Negligible Adverse	45.4	46.9	46.3
11, WALLACEBRAE AVENUE, DANESTONE	Dwelling	56.4	57.7	56.2	-0.2	Negligible Beneficial	57.3	0.9	Negligible Adverse	44.5	45.7	45.3
12, WALLACEBRAE AVENUE, DANESTONE	Dwelling	54.3	54.5	54.0	-0.3	Negligible Beneficial	54.8	0.5	Negligible Adverse	42.6	42.6	43.1
14, WALLACEBRAE AVENUE, DANESTONE	Dwelling	53.7	54.3	53.5	-0.2	Negligible Beneficial	54.3	0.6	Negligible Adverse	42.1	42.6	42.6
15, WALLACEBRAE AVENUE, DANESTONE	Dwelling	57.4	58.5	57.2	-0.2	Negligible Beneficial	58.2	0.8	Negligible Adverse	45.4	46.4	46.1
16, WALLACEBRAE AVENUE, DANESTONE	Dwelling	57.4	58.5	57.2	-0.2	Negligible Beneficial	58.2	0.8	Negligible Adverse	45.4	46.4	46.1
17, WALLACEBRAE AVENUE, DANESTONE	Dwelling	58.0	60.0	57.8	-0.2	Negligible Beneficial	59.2	1.2	Negligible Adverse	45.9	47.7	47.0
18, WALLACEBRAE AVENUE, DANESTONE	Dwelling	58.0	60.1	57.8	-0.2	Negligible Beneficial	59.2	1.2	Negligible Adverse	45.9	47.8	47.0
19, WALLACEBRAE AVENUE, DANESTONE	Dwelling	53.5	53.8	53.4	-0.1	Negligible Beneficial	54.2	0.7	Negligible Adverse	41.9	42.2	42.5
2, WALLACEBRAE AVENUE, DANESTONE	Dwelling	55.5	55.0	55.3	-0.2	Negligible Beneficial	55.9	0.4	Negligible Adverse	43.7	43.2	44.0
20, WALLACEBRAE AVENUE, DANESTONE	Dwelling	57.5	59.3	57.2	-0.3	Negligible Beneficial	58.6	1.1	Negligible Adverse	45.5	47.1	46.5
21, WALLACEBRAE AVENUE, DANESTONE	Dwelling	55.2	56.8	54.7	-0.5	Negligible Beneficial	56.2	1.0	Negligible Adverse	43.4	44.9	44.3
22, WALLACEBRAE AVENUE, DANESTONE	Dwelling	58.0	60.0	57.7	-0.3	Negligible Beneficial	59.2	1.2	Negligible Adverse	45.9	47.7	47.0
23, WALLACEBRAE AVENUE, DANESTONE	Dwelling	55.7	56.4	55.4	-0.3	Negligible Beneficial	56.4	0.7	Negligible Adverse	43.9	44.5	44.5
24, WALLACEBRAE AVENUE, DANESTONE	Dwelling	55.8	56.5	55.5	-0.3	Negligible Beneficial	56.5	0.7	Negligible Adverse	44.0	44.6	44.6
25, WALLACEBRAE AVENUE, DANESTONE	Dwelling	55.3	55.6	55.0	-0.3	Negligible Beneficial	55.9	0.6	Negligible Adverse	43.5	43.8	44.0
26, WALLACEBRAE AVENUE, DANESTONE	Dwelling	55.3	55.6	55.0	-0.3	Negligible Beneficial	55.9	0.6	Negligible Adverse	43.5	43.8	44.0
27, WALLACEBRAE AVENUE, DANESTONE	Dwelling	52.6	52.8	52.3	-0.3	Negligible Beneficial	53.1	0.5	Negligible Adverse	41.1	41.3	41.5
28, WALLACEBRAE AVENUE, DANESTONE	Dwelling	52.8	52.0	52.6	-0.2	Negligible Beneficial	53.2	0.4	Negligible Adverse	41.3	40.5	41.6
29, WALLACEBRAE AVENUE, DANESTONE	Dwelling	51.3	50.8	51.2	-0.1	Negligible Beneficial	51.7	0.4	Negligible Adverse	39.9	39.5	40.3
3, WALLACEBRAE AVENUE, DANESTONE	Dwelling	51.6	51.8	51.5	-0.1	Negligible Beneficial	52.2	0.6	Negligible Adverse	40.2	40.4	40.7
4, WALLACEBRAE AVENUE, DANESTONE	Dwelling	51.6	51.7	51.4	-0.2	Negligible Beneficial	52.1	0.5	Negligible Adverse	40.2	40.3	40.6
5, WALLACEBRAE AVENUE, DANESTONE	Dwelling	53.7	53.5	53.5	-0.2	Negligible Beneficial	54.1	0.4	Negligible Adverse	42.1	41.9	42.4
6, WALLACEBRAE AVENUE, DANESTONE	Dwelling	52.5	52.8	52.1	-0.4	Negligible Beneficial	52.9	0.4	Negligible Adverse	41.0	41.3	41.3
7, WALLACEBRAE AVENUE, DANESTONE	Dwelling	53.4	52.8	53.3	-0.1	Negligible Beneficial	54.0	0.6	Negligible Adverse	41.8	41.3	42.3
8, WALLACEBRAE AVENUE, DANESTONE	Dwelling	57.2	58.3	57.1	-0.1	Negligible Beneficial	58.1	0.9	Negligible Adverse	45.2	46.2	46.0
9, WALLACEBRAE AVENUE, DANESTONE	Dwelling	57.0	58.8	56.8	-0.2	Negligible Beneficial	58.1	1.1	Negligible Adverse	45.0	46.7	46.0
1, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	49.7	49.2	49.6	-0.1	Negligible Beneficial	50.4	0.7	Negligible Adverse	38.5	38.0	39.1
10, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.7	50.0	50.7	0.0	No Change	51.4	0.7	Negligible Adverse	39.4	38.7	40.0
11, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.0	50.7	51.0	0.0	No Change	51.9	0.9	Negligible Adverse	39.6	39.4	40.4
12, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	49.2	49.4	49.2	0.0	No Change	50.0	0.8	Negligible Adverse	38.0	38.0	38.7
14, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	49.0	49.2	49.0	0.0	No Change	49.6	0.6	Negligible Adverse	37.8	38.2	38.6
15, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.1	50.7	51.1	0.0	No Change	51.1	0.8	Negligible Adverse	39.7	39.4	41.4
16, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	49.0	49.2	49.0	0.0	No Change	49.9	0.9	Negligible Adverse	37.8	38.0	38.6
17, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.9	50.8	50.9	0.0	No Change	51.8	0.9	Negligible Adverse	39.5	39.5	40.4
18, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.3	50.5	50.2	-0.1	Negligible Beneficial	51.0	0.7	Negligible Adverse	39.0	39.2	39.6
19, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.2	51.1	51.2	0.0	No Change	52.1	0.9	Negligible Adverse	39.8	39.7	40.6
2, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.9	50.1	50.9	0.0	No Change	51.6	0.7	Negligible Adverse	39.5	38.8	40.2
20, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.2	50.4	50.2	-0.2	Negligible Beneficial	50.8	0.6	Negligible Adverse	38.9	39.1	39.5
21, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.4	51.1	51.4	0.0	No Change	52.2	0.8	Negligible Adverse	40.0	39.7	40.7
22, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.8	51.0	50.5	-0.3	Negligible Beneficial	51.3	0.5	Negligible Adverse	39.5	39.6	39.9
23, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.6	51.4	51.6	0.0	No Change	52.4	0.8	Negligible Adverse	40.2	40.0	40.9
24, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.7	50.9	50.4	-0.3	Negligible Beneficial	51.4	0.5	Negligible Adverse	39.4	39.5	39.8
25, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.9	51.9	51.9	0.0	No Change	52.7	0.8	Negligible Adverse	40.4	40.4	41.2
26, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.7	50.9	50.4	-0.3	Negligible Beneficial	51.2	0.5	Negligible Adverse	39.4	39.5	39.8
27, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.9	52.1	51.9	0.0	No Change	52.8	0.9	Negligible Adverse	40.4	40.6	41.3
28, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.6	50.3	50.3	-0.3	Negligible Beneficial	51.1	0.5	Negligible Adverse	39.3	39.5	39.7
29, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.7	51.3	50.6	-0.1	Negligible Beneficial	51.6	0.9	Negligible Adverse	39.4	39.9	40.2
3, WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.8	50.2	50.8	0.0	No Change	51.5	0.7	Negligible Adverse	39.5	38.9	40.1

A90/A96 Haudagain Improvement
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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
30. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.5	50.8	50.3	-0.2	Negligible Beneficial	51.0	0.5	Negligible Adverse	39.2	39.5	39.6
31. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	49.5	50.0	49.5	0.0	No Change	50.3	0.8	Negligible Adverse	38.3	38.7	39.0
32. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.7	50.9	50.4	-0.3	Negligible Beneficial	51.2	0.5	Negligible Adverse	39.4	39.5	39.8
33. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	49.7	50.2	49.7	0.0	No Change	50.6	0.9	Negligible Adverse	38.5	38.9	39.3
34. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.0	50.3	49.7	-0.3	Negligible Beneficial	50.5	0.5	Negligible Adverse	38.7	39.0	39.2
35. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	49.8	50.3	49.8	0.0	No Change	50.7	0.9	Negligible Adverse	38.6	39.0	39.4
36. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.1	50.6	50.9	-0.2	Negligible Beneficial	51.6	0.5	Negligible Adverse	39.7	39.3	40.2
37. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	49.7	50.2	49.7	0.0	No Change	50.6	0.9	Negligible Adverse	38.5	38.9	39.3
38. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.6	49.6	50.5	-0.1	Negligible Beneficial	51.2	0.6	Negligible Adverse	39.3	38.4	39.8
39. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.1	51.6	50.8	-0.3	Negligible Beneficial	51.7	0.6	Negligible Adverse	39.7	40.2	40.3
4. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.6	49.7	50.6	0.0	No Change	51.3	0.7	Negligible Adverse	39.3	38.5	39.9
40. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.1	50.9	50.9	-0.2	Negligible Beneficial	51.6	0.5	Negligible Adverse	39.7	39.2	40.2
41. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.2	51.2	50.9	-0.3	Negligible Beneficial	51.8	0.6	Negligible Adverse	39.8	39.8	40.4
43. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.1	51.5	50.9	-0.2	Negligible Beneficial	51.7	0.6	Negligible Adverse	39.7	40.1	40.3
45. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.0	51.4	50.8	-0.2	Negligible Beneficial	51.6	0.6	Negligible Adverse	39.6	40.0	40.2
47. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.1	50.5	49.8	-0.3	Negligible Beneficial	50.7	0.6	Negligible Adverse	38.8	39.2	39.4
49. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.2	50.5	50.0	-0.2	Negligible Beneficial	50.8	0.6	Negligible Adverse	38.9	39.2	39.5
5. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.0	50.5	51.0	0.0	No Change	51.7	0.7	Negligible Adverse	39.6	39.2	40.3
51. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	48.9	49.0	48.8	0.1	Negligible Beneficial	49.7	0.8	Negligible Adverse	37.7	37.8	38.5
53. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	49.8	49.9	49.6	-0.2	Negligible Beneficial	50.4	0.6	Negligible Adverse	38.6	38.6	39.1
55. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.4	50.5	50.2	-0.2	Negligible Beneficial	51.0	0.6	Negligible Adverse	39.1	39.2	39.6
57. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.8	51.5	51.5	0.3	Negligible Beneficial	52.3	0.5	Negligible Adverse	40.4	40.1	40.8
59. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.7	51.3	51.4	-0.3	Negligible Beneficial	52.1	0.4	Negligible Adverse	40.3	39.9	40.6
6. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.8	50.2	50.8	0.0	No Change	51.5	0.7	Negligible Adverse	39.5	38.9	40.1
61. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.4	51.4	51.4	-0.2	Negligible Beneficial	52.1	0.5	Negligible Adverse	40.2	40.0	40.6
63. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.5	51.3	51.3	-0.2	Negligible Beneficial	52.3	0.6	Negligible Adverse	40.1	39.8	40.6
65. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.5	51.0	51.3	-0.2	Negligible Beneficial	52.0	0.5	Negligible Adverse	40.1	39.6	40.5
7. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.7	51.3	51.6	-0.1	Negligible Beneficial	52.4	0.7	Negligible Adverse	40.3	39.9	40.9
8. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	50.9	50.3	50.9	0.0	No Change	51.6	0.7	Negligible Adverse	39.5	39.0	40.2
9. WALLACEBRAE CRESCENT, DANESTONE	Dwelling	51.7	51.4	51.7	0.0	No Change	52.5	0.8	Negligible Adverse	40.3	40.0	41.0
1. WALLACEBRAE DRIVE	Dwelling	58.1	60.9	57.9	-0.2	Negligible Beneficial	59.9	1.8	Negligible Adverse	46.0	48.5	47.6
10. WALLACEBRAE DRIVE	Dwelling	49.5	48.6	49.5	0.0	No Change	50.2	0.7	Negligible Adverse	38.3	37.5	38.9
11. WALLACEBRAE DRIVE	Dwelling	50.5	51.5	50.4	-0.1	Negligible Beneficial	51.6	1.1	Negligible Adverse	39.2	40.1	40.2
12. WALLACEBRAE DRIVE	Dwelling	48.7	48.7	48.7	0.0	No Change	49.5	0.8	Negligible Adverse	37.6	37.6	38.3
14. WALLACEBRAE DRIVE	Dwelling	51.3	50.4	51.2	-0.1	Negligible Beneficial	51.9	0.6	Negligible Adverse	39.9	39.1	40.4
15. WALLACEBRAE DRIVE	Dwelling	51.3	51.8	51.2	-0.1	Negligible Beneficial	52.2	0.9	Negligible Adverse	39.9	40.4	40.7
16. WALLACEBRAE DRIVE	Dwelling	51.2	50.3	51.2	0.0	No Change	51.9	0.7	Negligible Adverse	39.8	39.0	40.4
17. WALLACEBRAE DRIVE	Dwelling	51.1	51.9	51.1	0.0	No Change	52.1	1.0	Negligible Adverse	39.7	40.4	40.6
18. WALLACEBRAE DRIVE	Dwelling	50.9	50.0	50.8	-0.1	Negligible Beneficial	51.6	0.7	Negligible Adverse	39.5	38.7	40.2
19. WALLACEBRAE DRIVE	Dwelling	50.7	51.1	50.7	0.0	No Change	50.7	0.9	Negligible Adverse	39.4	39.7	40.2
2. WALLACEBRAE DRIVE	Dwelling	56.0	55.9	56.0	0.0	Negligible Beneficial	57.8	1.8	Negligible Adverse	44.1	46.7	45.8
20. WALLACEBRAE DRIVE	Dwelling	51.5	51.2	51.3	-0.2	Negligible Beneficial	52.1	0.6	Negligible Adverse	40.1	39.8	40.6
21. WALLACEBRAE DRIVE	Dwelling	50.4	50.9	50.3	-0.1	Negligible Beneficial	51.3	0.9	Negligible Adverse	39.1	39.5	39.9
22. WALLACEBRAE DRIVE	Dwelling	50.1	50.1	50.0	-0.1	Negligible Beneficial	50.8	0.7	Negligible Adverse	38.8	38.8	39.5
23. WALLACEBRAE DRIVE	Dwelling	49.9	50.3	49.9	0.0	No Change	50.9	1.0	Negligible Adverse	38.6	39.0	39.5
24. WALLACEBRAE DRIVE	Dwelling	51.0	50.3	50.9	-0.1	Negligible Beneficial	51.6	0.6	Negligible Adverse	39.6	39.0	40.2
25. WALLACEBRAE DRIVE	Dwelling	49.8	50.2	49.8	0.0	No Change	50.7	0.9	Negligible Adverse	38.6	38.9	39.4
26. WALLACEBRAE DRIVE	Dwelling	51.0	50.1	50.9	-0.1	Negligible Beneficial	51.7	0.7	Negligible Adverse	39.6	38.8	40.3
27. WALLACEBRAE DRIVE	Dwelling	50.9	50.1	50.9	0.0	No Change	51.6	0.7	Negligible Adverse	39.5	38.8	40.2
28. WALLACEBRAE DRIVE	Dwelling	49.5	49.4	49.4	-0.1	Negligible Beneficial	50.1	0.6	Negligible Adverse	38.3	38.2	38.8
29. WALLACEBRAE DRIVE	Dwelling	51.0	50.0	50.9	-0.1	Negligible Beneficial	51.6	0.6	Negligible Adverse	39.6	38.7	40.2
3. WALLACEBRAE DRIVE	Dwelling	54.8	57.4	54.7	-0.1	Negligible Beneficial	56.5	1.7	Negligible Adverse	43.1	45.4	44.6
30. WALLACEBRAE DRIVE	Dwelling	50.4	49.4	50.3	-0.1	Negligible Beneficial	51.0	0.6	Negligible Adverse	39.1	38.2	39.6
31. WALLACEBRAE DRIVE	Dwelling	50.2	50.1	50.2	0.0	Negligible Beneficial	50.7	0.5	Negligible Adverse	38.9	38.9	39.4
32. WALLACEBRAE DRIVE	Dwelling	49.6	48.4	49.6	0.0	No Change	50.2	0.6	Negligible Adverse	38.4	37.3	38.9
33. WALLACEBRAE DRIVE	Dwelling	50.3	50.1	50.1	-0.2	Negligible Beneficial	50.8	0.5	Negligible Adverse	39.0	38.8	39.5
34. WALLACEBRAE DRIVE	Dwelling	51.8	51.2	51.6	-0.2	Negligible Beneficial	52.4	0.6	Negligible Adverse	40.4	39.8	40.9
35. WALLACEBRAE DRIVE	Dwelling	50.2	50.0	50.0	-0.2	Negligible Beneficial	50.6	0.4	Negligible Adverse	38.9	38.7	39.3
36. WALLACEBRAE DRIVE	Dwelling	51.0	49.9	50.9	-0.1	Negligible Beneficial	51.5	0.5	Negligible Adverse	39.6	38.6	40.1
37. WALLACEBRAE DRIVE	Dwelling	50.6	50.3	50.4	-0.2	Negligible Beneficial	51.0	0.4	Negligible Adverse	39.3	39.0	39.6
38. WALLACEBRAE DRIVE	Dwelling	51.5	50.4	51.5	0.0	No Change	52.1	0.6	Negligible Adverse	40.1	39.1	40.6
39. WALLACEBRAE DRIVE	Dwelling	50.8	50.7	50.6	-0.2	Negligible Beneficial	51.2	0.4	Negligible Adverse	39.5	39.4	39.8
4. WALLACEBRAE DRIVE	Dwelling	54.8	55.8	54.7	-0.1	Negligible Beneficial	55.9	1.1	Negligible Adverse	43.1	44.0	44.0
40. WALLACEBRAE DRIVE	Dwelling	51.7	50.6	51.6	-0.1	Negligible Beneficial	52.3	0.6	Negligible Adverse	40.3	39.3	40.8
41. WALLACEBRAE DRIVE	Dwelling	51.5	51.3	51.2	-0.3	Negligible Beneficial	51.9	0.4	Negligible Adverse	40.1	39.9	40.4
42. WALLACEBRAE DRIVE	Dwelling	51.7	50.6	51.7	0.0	No Change	52.3	0.6	Negligible Adverse	40.3	39.3	40.8
5. WALLACEBRAE DRIVE	Dwelling	51.7	53.5	51.6	-0.1	Negligible Beneficial	53.1	1.4	Negligible Adverse	40.3	41.9	40.8
6. WALLACEBRAE DRIVE	Dwelling	54.2	54.2	54.2	-0.1	Negligible Beneficial	54.3	1.1	Negligible Adverse	42.6	42.6	43.6
7. WALLACEBRAE DRIVE	Dwelling	51.3	52.8	51.2	-0.1	Negligible Beneficial	52.6	1.3	Negligible Adverse	39.9	41.3	41.1
9. WALLACEBRAE DRIVE	Dwelling	51.1	52.2	51.0	-0.1	Negligible Beneficial	52.2	1.1	Negligible Adverse	39.7	40.7	40.7
1. WALLACEBRAE GARDENS, DANESTONE	Dwelling	52.4	52.1	52.1	-0.3	Negligible Beneficial	52.9	0.5	Negligible Adverse	40.9	40.6	41.3
10. WALLACEBRAE GARDENS, DANESTONE	Dwelling	51.4	51.7	51.0	-0.4	Negligible Beneficial	51.8	0.4	Negligible Adverse	40.0	40.3	40.4
11. WALLACEBRAE GARDENS, DANESTONE	Dwelling	50.9	51.2	50.5	-0.4	Negligible Beneficial	51.4	0.5	Negligible Adverse	39.5	39.8	40.0
2. WALLACEBRAE GARDENS, DANESTONE	Dwelling	52.6	52.3	52.3	-0.3	Negligible Beneficial	53.0	0.4	Negligible Adverse	41.1	40.8	41.4
3. WALLACEBRAE GARDENS, DANESTONE	Dwelling	52.7	52.4	52.4	-0.3	Negligible Beneficial	53.2	0.5	Negligible Adverse	41.2	40.9	41.6
4. WALLACEBRAE GARDENS, DANESTONE	Dwelling	52.7	52.5	52.4	-0.3	Negligible Beneficial	53.2	0.5	Negligible Adverse	41.2	41.0	41.6
5. WALLACEBRAE GARDENS, DANESTONE	Dwelling	52.8	52.5	52.4	-0.4	Negligible Beneficial	53.2	0.4	Negligible Adverse	41.3	41.0	41.6
6. WALLACEBRAE GARDENS, DANESTONE	Dwelling	51.8	52.0	51.5	-0.3	Negligible Beneficial	52.3	0.5	Negligible Adverse	40.4	40.5	40.8
7. WALLACEBRAE GARDENS, DANESTONE	Dwelling	52.0	52.4	51.6	-0.4	Negligible Beneficial	52.4	0.4	Negligible Adverse	40.5	40.9	40.9
8. WALLACEBRAE GARDENS, DANESTONE	Dwelling	51.9	52.2	51.5	-0.4	Negligible Beneficial	52.3	0.4	Negligible Adverse	40.4	40.7	40.8
9. WALLACEBRAE GARDENS, DANESTONE	Dwelling	51.6	52.0	51.3	-0.3	Negligible Beneficial	52.1	0.5	Negligible Adverse	40.2	40.5	40.6
1. WALLACEBRAE PATH, DANESTONE	Dwelling	51.4	50.8	51.3	-0.1	Negligible Beneficial	51.9	0.5	Negligible Adverse	40.0	39.5	40.4
2. WALLACEBRAE PATH, DANESTONE	Dwelling	52.0	51.4	51.9	-0.1	Negligible Beneficial	52.4	0.4	Negligible Adverse	40.5	40.0	40.9

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
3. WALLACEBRAE PATH, DANESTONE	Dwelling	49.3	49.6	49.0	-0.3	Negligible Beneficial	49.8	0.5	Negligible Adverse	38.1	38.4	38.6
4. WALLACEBRAE PATH, DANESTONE	Dwelling	51.0	51.3	50.7	-0.3	Negligible Beneficial	51.5	0.5	Negligible Adverse	39.6	39.9	40.1
5. WALLACEBRAE PATH, DANESTONE	Dwelling	50.5	50.7	50.3	-0.2	Negligible Beneficial	51.1	0.6	Negligible Adverse	39.2	39.4	39.7
6. WALLACEBRAE PATH, DANESTONE	Dwelling	53.1	52.5	52.9	-0.2	Negligible Beneficial	53.6	0.5	Negligible Adverse	41.5	41.0	42.0
7. WALLACEBRAE PATH, DANESTONE	Dwelling	50.8	50.1	50.8	0.0	No Change	51.5	0.7	Negligible Adverse	39.5	38.8	40.1
1. WALLACEBRAE PLACE	Dwelling	55.5	56.8	55.4	-0.1	Negligible Beneficial	56.8	1.3	Negligible Adverse	43.7	44.9	44.9
10. WALLACEBRAE PLACE	Dwelling	51.5	50.8	51.5	0.0	No Change	52.3	0.8	Negligible Adverse	40.1	39.5	40.8
11. WALLACEBRAE PLACE	Dwelling	54.9	55.8	54.8	-0.1	Negligible Beneficial	56.1	1.2	Negligible Adverse	43.1	44.0	44.2
12. WALLACEBRAE PLACE	Dwelling	51.6	50.8	51.6	0.0	No Change	52.4	0.8	Negligible Adverse	40.2	39.5	40.9
14. WALLACEBRAE PLACE	Dwelling	52.3	51.0	52.3	0.0	No Change	52.9	0.6	Negligible Adverse	40.8	39.6	41.3
15. WALLACEBRAE PLACE	Dwelling	53.3	56.9	55.2	-0.1	Negligible Beneficial	56.7	1.4	Negligible Adverse	43.5	44.9	44.8
16. WALLACEBRAE PLACE	Dwelling	52.4	51.2	52.4	0.0	No Change	53.0	0.6	Negligible Adverse	40.9	39.8	41.4
17. WALLACEBRAE PLACE	Dwelling	55.8	57.8	55.6	-0.2	Negligible Beneficial	57.4	1.6	Negligible Adverse	44.0	45.8	45.4
18. WALLACEBRAE PLACE	Dwelling	52.0	50.6	51.9	-0.1	Negligible Beneficial	52.6	0.6	Negligible Adverse	40.5	39.3	41.1
19. WALLACEBRAE PLACE	Dwelling	54.3	55.2	54.2	-0.1	Negligible Beneficial	55.5	1.2	Negligible Adverse	42.6	43.4	43.7
2. WALLACEBRAE PLACE	Dwelling	53.3	52.2	53.2	-0.1	Negligible Beneficial	53.9	0.6	Negligible Adverse	41.7	40.7	42.2
20. WALLACEBRAE PLACE	Dwelling	52.1	50.7	52.0	-0.1	Negligible Beneficial	52.6	0.5	Negligible Adverse	40.6	39.4	41.1
21. WALLACEBRAE PLACE	Dwelling	51.5	51.1	51.4	0.0	Negligible Beneficial	52.3	0.8	Negligible Adverse	40.1	39.7	40.8
22. WALLACEBRAE PLACE	Dwelling	50.8	50.0	50.8	0.0	No Change	51.6	0.8	Negligible Adverse	39.5	38.7	40.2
23. WALLACEBRAE PLACE	Dwelling	52.9	51.8	52.8	-0.1	Negligible Beneficial	53.6	0.7	Negligible Adverse	41.3	40.4	42.0
24. WALLACEBRAE PLACE	Dwelling	50.6	49.8	50.6	0.0	No Change	51.4	0.8	Negligible Adverse	39.3	38.6	40.0
25. WALLACEBRAE PLACE	Dwelling	52.3	51.5	52.2	-0.1	Negligible Beneficial	52.8	0.5	Negligible Adverse	40.8	40.1	41.3
27. WALLACEBRAE PLACE	Dwelling	52.7	51.5	52.6	-0.1	Negligible Beneficial	53.4	0.7	Negligible Adverse	41.2	40.1	41.8
29. WALLACEBRAE PLACE	Dwelling	50.5	49.8	50.5	0.0	No Change	51.3	0.8	Negligible Adverse	39.2	38.6	39.9
3. WALLACEBRAE PLACE	Dwelling	56.5	56.5	55.5	-0.1	Negligible Beneficial	56.8	1.2	Negligible Adverse	43.8	44.8	44.9
31. WALLACEBRAE PLACE	Dwelling	50.1	49.4	50.0	-0.1	Negligible Beneficial	50.7	0.6	Negligible Adverse	38.8	38.2	39.5
4. WALLACEBRAE PLACE	Dwelling	52.9	51.7	52.9	0.0	No Change	53.5	0.6	Negligible Adverse	41.3	40.3	41.9
5. WALLACEBRAE PLACE	Dwelling	55.8	56.8	55.7	-0.1	Negligible Beneficial	57.0	1.2	Negligible Adverse	44.0	44.9	45.0
6. WALLACEBRAE PLACE	Dwelling	53.0	51.8	53.0	0.0	No Change	53.6	0.6	Negligible Adverse	41.4	40.4	42.0
7. WALLACEBRAE PLACE	Dwelling	55.7	56.9	55.6	-0.1	Negligible Beneficial	57.0	1.3	Negligible Adverse	43.9	44.9	45.0
8. WALLACEBRAE PLACE	Dwelling	51.7	50.9	51.6	-0.1	Negligible Beneficial	52.4	0.7	Negligible Adverse	40.3	39.5	40.9
9. WALLACEBRAE PLACE	Dwelling	55.5	56.6	55.4	-0.1	Negligible Beneficial	56.7	1.2	Negligible Adverse	43.7	44.7	44.8
1. WALLACEBRAE ROAD	Dwelling	61.5	64.1	60.2	-1.3	Minor Beneficial	62.7	1.2	Negligible Adverse	49.1	51.4	50.2
10. WALLACEBRAE ROAD	Dwelling	59.0	61.6	57.7	-1.3	Minor Beneficial	60.2	1.2	Negligible Adverse	46.8	49.2	47.9
11. WALLACEBRAE ROAD	Dwelling	59.3	61.8	58.1	-1.2	Minor Beneficial	60.5	1.2	Negligible Adverse	47.1	49.4	48.2
12. WALLACEBRAE ROAD	Dwelling	57.9	60.4	56.7	-1.2	Minor Beneficial	59.0	1.1	Negligible Adverse	45.8	48.1	46.8
14. WALLACEBRAE ROAD	Dwelling	57.3	59.7	56.1	-1.2	Minor Beneficial	58.4	1.1	Negligible Adverse	45.3	47.5	46.3
15. WALLACEBRAE ROAD	Dwelling	59.5	62.1	58.4	-1.1	Minor Beneficial	60.7	1.2	Negligible Adverse	47.3	49.6	48.4
16. WALLACEBRAE ROAD	Dwelling	55.4	57.6	54.4	-1.0	Minor Beneficial	56.4	1.0	Negligible Adverse	43.6	45.6	44.5
17. WALLACEBRAE ROAD	Dwelling	60.0	62.5	58.7	-1.3	Minor Beneficial	61.1	1.1	Negligible Adverse	47.7	50.0	48.7
18. WALLACEBRAE ROAD	Dwelling	52.0	53.0	51.5	-0.5	Negligible Beneficial	52.8	0.8	Negligible Adverse	40.5	41.4	41.3
19. WALLACEBRAE ROAD	Dwelling	59.7	62.2	58.5	-1.2	Minor Beneficial	60.8	1.1	Negligible Adverse	47.5	49.7	48.5
2. WALLACEBRAE ROAD	Dwelling	61.1	63.9	59.7	-1.4	Minor Beneficial	62.4	1.3	Negligible Adverse	48.7	51.2	49.9
20. WALLACEBRAE ROAD	Dwelling	52.4	53.4	51.9	-0.5	Negligible Beneficial	53.1	0.7	Negligible Adverse	40.9	41.8	41.5
21. WALLACEBRAE ROAD	Dwelling	59.2	61.7	58.1	-1.1	Minor Beneficial	60.4	1.2	Negligible Adverse	47.0	49.3	48.1
22. WALLACEBRAE ROAD	Dwelling	52.1	53.1	51.6	-0.5	Negligible Beneficial	52.9	0.8	Negligible Adverse	40.6	41.5	41.3
23. WALLACEBRAE ROAD	Dwelling	59.6	62.1	58.4	-1.2	Minor Beneficial	60.8	1.2	Negligible Adverse	47.4	49.6	48.5
24. WALLACEBRAE ROAD	Dwelling	50.1	51.0	49.6	-0.5	Negligible Beneficial	50.7	0.6	Negligible Adverse	38.8	39.6	39.4
25. WALLACEBRAE ROAD	Dwelling	60.0	62.5	58.8	-1.2	Minor Beneficial	61.1	1.1	Negligible Adverse	47.7	50.0	48.7
26. WALLACEBRAE ROAD	Dwelling	52.7	54.0	52.1	-0.6	Negligible Beneficial	53.4	0.7	Negligible Adverse	41.2	42.3	41.8
27. WALLACEBRAE ROAD	Dwelling	60.3	62.8	59.2	-1.1	Minor Beneficial	61.5	1.2	Negligible Adverse	48.0	50.3	49.1
28. WALLACEBRAE ROAD	Dwelling	52.6	53.7	52.0	-0.6	Negligible Beneficial	53.3	0.7	Negligible Adverse	41.1	42.1	41.7
29. WALLACEBRAE ROAD	Dwelling	60.2	62.7	59.1	-1.1	Minor Beneficial	61.4	1.2	Negligible Adverse	47.9	50.2	49.0
3. WALLACEBRAE ROAD	Dwelling	55.9	57.8	55.0	-0.9	Negligible Beneficial	56.8	0.9	Negligible Adverse	44.0	45.8	44.9
30. WALLACEBRAE ROAD	Dwelling	53.2	54.3	52.6	-0.6	Negligible Beneficial	53.9	0.7	Negligible Adverse	41.6	42.6	42.2
31. WALLACEBRAE ROAD	Dwelling	60.3	62.7	59.2	-1.1	Minor Beneficial	61.5	1.2	Negligible Adverse	48.0	50.2	49.1
32. WALLACEBRAE ROAD	Dwelling	53.6	54.8	53.0	-0.6	Negligible Beneficial	54.2	0.6	Negligible Adverse	42.0	43.1	42.5
33. WALLACEBRAE ROAD	Dwelling	59.7	62.0	58.7	-1.0	Minor Beneficial	60.9	1.2	Negligible Adverse	47.5	49.5	48.5
34. WALLACEBRAE ROAD	Dwelling	53.3	54.4	52.7	-0.6	Negligible Beneficial	53.9	0.6	Negligible Adverse	41.7	42.7	42.2
35. WALLACEBRAE ROAD	Dwelling	59.2	61.5	58.3	-0.9	Negligible Beneficial	60.4	1.2	Negligible Adverse	47.0	49.1	48.1
36. WALLACEBRAE ROAD	Dwelling	51.9	52.7	51.4	-0.5	Negligible Beneficial	52.5	0.6	Negligible Adverse	40.4	41.2	41.0
37. WALLACEBRAE ROAD	Dwelling	55.8	56.3	55.5	-0.3	Negligible Beneficial	56.4	0.6	Negligible Adverse	44.0	44.4	44.5
38. WALLACEBRAE ROAD	Dwelling	52.0	52.6	51.5	-0.5	Negligible Beneficial	52.5	0.5	Negligible Adverse	40.5	41.1	41.0
39. WALLACEBRAE ROAD	Dwelling	55.3	55.6	55.1	-0.2	Negligible Beneficial	55.9	0.6	Negligible Adverse	43.5	43.8	44.0
4. WALLACEBRAE ROAD	Dwelling	58.5	61.1	57.2	-1.3	Minor Beneficial	59.7	1.2	Negligible Adverse	46.4	48.7	47.5
40. WALLACEBRAE ROAD	Dwelling	52.1	52.7	51.7	-0.4	Negligible Beneficial	52.7	0.6	Negligible Adverse	40.6	41.2	41.2
41. WALLACEBRAE ROAD	Dwelling	49.8	50.0	49.6	-0.2	Negligible Beneficial	50.4	0.6	Negligible Adverse	38.6	38.7	39.1
42. WALLACEBRAE ROAD	Dwelling	51.8	52.2	51.4	-0.2	Negligible Beneficial	52.3	0.5	Negligible Adverse	40.4	40.7	40.8
43. WALLACEBRAE ROAD	Dwelling	50.7	50.8	50.4	-0.4	Negligible Beneficial	51.2	0.5	Negligible Adverse	39.5	39.5	39.8
44. WALLACEBRAE ROAD	Dwelling	51.8	52.3	51.5	-0.3	Negligible Beneficial	52.4	0.6	Negligible Adverse	40.4	40.8	40.9
45. WALLACEBRAE ROAD	Dwelling	51.2	51.5	50.9	-0.3	Negligible Beneficial	51.7	0.5	Negligible Adverse	39.8	40.1	40.3
46. WALLACEBRAE ROAD	Dwelling	51.3	51.8	50.9	-0.4	Negligible Beneficial	51.8	0.5	Negligible Adverse	39.9	40.4	40.4
47. WALLACEBRAE ROAD	Dwelling	51.7	52.0	51.4	-0.3	Negligible Beneficial	52.2	0.5	Negligible Adverse	40.3	40.5	40.7
48. WALLACEBRAE ROAD	Dwelling	50.6	51.0	50.3	-0.3	Negligible Beneficial	51.2	0.6	Negligible Adverse	39.3	39.6	39.8
49. WALLACEBRAE ROAD	Dwelling	51.4	51.8	51.1	-0.3	Negligible Beneficial	52.0	0.6	Negligible Adverse	40.0	40.4	40.5
5. WALLACEBRAE ROAD	Dwelling	57.7	60.0	56.6	-1.1	Minor Beneficial	58.7	1.0	Negligible Adverse	45.7	47.7	46.6
50. WALLACEBRAE ROAD	Dwelling	50.1	50.4	49.8	-0.3	Negligible Beneficial	50.6	0.5	Negligible Adverse	38.8	39.1	39.3
51. WALLACEBRAE ROAD	Dwelling	52.6	51.9	52.4	-0.2	Negligible Beneficial	53.0	0.4	Negligible Adverse	41.1	40.4	41.4
52. WALLACEBRAE ROAD	Dwelling	50.0	50.0	49.8	-0.2	Negligible Beneficial	50.6	0.6	Negligible Adverse	38.7	38.7	39.3
53. WALLACEBRAE ROAD	Dwelling	53.5	53.0	53.3	-0.2	Negligible Beneficial	54.0	0.5	Negligible Adverse	41.9	41.4	42.3
54. WALLACEBRAE ROAD	Dwelling	48.6	49.0	48.3	-0.2	Negligible Beneficial	49.3	0.7	Negligible Adverse	37.5	37.8	38.0
55. WALLACEBRAE ROAD	Dwelling	48.6	48.4	48.4	-0.2	Negligible Beneficial	49.2	0.6	Negligible Adverse	37.5	37.3	38.1
56. WALLACEBRAE ROAD	Dwelling	48.6	48.4	48.4	-0.2	Negligible Beneficial	49.2	0.6	Negligible Adverse	37.5	37.3	38.0
58. WALLACEBRAE ROAD	Dwelling	48.6	48.3	48.4	-0.2	Negligible Beneficial	49.1	0.5	Negligible Adverse	37.5	37.2	37.9

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
6. WALLACEBRAE ROAD	Dwelling	58.4	61.1	57.1	-1.3	Minor Beneficial	59.6	1.2	Negligible Adverse	46.3	48.7	47.4
60. WALLACEBRAE ROAD	Dwelling	50.7	50.5	50.5	-0.2	Negligible Beneficial	51.2	0.5	Negligible Adverse	39.4	39.2	39.8
62. WALLACEBRAE ROAD	Dwelling	50.8	50.6	50.6	-0.2	Negligible Beneficial	51.3	0.5	Negligible Adverse	39.5	39.3	39.9
64. WALLACEBRAE ROAD	Dwelling	49.5	49.7	49.3	-0.2	Negligible Beneficial	50.1	0.6	Negligible Adverse	38.3	38.5	38.8
66. WALLACEBRAE ROAD	Dwelling	49.7	49.9	49.5	-0.2	Negligible Beneficial	50.3	0.6	Negligible Adverse	38.5	38.6	39.0
68. WALLACEBRAE ROAD	Dwelling	50.0	50.2	49.7	-0.3	Negligible Beneficial	50.5	0.5	Negligible Adverse	38.7	38.9	39.2
7. WALLACEBRAE ROAD	Dwelling	59.4	61.9	58.2	-1.2	Minor Beneficial	60.5	1.1	Negligible Adverse	47.2	49.4	48.2
70. WALLACEBRAE ROAD	Dwelling	50.5	50.8	50.3	-0.2	Negligible Beneficial	51.1	0.6	Negligible Adverse	39.2	39.5	39.7
72. WALLACEBRAE ROAD	Dwelling	51.3	51.7	50.9	-0.4	Negligible Beneficial	51.8	0.5	Negligible Adverse	39.9	40.3	40.4
74. WALLACEBRAE ROAD	Dwelling	50.9	51.3	50.7	-0.2	Negligible Beneficial	51.5	0.6	Negligible Adverse	39.5	39.9	40.1
76. WALLACEBRAE ROAD	Dwelling	51.1	51.6	50.6	-0.5	Negligible Beneficial	51.6	0.5	Negligible Adverse	39.7	40.2	40.2
78. WALLACEBRAE ROAD	Dwelling	51.0	51.5	50.6	-0.4	Negligible Beneficial	51.5	0.5	Negligible Adverse	39.6	40.1	40.1
8. WALLACEBRAE ROAD	Dwelling	59.5	62.3	58.1	-1.4	Minor Beneficial	60.7	1.2	Negligible Adverse	47.3	49.8	48.4
80. WALLACEBRAE ROAD	Dwelling	51.9	52.9	51.3	-0.6	Negligible Beneficial	52.5	0.6	Negligible Adverse	40.4	41.3	41.0
82. WALLACEBRAE ROAD	Dwelling	53.0	54.1	52.4	-0.6	Negligible Beneficial	53.6	0.6	Negligible Adverse	41.4	42.4	42.0
84. WALLACEBRAE ROAD	Dwelling	52.2	53.2	51.6	-0.6	Negligible Beneficial	52.8	0.6	Negligible Adverse	40.7	41.6	41.3
86. WALLACEBRAE ROAD	Dwelling	52.1	53.1	51.5	-0.6	Negligible Beneficial	52.7	0.6	Negligible Adverse	40.6	41.5	41.2
88. WALLACEBRAE ROAD	Dwelling	49.2	50.2	48.9	-0.3	Negligible Beneficial	50.0	0.8	Negligible Adverse	38.0	38.9	38.7
9. WALLACEBRAE ROAD	Dwelling	59.4	62.0	58.3	-1.1	Minor Beneficial	60.6	1.2	Negligible Adverse	47.2	49.5	48.3
90. WALLACEBRAE ROAD	Dwelling	50.5	51.4	50.1	-0.4	Negligible Beneficial	51.2	0.7	Negligible Adverse	39.2	40.0	39.8
92. WALLACEBRAE ROAD	Dwelling	50.2	50.7	49.8	-0.4	Negligible Beneficial	50.8	0.6	Negligible Adverse	38.9	39.4	39.5
94. WALLACEBRAE ROAD	Dwelling	49.2	49.7	48.9	-0.3	Negligible Beneficial	49.8	0.6	Negligible Adverse	38.0	38.5	38.6
96. WALLACEBRAE ROAD	Dwelling	50.6	51.0	50.3	-0.3	Negligible Beneficial	51.1	0.5	Negligible Adverse	39.3	39.6	39.7
1. WALLACEBRAE TERRACE, DANESTONE	Dwelling	55.0	56.3	54.9	-0.1	Negligible Beneficial	56.3	1.3	Negligible Adverse	43.2	44.4	44.4
10. WALLACEBRAE TERRACE, DANESTONE	Dwelling	52.5	52.2	52.5	0.0	No Change	53.3	0.8	Negligible Adverse	41.0	41.7	41.0
11. WALLACEBRAE TERRACE, DANESTONE	Dwelling	53.1	52.4	52.9	-0.2	Negligible Beneficial	53.4	0.4	Negligible Adverse	41.5	40.9	41.0
12. WALLACEBRAE TERRACE, DANESTONE	Dwelling	52.2	51.5	52.1	-0.1	Negligible Beneficial	52.9	0.7	Negligible Adverse	40.7	40.1	41.3
14. WALLACEBRAE TERRACE, DANESTONE	Dwelling	54.0	53.5	53.7	-0.3	Negligible Beneficial	54.4	0.4	Negligible Adverse	42.3	41.9	42.7
15. WALLACEBRAE TERRACE, DANESTONE	Dwelling	53.0	52.4	52.7	-0.3	Negligible Beneficial	53.3	0.3	Negligible Adverse	41.4	40.9	41.7
16. WALLACEBRAE TERRACE, DANESTONE	Dwelling	53.2	52.5	53.0	-0.2	Negligible Beneficial	53.6	0.4	Negligible Adverse	41.6	41.0	42.0
17. WALLACEBRAE TERRACE, DANESTONE	Dwelling	52.5	52.1	52.3	-0.2	Negligible Beneficial	52.9	0.4	Negligible Adverse	41.0	40.6	41.3
18. WALLACEBRAE TERRACE, DANESTONE	Dwelling	53.8	54.1	53.5	-0.3	Negligible Beneficial	54.3	0.5	Negligible Adverse	42.2	42.4	42.6
19. WALLACEBRAE TERRACE, DANESTONE	Dwelling	52.4	51.8	52.2	-0.2	Negligible Beneficial	52.8	0.4	Negligible Adverse	40.9	40.4	41.3
2. WALLACEBRAE TERRACE, DANESTONE	Dwelling	55.9	57.4	55.8	-0.1	Negligible Beneficial	57.2	1.3	Negligible Adverse	44.0	45.4	45.2
20. WALLACEBRAE TERRACE, DANESTONE	Dwelling	55.3	54.8	55.1	-0.2	Negligible Beneficial	55.7	0.4	Negligible Adverse	43.5	43.1	43.9
21. WALLACEBRAE TERRACE, DANESTONE	Dwelling	51.6	50.4	51.6	0.0	No Change	52.2	0.6	Negligible Adverse	40.2	39.1	40.7
22. WALLACEBRAE TERRACE, DANESTONE	Dwelling	51.5	51.3	51.2	-0.3	Negligible Beneficial	51.9	0.4	Negligible Adverse	40.1	39.9	40.4
23. WALLACEBRAE TERRACE, DANESTONE	Dwelling	51.7	50.4	51.6	-0.1	Negligible Beneficial	52.3	0.6	Negligible Adverse	40.3	39.1	40.8
24. WALLACEBRAE TERRACE, DANESTONE	Dwelling	51.7	51.5	51.5	-0.2	Negligible Beneficial	52.2	0.5	Negligible Adverse	40.3	40.1	40.7
25. WALLACEBRAE TERRACE, DANESTONE	Dwelling	51.9	50.6	51.9	0.0	No Change	52.5	0.6	Negligible Adverse	40.4	39.3	41.0
26. WALLACEBRAE TERRACE, DANESTONE	Dwelling	51.9	51.6	51.8	0.0	Negligible Beneficial	52.3	0.4	Negligible Adverse	40.4	40.4	40.8
27. WALLACEBRAE TERRACE, DANESTONE	Dwelling	51.9	50.5	51.9	0.0	No Change	52.5	0.6	Negligible Adverse	40.4	39.2	41.0
28. WALLACEBRAE TERRACE, DANESTONE	Dwelling	51.5	51.0	51.3	-0.2	Negligible Beneficial	52.0	0.5	Negligible Adverse	40.1	39.6	40.5
29. WALLACEBRAE TERRACE, DANESTONE	Dwelling	51.9	50.5	51.8	-0.1	Negligible Beneficial	52.4	0.5	Negligible Adverse	40.4	39.2	40.9
3. WALLACEBRAE TERRACE, DANESTONE	Dwelling	53.7	53.4	53.5	-0.2	Negligible Beneficial	54.2	0.5	Negligible Adverse	42.1	41.8	42.5
30. WALLACEBRAE TERRACE, DANESTONE	Dwelling	49.8	49.8	49.6	-0.2	Negligible Beneficial	50.3	0.5	Negligible Adverse	38.6	38.6	39.0
31. WALLACEBRAE TERRACE, DANESTONE	Dwelling	51.8	50.4	51.7	-0.1	Negligible Beneficial	52.4	0.6	Negligible Adverse	40.4	39.1	40.9
32. WALLACEBRAE TERRACE, DANESTONE	Dwelling	49.5	49.5	49.3	-0.2	Negligible Beneficial	50.1	0.6	Negligible Adverse	38.3	38.3	38.8
33. WALLACEBRAE TERRACE, DANESTONE	Dwelling	51.4	50.2	51.4	0.0	No Change	52.0	0.6	Negligible Adverse	40.0	38.9	40.5
34. WALLACEBRAE TERRACE, DANESTONE	Dwelling	49.2	49.2	49.1	-0.1	Negligible Beneficial	49.8	0.6	Negligible Adverse	38.0	38.0	38.6
35. WALLACEBRAE TERRACE, DANESTONE	Dwelling	51.4	50.0	51.3	-0.1	Negligible Beneficial	51.9	0.5	Negligible Adverse	40.0	38.7	40.4
36. WALLACEBRAE TERRACE, DANESTONE	Dwelling	49.1	49.0	49.0	0.0	Negligible Beneficial	49.7	0.6	Negligible Adverse	37.9	37.8	38.5
37. WALLACEBRAE TERRACE, DANESTONE	Dwelling	51.6	50.3	51.6	-0.1	No Change	52.2	0.6	Negligible Adverse	40.2	39.0	40.7
39. WALLACEBRAE TERRACE, DANESTONE	Dwelling	51.7	50.4	51.7	0.0	No Change	52.3	0.6	Negligible Adverse	40.3	39.1	40.8
4. WALLACEBRAE TERRACE, DANESTONE	Dwelling	56.1	56.1	56.0	-0.1	Negligible Beneficial	56.8	0.7	Negligible Adverse	44.2	44.2	44.9
5. WALLACEBRAE TERRACE, DANESTONE	Dwelling	53.2	52.8	53.1	-0.1	Negligible Beneficial	53.7	0.5	Negligible Adverse	41.6	41.3	42.1
6. WALLACEBRAE TERRACE, DANESTONE	Dwelling	55.5	55.7	55.3	-0.2	Negligible Beneficial	56.2	0.7	Negligible Adverse	43.7	43.9	44.3
7. WALLACEBRAE TERRACE, DANESTONE	Dwelling	53.1	52.4	53.0	-0.1	Negligible Beneficial	53.6	0.5	Negligible Adverse	41.5	40.9	42.0
8. WALLACEBRAE TERRACE, DANESTONE	Dwelling	54.5	54.2	54.5	0.0	No Change	55.3	0.8	Negligible Adverse	42.8	42.5	43.5
9. WALLACEBRAE TERRACE, DANESTONE	Dwelling	52.7	52.0	52.6	-0.1	Negligible Beneficial	53.2	0.5	Negligible Adverse	41.2	40.5	41.6
1. WALLACEBRAE WALK	Dwelling	53.2	51.7	53.1	-0.1	Negligible Beneficial	53.6	0.4	Negligible Adverse	41.6	40.3	42.0
10. WALLACEBRAE WALK	Dwelling	51.8	50.9	51.8	0.0	No Change	52.5	0.7	Negligible Adverse	40.4	39.5	41.0
11. WALLACEBRAE WALK	Dwelling	57.2	59.8	57.0	-0.2	Negligible Beneficial	58.7	1.5	Negligible Adverse	45.2	47.6	46.6
12. WALLACEBRAE WALK	Dwelling	53.7	52.8	53.6	-0.1	Negligible Beneficial	54.3	0.6	Negligible Adverse	42.1	41.3	42.6
14. WALLACEBRAE WALK	Dwelling	56.0	57.2	55.9	-0.1	Negligible Beneficial	57.2	1.2	Negligible Adverse	44.1	45.2	45.2
15. WALLACEBRAE WALK	Dwelling	56.7	56.8	56.7	0.0	No Change	58.2	1.5	Negligible Adverse	44.8	46.7	46.1
16. WALLACEBRAE WALK	Dwelling	56.4	57.9	56.4	0.0	No Change	57.6	1.2	Negligible Adverse	44.5	45.8	45.6
17. WALLACEBRAE WALK	Dwelling	56.0	57.2	55.9	-0.1	Negligible Beneficial	57.1	1.1	Negligible Adverse	44.1	45.2	45.1
18. WALLACEBRAE WALK	Dwelling	56.0	56.9	56.0	0.0	No Change	57.0	1.0	Negligible Adverse	44.1	44.9	45.0
2. WALLACEBRAE WALK	Dwelling	52.7	51.2	52.7	0.0	No Change	53.2	0.5	Negligible Adverse	41.2	39.8	41.6
20. WALLACEBRAE WALK	Dwelling	56.1	57.2	56.1	0.0	No Change	57.2	1.1	Negligible Adverse	44.2	45.2	45.2
22. WALLACEBRAE WALK	Dwelling	56.1	57.2	56.0	-0.1	Negligible Beneficial	57.2	1.1	Negligible Adverse	44.2	45.2	45.2
3. WALLACEBRAE WALK	Dwelling	54.7	54.2	54.5	-0.2	Negligible Beneficial	55.1	0.4	Negligible Adverse	43.0	42.5	43.3
4. WALLACEBRAE WALK	Dwelling	54.3	53.8	54.0	-0.3	Negligible Beneficial	54.7	0.4	Negligible Adverse	42.6	42.2	43.0
6. WALLACEBRAE WALK	Dwelling	52.8	51.7	52.8	0.0	No Change	53.4	0.6	Negligible Adverse	41.3	40.3	41.8
7. WALLACEBRAE WALK	Dwelling	54.0	54.1	53.8	-0.2	Negligible Beneficial	54.5	0.5	Negligible Adverse	42.3	42.4	42.8
8. WALLACEBRAE WALK	Dwelling	52.5	51.3	52.4	-0.1	Negligible Beneficial	53.0	0.5	Negligible Adverse	41.0	39.9	41.4
9. WALLACEBRAE WALK	Dwelling	55.7	57.2	55.5	-0.2	Negligible Beneficial	56.7	1.0	Negligible Adverse	43.9	45.2	44.8
1. WALLACEBRAE WYND, DANESTONE	Dwelling	53.3	53.2	53.3	0.0	No Change	54.1	0.8	Negligible Adverse	41.7	41.6	42.4
10. WALLACEBRAE WYND, DANESTONE	Dwelling	51.7	51.3	51.5	-0.2	Negligible Beneficial	52.3	0.6	Negligible Adverse	40.3	39.9	40.8
11. WALLACEBRAE WYND, DANESTONE	Dwelling	52.5	52.4	52.4	-0.1	Negligible Beneficial	53.4	0.8	Negligible Adverse	41.1	41.9	41.8
12. WALLACEBRAE WYND, DANESTONE	Dwelling	52.1	52.1	52.1	0.0	No Change	53.3	1.2	Negligible Adverse	41.1	41.7	41.7
14. WALLACEBRAE WYND, DANESTONE	Dwelling	55.0	56.5	54.9	-0.1	Negligible Beneficial	56.3	1.3	Negligible Adverse	43.2	44.6	44.4

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DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
15. WALLACEBRAE WYND, DANESTONE	Dwelling	52.6	52.4	52.5	-0.1	Negligible Beneficial	53.4	0.8	Negligible Adverse	41.1	40.9	41.8
16. WALLACEBRAE WYND, DANESTONE	Dwelling	55.0	57.0	54.9	-0.1	Negligible Beneficial	56.4	1.4	Negligible Adverse	43.2	45.0	44.5
17. WALLACEBRAE WYND, DANESTONE	Dwelling	52.8	52.6	52.7	-0.1	Negligible Beneficial	53.7	0.9	Negligible Adverse	41.3	41.1	42.1
18. WALLACEBRAE WYND, DANESTONE	Dwelling	57.3	59.7	57.1	-0.2	Negligible Beneficial	58.9	1.6	Negligible Adverse	45.3	47.5	46.7
19. WALLACEBRAE WYND, DANESTONE	Dwelling	52.8	52.6	52.7	-0.1	Negligible Beneficial	53.7	0.9	Negligible Adverse	41.3	41.1	42.1
2. WALLACEBRAE WYND, DANESTONE	Dwelling	52.4	53.0	52.3	-0.1	Negligible Beneficial	53.4	1.0	Negligible Adverse	40.9	41.4	41.8
20. WALLACEBRAE WYND, DANESTONE	Dwelling	57.2	59.6	57.1	-0.1	Negligible Beneficial	58.9	1.7	Negligible Adverse	45.2	47.4	46.7
21. WALLACEBRAE WYND, DANESTONE	Dwelling	52.7	52.3	52.6	-0.1	Negligible Beneficial	53.5	0.8	Negligible Adverse	41.2	40.8	41.9
22. WALLACEBRAE WYND, DANESTONE	Dwelling	57.3	59.7	57.1	-0.2	Negligible Beneficial	58.9	1.6	Negligible Adverse	45.3	47.5	46.7
23. WALLACEBRAE WYND, DANESTONE	Dwelling	52.7	52.3	52.6	-0.1	Negligible Beneficial	53.5	0.8	Negligible Adverse	41.2	40.8	41.9
24. WALLACEBRAE WYND, DANESTONE	Dwelling	56.3	56.7	56.1	-0.2	Negligible Beneficial	57.9	1.6	Negligible Adverse	44.4	46.6	45.8
25. WALLACEBRAE WYND, DANESTONE	Dwelling	52.2	52.6	52.7	-0.1	Negligible Beneficial	53.5	0.8	Negligible Adverse	41.2	40.7	41.9
26. WALLACEBRAE WYND, DANESTONE	Dwelling	57.2	59.6	57.0	-0.2	Negligible Beneficial	58.8	1.6	Negligible Adverse	45.2	47.4	46.7
27. WALLACEBRAE WYND, DANESTONE	Dwelling	52.7	52.2	52.6	-0.1	Negligible Beneficial	53.5	0.8	Negligible Adverse	41.2	40.7	41.9
28. WALLACEBRAE WYND, DANESTONE	Dwelling	57.2	59.5	57.0	-0.2	Negligible Beneficial	58.8	1.6	Negligible Adverse	45.2	47.3	46.7
29. WALLACEBRAE WYND, DANESTONE	Dwelling	52.9	52.5	52.8	-0.1	Negligible Beneficial	53.7	0.8	Negligible Adverse	41.3	41.0	42.1
3. WALLACEBRAE WYND, DANESTONE	Dwelling	53.0	52.8	53.0	0.0	No Change	53.8	0.8	Negligible Adverse	41.4	41.3	42.2
30. WALLACEBRAE WYND, DANESTONE	Dwelling	57.2	59.5	57.0	-0.2	Negligible Beneficial	58.8	1.6	Negligible Adverse	45.2	47.3	46.7
31. WALLACEBRAE WYND, DANESTONE	Dwelling	52.9	52.4	52.8	-0.1	Negligible Beneficial	53.7	0.8	Negligible Adverse	41.3	40.9	42.1
32. WALLACEBRAE WYND, DANESTONE	Dwelling	54.0	54.5	53.9	-0.1	Negligible Beneficial	55.0	1.0	Negligible Adverse	42.3	42.8	43.2
33. WALLACEBRAE WYND, DANESTONE	Dwelling	52.3	51.6	52.2	-0.1	Negligible Beneficial	52.9	0.6	Negligible Adverse	40.8	40.2	41.3
34. WALLACEBRAE WYND, DANESTONE	Dwelling	51.9	52.1	51.9	0.0	No Change	52.9	1.0	Negligible Adverse	40.4	40.6	41.3
35. WALLACEBRAE WYND, DANESTONE	Dwelling	52.7	52.2	52.5	-0.2	Negligible Beneficial	53.3	0.6	Negligible Adverse	41.2	40.7	41.7
36. WALLACEBRAE WYND, DANESTONE	Dwelling	55.0	56.0	54.8	-0.2	Negligible Beneficial	56.1	1.1	Negligible Adverse	43.2	44.1	44.2
37. WALLACEBRAE WYND, DANESTONE	Dwelling	51.3	51.9	51.3	-0.1	Negligible Beneficial	52.6	0.6	Negligible Adverse	40.5	39.9	41.1
38. WALLACEBRAE WYND, DANESTONE	Dwelling	55.0	56.0	54.8	-0.2	Negligible Beneficial	56.2	1.2	Negligible Adverse	43.2	44.1	44.3
39. WALLACEBRAE WYND, DANESTONE	Dwelling	52.0	51.3	51.9	-0.1	Negligible Beneficial	52.6	0.6	Negligible Adverse	40.5	39.9	41.1
4. WALLACEBRAE WYND, DANESTONE	Dwelling	52.2	53.1	52.0	-0.2	Negligible Beneficial	52.6	1.0	Negligible Adverse	40.7	41.5	41.6
40. WALLACEBRAE WYND, DANESTONE	Dwelling	55.5	56.9	55.3	-0.2	Negligible Beneficial	56.8	1.3	Negligible Adverse	43.7	44.9	44.9
41. WALLACEBRAE WYND, DANESTONE	Dwelling	48.6	47.9	48.6	0.0	No Change	49.2	0.6	Negligible Adverse	37.5	36.8	38.0
42. WALLACEBRAE WYND, DANESTONE	Dwelling	55.5	56.9	55.3	-0.2	Negligible Beneficial	56.8	1.3	Negligible Adverse	43.7	44.9	44.9
43. WALLACEBRAE WYND, DANESTONE	Dwelling	48.6	47.9	48.6	0.0	No Change	49.2	0.6	Negligible Adverse	37.5	36.8	38.0
44. WALLACEBRAE WYND, DANESTONE	Dwelling	57.9	60.8	57.7	-0.2	Negligible Beneficial	59.7	1.8	Negligible Adverse	45.8	48.5	47.5
45. WALLACEBRAE WYND, DANESTONE	Dwelling	50.2	49.9	50.2	0.0	No Change	51.0	0.8	Negligible Adverse	38.9	38.6	39.6
46. WALLACEBRAE WYND, DANESTONE	Dwelling	57.8	60.7	57.6	-0.2	Negligible Beneficial	59.7	1.9	Negligible Adverse	45.8	48.4	47.5
47. WALLACEBRAE WYND, DANESTONE	Dwelling	49.9	49.6	49.8	-0.1	Negligible Beneficial	50.6	0.7	Negligible Adverse	38.6	38.4	39.3
48. WALLACEBRAE WYND, DANESTONE	Dwelling	58.5	61.8	58.3	-0.2	Negligible Beneficial	60.5	2.0	Negligible Adverse	46.4	49.4	48.2
49. WALLACEBRAE WYND, DANESTONE	Dwelling	51.1	50.6	51.0	-0.1	Negligible Beneficial	51.7	0.6	Negligible Adverse	39.7	39.3	40.3
5. WALLACEBRAE WYND, DANESTONE	Dwelling	53.0	52.6	52.9	-0.1	Negligible Beneficial	53.7	0.7	Negligible Adverse	41.4	41.1	42.1
50. WALLACEBRAE WYND, DANESTONE	Dwelling	51.4	56.0	56.0	-0.2	Negligible Beneficial	57.6	1.4	Negligible Adverse	44.3	45.9	45.6
51. WALLACEBRAE WYND, DANESTONE	Dwelling	51.1	50.6	51.0	-0.1	Negligible Beneficial	51.7	0.6	Negligible Adverse	39.7	39.3	40.3
52. WALLACEBRAE WYND, DANESTONE	Dwelling	55.6	57.0	55.4	-0.2	Negligible Beneficial	56.9	1.3	Negligible Adverse	43.8	45.0	44.9
53. WALLACEBRAE WYND, DANESTONE	Dwelling	51.6	50.7	51.6	0.0	No Change	52.3	0.7	Negligible Adverse	40.2	39.4	40.8
54. WALLACEBRAE WYND, DANESTONE	Dwelling	55.2	56.1	55.1	-0.1	Negligible Beneficial	56.4	1.2	Negligible Adverse	43.4	44.2	44.5
55. WALLACEBRAE WYND, DANESTONE	Dwelling	51.6	50.7	51.6	0.0	No Change	52.3	0.7	Negligible Adverse	40.2	39.4	40.8
56. WALLACEBRAE WYND, DANESTONE	Dwelling	55.4	55.9	55.2	-0.2	Negligible Beneficial	56.3	0.9	Negligible Adverse	43.6	44.0	44.4
57. WALLACEBRAE WYND, DANESTONE	Dwelling	50.7	49.9	50.6	-0.1	Negligible Beneficial	51.4	0.7	Negligible Adverse	39.4	38.6	40.0
58. WALLACEBRAE WYND, DANESTONE	Dwelling	53.8	53.7	53.8	0.0	No Change	54.6	0.8	Negligible Adverse	42.2	42.1	42.9
59. WALLACEBRAE WYND, DANESTONE	Dwelling	50.7	49.9	50.7	0.0	No Change	51.4	0.7	Negligible Adverse	39.4	38.6	40.0
6. WALLACEBRAE WYND, DANESTONE	Dwelling	52.3	52.1	52.2	-0.1	Negligible Beneficial	53.0	0.7	Negligible Adverse	40.8	40.6	41.4
60. WALLACEBRAE WYND, DANESTONE	Dwelling	52.4	52.5	52.4	0.0	No Change	53.4	1.0	Negligible Adverse	40.9	41.0	41.8
61. WALLACEBRAE WYND, DANESTONE	Dwelling	51.1	50.5	51.1	0.0	No Change	51.9	0.8	Negligible Adverse	39.7	39.2	40.4
62. WALLACEBRAE WYND, DANESTONE	Dwelling	52.7	52.7	52.7	-0.1	Negligible Beneficial	53.7	0.9	Negligible Adverse	41.3	41.2	42.1
63. WALLACEBRAE WYND, DANESTONE	Dwelling	51.1	50.5	51.1	0.0	No Change	51.9	0.8	Negligible Adverse	39.7	39.2	40.4
64. WALLACEBRAE WYND, DANESTONE	Dwelling	52.8	52.7	52.7	-0.1	Negligible Beneficial	53.7	0.9	Negligible Adverse	41.3	41.2	42.1
65. WALLACEBRAE WYND, DANESTONE	Dwelling	52.3	51.4	52.3	0.0	No Change	52.9	0.6	Negligible Adverse	40.8	40.0	41.3
66. WALLACEBRAE WYND, DANESTONE	Dwelling	52.8	52.7	52.8	0.0	No Change	53.8	1.0	Negligible Adverse	41.3	41.2	42.2
67. WALLACEBRAE WYND, DANESTONE	Dwelling	52.3	51.4	52.3	0.0	No Change	52.9	0.6	Negligible Adverse	40.8	40.0	41.3
68. WALLACEBRAE WYND, DANESTONE	Dwelling	53.1	52.9	53.0	-0.1	Negligible Beneficial	54.0	0.9	Negligible Adverse	41.5	41.3	42.3
69. WALLACEBRAE WYND, DANESTONE	Dwelling	51.8	50.7	51.8	0.0	No Change	52.4	0.6	Negligible Adverse	40.4	39.4	40.9
7. WALLACEBRAE WYND, DANESTONE	Dwelling	52.3	52.4	52.1	-0.2	Negligible Beneficial	53.0	0.7	Negligible Adverse	40.8	40.9	41.4
70. WALLACEBRAE WYND, DANESTONE	Dwelling	52.1	51.1	52.0	-0.1	Negligible Beneficial	52.7	0.6	Negligible Adverse	40.6	39.7	41.2
71. WALLACEBRAE WYND, DANESTONE	Dwelling	50.6	50.5	50.3	-0.3	Negligible Beneficial	51.0	0.4	Negligible Adverse	39.3	39.2	39.6
72. WALLACEBRAE WYND, DANESTONE	Dwelling	52.2	51.2	52.1	-0.1	Negligible Beneficial	52.9	0.7	Negligible Adverse	40.7	39.8	41.3
74. WALLACEBRAE WYND, DANESTONE	Dwelling	53.3	52.2	53.2	-0.1	Negligible Beneficial	53.9	0.6	Negligible Adverse	41.7	40.7	42.2
76. WALLACEBRAE WYND, DANESTONE	Dwelling	52.4	51.2	52.4	0.0	No Change	53.0	0.6	Negligible Adverse	40.9	39.8	41.4
78. WALLACEBRAE WYND, DANESTONE	Dwelling	53.8	53.6	53.6	-0.2	Negligible Beneficial	54.3	0.5	Negligible Adverse	42.2	41.5	42.6
8. WALLACEBRAE WYND, DANESTONE	Dwelling	52.9	51.9	52.0	-0.1	Negligible Beneficial	53.1	1.1	Negligible Adverse	40.5	41.3	41.5
80. WALLACEBRAE WYND, DANESTONE	Dwelling	53.7	52.9	53.5	-0.2	Negligible Beneficial	54.2	0.5	Negligible Adverse	42.1	41.3	42.5
82. WALLACEBRAE WYND, DANESTONE	Dwelling	53.6	52.9	53.5	-0.1	Negligible Beneficial	54.1	0.5	Negligible Adverse	42.0	41.3	42.4
9. WALLACEBRAE WYND, DANESTONE	Dwelling	52.8	52.5	52.8	0.0	No Change	53.6	0.8	Negligible Adverse	41.3	41.0	42.0
1. WAVELL CRESCENT	Dwelling	48.7	49.9	48.5	-0.2	Negligible Beneficial	49.8	1.1	Negligible Adverse	37.6	38.6	38.6
10. WAVELL CRESCENT	Dwelling	47.4	48.0	47.3	-0.1	Negligible Beneficial	48.4	1.0	Negligible Adverse	36.4	36.9	37.3
11. WAVELL CRESCENT	Dwelling	48.4	49.6	48.3	-0.1	Negligible Beneficial	49.4	1.0	Negligible Adverse	37.3	38.4	38.2
12. WAVELL CRESCENT	Dwelling	47.3	48.2	47.3	0.0	No Change	48.3	1.0	Negligible Adverse	36.3	37.1	37.2
13. WAVELL CRESCENT	Dwelling	48.6	50.0	48.5	-0.1	Negligible Beneficial	49.7	1.1	Negligible Adverse	37.5	38.7	38.5
14. WAVELL CRESCENT	Dwelling	46.9	47.7	46.8	-0.1	Negligible Beneficial	47.9	1.0	Negligible Adverse	35.9	36.7	36.8
15. WAVELL CRESCENT	Dwelling	49.0	50.5	48.8	-0.2	Negligible Beneficial	50.1	1.1	Negligible Adverse	37.8	39.2	38.8
16. WAVELL CRESCENT	Dwelling	47.5	48.0	47.4	-0.1	Negligible Beneficial	48.5	1.0	Negligible Adverse	36.5	36.9	37.4
17. WAVELL CRESCENT	Dwelling	49.2	50.9	49.1	-0.1	Negligible Beneficial	50.4	1.2	Negligible Adverse	38.0	39.5	39.1
18. WAVELL CRESCENT	Dwelling	47.6	48.3	47.5	-0.1	Negligible Beneficial	48.5	0.9	Negligible Adverse	36.6	37.2	37.4
19. WAVELL CRESCENT	Dwelling	50.0	51.8	49.8	-0.2	Negligible Beneficial	51.2	1.2	Negligible Adverse	38.7	40.4	39.8
2. WAVELL CRESCENT	Dwelling	46.9	47.5	46.8	-0.1	Negligible Beneficial	47.8	0.9	Negligible Adverse	35.9	36.5	36.8

A90/A96 Haudagain Improvement
DMRB Stage 3 Environmental Statement
Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
20. WAVELL CRESCENT	Dwelling	47.0	47.8	46.9	-0.1	Negligible Beneficial	48.0	1.0	Negligible Adverse	36.0	36.8	36.9
21. WAVELL CRESCENT	Dwelling	50.8	52.9	50.5	-0.3	Negligible Beneficial	52.1	1.3	Negligible Adverse	39.5	41.3	40.6
22. WAVELL CRESCENT	Dwelling	47.6	48.4	47.5	-0.1	Negligible Beneficial	48.6	1.0	Negligible Adverse	36.6	37.3	37.5
23. WAVELL CRESCENT	Dwelling	52.9	55.3	52.5	-0.4	Negligible Beneficial	54.4	1.5	Negligible Adverse	41.3	43.5	42.7
24. WAVELL CRESCENT	Dwelling	47.7	48.5	47.6	-0.1	Negligible Beneficial	48.7	1.0	Negligible Adverse	36.7	37.4	37.6
26. WAVELL CRESCENT	Dwelling	48.6	50.0	48.5	-0.1	Negligible Beneficial	49.8	1.2	Negligible Adverse	37.5	38.7	38.6
28. WAVELL CRESCENT	Dwelling	48.7	50.1	48.6	-0.1	Negligible Beneficial	49.9	1.2	Negligible Adverse	37.6	38.8	38.6
3. WAVELL CRESCENT	Dwelling	48.9	49.8	48.8	-0.1	Negligible Beneficial	49.8	0.9	Negligible Adverse	37.7	38.6	38.6
30. WAVELL CRESCENT	Dwelling	49.0	50.5	48.8	-0.2	Negligible Beneficial	50.2	1.2	Negligible Adverse	37.8	39.2	38.9
32. WAVELL CRESCENT	Dwelling	49.1	50.7	48.9	-0.2	Negligible Beneficial	50.3	1.2	Negligible Adverse	37.9	39.4	39.0
34. WAVELL CRESCENT	Dwelling	49.5	51.2	49.3	-0.2	Negligible Beneficial	50.8	1.3	Negligible Adverse	38.3	39.8	39.5
36. WAVELL CRESCENT	Dwelling	50.6	52.2	50.4	-0.2	Negligible Beneficial	51.8	1.2	Negligible Adverse	39.3	40.7	40.4
4. WAVELL CRESCENT	Dwelling	48.8	47.4	46.7	-0.1	Negligible Beneficial	47.7	0.9	Negligible Adverse	35.9	36.4	36.7
5. WAVELL CRESCENT	Dwelling	48.9	49.8	48.8	-0.1	Negligible Beneficial	49.8	0.9	Negligible Adverse	37.7	38.6	38.6
6. WAVELL CRESCENT	Dwelling	46.6	47.2	46.6	0.0	No Change	47.5	0.9	Negligible Adverse	35.7	36.2	36.5
7. WAVELL CRESCENT	Dwelling	49.1	49.9	49.0	-0.1	Negligible Beneficial	50.0	0.9	Negligible Adverse	37.9	38.6	38.7
8. WAVELL CRESCENT	Dwelling	46.7	47.2	46.6	-0.1	Negligible Beneficial	47.6	0.9	Negligible Adverse	35.8	36.2	36.6
9. WAVELL CRESCENT	Dwelling	48.3	49.5	48.2	-0.1	Negligible Beneficial	49.4	1.1	Negligible Adverse	37.2	38.3	38.2
1. WEAVER TERRACE	Dwelling	50.4	51.4	50.4	0.0	No Change	51.3	0.9	Negligible Adverse	39.1	40.0	39.9
10. WEAVER TERRACE	Dwelling	48.0	48.9	47.9	-0.1	Negligible Beneficial	48.8	0.8	Negligible Adverse	36.9	37.7	37.7
11. WEAVER TERRACE	Dwelling	49.4	50.4	49.3	-0.1	Negligible Beneficial	50.2	0.8	Negligible Adverse	38.2	39.1	38.9
12. WEAVER TERRACE	Dwelling	47.5	48.5	47.5	0.0	No Change	48.4	0.9	Negligible Adverse	36.5	37.4	37.3
14. WEAVER TERRACE	Dwelling	47.4	48.4	47.4	0.0	No Change	48.3	0.9	Negligible Adverse	36.4	37.3	37.2
15. WEAVER TERRACE	Dwelling	49.0	50.0	48.9	-0.1	Negligible Beneficial	49.9	0.9	Negligible Adverse	37.8	38.7	38.6
16. WEAVER TERRACE	Dwelling	47.4	48.4	47.3	-0.1	Negligible Beneficial	48.2	0.8	Negligible Adverse	36.4	37.3	37.1
17. WEAVER TERRACE	Dwelling	50.2	49.0	49.0	-0.1	Negligible Beneficial	49.0	0.9	Negligible Adverse	37.9	38.9	38.7
18. WEAVER TERRACE	Dwelling	47.7	48.7	47.6	-0.1	Negligible Beneficial	48.6	0.9	Negligible Adverse	36.7	37.6	37.5
19. WEAVER TERRACE	Dwelling	48.9	50.0	48.8	-0.1	Negligible Beneficial	49.8	0.9	Negligible Adverse	37.7	38.7	38.6
2. WEAVER TERRACE	Dwelling	50.4	51.4	50.4	0.0	No Change	51.3	0.9	Negligible Adverse	39.1	40.0	39.9
20. WEAVER TERRACE	Dwelling	47.3	48.3	47.2	-0.1	Negligible Beneficial	48.2	0.9	Negligible Adverse	36.3	37.2	37.1
21. WEAVER TERRACE	Dwelling	49.0	50.1	48.9	-0.1	Negligible Beneficial	49.9	0.9	Negligible Adverse	37.8	38.8	38.6
22. WEAVER TERRACE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
23. WEAVER TERRACE	Dwelling	48.8	50.0	48.7	-0.1	Negligible Beneficial	49.8	1.0	Negligible Adverse	37.7	38.7	38.6
24. WEAVER TERRACE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
25. WEAVER TERRACE	Dwelling	48.8	50.1	48.7	-0.1	Negligible Beneficial	49.8	1.0	Negligible Adverse	37.7	38.8	38.6
26. WEAVER TERRACE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
28. WEAVER TERRACE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
3. WEAVER TERRACE	Dwelling	50.4	51.4	50.4	0.0	No Change	51.3	0.9	Negligible Adverse	39.1	40.0	39.9
30. WEAVER TERRACE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
32. WEAVER TERRACE	Dwelling	46.1	47.0	46.0	-0.1	Negligible Beneficial	46.8	0.7	Negligible Adverse	35.2	36.0	35.9
4. WEAVER TERRACE	Dwelling	50.4	51.4	50.4	0.0	No Change	51.3	0.9	Negligible Adverse	39.1	40.0	39.9
5. WEAVER TERRACE	Dwelling	50.8	51.8	50.7	-0.1	Negligible Beneficial	51.6	0.8	Negligible Adverse	39.5	40.4	40.2
6. WEAVER TERRACE	Dwelling	50.4	51.4	50.4	0.0	No Change	51.3	0.9	Negligible Adverse	39.1	40.0	39.9
7. WEAVER TERRACE	Dwelling	51.1	52.0	51.0	-0.1	Negligible Beneficial	51.9	0.8	Negligible Adverse	39.7	40.5	40.4
8. WEAVER TERRACE	Dwelling	50.4	51.4	50.4	0.0	No Change	51.3	0.9	Negligible Adverse	39.1	40.0	39.9
9. WEAVER TERRACE	Dwelling	49.7	50.7	49.6	-0.1	Negligible Beneficial	50.6	0.9	Negligible Adverse	38.5	39.4	39.3
FOUNTAIN GRANGE, 1, WESTERN ROAD	Dwelling	66.1	67.1	66.2	0.1	Negligible Adverse	67.1	1.0	Negligible Adverse	53.2	54.1	54.1
WOODSIDE MEDICAL GROUP, 1, SKENE PLACE, DYCE	Clinic	60.6	66.8	60.9	0.3	Negligible Adverse	64.9	4.3	Minor Adverse	48.3	53.9	52.1
FOUNTAIN GRANGE, 2, WESTERN ROAD	Dwelling	66.1	67.1	66.2	0.1	Negligible Adverse	67.1	1.0	Negligible Adverse	53.2	54.1	54.1
FOUNTAIN GRANGE, 3, WESTERN ROAD	Dwelling	66.1	67.1	66.2	0.1	Negligible Adverse	67.1	1.0	Negligible Adverse	53.2	54.1	54.1
FOUNTAIN GRANGE, 4, WESTERN ROAD	Dwelling	66.1	67.1	66.2	0.1	Negligible Adverse	67.1	1.0	Negligible Adverse	53.2	54.1	54.1
FOUNTAIN GRANGE, 5, WESTERN ROAD	Dwelling	66.1	67.1	66.2	0.1	Negligible Adverse	67.1	1.0	Negligible Adverse	53.2	54.1	54.1
FOUNTAIN GRANGE, 6, WESTERN ROAD	Dwelling	66.1	67.1	66.2	0.1	Negligible Adverse	67.1	1.0	Negligible Adverse	53.2	54.1	54.1
FOUNTAIN GRANGE, 7, WESTERN ROAD	Dwelling	66.1	67.1	66.2	0.1	Negligible Adverse	67.1	1.0	Negligible Adverse	53.2	54.1	54.1
FOUNTAIN GRANGE, 8, WESTERN ROAD	Dwelling	66.1	67.1	66.2	0.1	Negligible Adverse	67.1	1.0	Negligible Adverse	53.2	54.1	54.1
FOUNTAIN GRANGE, 9, WESTERN ROAD	Dwelling	66.1	67.1	66.2	0.1	Negligible Adverse	67.1	1.0	Negligible Adverse	53.2	54.1	54.1
FOUNTAIN GRANGE, 10, WESTERN ROAD	Dwelling	66.1	67.1	66.2	0.1	Negligible Adverse	67.1	1.0	Negligible Adverse	53.2	54.1	54.1
FOUNTAIN GRANGE, 11, WESTERN ROAD	Dwelling	66.1	67.1	66.2	0.1	Negligible Adverse	67.1	1.0	Negligible Adverse	53.2	54.1	54.1
FOUNTAIN GRANGE, 12, WESTERN ROAD	Dwelling	66.1	67.1	66.2	0.1	Negligible Adverse	67.1	1.0	Negligible Adverse	53.2	54.1	54.1
FOUNTAIN GRANGE, 13, WESTERN ROAD	Dwelling	65.6	66.7	65.7	0.1	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.8	53.8
FOUNTAIN GRANGE, 14, WESTERN ROAD	Dwelling	65.6	66.7	65.7	0.1	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.8	53.8
FOUNTAIN GRANGE, 15, WESTERN ROAD	Dwelling	65.6	66.7	65.7	0.1	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.8	53.8
FOUNTAIN GRANGE, 16, WESTERN ROAD	Dwelling	65.6	66.7	65.7	0.1	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.8	53.8
FOUNTAIN GRANGE, 17, WESTERN ROAD	Dwelling	65.6	66.7	65.7	0.1	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.8	53.8
FOUNTAIN GRANGE, 18, WESTERN ROAD	Dwelling	65.6	66.7	65.7	0.1	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.8	53.8
FOUNTAIN GRANGE, 19, WESTERN ROAD	Dwelling	65.6	66.7	65.7	0.1	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.8	53.8
FOUNTAIN GRANGE, 20, WESTERN ROAD	Dwelling	65.6	66.7	65.7	0.1	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.8	53.8
FOUNTAIN GRANGE, 21, WESTERN ROAD	Dwelling	65.6	66.7	65.7	0.1	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.8	53.8
FOUNTAIN GRANGE, 22, WESTERN ROAD	Dwelling	65.6	66.7	65.7	0.1	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.8	53.8
FOUNTAIN GRANGE, 23, WESTERN ROAD	Dwelling	65.6	66.7	65.7	0.1	Negligible Adverse	66.7	1.1	Negligible Adverse	52.8	53.8	53.8
FOUNTAIN GRANGE, 24, WESTERN ROAD	Dwelling	54.6	55.4	54.8	0.2	Negligible Adverse	55.3	0.7	Negligible Adverse	42.9	43.6	43.5
FOUNTAIN GRANGE, 25, WESTERN ROAD	Dwelling	54.6	55.4	54.8	0.2	Negligible Adverse	55.3	0.7	Negligible Adverse	42.9	43.6	43.5
FOUNTAIN GRANGE, 26, WESTERN ROAD	Dwelling	54.6	55.4	54.8	0.2	Negligible Adverse	55.3	0.7	Negligible Adverse	42.9	43.6	43.5
FOUNTAIN GRANGE, 27, WESTERN ROAD	Dwelling	54.6	55.4	54.8	0.2	Negligible Adverse	55.3	0.7	Negligible Adverse	42.9	43.6	43.5
FOUNTAIN GRANGE, 28, WESTERN ROAD	Dwelling	54.6	55.4	54.8	0.2	Negligible Adverse	55.3	0.7	Negligible Adverse	42.9	43.6	43.5
FOUNTAIN GRANGE, 29, WESTERN ROAD	Dwelling	54.6	55.4	54.8	0.2	Negligible Adverse	55.3	0.7	Negligible Adverse	42.9	43.6	43.5
FOUNTAIN GRANGE, 30, WESTERN ROAD	Dwelling	54.6	55.4	54.8	0.2	Negligible Adverse	55.3	0.7	Negligible Adverse	42.9	43.6	43.5
FOUNTAIN GRANGE, 31, WESTERN ROAD	Dwelling	54.6	55.4	54.8	0.2	Negligible Adverse	55.3	0.7	Negligible Adverse	42.9	43.6	43.5
FOUNTAIN GRANGE, 32, WESTERN ROAD	Dwelling	54.6	55.4	54.8	0.2	Negligible Adverse	55.3	0.7	Negligible Adverse	42.9	43.6	43.5
GROUND FLOOR, 32, WESTERN ROAD	Dwelling	57.3	57.2	56.7	-0.6	Negligible Beneficial	57.2	-0.1	Negligible Beneficial	45.3	45.2	45.2
FOUNTAIN GRANGE, 33, WESTERN ROAD	Dwelling	54.6	55.4	54.8	0.2	Negligible Adverse	55.3	0.7	Negligible Adverse	42.9	43.6	43.5
FOUNTAIN GRANGE, 34, WESTERN ROAD	Dwelling	54.6	55.4	54.8	0.2	Negligible Adverse	55.3	0.7	Negligible Adverse	42.9	43.6	43.5
FOUNTAIN GRANGE, 35, WESTERN ROAD	Dwelling	54.6	55.4	54.8	0.2	Negligible Adverse	55.3	0.7	Negligible Adverse	42.9	43.6	43.5

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
FOUNTAIN GRANGE, 36, WESTERN ROAD	Dwelling	67.5	68.6	67.6	0.1	Negligible Beneficial	68.5	1.0	Negligible Adverse	54.5	55.5	55.4
GROUND FLOOR, 36, WESTERN ROAD	Dwelling	55.8	55.6	55.2	-0.6	Negligible Beneficial	55.7	-0.1	Negligible Beneficial	44.0	43.8	43.9
FOUNTAIN GRANGE, 37, WESTERN ROAD	Dwelling	67.5	68.6	67.6	0.1	Negligible Beneficial	68.5	1.0	Negligible Adverse	54.5	55.5	55.4
FOUNTAIN GRANGE, 38, WESTERN ROAD	Dwelling	67.5	68.6	67.6	0.1	Negligible Beneficial	68.5	1.0	Negligible Adverse	54.5	55.5	55.4
GROUND FLOOR, 38, WESTERN ROAD	Dwelling	55.8	55.6	55.2	-0.6	Negligible Beneficial	55.7	-0.1	Negligible Beneficial	44.0	43.8	43.9
FOUNTAIN GRANGE, 39, WESTERN ROAD	Dwelling	67.5	68.6	67.6	0.1	Negligible Beneficial	68.5	1.0	Negligible Adverse	54.5	55.5	55.4
FOUNTAIN GRANGE, 40, WESTERN ROAD	Dwelling	67.5	68.6	67.6	0.1	Negligible Beneficial	68.5	1.0	Negligible Adverse	54.5	55.5	55.4
FOUNTAIN GRANGE, 41, WESTERN ROAD	Dwelling	67.5	68.6	67.6	0.1	Negligible Beneficial	68.5	1.0	Negligible Adverse	54.5	55.5	55.4
FOUNTAIN GRANGE, 42, WESTERN ROAD	Dwelling	67.5	68.6	67.6	0.1	Negligible Beneficial	68.5	1.0	Negligible Adverse	54.5	55.5	55.4
FOUNTAIN GRANGE, 43, WESTERN ROAD	Dwelling	67.5	68.6	67.6	0.1	Negligible Beneficial	68.5	1.0	Negligible Adverse	54.5	55.5	55.4
FOUNTAIN GRANGE, 44, WESTERN ROAD	Dwelling	67.5	68.6	67.6	0.1	Negligible Beneficial	68.5	1.0	Negligible Adverse	54.5	55.5	55.4
FOUNTAIN GRANGE, 45, WESTERN ROAD	Dwelling	67.5	68.6	67.6	0.1	Negligible Beneficial	68.5	1.0	Negligible Adverse	54.5	55.5	55.4
FOUNTAIN GRANGE, 46, WESTERN ROAD	Dwelling	67.5	68.6	67.6	0.1	Negligible Beneficial	68.5	1.0	Negligible Adverse	54.5	55.5	55.4
FOUNTAIN GRANGE, 47, WESTERN ROAD	Dwelling	67.5	68.6	67.6	0.1	Negligible Beneficial	68.5	1.0	Negligible Adverse	54.5	55.5	55.4
FLAT B, 87, WESTERN ROAD	Dwelling	60.5	66.0	60.7	0.2	Negligible Adverse	64.3	3.8	Minor Adverse	48.2	53.1	51.6
FLAT C, 87, WESTERN ROAD	Dwelling	60.5	66.0	60.7	0.2	Negligible Adverse	64.3	3.8	Minor Adverse	48.2	53.1	51.6
FLAT B, 89, WESTERN ROAD	Dwelling	61.8	67.0	62.4	0.6	Negligible Adverse	65.9	4.1	Minor Adverse	49.4	54.0	53.0
FLAT C, 89, WESTERN ROAD	Dwelling	61.8	67.0	62.4	0.6	Negligible Adverse	65.9	4.1	Minor Adverse	49.4	54.0	53.0
FLAT D, 89, WESTERN ROAD	Dwelling	61.8	67.0	62.4	0.6	Negligible Adverse	65.9	4.1	Minor Adverse	49.4	54.0	53.0
FLAT E, 89, WESTERN ROAD	Dwelling	61.8	67.0	62.4	0.6	Negligible Adverse	65.9	4.1	Minor Adverse	49.4	54.0	53.0
FLAT F, 89, WESTERN ROAD	Dwelling	61.8	67.0	62.4	0.6	Negligible Adverse	65.9	4.1	Minor Adverse	49.4	54.0	53.0
10, WESTERN ROAD	Dwelling	54.4	57.0	53.1	-1.3	Minor Beneficial	56.3	1.9	Negligible Adverse	42.7	45.0	44.4
100, WESTERN ROAD	Dwelling	57.0	62.9	57.3	0.3	Negligible Adverse	62.3	5.3	Moderate Adverse	45.0	50.3	49.8
101, WESTERN ROAD	Dwelling	58.3	64.4	58.5	0.2	Negligible Adverse	63.7	5.4	Moderate Adverse	46.2	51.7	51.1
102, WESTERN ROAD	Dwelling	57.9	62.9	57.3	0.3	Negligible Adverse	62.3	5.3	Moderate Adverse	45.0	50.3	49.8
103, WESTERN ROAD	Dwelling	58.3	64.4	58.5	0.2	Negligible Adverse	63.7	5.4	Moderate Adverse	46.2	51.7	51.1
104, WESTERN ROAD	Dwelling	57.1	63.0	57.4	0.3	Negligible Adverse	62.4	5.3	Moderate Adverse	45.1	50.4	49.9
105, WESTERN ROAD	Dwelling	57.5	63.1	57.7	0.2	Negligible Adverse	62.5	5.0	Moderate Adverse	45.5	50.5	50.0
106, WESTERN ROAD	Dwelling	57.1	63.0	57.4	0.3	Negligible Adverse	62.4	5.3	Moderate Adverse	45.1	50.4	49.9
107, WESTERN ROAD	Dwelling	57.5	63.1	57.7	0.2	Negligible Adverse	62.5	5.0	Moderate Adverse	45.5	50.5	50.0
108, WESTERN ROAD	Dwelling	57.5	63.1	57.7	0.2	Negligible Adverse	62.6	5.1	Moderate Adverse	45.5	50.5	50.1
109, WESTERN ROAD	Dwelling	57.5	63.0	57.7	0.2	Negligible Adverse	62.5	5.0	Moderate Adverse	45.5	50.4	50.0
11, WESTERN ROAD	Dwelling	55.1	54.8	53.6	-1.5	Minor Beneficial	54.8	-0.3	Negligible Beneficial	43.3	43.1	43.1
110, WESTERN ROAD	Dwelling	57.5	63.1	57.7	0.2	Negligible Adverse	62.6	5.1	Moderate Adverse	45.5	50.5	50.1
111, WESTERN ROAD	Dwelling	57.5	63.0	57.7	0.2	Negligible Adverse	62.5	5.0	Moderate Adverse	45.5	50.4	50.0
112, WESTERN ROAD	Dwelling	57.6	63.2	57.8	0.2	Negligible Adverse	62.6	5.0	Moderate Adverse	45.6	50.6	50.1
113, WESTERN ROAD	Dwelling	57.2	62.9	57.4	0.2	Negligible Adverse	62.3	5.1	Moderate Adverse	45.2	50.3	49.8
114, WESTERN ROAD	Dwelling	57.6	63.2	57.8	0.2	Negligible Adverse	62.6	5.0	Moderate Adverse	45.6	50.6	50.1
115, WESTERN ROAD	Dwelling	57.2	62.9	57.4	0.2	Negligible Adverse	62.3	5.1	Moderate Adverse	45.2	50.3	49.8
116, WESTERN ROAD	Dwelling	57.9	63.2	58.1	0.2	Negligible Adverse	62.6	4.7	Minor Adverse	45.8	50.6	50.1
117, WESTERN ROAD	Dwelling	57.3	63.0	57.5	0.2	Negligible Adverse	62.4	5.1	Moderate Adverse	45.3	50.4	49.9
118, WESTERN ROAD	Dwelling	57.9	63.2	58.1	0.2	Negligible Adverse	62.6	4.7	Minor Adverse	45.8	50.6	50.1
119, WESTERN ROAD	Dwelling	57.3	63.0	57.5	0.2	Negligible Adverse	62.4	5.1	Moderate Adverse	45.3	50.4	49.9
12, WESTERN ROAD	Dwelling	53.2	55.3	52.3	-0.9	Negligible Beneficial	54.8	1.6	Negligible Adverse	41.6	43.5	43.1
120, WESTERN ROAD	Dwelling	58.3	63.2	58.5	0.2	Negligible Adverse	62.7	4.4	Minor Adverse	46.2	50.6	50.2
121, WESTERN ROAD	Dwelling	56.6	61.9	56.8	0.2	Negligible Adverse	61.4	4.8	Minor Adverse	44.7	49.4	49.0
122, WESTERN ROAD	Dwelling	58.3	63.2	58.5	0.2	Negligible Adverse	62.7	4.4	Minor Adverse	46.2	50.6	50.2
123, WESTERN ROAD	Dwelling	56.6	61.9	56.8	0.2	Negligible Adverse	61.4	4.8	Minor Adverse	44.7	49.4	49.0
124, WESTERN ROAD	Dwelling	59.3	63.4	59.4	0.1	Negligible Adverse	63.0	3.7	Minor Adverse	47.1	50.8	50.4
125, WESTERN ROAD	Dwelling	56.8	62.0	57.0	0.2	Negligible Adverse	61.6	4.8	Minor Adverse	44.9	49.5	49.2
126, WESTERN ROAD	Dwelling	59.3	63.5	59.4	0.1	Negligible Adverse	63.0	3.7	Minor Adverse	47.1	50.9	50.4
127, WESTERN ROAD	Dwelling	56.8	62.0	57.0	0.2	Negligible Adverse	61.6	4.8	Minor Adverse	44.9	49.5	49.2
128, WESTERN ROAD	Dwelling	60.1	65.8	60.2	0.1	Negligible Adverse	63.5	3.4	Minor Adverse	47.8	51.2	50.9
129, WESTERN ROAD	Dwelling	56.9	62.1	57.1	0.2	Negligible Adverse	61.6	4.7	Minor Adverse	44.9	49.6	49.2
13, WESTERN ROAD	Dwelling	55.9	55.3	54.4	-1.5	Minor Beneficial	55.4	-0.5	Negligible Beneficial	44.0	43.5	43.6
130, WESTERN ROAD	Dwelling	60.1	63.8	60.3	0.2	Negligible Adverse	63.5	3.4	Minor Adverse	47.8	51.2	50.9
131, WESTERN ROAD	Dwelling	56.9	62.1	57.1	0.2	Negligible Adverse	61.6	4.7	Minor Adverse	44.9	49.6	49.2
133, WESTERN ROAD	Dwelling	57.0	62.1	57.2	0.2	Negligible Adverse	61.6	4.6	Minor Adverse	45.0	49.6	49.2
135, WESTERN ROAD	Dwelling	57.0	62.1	57.2	0.2	Negligible Adverse	61.6	4.6	Minor Adverse	45.0	49.6	49.2
137, WESTERN ROAD	Dwelling	58.3	63.3	58.5	0.2	Negligible Adverse	62.8	4.5	Minor Adverse	46.2	50.7	50.3
139, WESTERN ROAD	Dwelling	58.3	63.3	58.5	0.2	Negligible Adverse	62.8	4.5	Minor Adverse	46.2	50.7	50.3
14, WESTERN ROAD	Dwelling	56.6	55.6	55.0	-1.6	Minor Beneficial	55.9	-0.7	Negligible Beneficial	44.7	43.8	44.0
141, WESTERN ROAD	Dwelling	58.6	63.2	58.8	0.2	Negligible Adverse	62.8	4.2	Minor Adverse	46.5	50.6	50.3
143, WESTERN ROAD	Dwelling	58.6	63.2	58.8	0.2	Negligible Adverse	62.8	4.2	Minor Adverse	46.5	50.6	50.3
145, WESTERN ROAD	Dwelling	59.6	63.6	59.7	0.1	Negligible Adverse	63.3	3.7	Minor Adverse	47.4	51.0	50.7
147, WESTERN ROAD	Dwelling	59.6	63.6	59.7	0.1	Negligible Adverse	63.3	3.7	Minor Adverse	47.4	51.0	50.7
149, WESTERN ROAD	Dwelling	61.0	64.3	61.1	0.1	Negligible Adverse	64.1	3.1	Minor Adverse	48.6	51.4	51.6
15, WESTERN ROAD	Dwelling	56.3	55.6	54.7	-1.6	Minor Beneficial	55.3	-0.5	Negligible Beneficial	44.4	43.8	44.0
151, WESTERN ROAD	Dwelling	61.0	64.3	61.1	0.1	Negligible Adverse	64.1	3.1	Minor Adverse	48.6	51.4	51.6
16, WESTERN ROAD	Dwelling	57.3	56.1	55.7	-1.6	Minor Beneficial	56.4	-0.9	Negligible Beneficial	45.3	44.2	44.5
17, WESTERN ROAD	Dwelling	56.8	56.0	55.3	-1.5	Minor Beneficial	56.2	-0.6	Negligible Beneficial	44.9	44.1	44.3
18, WESTERN ROAD	Dwelling	53.5	53.0	52.4	-1.1	Minor Beneficial	53.2	-0.3	Negligible Beneficial	41.9	41.4	41.6
19, WESTERN ROAD	Dwelling	57.2	56.4	55.7	-1.5	Minor Beneficial	56.6	-0.6	Negligible Beneficial	45.2	44.5	44.7
20, WESTERN ROAD	Dwelling	54.3	53.8	53.2	-1.1	Minor Beneficial	53.9	-0.4	Negligible Beneficial	42.6	42.2	42.2
21, WESTERN ROAD	Dwelling	57.4	56.7	56.1	-1.3	Minor Beneficial	56.9	-0.5	Negligible Beneficial	45.4	44.8	44.9
22, WESTERN ROAD	Dwelling	54.1	53.5	53.1	-1.0	Minor Beneficial	53.7	-0.4	Negligible Beneficial	42.4	41.9	42.1
23, WESTERN ROAD	Dwelling	59.4	59.6	58.9	-0.5	Negligible Beneficial	59.6	0.2	Negligible Adverse	47.2	47.4	47.4
24, WESTERN ROAD	Dwelling	56.3	55.9	55.4	-0.9	Negligible Beneficial	56.0	-0.3	Negligible Beneficial	44.4	44.0	44.1
25, WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Adverse	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
26, WESTERN ROAD	Dwelling	56.6	56.3	55.8	-0.8	Negligible Beneficial	56.4	-0.2	Negligible Beneficial	44.7	44.4	44.5
27, WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Adverse	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
28, WESTERN ROAD	Dwelling	56.5	56.4	55.9	-0.6	Negligible Beneficial	56.5	0.0	No Change	44.6	44.5	44.6
29, WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Adverse	68.8	1.0	Negligible Adverse	54.8	56.0	55.7

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
3. WESTERN ROAD	Dwelling	51.8	52.6	50.9	-0.9	Negligible Beneficial	52.4	0.6	Negligible Adverse	40.4	41.1	40.9
31. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
33. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
34. WESTERN ROAD	Dwelling	57.3	57.2	56.7	-0.6	Negligible Beneficial	57.2	-0.1	Negligible Beneficial	45.3	45.2	45.2
35. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
37. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
39. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
41. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
43. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
43. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
47. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
49. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
5. WESTERN ROAD	Dwelling	52.3	52.8	51.4	-0.9	Negligible Beneficial	52.8	0.5	Negligible Adverse	40.8	41.3	41.3
51. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
53. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
55. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
57. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
59. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
61. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
63. WESTERN ROAD	Dwelling	67.8	69.2	67.7	-0.1	Negligible Beneficial	68.8	1.0	Negligible Adverse	54.8	56.0	55.7
67. WESTERN ROAD	Dwelling	55.2	58.5	55.3	0.1	Negligible Beneficial	57.3	2.1	Negligible Adverse	43.4	46.4	45.3
69. WESTERN ROAD	Dwelling	57.6	62.2	57.7	0.1	Negligible Adverse	60.6	3.0	Minor Adverse	45.6	49.7	48.3
7. WESTERN ROAD	Dwelling	52.7	53.0	51.6	-1.1	Minor Beneficial	52.9	0.2	Negligible Adverse	41.2	41.4	41.3
72. WESTERN ROAD	Dwelling	62.0	67.9	62.2	0.2	Negligible Adverse	66.0	4.0	Minor Adverse	49.5	54.8	53.1
73. WESTERN ROAD	Dwelling	61.0	66.5	61.2	0.2	Negligible Adverse	64.7	3.7	Minor Adverse	46.6	53.6	52.0
74. WESTERN ROAD	Dwelling	62.0	67.9	62.2	0.2	Negligible Adverse	66.0	4.0	Minor Adverse	49.5	54.8	53.1
75. WESTERN ROAD	Dwelling	61.0	66.6	61.3	0.3	Negligible Adverse	64.8	3.8	Minor Adverse	48.6	53.7	52.1
76. WESTERN ROAD	Dwelling	62.0	67.9	62.2	0.2	Negligible Adverse	66.0	4.0	Minor Adverse	49.5	54.8	53.1
77. WESTERN ROAD	Dwelling	61.2	66.7	61.4	0.2	Negligible Adverse	64.9	3.7	Minor Adverse	48.8	53.8	52.1
77. WESTERN ROAD	Dwelling	61.2	66.7	61.4	0.2	Negligible Adverse	64.9	3.7	Minor Adverse	48.8	53.8	52.1
77. WESTERN ROAD	Dwelling	61.2	66.7	61.4	0.2	Negligible Adverse	64.9	3.7	Minor Adverse	48.8	53.8	52.1
77. WESTERN ROAD	Dwelling	61.2	66.7	61.4	0.2	Negligible Adverse	64.9	3.7	Minor Adverse	48.8	53.8	52.1
77. WESTERN ROAD	Dwelling	61.2	66.7	61.4	0.2	Negligible Adverse	64.9	3.7	Minor Adverse	48.8	53.8	52.1
78. WESTERN ROAD	Dwelling	62.0	67.9	62.2	0.2	Negligible Adverse	66.0	4.0	Minor Adverse	49.5	54.8	53.1
79. WESTERN ROAD	Dwelling	57.8	62.7	58.0	0.2	Negligible Adverse	61.0	3.2	Minor Adverse	45.8	50.2	48.6
81. WESTERN ROAD	Dwelling	59.0	64.1	59.1	0.1	Negligible Adverse	62.4	3.4	Minor Adverse	46.8	51.4	49.9
82. WESTERN ROAD	Dwelling	60.2	66.0	60.6	0.4	Negligible Adverse	64.3	4.1	Minor Adverse	47.9	53.1	51.6
83. WESTERN ROAD	Dwelling	58.4	63.6	58.6	0.2	Negligible Adverse	61.9	3.5	Minor Adverse	46.3	51.0	49.4
85. WESTERN ROAD	Public / Village Hall / Other Community Facility	60.8	66.9	61.1	0.3	Negligible Adverse	65.0	4.2	Minor Adverse	49.5	53.9	52.2
87. WESTERN ROAD	Dwelling	60.5	66.0	60.7	0.2	Negligible Adverse	64.3	3.8	Minor Adverse	48.2	53.1	51.6
87. WESTERN ROAD	Dwelling	60.4	65.9	60.7	0.3	Negligible Adverse	64.2	3.8	Minor Adverse	48.1	53.0	51.5
89. WESTERN ROAD	Dwelling	61.8	67.0	62.4	0.6	Negligible Adverse	65.9	4.1	Minor Adverse	49.4	54.0	53.0
89. WESTERN ROAD	Dwelling	61.9	67.0	62.4	0.5	Negligible Adverse	65.9	4.0	Minor Adverse	49.4	54.0	53.0
9. WESTERN ROAD	Dwelling	54.0	53.9	52.6	-1.4	Minor Beneficial	53.9	-0.1	Negligible Beneficial	42.3	42.2	42.2
93. WESTERN ROAD	Dwelling	58.0	63.9	58.3	0.3	Negligible Adverse	63.2	5.2	Moderate Adverse	45.9	51.2	50.6
94. WESTERN ROAD	Dwelling	57.7	63.8	57.9	0.2	Negligible Adverse	63.1	5.4	Moderate Adverse	45.7	51.2	50.5
94. WESTERN ROAD	Dwelling	54.4	59.8	54.6	0.2	Negligible Adverse	59.3	4.9	Minor Adverse	42.7	47.6	47.1
94. WESTERN ROAD	Dwelling	54.4	59.8	54.6	0.2	Negligible Adverse	59.3	4.9	Minor Adverse	42.7	47.6	47.1
95. WESTERN ROAD	Dwelling	57.1	63.4	57.3	0.2	Negligible Adverse	62.6	5.5	Moderate Adverse	45.1	50.8	50.1
96. WESTERN ROAD	Dwelling	57.6	63.7	57.9	0.3	Negligible Adverse	63.1	5.5	Moderate Adverse	45.6	51.1	50.5
97. WESTERN ROAD	Dwelling	58.4	64.5	58.6	0.2	Negligible Adverse	63.8	5.4	Moderate Adverse	46.3	51.8	51.2
98. WESTERN ROAD	Dwelling	57.8	63.7	57.9	0.3	Negligible Adverse	63.1	5.5	Moderate Adverse	45.6	51.1	50.5
99. WESTERN ROAD	Dwelling	58.4	64.5	58.6	0.2	Negligible Adverse	63.8	5.4	Moderate Adverse	46.3	51.8	51.2
1. WESTERTON CRESCENT	Dwelling	43.3	43.5	43.2	0.1	Negligible Beneficial	43.9	0.6	Negligible Adverse	32.7	32.9	33.2
10. WESTERTON CRESCENT	Dwelling	42.9	43.3	42.9	0.0	No Change	43.7	0.8	Negligible Adverse	32.3	32.7	33.1
11. WESTERTON CRESCENT	Dwelling	42.2	42.7	42.1	-0.1	Negligible Beneficial	42.9	0.7	Negligible Adverse	31.7	32.2	32.3
12. WESTERTON CRESCENT	Dwelling	43.1	43.4	43.0	-0.1	Negligible Beneficial	43.8	0.7	Negligible Adverse	32.5	32.8	33.2
13. WESTERTON CRESCENT	Dwelling	42.3	42.7	42.0	-0.1	Negligible Beneficial	43.0	0.7	Negligible Adverse	31.8	32.2	32.4
14. WESTERTON CRESCENT	Dwelling	43.1	43.5	43.0	-0.1	Negligible Beneficial	43.9	0.8	Negligible Adverse	32.5	32.9	33.2
16. WESTERTON CRESCENT	Dwelling	42.7	43.2	42.7	0.0	No Change	43.5	0.8	Negligible Adverse	32.2	32.6	32.9
18. WESTERTON CRESCENT	Dwelling	41.7	42.3	41.6	-0.1	Negligible Beneficial	42.5	0.8	Negligible Adverse	31.3	31.8	32.0
2. WESTERTON CRESCENT	Dwelling	40.5	41.3	40.3	-0.2	Negligible Beneficial	41.3	0.8	Negligible Adverse	30.2	30.9	30.9
20. WESTERTON CRESCENT	Dwelling	42.1	42.7	42.0	-0.1	Negligible Beneficial	42.9	0.8	Negligible Adverse	31.6	32.2	32.3
22. WESTERTON CRESCENT	Dwelling	42.2	42.8	42.2	0.0	No Change	43.1	0.9	Negligible Adverse	31.7	32.3	32.5
24. WESTERTON CRESCENT	Dwelling	42.3	42.8	42.2	-0.1	Negligible Beneficial	43.0	0.7	Negligible Adverse	31.8	32.3	32.4
26. WESTERTON CRESCENT	Dwelling	42.0	42.9	41.9	-0.1	Negligible Beneficial	42.6	0.6	Negligible Adverse	31.5	31.7	32.1
28. WESTERTON CRESCENT	Dwelling	42.3	42.6	42.3	0.0	Negligible Beneficial	43.1	0.7	Negligible Adverse	31.3	32.1	32.5
3. WESTERTON CRESCENT	Dwelling	42.4	42.9	42.3	-0.1	Negligible Beneficial	43.2	0.8	Negligible Adverse	31.9	32.3	32.6
4. WESTERTON CRESCENT	Dwelling	39.9	40.6	39.8	-0.1	Negligible Beneficial	40.7	0.8	Negligible Adverse	29.6	30.3	30.4
5. WESTERTON CRESCENT	Dwelling	42.3	42.8	42.2	-0.1	Negligible Beneficial	43.1	0.8	Negligible Adverse	31.8	32.3	32.5
6. WESTERTON CRESCENT	Dwelling	42.7	43.0	42.6	-0.1	Negligible Beneficial	43.4	0.7	Negligible Adverse	32.2	32.4	32.8
7. WESTERTON CRESCENT	Dwelling	42.8	43.0	42.7	-0.1	Negligible Beneficial	43.5	0.7	Negligible Adverse	32.3	32.4	32.9
8. WESTERTON CRESCENT	Dwelling	42.8	43.1	42.7	-0.1	Negligible Beneficial	43.5	0.7	Negligible Adverse	32.3	32.5	32.9
9. WESTERTON CRESCENT	Dwelling	42.2	42.1	42.1	0.0	Negligible Beneficial	43.0	0.8	Negligible Adverse	31.7	32.2	32.4
1. WESTERTON PLACE, NORTHFIELD	Dwelling	54.9	55.4	55.0	0.1	Negligible Adverse	55.9	1.0	Negligible Adverse	43.1	43.6	44.0
10. WESTERTON PLACE, NORTHFIELD	Dwelling	52.8	52.7	52.8	0.0	No Change	53.4	0.6	Negligible Adverse	41.3	41.2	41.8
11. WESTERTON PLACE, NORTHFIELD	Dwelling	52.6	52.5	52.6	0.0	No Change	53.2	0.6	Negligible Adverse	41.1	41.0	41.6
12. WESTERTON PLACE, NORTHFIELD	Dwelling	50.8	51.9	50.9	0.1	Negligible Adverse	52.1	1.3	Negligible Adverse	39.5	40.4	40.6
13. WESTERTON PLACE, NORTHFIELD	Dwelling	54.6	54.9	54.6	0.0	No Change	55.4	0.8	Negligible Adverse	42.9	43.1	43.6
14. WESTERTON PLACE, NORTHFIELD	Dwelling	55.8	56.4	56.0	0.0	No Change	56.8	1.0	Negligible Adverse	44.0	44.5	44.9
15. WESTERTON PLACE, NORTHFIELD	Dwelling	56.7	56.8	56.8	0.1	Negligible Beneficial	57.8	1.1	Negligible Adverse	44.8	45.5	45.8
16. WESTERTON PLACE, NORTHFIELD	Dwelling	58.1	59.1	58.2	0.1	Negligible Adverse	59.3	1.2	Negligible Adverse	46.0	46.9	47.1

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Appendix A14.4: Operational Noise Modelling Results

Receptor Name	Receptor Description	DM18 LA10,18hr	DM33 LA10,18hr	DS18 LA10,18hr	Short-term Daytime Noise Change (dB)	Magnitude of Change	DS33 LA10,18hr	Long-term Daytime Noise Change (dB)	Magnitude of Change	DM18 Lnight,outside	DM33 Lnight,outside	DS33 Lnight,outside
2. WESTERTON PLACE, NORTHFIELD	Dwelling	55.1	55.7	55.2	0.1	Negligible Adverse	56.1	1.0	Negligible Adverse	43.3	43.9	44.2
3. WESTERTON PLACE, NORTHFIELD	Dwelling	55.0	55.6	55.0	0.0	No Change	56.0	1.0	Negligible Adverse	43.2	43.8	44.1
4. WESTERTON PLACE, NORTHFIELD	Dwelling	53.8	54.9	53.8	0.0	No Change	55.0	1.2	Negligible Adverse	42.2	43.1	43.2
5. WESTERTON PLACE, NORTHFIELD	Dwelling	52.8	53.8	52.8	0.0	No Change	54.0	1.2	Negligible Adverse	41.3	42.2	42.3
6. WESTERTON PLACE, NORTHFIELD	Dwelling	52.2	53.2	52.3	0.1	Negligible Beneficial	53.4	1.2	Negligible Adverse	40.7	41.6	41.8
7. WESTERTON PLACE, NORTHFIELD	Dwelling	51.3	52.2	51.3	0.0	No Change	52.4	1.1	Negligible Adverse	39.9	40.7	40.9
8. WESTERTON PLACE, NORTHFIELD	Dwelling	53.5	53.5	53.4	-0.1	Negligible Beneficial	54.2	0.7	Negligible Adverse	41.9	41.9	42.5
9. WESTERTON PLACE, NORTHFIELD	Dwelling	53.3	53.3	53.2	-0.1	Negligible Beneficial	53.9	0.6	Negligible Adverse	41.7	41.7	42.2
WESTFIELD, WESTFIELD, GRANDHOLM DRIVE	Dwelling	48.2	48.8	48.0	-0.2	Negligible Beneficial	49.2	1.0	Negligible Adverse	37.1	37.7	38.0
1. WILKIE AVENUE	Dwelling	54.6	54.7	52.4	-2.2	Minor Beneficial	53.1	-1.5	Negligible Beneficial	42.9	43.0	41.5
2. WILKIE AVENUE	Dwelling	53.5	53.9	50.1	-3.4	Moderate Beneficial	51.1	-2.4	Negligible Beneficial	41.9	42.2	39.7
3. WILKIE AVENUE	Dwelling	55.0	55.2	52.6	-2.4	Minor Beneficial	53.3	-1.7	Negligible Beneficial	43.2	43.4	41.7
4. WILKIE AVENUE	Dwelling	54.0	54.4	50.1	-3.9	Moderate Beneficial	51.0	-3.0	Minor Beneficial	42.3	42.7	39.6
5. WILKIE AVENUE	Dwelling	56.3	56.6	53.4	-2.9	Minor Beneficial	54.1	-2.2	Negligible Beneficial	44.4	44.7	42.4
6. WILKIE AVENUE	Dwelling	56.0	56.5	50.6	-5.4	Major Beneficial	51.7	-4.3	Minor Beneficial	44.1	44.6	40.3
7. WILKIE AVENUE	Dwelling	59.5	59.9	54.9	-4.6	Moderate Beneficial	55.8	-3.7	Minor Beneficial	47.3	47.6	44.0
8. WILKIE AVENUE	Dwelling	58.8	59.2	52.7	-6.1	Major Beneficial	53.8	-5.0	Moderate Beneficial	46.7	47.0	42.2
WOODBINE COTTAGE, WOODBINE, GRANDHOLM COTTAGES, GRANDHOLM	Dwelling	52.1	52.6	52.0	-0.1	Negligible Beneficial	53.1	1.0	Negligible Adverse	40.6	41.1	41.5
WOODLEA, WOODLEA, GRANDHOLM DRIVE	Dwelling	47.7	48.3	47.5	-0.2	Negligible Beneficial	48.7	1.0	Negligible Adverse	36.7	37.2	37.6
WOODSIDE SOUTH CHURCH AND HALL, WOODSIDE CHURCH, CHURCH	Church	53.5	54.3	53.7	0.2	Negligible Adverse	54.4	0.9	Negligible Adverse	41.9	42.6	42.7
STREET, WOODSIDE	Dwelling	50.6	53.4	50.7	0.1	Negligible Adverse	53.0	2.4	Negligible Adverse	39.3	41.8	41.4
1. WRIGHTS LANE, HILTON	Dwelling	50.6	53.4	50.7	0.1	Negligible Adverse	53.0	2.4	Negligible Adverse	39.3	41.8	41.4
2. WRIGHTS LANE, HILTON	Dwelling	50.6	53.4	50.7	0.1	Negligible Adverse	53.0	2.4	Negligible Adverse	39.3	41.8	41.4
3. WRIGHTS LANE, HILTON	Dwelling	50.6	53.4	50.7	0.1	Negligible Adverse	53.0	2.4	Negligible Adverse	39.3	41.8	41.4
4. WRIGHTS LANE, HILTON	Dwelling	50.6	53.4	50.7	0.1	Negligible Adverse	53.0	2.4	Negligible Adverse	39.3	41.8	41.4
5. WRIGHTS LANE, HILTON	Dwelling	50.6	53.4	50.7	0.1	Negligible Adverse	53.0	2.4	Negligible Adverse	39.3	41.8	41.4
6. WRIGHTS LANE, HILTON	Dwelling	50.6	53.4	50.7	0.1	Negligible Adverse	53.0	2.4	Negligible Adverse	39.3	41.8	41.4
7. WRIGHTS LANE, HILTON	Dwelling	50.6	53.4	50.7	0.1	Negligible Adverse	53.0	2.4	Negligible Adverse	39.3	41.8	41.4
8. WRIGHTS LANE, HILTON	Dwelling	50.6	53.4	50.7	0.1	Negligible Adverse	53.0	2.4	Negligible Adverse	39.3	41.8	41.4

Note 1 - The Do-Something (DS) noise levels include the reduction afforded by the proposed noise barriers.

Note 2 - The addresses shown above have been taken from the available OS property address product. The address names have been created through combining several fields within the address products. It should be noted that property and/ or apartment numbers were missing from the OS property address product, hence there are some incomplete address presented above.

A17.1: Planning Policy Context for Environmental Assessment

1 Policy Context to ES Chapters

1.1.1 The following sections provide a summary of the key planning policies that are relevant to each topic chapter in the Stage 3 Environmental Statement (ES).

Policy Context for Chapter 7: Community and Private Assets

1.1.2 National planning policy on a variety of themes is contained in Scottish Planning Policy (SPP) (Scottish Government, 2014). Key provisions of SPP on community and private assets are:

- achieving a sustainable economy;
- promoting regeneration and the full and the efficient appropriate use of land, buildings and infrastructure;
- supporting development which will enhance local competitiveness and promoting the creation of mixed communities;
- facilitating access to local community services and support for public transport;
- promoting the integration of employment regeneration opportunities with supporting infrastructure and housing development; and
- to support healthier living by improving the quality of the built environment, by increasing access to amenities, services and active travel opportunities, and by addressing environmental problems affecting communities.

1.1.3 SPP indicates that the fundamental principle of sustainable development is that it integrates economic, social and environmental objectives. The aim is to achieve the right development in the right place. SPP provides that the planning system should promote development that supports the move towards a more economically, socially and environmentally sustainable society.

1.1.4 Table 1 below provides a summary of the key development plan policies and relevant supplementary guidance that are of relevance to community and private assets. An assessment of compliance of the proposed scheme in relation to these policies is provided in Appendix A17.2 (Assessment of Development Plan Policy Compliance), and is summarised in Chapter 17 (Policies and Plans) having regard to the overall compliance of the proposed scheme in relation to national, regional and local policy.

Table 1: Development Plan Policy for Community and Private Assets

Aberdeen City and Shire Strategic Development Plan 2014			
Objective		Targets	
Sustainable mixed communities		<ul style="list-style-type: none"> • To increase the range and quality of housing and the residential environment in the 'regeneration priority areas'; • For 40% of all new housing in Aberdeen City to be on brownfield sites; • For the quality and design of new developments in the city region to be nationally recognised; • For local development plans and all masterplans to fully consider the scope for a mix of uses on a site. 	
Aberdeen Local Development Plan 2012			
Policy Ref.	Title	Supplementary Guidance	Policy Objectives
Policy H1	Residential Areas	House Extensions* Curtilage Splits* Open Space	Within existing residential areas (H1 on the Proposals Map) and within new residential developments, proposals for new residential development and householder development will be approved in principle if it: <ol style="list-style-type: none"> 1. does not constitute over development; 2. does not have an unacceptable impact on the character or amenity of the surrounding area; 3. does not result in the loss of valuable and valued areas of open

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			<p>space. Open space is defined in the Aberdeen Open Space Audit 2010;</p> <p>4. complies with Supplementary Guidance on Curtilage Splits; and</p> <p>5. complies with Supplementary Guidance on House Extensions.</p> <p>Within existing residential areas, proposals for non-residential uses will be refused unless:</p> <ol style="list-style-type: none"> 1. they are considered complementary to residential use; or 2. it can be demonstrated that the use would cause no conflict with, or any nuisance to, the enjoyment of existing residential amenity.
Policy T1	Land for Transport		<p>Land has been safeguarded for transport projects listed below and these are highlighted on the proposals map:</p> <ul style="list-style-type: none"> • Improved rail services; • A96 Park and Ride / Choose / Dyce Drive Link Road; • Berryden Corridor; • South College Street improvements; • Haudagain roundabout improvements; and • The Third Don Crossing
Policy NE1	Green Space Network		<p>The City Council will protect, promote and enhance the wildlife, recreational, landscape and access value of the Green Space Network. Proposals for development that are likely to destroy or erode the character or function of the Green Space Network will not be permitted. Where major infrastructure projects or other developments necessitate crossing the Green Space Network, such developments shall take into account the coherence of the network. In doing so measures shall be taken to allow access across roads for wildlife and for access and outdoor recreation purposes.</p>
Policy NE2	Green Belt	Green Belt Review	<p>The City Council will ensure no development will be permitted in the green belt for purposes other than those essential for agriculture, woodland and forestry, recreational uses compatible with an agricultural or natural setting, mineral extraction or restoration or landscape renewal.</p> <p>The following relevant exceptions apply to this policy:</p> <ol style="list-style-type: none"> 1) Proposals for development associated with existing activities in the green belt will be permitted but only if all of the following criteria are met: <ol style="list-style-type: none"> a. The development is within the boundary of the existing activity, b. The development is small-scale. c. The intensity of activity is not significantly increased. d. Any proposed built construction is ancillary to what exists. 2) Essential infrastructure, such as electronic communications infrastructure and electricity grid connections, transport, proposals identified in the Local Development Plan, such as the Aberdeen Western Peripheral Route, as well as roads planned through the masterplanning of new housing and employment allocations, which cannot be accommodated other than in the green belt.
Policy NE3	Urban Green Space		<p>Permission will not be granted to use or redevelop any parks, playing fields, sports pitches, allotments or all other areas of urban green space (including smaller spaces not identified on the Proposals Maps). In all cases, development will only be acceptable provided that there are no significant impacts on landscape, access or the natural environment.</p>

Policy Context for Chapter 8: Geology, Soils, Contaminated Land and Groundwater

1.1.5 National planning policy on a variety of themes is contained in Scottish Planning Policy (SPP) (Scottish Government, 2014). Key provisions of SPP on geology, soils, contaminated land and groundwater are:

- to support healthier living by improving the quality of the built environment and by addressing environmental problems affecting communities;
- seek to protect soils from damage such as erosion or compaction;

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- to encourage planning authorities to take the probability of flooding from all sources – (coastal, fluvial (water course), pluvial (surface water), groundwater, sewers and blocked culverts) and the risks involved into account when preparing development plans and determining planning applications; and
- to take into account the implications of development for water, air and soil quality.

1.1.6 Planning Advice Notes (PAN) published by the Scottish Government provide further guidance on specific topics. PAN 33 is applicable to contaminated land and the details of this guidance are summarised in Table 2 below.

Table 2: National Planning Guidance and Advice

Reference	Title	Summary of Document
PAN 33	Development of Contaminated Land (2000)	Provides advice on the implications of the contaminated land regime for the planning system; and the development of, and approach to, contaminated land in development plans. It also contains guidance on the determination of planning applications when the site is, or may be, contaminated.

1.1.7 Table 3 provides a summary of the key development plan policies and relevant supplementary guidance that are of relevance to geology, soils, contaminated land and groundwater. An assessment of compliance of the proposed scheme in relation to these policies is provided in Appendix A17.2 (Assessment of Development Plan Policy Compliance), and is summarised in Chapter 17 (Policies and Plans) having regard to the overall compliance of the proposed scheme in relation to national, regional and local policy.

Table 3: Development Plan Policy for Geology, Soils, Contaminated Land and Groundwater

Aberdeen City and Shire Strategic Development Plan 2014			
Objective		Targets	
Quality of the environment		<ul style="list-style-type: none"> • To avoid new development preventing water bodies achieving 'good ecological status' under the Water Framework Directive. 	
Aberdeen Local Development Plan 2012			
Policy Ref.	Title	Supplementary Guidance	Policy Objectives
Policy R2	Degraded and Contaminated Land		The City Council will require that all land that is degraded or contaminated, including visually, is either restored, reclaimed or remediated to a level appropriate for its proposed use.
Policy NE8	Natural Heritage	Buffer Strips	<p>Development that, taking into account any proposed mitigation measures, has an adverse effect on a protected species or an area designated because of its natural heritage value will only be permitted where it addresses the criteria set out in Scottish Planning Policy. These are International Designations, National Designations, Local Designations and European Protected Species and Species protected under the Wildlife and Countryside Act 1981. In addition, as stated in the supplementary guidance, the value of Buffer Strips as an area of land maintained in permanent vegetation that helps to control soil and water quality and has other environmental benefits.</p> <p>In all cases of development at any location: -</p> <ul style="list-style-type: none"> • Applicants should submit supporting evidence for any development that has an adverse effect on a protected species demonstrating both the need for the development and that a full range of possible alternative courses of action have been properly examined and none found to acceptably meet the need identified. • An ecological assessment will be required on a designated site or where there is evidence to suggest that a habitat or species of importance (including those identified in the UK and Local Biodiversity Action Plans) exists on the site. • No development will be permitted unless steps are taken to mitigate negative development impacts. • Natural heritage beyond the confines of designated sites should be protected and enhanced.

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Aberdeen City and Shire Strategic Development Plan 2014			
Objective		Targets	
Quality of the environment		<ul style="list-style-type: none"> To avoid new development preventing water bodies achieving 'good ecological status' under the Water Framework Directive. 	
Aberdeen Local Development Plan 2012			
Policy Ref.	Title	Supplementary Guidance	Policy Objectives
			<ul style="list-style-type: none"> Where feasible, steps to prevent further fragmentation or isolation of habitats must be sought and opportunities to restore links which have been broken will be taken. Measures will be taken, in proportion to the opportunities available, to enhance biodiversity through the creation and restoration of habitats and, where possible, incorporating existing habitats. <p>There will be a presumption against excessive engineering and culverting; there will be a requirement to restore existing culverted or canalised water bodies where this is possible; and the inclusion of SUDS.</p>

Policy Context for Chapter 9: Road Drainage and the Water Environment

- 1.1.8 National planning policy on a variety of themes is contained in Scottish Planning Policy (SPP) (Scottish Government, 2014). Key provisions of SPP on road drainage and the water environment are:
- to support development that will contribute to sustainable economic growth and to high quality sustainable places;
 - to prevent further development which would be at risk from flooding or coastal erosion;
 - to take into account the implications of development for water, air and soil quality;
 - improving the natural environment and the sustainable use and enjoyment of it; and
 - to manage flooding to reduce its economic and social consequences and safeguard services and infrastructure.
- 1.1.9 SPP encourages planning authorities to take the probability of flooding from all sources – (coastal, fluvial (water course), pluvial (surface water), groundwater, sewers and blocked culverts) and the risks involved with such flooding into account when preparing development plans and determining planning applications.
- 1.1.10 The following Planning Advice Notes (PANs) published by the Scottish Government provide further guidance on specific topics. Documents of relevance to road drainage and the water environment are summarised in Table 4 below.

Table 4: National Planning Guidance and Advice

Reference	Title	Summary of Document
PANs		
PAN 61	Planning and Sustainable Urban Drainage Systems (2001)	Provides good practice advice for planners and the development industry on the implementation of Sustainable Urban Drainage Systems (SUDS) (now referred to as Sustainable Drainage Systems in latest guidance) to aid the introduction of more sustainable developments.
PAN 69	Planning and Building Standards Advice on Flooding (2004)	Provides background information and best practice advice in support of the former SPP7 (Planning and Flooding) which has now been consolidated into SPP, and the Technical Handbooks published by the Scottish Building Standards Agency that provide guidance for the Building (Scotland) Regulations 2004. This Advice Note focuses on the responsibilities of local authorities and developers in ensuring that future built development is not located in areas with a significant risk of flooding, including functional flood plains.
PAN 79	Water and Drainage (2006)	Clarifies the role of the planning authority in setting the direction of development to inform the planning and delivery of new water infrastructure in a coordinated way. It explains the roles of Scottish Water and SEPA and encourages joint working in

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Reference	Title	Summary of Document
		order to ensure a common understanding of capacity constraints and agreement on the means of their removal. It advises on the appropriateness of private schemes and the handling of Scottish Water developments.

1.1.11 Table 5 below provides a summary of the key development plan policies and relevant supplementary guidance that are of relevance to road drainage and the water environment. An assessment of compliance of the proposed scheme in relation to these policies is provided in Appendix A17.2 (Assessment of Development Plan Policy Compliance), and is summarised in Chapter 17 (Policies and Plans) having regard to the overall compliance of the proposed scheme in relation to national, regional and local policy.

Table 5: Development Plan Policy for Road Drainage and the Water Environment

Aberdeen City and Shire Strategic Development Plan 2014			
Objective	Targets		
Sustainable development and climate change	<ul style="list-style-type: none"> To avoid developments on land which is at an unacceptable risk from coastal or river flooding (as defined by the 'Indicative River and Coastal Flood Map for Scotland' or through a detailed flood risk assessment), except in exceptional circumstances. 		
Quality of the environment	<ul style="list-style-type: none"> To make sure that development improves and does not lead to the loss of, or damage to, built natural or cultural heritage asset; and To avoid new development preventing water bodies achieving 'good ecological status' under the Water Framework Directive. 		
Aberdeen Local Development Plan 2012			
Policy Ref.	Title	Supplementary Guidance	Policy Objectives
Policy NE6	Flooding and Drainage	Drainage Impact Assessment	<p>Development will not be permitted if:</p> <ol style="list-style-type: none"> 1) it would increase the risk of flooding:- <ul style="list-style-type: none"> • by reducing the ability of the functional flood plain to store and convey water; • through the discharge of additional surface water; or • by harming flood defences. 2) it would be at risk itself from flooding; 3) adequate provision is not made for access to water bodies for maintenance; or 4) it would result in the construction of new or strengthened flood defences that would have a significantly damaging effect on the natural heritage interests within or adjacent to a watercourse. <p>In addition, supplementary guidance states that, an application of this type should be accompanied by a DIA should be carried out in accordance with the principles of sustainable drainage. The submitted DIA should include the following basic requirements and additional requirements where specified by the planning authority. The development should confirm the requirements before preparing the DIA.</p> <p>Basic requirements are:</p> <ul style="list-style-type: none"> • an examination of the current and historical drainage patterns; • a concept drawing of the development proposal; • a brief summary of how the drainage design provides SUDS techniques in accordance with the design manual; • summary of SUDS to be incorporated (refer to the selection tool within the design manual); • the soil classification for the site; • evidence of subsoil porosity tests including where possible at the location of any intended infiltration device; • calculations showing the pre- and post-development peak run-off flow rate for the critical rainfall event (refer to section 3); • attenuation designed for a 10 year return period rainfall event; • wastewater drainage proposals; • confirmation of maintenance responsibility; and • a copy of a letter from the water authority giving the location of the

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			nearest public sewers and confirmation of their availability for servicing the site.
Policy NE8	Natural Heritage	Buffer Strips	<p>Development that, taking into account any proposed mitigation measures, has an adverse effect on a protected species or an area designated because of its natural heritage value will only be permitted where it addresses the criteria set out in Scottish Planning Policy. These are International Designations, National Designations, Local Designations, European Protected Species and Species protected under the Wildlife and Countryside Act 1981.</p> <p>In all cases of development at any location: -</p> <ul style="list-style-type: none"> • Applicants should submit supporting evidence for any development that has an adverse effect on a protected species demonstrating both the need for the development and that a full range of possible alternative courses of action have been properly examined and none found to acceptably meet the need identified. • An ecological assessment will be required on a designated site or where there is evidence to suggest that a habitat or species of importance (including those identified in the UK and Local Biodiversity Action Plans) exists on the site. • No development will be permitted unless steps are taken to mitigate negative development impacts. • Natural heritage beyond the confines of designated sites should be protected and enhanced. • Where feasible, steps to prevent further fragmentation or isolation of habitats must be sought and opportunities to restore links which have been broken will be taken. • Measures will be taken, in proportion to the opportunities available, to enhance biodiversity through the creation and restoration of habitats and, where possible, incorporating existing habitats. • There will be a presumption against excessive engineering and culverting; there will be a requirement to restore existing culverted or canalised water bodies where this is possible; and the inclusion of SUDS. Natural buffer strips will be created for the protection and enhancement of water bodies, including lochs, ponds, wetlands, rivers, tributaries, estuaries and the sea. Supplementary Guidance will be developed on buffer strips. <p>In addition, supplementary guidance states that buffer strips are important to the water environment as they reduce run-off into water bodies by storing water and releasing it more slowly, and therefore reducing flooding.</p>

Policy Context for Chapter 10: Ecology and Nature Conservation

1.1.12 National planning policy on a variety of themes is contained in Scottish Planning Policy (SPP) (Scottish Government, 2014). Key provisions of SPP on ecology and nature conservation are:

- to protect and enhance the natural environment, including biodiversity and the landscape;
- improving the natural environment and the sustainable use and enjoyment of it;
- to support healthier living by improving the quality of the built environment and by addressing environmental problems affecting communities;
- to support habitat connectivity; and
- to protect and enhance ancient semi-natural woodland as an important and irreplaceable resource, together with other native and long established woodlands with high nature conservation value.

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1.1.13 SPP indicates that planning authorities should adopt a broad approach to natural heritage rather than just conserving designated or protected sites and species through taking into account ecosystems and natural processes in their area. SPP also states that planning authorities should support opportunities for enjoyment and understanding of natural heritage.

1.1.14 Circulars and Planning Advice Notes (PANs) published by the Scottish Government provide further guidance on specific topics. Documents of relevance to ecology and nature conservation are summarised in Table 6 below.

Table 6: National Planning Guidance and Advice

Reference	Title	Summary of Document
PANs		
PAN 60	Planning for Natural Heritage	Provides advice on how development and the planning system can contribute to the conservation, enhancement, enjoyment and understanding of Scotland's natural environment and encourages developers and planning authorities to be positive and creative in addressing natural heritage issues. PAN 60 complements the SPP on Natural Heritage, with examples of good planning practice in relation to natural heritage drawn from across Scotland highlighted in a number of case studies.

1.1.15 Table 7 below provides a summary of the key development plan policies and relevant supplementary guidance that are of relevance to ecology and nature conservation. An assessment of compliance of the proposed scheme in relation to these policies is provided in Appendix A17.2 (Assessment of Development Plan Policy Compliance), and is summarised in Chapter 17 (Policies and Plans) having regard to the overall compliance of the proposed scheme in relation to national, regional and local policy.

Table 7: Development Plan Policy for Ecology and Nature Conservation

Aberdeen City and Shire Strategic Development Plan 2014			
Objective		Targets	
Quality of the environment		<ul style="list-style-type: none"> To make sure that development improves and does not lead to the loss of, or damage to natural heritage; and To avoid new development preventing water bodies achieving 'good ecological status' under the Water Framework Directive. Recognise that both councils will take account of biodiversity, wildlife habitats, landscape, green networks and other sensitive areas in identifying land for development, preparing masterplans and assessing development proposals. 	
Aberdeen Local Development Plan 2012			
Policy Ref.	Title	Supplementary Guidance	Policy Objectives
Policy NE1	Green Space Network		The City Council will protect, promote and enhance the wildlife, recreational, landscape and access value of the Green Space Network. Proposals for development that are likely to destroy or erode the character or function of the Green Space Network will not be permitted. Where major infrastructure projects or other developments necessitate crossing the Green Space Network, such developments shall take into account the coherence of the network. In doing so measures shall be taken to allow access across roads for wildlife and for access and outdoor recreation purposes.
Policy NE5	Trees and Woodlands	Trees and Woodland	<p>Development that will result in the loss of, or damage to, established trees and woodlands that have natural or cultural heritage value or contribute to the character, biodiversity or amenity will be resisted.</p> <p>Appropriate measures should be taken for the protection and long term management of existing trees and new planting both during and after construction. Buildings and services should be sited so as to minimise adverse impacts on existing and future trees and tree cover.</p> <p>Additionally, supplementary guidance on trees state that a Tree Protection Plan should be developed and annotated stating the following:</p> <ul style="list-style-type: none"> Trees to be retained; Trees to be removed;

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			<ul style="list-style-type: none"> • Trees to be pruned; • The exact location of the Construction Exclusion Zone showing the protective barriers/fences, all physical barriers including the ground protection (these areas should reflect the RPAs taken from the Tree Constraints Plan, or a distance equal to half the height of the tree, or the canopy drip line of the tree, whichever is greatest); • Details of the type of fencing/physical barrier to be used (this is to be the same as in figure 2 of BS5837 unless otherwise agreed in writing); • The fencing/protective barrier with display signs indicating that the enclosed area is a construction exclusion zone; • Those areas of proposed or structural landscaping be protected to prevent damage to the soil structure; and • Finalised site layout.
Policy NE8	Natural Heritage	Buffer Strips Bats and Development	<p>Development that, taking into account any proposed mitigation measures, has an adverse effect on a protected species or an area designated because of its natural heritage value will only be permitted where it addresses the criteria set out in Scottish Planning Policy. These are International Designations, National Designations, Local Designations and European Protected Species and Species protected under the Wildlife and Countryside Act 1981. Supplementary guidance on Bats and Development set out minimum survey details that are required in cases where bats have been identified.</p> <p>In all cases of development at any location:</p> <ul style="list-style-type: none"> • Applicants should submit supporting evidence for any development that has an adverse effect on a protected species demonstrating both the need for the development and that a full range of possible alternative courses of action have been properly examined and none found to acceptably meet the need identified. • An ecological assessment will be required on a designated site or where there is evidence to suggest that a habitat or species of importance (including those identified in the UK and Local Biodiversity Action Plans) exists on the site. • No development will be permitted unless steps are taken to mitigate negative development impacts. • Natural heritage beyond the confines of designated sites should be protected and enhanced. • Where feasible, steps to prevent further fragmentation or isolation of habitats must be sought and opportunities to restore links which have been broken will be taken. • Measures will be taken, in proportion to the opportunities available, to enhance biodiversity through the creation and restoration of habitats and, where possible, incorporating existing habitats. • There will be a presumption against excessive engineering and culverting; there will be a requirement to restore existing culverted or canalised water bodies where this is possible; and the inclusion of SUDS.

Policy Context for Chapter 11: Landscape and Visual

1.1.16 National planning policy on a variety of themes is contained in Scottish Planning Policy (SPP) (Scottish Government, 2014). Key provisions of SPP on landscape and visual impacts are:

- safeguarding the impacts on local communities, individual houses, sensitive receptors and economic sectors important to the local economy;
- restoration and aftercare (including any benefits in terms of the remediation of existing areas of dereliction or instability);
- to facilitate positive change whilst maintaining and enhancing the distinctive character of the landscape in both the countryside and urban areas; and
- to ensure that the siting and design of development is informed by local landscape character.

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- 1.1.17 SPP indicates that landscapes and the natural heritage are sensitive to inappropriate development and encourages planning authorities to ensure that potential effects, including the cumulative effect of incremental changes, are considered when preparing development plans and deciding planning applications.
- 1.1.18 It is recognised in SPP that whilst the protection of the landscape and natural heritage can impose constraints on new development, *'with careful planning and design the potential for conflict can be minimised and the potential for enhancement maximised'* (Scottish Government 2014).
- 1.1.19 Circulars and Planning Advice Notes (PANs) published by the Scottish Government provide further guidance on specific topics. Documents of relevance to landscape and visual impacts are summarised in Table 8 below.

Table 8: National Planning Guidance and Advice

Reference	Title	Summary of Document
PANs		
PAN 60	Planning for Natural Heritage (2000)	Provides advice on how development and the planning system can contribute to the conservation, enhancement, enjoyment and understanding of Scotland's natural environment and encourages developers and planning authorities to be positive and creative in addressing natural heritage issues. It complements the policy in SPP, with examples of good planning practice in relation to natural heritage drawn from across Scotland highlighted in a number of case studies.

- 1.1.20 Table 9 below provides a summary of the key development plan policies and relevant supplementary guidance that are of relevance to visual impacts and effects on landscape. An assessment of compliance of the proposed scheme in relation to these policies is provided in Appendix A17.2 (Assessment of Development Plan Policy Compliance), and is summarised in Chapter 17 (Policies and Plans) having regard to the overall compliance of the proposed scheme in relation to national, regional and local policy.

Table 9: Development Plan Policy for Landscape and Visual

Aberdeen City and Shire Strategic Development Plan 2014			
Objective		Targets	
Quality of the environment		<ul style="list-style-type: none"> To make sure that development improves and does not lead to the loss of, or damage to, built, natural or cultural heritage assets. 	
Aberdeen Local Development Plan 2012			
Reference	Title	Supplementary Guidance	Policy Objectives
Policy H1	Residential Areas	House Extensions* Curtilage Splits* Open Space	<p>Within existing residential areas (H1 on the Proposals Map) and within new residential developments, proposals for new residential development and householder development will be approved in principle if it:</p> <ol style="list-style-type: none"> does not constitute over development; does not have an unacceptable impact on the character or amenity of the surrounding area; does not result in the loss of valuable and valued areas of open space. Open space is defined in the Aberdeen Open Space Audit 2010; complies with Supplementary Guidance on Curtilage Splits; and complies with Supplementary Guidance on House Extensions. <p>Within existing residential areas, proposals for non-residential uses will be refused unless:</p> <ol style="list-style-type: none"> they are considered complementary to residential use; or it can be demonstrated that the use would cause no conflict with, or any nuisance to, the enjoyment of existing residential amenity.
Policy D6	Landscape	Landscape Strategy Part 2 – Landscape Guidelines	<p>Development will not be acceptable unless it avoids:</p> <ul style="list-style-type: none"> Adversely affecting landscape character and elements which contribute to, or provide, a distinct 'sense of place' which point to being either in or around Aberdeen or a particular part of it;

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			<ul style="list-style-type: none"> • Obstructing views of the City's townscape, landmarks and features when seen from publicly accessible vantage points such as roads, railways, recreation areas and pathways and particularly from the main city approaches; • Disturbance, loss or damage to recognised recreation, wildlife or woodland resources or to the physical links between them; • Sprawling onto green spaces or buffers between places or communities with individual identities, and those which can provide opportunities for countryside activities; and • Development should avoid significant adverse impacts upon existing landscape elements, including linear and boundary features or other components, which contribute to local amenity, and provide opportunities for conserving, restoring or enhancing them. <p>The Landscape Strategy supplementary guidance states, under Landscape Practice Note 5 – Development Proposals, that siting and design of new buildings and structures within urban areas shall have regard to landscape fit and local context in terms of their visual scale, massing and colour of materials. A Planning Brief explaining the principles on which development proposals are based will be required in some instances.</p>
Policy NE5	Trees and Woodlands	Trees and Woodland	<p>Development that will result in the loss of, or damage to, established trees and woodlands that have natural or cultural heritage value or contribute to the character, biodiversity or amenity will be resisted.</p> <p>Appropriate measures should be taken for the protection and long term management of existing trees and new planting both during and after construction. Buildings and services should be sited so as to minimise adverse impacts on existing and future trees and tree cover.</p> <p>Additionally, supplementary guidance on trees state that a Tree Protection Plan should be developed and annotated stating the following:</p> <ul style="list-style-type: none"> • Trees to be retained; • Trees to be removed; • Trees to be pruned; • The exact location of the Construction Exclusion Zone showing the protective barriers/fences, all physical barriers including the ground protection (these areas should reflect the RPAs taken from the Tree Constraints Plan, or a distance equal to half the height of the tree, or the canopy drip line of the tree, whichever is greatest); • Details of the type of fencing/physical barrier to be used (this is to be the same as in figure 2 of BS5837 unless otherwise agreed in writing); • The fencing/protective barrier with display signs indicating that the enclosed area is a construction exclusion zone; • Those areas of proposed or structural landscaping be protected to prevent damage to the soil structure; and • Finalised site layout.

Policy Context for Chapter 12: Cultural Heritage

1.1.21 National planning policy on a variety of themes is contained in Scottish Planning Policy (SPP) (Scottish Government, 2014). Key provisions of SPP on cultural heritage are:

- to safeguard historic assets through development plans and development management decisions; and
- to promote the care and protection of the historic environment and decision-making based on a clear understanding of the importance of heritage assets.

1.1.22 The Government's Scottish Historic Environment Policy (SHEP) and the Managing Change in the Historic Environment Guidance Note series, both published by Historic Scotland, set out Scottish Ministers' policies for the historic environment and provide a framework that informs the work of a range of organisations that have a role and interest in managing the historic environment.

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1.1.23 A summary of the SHEP and other national guidance and advice of relevance to cultural heritage is provided in Table 10 below.

Table 10: National Planning Guidance and Advice

Reference	Title	Summary of Document
SHEP	Scotland's Historic Environment Policy (December 2011)	<p>This document consolidates the previous SHEP series into one policy document. The SHEP complements and has the same authority as the Scottish Planning Policy and other relevant Ministerial policy documents, and is a relevant consideration in the statutory planning, EIA and Strategic Environmental Assessment (SEA) processes.</p> <p>The policy of the Scottish Ministers states that:</p> <ul style="list-style-type: none"> actions taken in respect of Scotland's historic environment should secure its conservation and management for the benefit and enjoyment of present and future generations; there should be a presumption in favour of preservation of individual historic assets and also the pattern of the wider historic environment; no historic asset should be lost or radically changed without adequate consideration of its significance and of all the means available to manage and conserve it; and Scotland's historic environment should be managed in a sustainable way, recognising that it is a social, cultural, economic and environmental resource of great value.
Guidance Note Series	Managing Change in the Historic Environment	<p>The series details how to apply the policies contained in the Scottish Historic Environment Policy (2009) (SHEP) and Scottish Planning Policy (2014). The guidance notes that are of particular relevance to the scheme are 'Demolition' and 'Setting'. These documents set out the principles that apply to the demolition of listed buildings and unlisted buildings in conservation areas and those principles that apply to developments affecting the setting of historic assets or places.</p>
PAN 2/2011	Planning and Archaeology	<p>This PAN sits alongside Scottish Planning Policy (SPP), Scottish Historic Environment Policy (SHEP) and the Managing Change in the Historic Environment Guidance Notes, which together set out the Scottish Ministers' policies for planning and the historic environment.</p> <p>This advice note includes guidance on archaeological assessments and field assessments as well as arrangements for mitigation. The PAN promotes the protection and preservation of archaeological sites and monuments, and their settings, in situ wherever feasible.</p> <p>Where preservation in situ is not possible, advice is provided on an appropriate level of excavation, recording, analysis, publication and archiving which should be carried out before and/or during development.</p>
PAN 78	Inclusive Design (2006)	<p>PAN 78 supports the government's aim of promoting more equality in the areas where we live and work. The PAN aims to explain the importance of inclusive design, identify the nature of the problems experienced in designing inclusive environments and describe the legislative context. It also outlines the roles of the different stakeholders in delivering inclusive design and identifies the particular challenges of applying inclusive design when altering the historic environment to ensure accessibility for all users.</p>

1.1.24 Table 11 below provides a summary of the key development plan policies and relevant supplementary guidance that are of relevance to cultural heritage. An assessment of compliance of the proposed scheme in relation to these policies is provided in Appendix A17.2 (Assessment of Development Plan Policy Compliance), and is summarised in Chapter 17 (Policies and Plans) having regard to the overall compliance of the proposed scheme in relation to national, regional and local policy.

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Table 11: Development Plan Policy for Cultural Heritage

Aberdeen City and Shire Strategic Development Plan 2014		
Objective	Targets	
Quality of the environment	<ul style="list-style-type: none"> To make sure that development improves and does not lead to the loss of, or damage to built, natural or cultural heritage assets. 	
Aberdeen Local Development Plan 2012		
Reference	Title	Policy Objectives
Policy D4	Aberdeen's Granite Heritage	The City Council will encourage the retention of granite buildings throughout the City, even if not listed or in a conservation area. Conversion and adaptation of redundant granite buildings will be favoured. Within conservation areas, neither conservation area consent nor planning permission will be given for the demolition or part removal of granite buildings (excepting those buildings that make an insignificant contribution to the character of the conservation area). Consent will not be given for the demolition of granite-built garden or other boundary walls in conservation areas. Where a large or locally significant granite building that is not listed or in a conservation area is demolished, the City Council will expect the original granite to be used on the principal elevations of the replacement building. Page 186The City Council will seek to retain original setted streets and granite pavements in conservation areas, and elsewhere if they contribute significantly to a sense of place. Where the opportunities occur, greater use will be made of granite in resurfacing historic streets in the City Centre. The City Council will seek to retain coach houses and other large granite-built outbuildings adjoining rear lanes in conservation areas and conversion to appropriate new uses will be encouraged.
Policy D5	Built Heritage	Proposals affecting Conservation Areas or Listed Buildings will only be permitted if they comply with Scottish Planning Policy. Planning permission for development that would have an adverse effect on the character or setting of a site listed in the inventory of gardens and design landscapes in Scotland or in any addition to the inventory will be refused unless: <ul style="list-style-type: none"> the objectives of designation and the overall integrity and character of the designated area will not be compromised; or any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by social, economic and strategic benefit of national importance. In both cases mitigation and appropriate measures shall be taken to conserve and enhance the essential characteristics, aesthetics, archaeological and historical value and setting of the site. Supplementary Planning Guidance material to inform the decision making process has not yet been published by Aberdeen City Council.

Policy Context for Chapter 13: Air Quality

- 1.1.25 National planning policy on a variety of themes is contained in Scottish Planning Policy (SPP) (Scottish Government, 2014). Key provisions of SPP on air quality are:
- promoting sustainable development;
 - tackling congestion to support sustainable economic growth and reduce emissions;
 - to encourage decision making to take into account the implications of development for water, air and soil quality;
 - to support healthier living by improving the quality of the built environment and by addressing environmental problems affecting communities; and
 - to tackle climate change, and in particular reduce emissions of the greenhouse gases that contribute to it.
- 1.1.26 SPP states that the relationship between transport and land use has a strong influence on sustainable economic growth, and this should be taken into account when preparing development plans and in development management decisions. Policy indicates that a reduction in emissions from transport sources requires more sustainable modes of transport. It is suggested that the planning system should support a pattern of development which reduces the need to travel, encourages active travel and facilitates movement by public transport (Scottish Government, 2014).

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- 1.1.27 Circulars and Planning Advice Notes (PANs) published by the Scottish Government provide further guidance on specific topics. Documents of relevance to air quality are summarised in Table 12 below.

Table 12: National Planning Guidance and Advice

Reference	Title	Summary of Document
PANs		
PAN 51 (Revised 2006)	Planning, Environmental Protection and Regulation	<p>The main function of this Planning Advice Note (PAN) is to support the existing policy on the role of the planning system in relation to the environmental protection regimes, including air quality.</p> <p>PAN 51 summarises the statutory responsibilities of the environmental protection bodies, as well as informing these bodies about the planning system.</p> <p>The document also provides information on European and domestic legislation and policy frameworks for ambient air quality.</p>

- 1.1.28 Table 13 below provides a summary of the key development plan policies and relevant supplementary guidance that are of relevance to air quality. An assessment of compliance of the proposed scheme in relation to these policies is provided in Appendix A17.2 (Assessment of Development Plan Policy Compliance), and is summarised in Chapter 17 (Policies and Plans) having regard to the overall compliance of the proposed scheme in relation to national, regional and local policy.

- 1.1.29 Although there are no direct targets for Air Quality in the ACSSDP, the plan does state that in its 'Spatial Strategy' that planned a wide range of transport measures to either tackle existing problems or support the growth planned over the next 20 to 25 years. While congestion is a key factor, reducing the effect of transport on the environment (including improving air quality) is also important.

Table 13: Development Plan Policy for Air Quality

Aberdeen Local Development Plan 2012			
Reference	Title	Supplementary Guidance	Policy Objectives
Policy NE10	Air Quality	Air Quality	Planning applications for development which has the potential to have a detrimental impact on air quality will not be permitted unless measures to mitigate the impact of air pollutants are proposed and can be agreed with the Planning Authority. Additionally, supplementary guidance dictates that developments will need an air quality assessment where a significant change in air quality is expected. The change will include both construction and operational impacts.

Policy Context for Chapter 14: Noise and Vibration

- 1.1.30 National planning policy on a variety of themes is contained in Scottish Planning Policy (SPP) (Scottish Government, 2014). Key provisions of SPP on noise are:
- to support development that will contribute to sustainable economic growth and to high quality sustainable places; and
 - to support healthier living by improving the quality of the built environment and by addressing environmental problems affecting communities.
- 1.1.31 Circulars and Planning Advice Notes (PANs) published by the Scottish Government provide further guidance on specific topics. Documents of relevance to noise and vibration are summarised in Table 14 below.

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Table 14: National Planning Guidance and Advice

Reference	Title	Summary of Document
PAN 1/2011	Planning and Noise	This PAN promotes the principles of good acoustic design and a sensitive approach to the location of new development. It promotes the appropriate location of new potentially noisy development, and a pragmatic approach to the location of new development within the vicinity of existing noise generating uses, to ensure that quality of life is not unreasonably affected and that new development continues to support sustainable economic growth.

1.1.32 Table 15 below provides a summary of the key development plan policies and relevant supplementary guidance that are of relevance to noise and vibration. An assessment of compliance of the proposed scheme in relation to these policies is provided in Appendix A17.2 (Assessment of Development Plan Policy Compliance), and is summarised in Chapter 17 (Policies and Plans) having regard to the overall compliance of the proposed scheme in relation to national, regional and local policy.

Table 15: Development Plan Policy for Noise and Vibration

Aberdeen City and Shire Strategic Development Plan 2014			
Objective		Targets	
Quality of the environment		<ul style="list-style-type: none"> To make sure that development improves and does not lead to the loss of, or damage to, built, natural or cultural heritage assets. 	
Aberdeen Local Development Plan 2012			
Policy Ref.	Title	Supplementary Guidance	Policy Objectives
Policy H1	Residential Areas	House Extensions* Curtilage Splits * Open Space	<p>Within existing residential areas (H1 on the Proposals Map) and within new residential developments, proposals for new residential development and householder development will be approved in principle if it:</p> <ol style="list-style-type: none"> does not constitute over development; does not have an unacceptable impact on the character or amenity of the surrounding area; does not result in the loss of valuable and valued areas of open space. Open space is defined in the Aberdeen Open Space Audit 2010; complies with Supplementary Guidance on Curtilage Splits; and complies with Supplementary Guidance on House Extensions. <p>Within existing residential areas, proposals for non-residential uses will be refused unless:</p> <ol style="list-style-type: none"> they are considered complementary to residential use; or it can be demonstrated that the use would cause no conflict with, or any nuisance to, the enjoyment of existing residential amenity.

Policy Context for Chapter 15: Effects on All Travellers

1.1.33 National planning policy on a variety of themes is contained in Scottish Planning Policy (SPP) (Scottish Government, 2014). Key provisions of SPP relevant to assessing effects on all travellers including effects on vehicle travellers (view from the road, driver stress) and effects on pedestrians, cyclists and equestrians are:

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- promoting sustainable development;
- to prioritise opportunities for personal travel by mode in the following order – walking, cycling, public transport, car and other motorised vehicles;
- to encourage improvements to active transport networks, such as paths and cycle routes, in urban and rural areas that will support more sustainable travel choices;
- improving the natural environment and the sustainable use and enjoyment of it; and
- to facilitate positive change whilst maintaining and enhancing the distinctive character of the landscape in both the countryside and urban areas.

1.1.34 Planning Advice Notes (PAN) published by the Scottish Government provide further guidance on specific topics. Details of relevant PANS are summarised in Table 15 below.

Table 15: National Planning Guidance and Advice

Reference	Title	Summary of Document
PANs		
PAN 75	Planning for Transport (2005)	Aims to create greater awareness of how linkages between planning and transport can be managed. It highlights the roles of different bodies and professions in the process and points to other sources of information on the overlap of the two sectors.
PAN 78	Inclusive Design (2006)	Supports the government's aim of promoting more equality in the areas where we live and work. The PAN aims to explain the importance of inclusive design, identify the nature of the problems experienced in designing inclusive environments and describe the legislative context. It also outlines the roles of the different stakeholders in delivering inclusive design.

1.1.35 Table 16 provides a summary of the key development plan policies and relevant supplementary guidance that are of relevance to effects on all travellers. An assessment of compliance of the proposed scheme in relation to these policies is provided in Appendix A17.2 (Assessment of Development Plan Policy Compliance), and is summarised in Chapter 17 (Policies and Plans) having regard to the overall compliance of the proposed scheme in relation to national, regional and local policy.

Table 16: Development Plan Policy for Effects on All Travellers

Aberdeen City and Shire Strategic Development Plan 2014			
Objective		Targets	
Accessibility		<ul style="list-style-type: none"> • For all developments to meet the accessibility standards set out in the regional transport strategy. • For major employment and service developments in strategic growth areas to show that they are easy to access by walking, cycling or using public transport. The travel plans produced for these developments should reduce the need for people to use cars. • To reduce the percentage of journeys made by car. 	
Aberdeen Local Development Plan 2012			
Policy Ref.	Title	Supplementary Guidance	Policy Objectives
Policy D3	Sustainable and Active Travel	Transport and Accessibility	<p>New development will be designed in order to minimise travel by private car, improve access to services and promote healthy lifestyles by encouraging active travel. Development will maintain and enhance permeability, ensuring that opportunities for sustainable and active travel are both protected and improved. Access to, and movement within and between, new and existing developments will prioritise transport modes in the following order - walking, cycling, public transport, car and other motorised vehicles.</p> <p>Existing access rights, including core paths, rights of way and paths within the wider network will be protected and enhanced. Where development proposals impact on the access network, the principle of the access must</p>

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			<p>be maintained through the provision of suitable alternative routes.</p> <p>Chapter 4 of the Transport and Accessibility SPG states that the Council is currently undertaking a review of its 1998 publication "Guidelines and Specification for Roads within Residential and Industrial Developments" which sets out the technical requirements for designing new roads, parking facilities, and walking and cycling infrastructure. The review takes account of the Scottish Government's Policy Statement Designing Streets (2010). The Council intends to publish a fully revised version of the technical guidelines in due course and officers are progressing this detailed work. In the meantime, the Local Development Plan has taken account of Designing Streets by including a Roads Descriptor Map which categorises the road network according to the principles of Designing Streets.</p>
Policy NE9	Access and Informal Recreation	Infrastructure and Developers Contribution Manual, Transport and Accessibility and Open Space	<p>New development should not compromise the integrity of existing or potential recreational opportunities including access rights, core paths, other paths and rights of way. Core Paths are shown on the Proposals Map. Where development is proposed, every opportunity should be taken to improve public access, permeability and links to green space for recreation and for active travel.</p> <p>The SPG states that contributions from other developments can be used to provide improvements to public transport, the local road network, traffic management, pedestrian and cycle facilities, and accessibility infrastructure.</p>

Policy Context for Chapter 16: Materials

1.1.36 National planning policy on a variety of themes is contained in Scottish Planning Policy (SPP) (Scottish Government, 2014). Key provisions of SPP on design and materials are:

- to support sustainable development;
- to encourage the use of sustainable and recycled materials in construction; and
- promote development design that would contribute positively to the built and natural environment.

References

Aberdeen City Council (2012). Aberdeen Local Development Plan (ALDP) 2012.

Aberdeen City Council (2012). Air Quality, Supplementary Guidance. Aberdeen Local Development Plan (ALDP) 2012.

Aberdeen City Council (2012). Buffer Strips, Supplementary Guidance. Aberdeen Local Development Plan (ALDP) 2012.

Aberdeen City Council (2012). Drainage Impact Assessment, Supplementary Guidance. Aberdeen Local Development Plan (ALDP) 2012.

Aberdeen City Council (2012). Green Belt Review, Supplementary Guidance. Aberdeen Local Development Plan (ALDP) 2012.

Aberdeen City Council (2012). Open Space, Supplementary Guidance. Aberdeen Local Development Plan (ALDP) 2012.

Aberdeen City Council (2012). Landscape Guidelines, Supplementary Guidance. Aberdeen Local Development Plan (ALDP) 2012.

Aberdeen City Council (2012). Transport and Accessibility, Supplementary Guidance. Aberdeen Local Development Plan (ALDP) 2012.

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Aberdeen City Council (2012). Trees and Woodlands, Supplementary Guidance. Aberdeen Local Development Plan (ALDP) 2012.

Aberdeen City Council (2013). Infrastructure and Developer Contributions Manual, Supplementary Guidance. Aberdeen Local Development Plan (ALDP) 2012.

Aberdeen City Council (2013). Bats and Development, Supplementary Guidance. Aberdeen Local Development Plan (ALDP) 2012.

Aberdeen City and Shire Strategic Development Planning Authority (2014). Aberdeen City and Aberdeenshire Strategic Development Plan

Historic Scotland (2011). SHEP Scotland's Historic Environment Policy.

Historic Scotland. Managing Change in the Historic Environment guidance note series.

Scottish Government (2000). Planning Advice Note (PAN) 60 Planning for Natural Heritage.

Scottish Government (2001). Planning Advice Note (PAN) 61: Planning and Sustainable Urban Drainage Systems.

Scottish Government (2004). Planning Advice Note (PAN) 69: Planning and Building Standards Advice on Flooding.

Scottish Government (2006). Planning Advice Note (PAN) 51 Planning, Environmental Protection and Regulation.

Scottish Government (2006). Planning Advice Note (PAN) 78: Inclusive Design.

Scottish Government (2006). Planning Advice Note (PAN) 79: Water and Drainage.

Scottish Government (2011). Planning Advice Note (PAN) 1/2011 Planning and Noise.

Scottish Government (2011). Planning Advice Note (SPP) 2/2011 Planning and Archaeology.

Scottish Government (2014). Scottish Planning Policy.

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Table 1 below lists the key policies that may affect the development of the proposed scheme.

Policies that are marked with 'X' are of particular relevance as there may be non-compliance issues. Policies that are marked with a tick '✓' are generally compliant.

Those ES chapters that are relevant to individual policies are cross-referenced.

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Table 1: Assessment of Policy Compliance (Strategic Development Plan)

Objectives / Aspirations	Relevant Environmental Statement Chapter(s)	Compliance with Policy	Summary of Targets
Aberdeen City and Shire Strategic Development Plan (ACSSDP) 2014			
Sustainable Development and Climate Change	Chapter 16 (Materials)	✓	<p>The ACSSDP is committed to tackling climate change and promoting sustainable development. The targets identified to achieve this objective include the mitigation and prevention of flood risk and promoting waste management practices, these targets are identified below. In addition, the ACSSDP notes that new developments must be designed and built to use resources more efficiently and be located in places where they have as little effect on the environment as possible.</p> <p><u>Targets:</u></p> <ul style="list-style-type: none"> • For all new buildings to be carbon neutral by 2020; • For the equivalent of the city region's electricity needs to be met from renewable sources by 2020; • To avoid having to increase the amount of water Scottish Water are licensed to take from the River Dee, as a result of the new developments proposed in the plan; • For all new developments to use water-saving technology; • To avoid developments on land which is at an unacceptable risk from coastal or river flooding (as defined by the 'Indicative River and Coastal Flood Map for Scotland' or through a detailed flood risk assessment), except in exceptional circumstances; and • To work towards at least an extra 300,000 tonnes of new waste-management infrastructure. <p>Through the implementation of mitigation items such as Site Waste Management Plans (Mitigation Item W25), Construction Environmental Management Plans (Mitigation Item M3) and SUDS (Mitigation Item M2) the proposed scheme accounts and broadly complies with these objectives.</p>
	Chapter 9 (Road Drainage and the Water Environment)	✓	
	Chapter 8 (Geology, Soils, Contaminated Land and Groundwater)	✓	
Population Growth	Chapter 2 (Need for the Scheme)	✓	<p>An overarching principle of the ACSSDP is to increase growth within the city region to 500,000 by 2035. Providing the necessary infrastructure to accommodate this growth is highlighted as a priority.</p> <p><u>Targets:</u></p> <ul style="list-style-type: none"> • To increase the population of the city region to 500,000 by 2035; • To move towards building at least 2,500 homes a year by 2016 through the development plan; and • To move towards building at least 3,000 homes a year by 2020 through the development plan. <p>The Haudagain Improvement is listed in the 'Spatial Strategy' section of the ACSSDP as necessary to support growth and so the proposed scheme is fully compliant with this objective.</p>

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Quality of the Environment	Chapter 7 (Community and Private Assets)	✓	<p>A key objective of the ACSSDP is to ensure that development improves and does not lead to the loss of, or damage to, built, natural or cultural heritage.</p> <p><u>Targets:</u></p> <ul style="list-style-type: none"> To make sure that development improves and does not lead to the loss of, or damage to, built, natural or cultural heritage assets; and To avoid new development preventing water bodies achieving 'good ecological status' under the Water Framework Directive. <p>Adherence to and preservation of the above targets will be set out in chapters 7, 10, 11 and 12 (for the first target) and chapters 8 and 9 (for the second target). Further assessment is provided in Table 2 below.</p> <p>Appropriate mitigation measures have been identified to minimise impacts, these can be found in Chapter 20 – Schedule of Environmental Commitments and it is considered that the proposed scheme broadly supports the SDP objectives in this respect.</p>
	Chapter 08 – (Geology, Soils, Contaminated Land and Groundwater)	✓	
	Chapter 09 – (Road Drainage and the Water Environment)	✓	
	Chapter 10 (Ecology and Nature Conservation)	✓	
	Chapter 11 (Landscape and Visual)	✓	
	Chapter 12 (Cultural Heritage)	✓	
Accessibility	Chapter 15 (Effects on all Travellers)	✓	<p><u>Targets:</u></p> <ul style="list-style-type: none"> For all developments to meet the accessibility standards set out in the regional transport strategy; For major employment and service developments in strategic growth areas to show that they are easy to access by walking, cycling or using public transport. The travel plans produced for these developments should reduce the need for people to use cars; and To reduce the percentage of journeys made by car. <p>The ACSSDP seeks to ensure that all developments promote attractive and accessible travel options for both motorised and non-motorised users (NMUs). This has been accommodated in the design of the proposed scheme through the incorporation of designated cycle lanes and signalised crossings. Further information on the scheme design in terms of provisions for motorised and NMUs is provided in Chapter 15.</p>

Table 2: Assessment of Policy Compliance (Local Development Plan)

Policy (Supporting Supplementary Guidance)	Relevant Environmental Statement Chapter(s)	Compliance with Policy	Summary
Aberdeen Local Development Plan 2012			
Policy T1 Land for Transport	Chapter 7 (Community and Private Assets)	✓	ALDP Policy T1 safeguards land for the Haudagain Roundabout improvement. The proposed scheme closely aligns with the land allocated for transport land in the ALDP and this would enable the development of the neighbouring Opportunity Sites (OP19 and OP21) allocated for new housing and retail. The land designation of the proposed scheme has partially exceeded the safeguarded land as the design has been developed, however overall the proposed scheme is compliant with the policy.
Policy D3 Sustainable and Active Travel	Chapter 15 (Effects on All Travellers)	✓	Policy D3 sets out to achieve a well integrated transport system which will be assisted by protecting and improving links, suitable for non-motorised use, between residential, employment, recreational and other facilities. The proposed scheme will either maintain or improve access for Non-Motorised Users with improvements embedded in the design such as new cycle routes/footpaths and NMU crossing points. Therefore, following the implementation of suitable mitigation, there are no adverse significant impacts expected as a result of the works.

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Policy (Supporting Supplementary Guidance)	Relevant Statement	Environmental Chapter(s)	Compliance with Policy	Summary
Aberdeen Local Development Plan 2012				
(Supplementary Guidance - Transport and Accessibility)				
Policy D4 Aberdeen's Granite Heritage	Chapter 12 (Cultural Heritage)	12 (Cultural Heritage)	N/A	ACC encourages the retention of granite buildings throughout the City. There are no buildings containing granite that will be affected by the proposed scheme and therefore this policy will not be compromised.
Policy D5 Built Heritage	Chapter 12 (Cultural Heritage)	12 (Cultural Heritage)	✓	The proposed scheme will not have a detrimental effect on the character, integrity or setting of the historic buildings within the study area. The assessment outlined in Chapter 12 (Cultural Heritage) concluded that after mitigation, there would be a Neutral impact on historic properties within the surrounding area and as such, the proposed scheme would satisfy the requirements of Policy D5. Similarly there are no listed buildings, conservation areas or scheduled monuments within the local area which would be affected by the works.
Policy D6 Landscape (Supplementary Guidance - Landscape Strategy Part 2 – Landscape Guidelines)	Chapter 11 (Landscape and Visual)	11 (Landscape and Visual)	-	<p>Policy D6 – Landscape states that development will not be acceptable unless it avoids the following:</p> <ol style="list-style-type: none"> <i>significantly adversely affecting landscape character and elements which contribute to, or provide, a distinct 'sense of place' which point to being either in or around Aberdeen or a particular part of it;</i> <p>New planting is proposed to enhance a strong sense of place, acknowledging the fact that the existing sense of place and overall urban character and structure of the townscape would have substantial impacts from the proposed scheme. It should also be acknowledged that the proposed scheme will enable the subsequent development of Haudagain Triangle (OP19) and Manor Walk (OP21) which have been identified in the ALDP as Opportunity Sites and part of the Spatial Strategy as set out in Paragraph 2.2 of the ALDP. Thereby the proposed scheme supports the creation of a regenerated 'sense of place' in broader compliance with Policy D6</p> <ol style="list-style-type: none"> <i>obstructing important views of the City's townscape, landmarks and features when seen from busy and important publicly accessible vantage points such as roads, railways, recreation areas and pathways and particularly from the main city approaches;</i> <p>The landscape and visual assessment has not identified the loss of any important viewpoints as a result of the proposed scheme. As can be seen in figure 11.4, the proposed scheme design integrates NMU path and cycleways into the scheme while the overall layout and design (prepared in cognisance of Criteria 3 and Section 7 of Landscape Strategy Part 2) has been landscaped with both soft and hard landscaping which enables greater definition of areas for open space, pedestrian movement and areas for wildlife.</p> <ol style="list-style-type: none"> <i>disturbance, loss or damage to important recreation, wildlife or woodland resources or to the physical links between them;</i> <p>Figure 11.4 also displays, in accordance with the third criteria and Section 8 of the Landscape Strategy, clearly defined proposed spatial distribution of trees, shrubs, hedges, other plants and grass seeded areas (Mitigation Items LV6). The mitigation strategy adopted by the proposed scheme will look to replace trees lost during construction and embedded newly planted trees with existing planting</p>

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Policy (Supporting Supplementary Guidance)	Relevant Environmental Statement Chapter(s)	Compliance with Policy	Summary
Aberdeen Local Development Plan 2012			
			<p>4. <i>sprawling onto important or necessary green spaces or buffers between places or communities with individual identities, and those which can provide opportunities for countryside activities.</i></p> <p>No areas of green belt or Urban Green Space will be lost due to the proposed scheme; however there will be a requirement to use some localised residential open space. The use of hedgerow planting and earth bunds / mounding will act as mitigating buffers which will avoid sprawling between communities and places.</p>
Policy H1– Residential Areas	Chapter 7 (Community and Private Assets) Chapter 11 (Landscape and Visual) Chapter 14 (Noise and Vibration)	X	<p>Policy H1 states that proposals for non-residential uses will be refused unless they can demonstrate that the use would cause no conflict with, or any nuisance to, the enjoyment of existing residential amenity.</p> <p>A small area of the proposed scheme is not covered by policy T1 and falls within the H1 designated area. There will be direct loss of residential land as a result of the proposed scheme, and it is assessed that there will be some significant residual impacts on residential properties remaining in proximity to the proposed scheme, notably from landscape and visual, and noise impacts.</p> <p>The proposed scheme is identified as a strategic improvement at this location. The development of the design and assessment of impacts has, where possible, sought to protect residential amenity; notably from noise, landscape and effects on all travellers. An extensive suite of mitigation measures (see Chapter 20: Schedule of Environmental Commitments) is proposed. It is also relevant to note that existing pressure on the Haudagain Roundabout has led to increased numbers of vehicles diverting onto adjacent residential streets. In addition to addressing congestion at the existing roundabout the proposed scheme will enable the reduction of traffic volumes on existing residential streets, with consequent benefits to amenity.</p>
Policy NE1 Green Space Network	Chapter 7 (Community and Private Assets) Chapter 10 - Ecology and Nature Conservation Chapter 11 - Landscape and Visual	✓ ✓ ✓	<p>Consideration of impacts on the green space network has been undertaken in Chapter 7 (Community and Private Assets). It is not expected that the proposed scheme would have a significant impact on this designation and therefore complies with policy.</p> <p>As stated in Chapters 10 and 11 the construction of the proposed scheme will result in some loss of the natural habitat but after appropriate mitigation measures have been implemented the impacts are not deemed to be significant.</p>
Policy NE2 Green Belt (Supplementary Information - Green Belt Review)	Chapter 7 (Community and Private Assets)	✓	<p>Consideration of impacts on the Green Belt has been undertaken in Chapter 7 (Community and Private Assets). Although designated Green Belt was identified within the 500m study buffer of the site, the proposed scheme will not impact on the Green Belt and is therefore compliant with policy in this respect.</p>
Policy NE3 Urban Green Space	Chapter 7 (Community and Private Assets)	✓	<p>Consideration of impacts on the green space network has been undertaken in Chapter 7 (Community and Private Assets). The proposed scheme will not impact on any urban green space and is therefore compliant with this policy.</p>

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Policy (Supporting Supplementary Guidance)	Relevant Environmental Statement Chapter(s)	Compliance with Policy	Summary
Aberdeen Local Development Plan 2012			
Policy NE4 Open Space Provision In New Developments (Supplementary Guidance - Open Space)	Chapter 17 (Policies and Plans)	N/A	During pre-application discussions with ACC it was indicated that consideration should be given to Policy NE4. This policy, supplemented by Open Space Guidance, states that the Council will require provisions of at least 2.8 hectares of meaningful and useful public open space per 1,000 people in new residential developments. This policy is not applicable to the proposed scheme as it does not include any new residential development.
Policy NE5 Trees and Woodlands (Supplementary Guidance - Trees and Woodland)	Chapter 10 (Ecology and Nature Conservation) Chapter 11 (Landscape and Visual)	✓	This policy presumes against the loss of trees and woodlands of importance to nature conservation and local amenity, and requires consideration of appropriate management techniques and new/replacement planting as part of the development proposals. Impacts on trees within the study area are considered in both Chapters 10 (Ecology and Nature Conservation) and 11 (Landscape and Visual). These propose that while there are some trees which will require to be removed to accommodate the proposed scheme, mitigation measures including planting to assist in softening the transition between the main road corridor and the adjacent residential areas (Mitigation item LV11) will be implemented. In addition, all trees removed will be replaced (Mitigation item LV4) and it is expected that upon Summer, 15 years after opening, the woodland coverage in the area will exceed the current pre scheme figure. With these in place, it is considered the proposed scheme meets the requirements of the policy.
Policy NE6 Flooding and Drainage (Supplementary Guidance - Drainage Impact Assessment)	Chapter 9 (Road Drainage and the Water Environment) Chapter 8 (Geology, Soils, Contaminated Land and Groundwater)	✓	For the proposed scheme, a Sustainable Drainage System (SUDS) drainage outfall is proposed to the Scatter Burn immediately upstream of the Aberdeen - Inverness railway line. With the inclusion into the scheme of SUDS features such as a detention basin to manage surface water runoff and minimise pollution. With the inclusion of the proposed mitigation measures, the majority of residual impacts would be reduced to Neutral, with a small number of Slight Adverse impacts After mitigation, the potential impacts for the proposed scheme with respect to hydrology and flood risk have been identified as of Neutral significance in Chapter 9 (Road Drainage and the Water Environment) both during construction and operation. Accordingly, the proposed scheme would meet the requirements of this policy.
Policy NE8 Natural Heritage (Supplementary Guidance - Buffer Strips)	Chapter 10 (Ecology and Nature Conservation) Chapter 9 (Road Drainage and the Water Environment)	✓	The proposed scheme would have the potential to conflict with Policy NE8 as it has the potential to have a Negative impact on some ecological receptors during construction and operation such as pollution, alteration of commuting routes and loss of /disturbance to habitats. After mitigation works such as reducing habitat loss by restricting felling and vegetation clearance activities to the minimum area necessary for the works (Mitigation Item E6), it has been concluded that there would be no residual impacts from the proposed scheme and therefore the proposals are compliant with Policy NE8.

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Policy (Supporting Supplementary Guidance)	Relevant Environmental Statement Chapter(s)	Compliance with Policy	Summary
Aberdeen Local Development Plan 2012			
Policy NE9 Access and Informal Recreation (Supplementary Guidance - Infrastructure and Developers Contribution Manual, Transport and Accessibility and Open Space)	Chapter 15 (Effects on all Travellers)	✓	Policy NE9 seeks to retain the integrity of existing and potential access rights, core paths, other paths and rights of way. The proposed scheme has accounted for NMUs in the final design, and further information can be found in Chapter 15 (Effects on all Travellers). During operation, no residual impacts are anticipated on NMUs using any of the core paths, aspirational core paths or NCR1 within the study area and therefore the proposed scheme is compliant with this policy.
Policy NE10 Air Quality (Supplementary Guidance - Air Quality)	Chapter 13 (Air Quality)	✓	The assessment in Chapter 13 (Air Quality) concludes that following the implementation of appropriate mitigation measures, it is considered unlikely that there would be any significant residual impacts at the construction and operation stage for the proposed scheme. Accordingly, the proposed scheme satisfies the requirement of Policy NE10.
Policy R2 Degraded and Contaminated Land (Supplementary Guidance - Waste Management)	Chapter 8 (Geology, Soils, Contaminated Land and Groundwater)	✓	Appropriate mitigation measures would be implemented to meet the requirement of Policy R5 and therefore, the proposed scheme would not present any conflict with policy in this respect.