

15. People and Communities – Community and Private Assets, and Human Health

This chapter considers the impacts of the Proposed Scheme on community and private assets, and human health. There are several residential properties, businesses and community facilities in close proximity to the Proposed Scheme. There are also a number of Local Development Plan allocations for the future development of Business and Industry Land. The immediate land use is predominately agricultural and consists of a mix of arable and grazing land. There are several swathes of woodland and the Borders Rail runs to the east of the Proposed Scheme.

The construction of the Proposed Scheme will necessitate approximately 27ha of land take. There will be a slight adverse impact on Sheriffhall House due to residential land take; however, no demolition of property is required. Small areas of land currently designated for development will be required to construct the scheme at Shawfair Park Extension 2 Site (EC1) and Sheriffhall South (E32) which will result in a large adverse and slight adverse effect respectively. Agricultural Land take requirements will affect eight separate land owners with varying impacts from slight adverse to large adverse. Land take will also be required from the following community land: Network Rail land, the existing road and Midlothian Council owned woodland/scrubland. Due to the nature of the development this will result in neutral impacts.

While the scheme design has been developed in consultation with landowners, the Proposed Scheme will result in the realignment of accesses to four private properties and seven agricultural field accesses (affecting three separate landowners). Negligible permanent alterations to accesses at Summerside, and Sheriffhall House and Farmhouse will result in slight adverse effects. There will be slight adverse effects on five of the accesses and a moderate adverse effect on an access to Landowner H & K's land which is being moved from the A6106 South to the A7 South

There will be a slight adverse effect on the agricultural field drainage of Landowner B & O's land due to permanent alteration of the field drainage.

There will be neutral land take, access and field drainage effects on Landowner J's land as the field will be purchased as part of the Proposed Scheme land take.

With regards to human health, during construction there will be an adverse effect on air quality, noise and neighbourhood amenity for residents and non-motorised users. There will also be an adverse effect on accessibility and active travel due to possible diversions and accesses during construction. During operation the Proposed Scheme will have a beneficial effect on air quality and noise and will increase the amenity of the neighbourhood. The Proposed Scheme will also improve social cohesion and lifetime neighbourhoods due to the reduced traffic and new segregated NMU routes.

15.1 Introduction

- 15.1.1 This chapter of the Environmental Statement (ES) reports the findings of an assessment of the likely significant effects on community and private assets and human health as a result of the changes to the A720 Sheriffhall Roundabout (hereafter referred to as 'the Proposed Scheme'), located to the southeast of Edinburgh.
- 15.1.2 Guidance presented in Design Manual for Roads and Bridges (DMRB) Volume 11, Interim Advice Note (IAN) 125/15 (Highways England, 2015), recommends that the Volume 11 three topic areas of 'Land Use', 'Pedestrians, Cyclists,

Equestrians and Community Effects' and 'Vehicle Travellers' (Volume 11: Parts 6, 8 and 9 respectively) are considered under a single topic heading ('People and Communities').

- 15.1.3 As discussed in Chapter 6 – Overview of Assessment Process, it was agreed with Transport Scotland (TS) that this report would follow the new topic structure proposed in IAN 125/15. IAN 125/15 suggests that previous topics of 'Effects on all Travellers' and 'Community and Private Assets' be combined into one new 'People & Communities' Chapter.
- 15.1.4 Accordingly, and for ease of reference, the consideration of the 'People and Communities' topic for the A720 Sheriffhall Roundabout scheme (hereafter referred to as 'the Proposed Scheme') are reported in two chapters; this Chapter (Chapter 15) covers the effects on 'Community and Private Assets' and the previous Chapter (Chapter 14) covers the effects on 'All Travellers'.
- 15.1.5 New guidance covering the 'People and Communities' topics was published on 31 October 2019 under the heading LA 112 – Population and Human Health. This guidance aligns the DMRB assessment process more closely with the 2017 EIA Regulations.
- 15.1.6 It should be noted that the People and Communities assessments (Chapters 14 and 15) had been completed prior to the publication of this guidance. However, Highways England's Major Projects Instruction (MPI) 57 'Environmental Impact Assessment: Implementing the Requirements of 2011/92/EU as amended by 2014/52/EU (EIA Directive)', which was published on 16 May 2017, has been referred to as guidance on implementing the 2017 EIA Regulations.
- 15.1.7 A review of the new guidance, LA 112, has been undertaken and it is not anticipated that the application of the guidance would substantially alter the assessment results.
- 15.1.8 For this ES to align with the 2017 EIA Regulations an assessment of the new topic 'Population and Human Health' as been included within this Chapter. Further information is provided in Chapter 6 – Overview of Assessment Process.
- 15.1.9 This chapter of the ES has been prepared by competent experts with relevant and appropriate experience. The technical lead for the Communities and Private Assets assessment has 15 years of relevant work experience and is a chartered member of the Royal Town Planning Institute (RTPI). Further details are provided in Appendix 1.2 – Table of Expert Competencies.

15.2 Approach and Methodology

Approach

- 15.2.1 This DMRB Stage 3 Environmental Impact Assessment (EIA) assesses the effects of the Proposed Scheme on community and private assets, and human health. It has been undertaken with specific reference to DMRB Volume 11 Section 3 Part 6 'Land Use', the Community Effects element of DMRB Volume 11 Section 3 Part 8 'Pedestrians, Equestrians, Cyclists and Community Effects' and Highway England's MPI 57 (as referenced above).

Methodology

- 15.2.2 The methodology embraces several key considerations for existing community and private asset receptor contained within, and in proximity to, the Proposed Scheme location; these are highlighted below. The DMRB Stage 3 Assessment (during both construction and operation phases) includes:
- Temporary and permanent loss of private property (e.g. demolition) and associated land take to accommodate the construction of the Proposed Scheme;

- Temporary and permanent loss of community land (e.g. common land) and open space (e.g. any land laid out as public parks or used for public recreation);
- Temporary and permanent loss of land which either City of Edinburgh Council (CEC) or Midlothian Council (MLC) has already designated for future development required as land take to accommodate the construction of the Proposed Scheme;
- Any impacts of the Proposed Scheme on either Council's development designations;
- An assessment of any loss of agricultural land required as land take to accommodate the construction of the Proposed Scheme and any likely effects on individual farm units or managed land including disruption to existing drainage and disruption of provision of water to fields;
- An assessment of any relevant planning applications or proposed developments;
- Permanent or temporary effects on access, or severance of access, to residential properties, business operations (including farms), and community facilities;
- Access to healthcare services and other social infrastructure;
- Access to open space and nature;
- Air quality, noise and neighbourhood amenity;
- Accessibility and active travel;
- Access to work and training; and,
- Social cohesion and lifetime neighbourhoods.

15.2.3 The assessment approach has also been guided by reference to:

- Consultee responses to the Proposed Scheme;
- Site visit findings which are reported in Section 15.5 – Baseline Conditions;
- The A720 Sheriffhall Roundabout, DMRB Stage 2 Scheme Assessment Report, Part 2 - Environmental Assessment: Volume 1 (AECOM, 2017); and,
- Desk-top documentation review and web-based information sources.

15.2.4 Prior to October 2019 there was no DMRB or TS methodology or practice for the assessment of the effects of trunk road schemes on human health. Therefore, the scope of the assessment has been informed by existing Highways England guidance (MPI 57) where relevant, as well as guidance produced by the London Healthy Urban Development Unit (HUDU) Planning for Health - Rapid Health Impact Assessment (HIA) Tool (NHS, 2017), which meets the parameters of the 2017 EIA Regulations.

15.2.5 The aims and objectives underpinning the proposed human health and wellbeing assessment are to:

- Understand how the Proposed Development could directly and indirectly impact on the key determinants of health and wellbeing;
- Identify those people most likely to be affected by the Proposed Development with regard to health inequality issues; and
- Identify measures to enhance the positive impacts and mitigate the negative effects of the Proposed Development on health and wellbeing.

15.2.6 The Rapid HIA Tool recommends the assessment of potential health impacts under eleven topics or broad determinants outlined below:

1. Housing quality and design (not applicable to the Proposed Scheme);

2. Access to healthcare services and other social infrastructure;
3. Access to open space and nature;
4. Air quality, noise and neighbourhood amenity;
5. Accessibility and active travel;
6. Crime reduction and community safety (not applicable to the Proposed Scheme);
7. Access to healthy food (not applicable to the Proposed Scheme);
8. Access to work and training;
9. Social cohesion and lifetime neighbourhoods;
10. Minimising the use of resources (covered in Chapter 17 – Material Assets and Waste)
11. Climate change (covered in Chapter 18 – Climate Change).

Impact Assessment

15.2.7 The general approach to the assessment is based on the determination of the significance of the effect caused by the Proposed Scheme on a receptor. The significance is determined from a combination of the sensitivity of the baseline receptors and the magnitude of the impact of the Proposed Scheme. The impact assessment involves three steps:

- Assignment of receptor sensitivity;
- Characterisation of the magnitude of impact on the receptor; and,
- Determination of the significance of the effect on the receptor.

Assessment of Impacts on Land and Accesses

Assignment of Receptor Sensitivity

15.2.8 Sensitivity of receptors has been defined by professional judgement as to the importance or value of the receptor and its resilience to cope with change. Table 15-1 'Sensitivity Criteria' summarises the criteria which has been applied. While the sensitivity assessment criteria are based on DMRB guidance (Volume 11, Section 2, Part 4 'Environmental Assessment and monitoring' (LA104) (Highways England, et al., 2019), Volume 11, Section 3, Part 6 'Land Use' (The Highways Agency, et al., 2001) and Volume 11, Section 3, Part 8 'Pedestrians, Cyclists, Equestrians and Community Effects' (The Highways Agency, et al., 1993)) professional judgement has been used to narrow the assessment three sensitivity categories: high, medium and low.

Table 15-1 Sensitivity Criteria

Sensitivity Description

Sensitivity	Description
High	<ul style="list-style-type: none"> • Residential or commercial buildings. • Property or land used by the community (e.g. schools, hospitals and community halls) • Community land that attracts users nationally (e.g. national parks). • Land designated for development in the Local Development Plan. • Small farm size (<50ha). • Presence of prime quality land (Classes 1, 2 and 3.1). • Conventionally farmed intensive arable cropping or intensive livestock systems (e.g. dairying). • Land of any farm type, farmed according to organic or biodynamic standards. • High value commercial sporting activity (e.g. salmon fishing). • Trees of high quality (good examples of species; rare or unusual; formal or semi-formal arboriculture species; of particular visual importance as arboricultural and/or landscape features; significant conservation, historical or commemorative value, e.g. veteran trees) with an estimated remaining life expectancy of at least 40 years if undisturbed.

Sensitivity Description

Medium	<ul style="list-style-type: none"> Residential or commercial land (e.g. gardens). Land used by the community on a regional scale (e.g. country parks, forests and other land managed in such a way as to attract visitors from a regional catchment). Medium farm size (50ha to 150ha). Presence of land of moderate quality (Classes 3.2 and 4). Conventionally farmed mixed cropping and livestock systems of moderate intensity. Moderate value commercial sporting activity (e.g. pheasant shooting). Trees of moderate quality (would be of high quality but have impaired condition; unsuitable for retention beyond 40 years; lacking special arboricultural quality; collective landscape qualities; material conservation or other cultural value) with an estimated remaining life expectancy of at least 20 years if undisturbed.
Low	<ul style="list-style-type: none"> Derelict or unoccupied buildings. Locally used community land (e.g. local parks and playing fields). Large farm size (>150ha). Presence of land of low quality (Classes 5, 6 and 7). Conventionally farmed extensive livestock systems or agricultural land in non-agricultural use. Low-value sporting activity (e.g. rough shooting). Trees of low quality (unremarkable trees of limited arboricultural merit; low or transient landscape benefits; no material conservation or other cultural value) with an estimated remaining life expectancy of at least 10 years if undisturbed. Trees in such condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years

Characterisation of Magnitude of Impact

15.2.9 The scales and applied definitions which have been used to define the magnitude of an impact on the Community & Private Asset receptors are listed in Table 15-2 'Impact Magnitude Criteria' below. The magnitude of impact assessment criteria has been based on DMRB guidance (Volume 11, Section 2, Part 4 'Environmental Assessment and monitoring' (LA104), Volume 11, Section 3, Part 6 'Land Use' and Volume 11, Section 3, Part 8 'Pedestrians') and professional judgement.

Table 15-2 Impact Magnitude Criteria

Magnitude of Impact	Definition
Major	<p>A fundamental change to the community and private assets conditions e.g.</p> <ul style="list-style-type: none"> Demolition of property/buildings More than 50% loss of non-agricultural land Complete severance of non-agricultural land due to land take Loss of more than 10% of an agricultural land holding High degree of severance extending to more than 20% of an agricultural land holding Access to agricultural and forestry land restricted High degree of disruption to cultivation patterns and with high risk of change in agricultural land use and existing field drainage systems Vehicle access to residential and commercial properties increases in journey distance by between 0.5km and 1km.
Moderate	<p>A material but non-fundamental change to the community and private assets conditions e.g.</p> <ul style="list-style-type: none"> Between 15% and 50% loss of non-agricultural land Major severance of non-agricultural land due to land take. Loss of between 5% and 10% of an agricultural landholding Moderate degree of severance extending to between 10% and 20% of an agricultural land holding Access to agricultural and forestry land compromised Moderate degree of disruption to cultivation patterns with moderate risk of change in agricultural land use and existing field drainage systems Vehicle access to residential and commercial properties increases in journey distance by between 0.25km and 0.5km.
Minor	<p>A detectable but non-material change to the community and private assets conditions e.g.</p> <ul style="list-style-type: none"> <15% land loss of non-agricultural land

- Partial severance of non-agricultural land due to land take.
- Loss of less than 5% of an agricultural landholding
- Low degree of severance extending to less than 10% of an agricultural land holding
- Minimal change in access to agricultural and forestry land
- Minimal degree of disruption to cultivation patterns with a low risk of change in agricultural land use and existing field drainage systems
- Vehicle access to residential and commercial properties increases in journey distance by between 0.1km and 0.25km.

Negligible	A non-detectable change to the Community & Private Assets conditions e.g. <ul style="list-style-type: none"> • Vehicle access to residential and commercial properties increases in journey distance by < 0.1km.
No Change	No change to the Community & Private Assets conditions.

Determination of Significance of Effect

15.2.10 Table 15-3 'Determination of Significance of Effect' below shows how the determination of the significance of effect on community and private assets, and human health has been reached, by considering both the magnitude of impact and sensitivity of the receptor. The impact's significance can include those that are positive (beneficial) or negative (adverse).

Table 15-3 Determination of Significance of Effect

Sensitivity of Receptor	Magnitude of Impact				
	Major	Moderate	Minor	Negligible	No Change
High	Large/Very Large	Moderate/Large	Slight/Moderate	Slight	Neutral
Medium	Moderate/Large	Moderate	Slight	Neutral/Slight	Neutral
Low	Slight/Moderate	Slight	Neutral/Slight	Neutral/Slight	Neutral

Source: Table 3.8.1, DMRB, Volume 11, Section 2, Part 4 'Environmental Assessment and monitoring' (LA104) (Highways England, 2019)

15.2.11 Significant effects typically comprise effects that are within the moderate, large or very large categories.

15.2.12 The approach to assigning significance of effect relies on reasoned argument, professional judgement and taking on board the advice and views of appropriate organisations. Predicted effects may also be compared with quantitative thresholds and scales in determining significance. Table 15-4 'Descriptors of Significance of Effect' summarises the assessed significance of effect descriptors used for the assessment of effects on community and private asset receptors.

Table 15-4 Descriptors of Significance of Effect

Significance Category	Typical Descriptors
Very Large	Only adverse effects are normally assigned this level of significance. They represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category.
Large	These beneficial or adverse effects represent key factors in the Proposed Scheme decision-making process.
Moderate	These beneficial or adverse effects may be important, but are not likely to be key decision-making factors. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a particular resource or receptor.
Slight	These beneficial or adverse effects are unlikely to be critical in the Proposed Scheme decision-making process, but are important in enhancing the subsequent design of the project.
Neutral	Proposed Scheme effects that are beneath levels of perception, equating to no/minimal changes to the baseline conditions.

Assessment of Impacts on Human Health

15.2.13 This health assessment considers the potential consequences for health and wellbeing from the construction and operation of the Proposed Scheme. A qualitative assessment of these impacts has been undertaken due to the diverse nature of health indicators and the outcomes which are to be assessed. Although the assessment of human health effects describes the likely qualitative health outcomes, it is not possible to quantify the significance of the effect. Therefore, any potential impact arising from this assessment will be categorized as beneficial, neutral or adverse. These effects are not assessed to be significant.

Limitations to the Assessment

15.2.14 It is likely that the Proposed Scheme will be procured by means of a Design and Build (D&B) type contract. Under the terms of this contract type, the Contractor will undertake both the detailed design and construction of the Proposed Scheme

15.2.15 It is expected that the construction work would take place within the Scheme Extents as shown on Figure 1.2 'The Proposed Scheme'. The Scheme Extents have informed the land take calculations undertaken for assessment purposes in this ES. The land within the Scheme Extents will be purchased under a Compulsory Purchase Order (CPO).

15.2.16 It is possible that the Contractor may require construction compounds to be located out with land identified in the CPO. Should construction compounds be located out with the Proposed Scheme Extents it will be the responsibility of the Contractor to assess the environmental impacts of the construction compounds and seek to mitigate these where possible.

15.2.17 The construction assessment is based on the construction information that is currently available, with advice being provided by the Highway Design Team. As with all construction assessments, the exact details of construction activities would not be fully known before a specific contractor is appointed to complete the works who would determine their exact construction methods and programme during the detailed design stage.

15.2.18 As the Proposed Scheme is developed at detailed design any refinements to the design should be subject to environmental review to ensure that the residual effects would not be greater (or significantly different) than those reported in this ES. The findings of any such review should be subject to approval by TS and where necessary opinions should be sought from the statutory bodies.

15.2.19 A number of assumptions have been made, these include:

- Referenced baseline information and data which has been accessed from a variety of publicly available sources is correct at the time of publication;
- Information arising from the DMRB Stage 3 consultations with affected property owners/landowners/tenants has been utilised in assessing the potential impacts of the Proposed Scheme option on future business viability.

15.3 Legislative and Policy Framework

15.3.1 The national, regional and local planning policies and plans relevant to the assessment of the effects of the Proposed Scheme on community, private assets and human health are set out below:

National Policy

National Planning Framework 3 (Scottish Government, 2014a)

- 15.3.2 The National Planning Framework 3 (NPF3) 'A Successful, Sustainable Place' theme states that within Edinburgh, the South East of the City is one of four geographic areas where there *"will be a focus for growth"* and it is also *"a key location for life sciences based around the Edinburgh BioQuarter"* (Pg. 12- 13).
- 15.3.3 NPF3 also aims to facilitate new housing development and acknowledges that some cities in Scotland have greater pressure for additional housing development; *"housing requirements will continue to be at their most acute around Edinburgh, Perth and Aberdeen"* (Paragraph 2.19).

Scottish Planning Policy (Scottish Government, 2014b)

- 15.3.4 The Scottish Planning Policy (SPP) sets out national planning policies which reflect the Scottish Ministers' priorities for the operation of the planning system and for the development and use of land.
- 15.3.5 SPP states that it is important to protect against an unsustainable growth in car-based commuting and the suburbanisation of the countryside and that Plans should make provision for most new urban development to take place within, or in planned extensions to, existing settlements. Transport is addressed as a subject policy within paragraphs 269 to 291. It is recognised that the relationship between the strategic transport network (which includes trunk roads) and land use has a strong influence on sustainable economic growth. The strategic transport network is identified as being critical in supporting a level of national connectivity that facilitates sustainable economic growth. SPP also promotes business and industrial development that increases economic activity while safeguarding and enhancing the natural and built environments.
- 15.3.6 SPP promotes rural development and in terms of prime agricultural land (Class 1, 2 or 3.1) states that development on such land should not be permitted except where it is essential, including, *"as a component of the settlement strategy or necessary to meet an established need, for example for essential infrastructure, where no other suitable site is available"* (Paragraph 80).
- 15.3.7 Paragraph 218 of SPP references the Scottish Government's 'Control of Woodland Removal' Policy which includes a presumption in favour of protecting woodland. This policy states that removal should only be permitted where it would achieve significant and clearly defined additional public benefits. Where woodland is removed in association with development, developers will generally be expected to provide compensatory planting. It sets out criteria for determining the acceptability of woodland removal and on the implementation of the policy, SPP states that *"this should be taken into account when preparing development plans and determining planning applications"* (Paragraph 218).
- 15.3.8 SPP also states that Local Development Plans should allocate a range of sites for business, taking account of a range of factors including their integration with, and access to, existing transport networks and their accessibility to transport networks by walking, cycling and public transport.

A More Active Scotland (Scottish Government, 2018)

- 15.3.9 This is a strategy developed to increase physical activity and sport in Scotland in order to improve the health of the general population, the cognitive development of children and to tackle inequality.
- 15.3.10 Outcome 4, 'we improve our active infrastructure – people and places', includes reference to the availability and accessibility of sport and exercise facilities and how transport infrastructure is one of the factors that can have a significant bearing on how readily people take part in physical activity and sport.

- 15.3.11 As a result, the strategy states that environments are sought which support outdoor play, walking, cycling and other forms of active travel. Actions to boost investment in walking and cycling and putting active travel at the heart of transport planning includes a TS action making towns and cities friendlier and safer for pedestrians and cyclists, by increasing investment that supports active travel from £40 million to £80 million per year from 2018-2019.

Regional Policy

South East Scotland Strategic Development Plan (SDP) (SESplan, 2013)

- 15.3.12 SESplan sets out a spatial strategy which recognises existing development commitments and promotes a sustainable pattern of growth across the City of Edinburgh, East Lothian, Fife, Midlothian, Scottish Borders and West Lothian Council areas. The strategy is supported by a framework for delivery which includes promoting the development of strategic transport and infrastructure networks to support economic growth and to meet the needs of communities.
- 15.3.13 A key SESplan spatial strategy development principle is to have regard to the need to improve the quality of life in local communities by conserving and enhancing the natural and built environment to create more healthy and attractive places to live whilst SESplan states the “*continued economic growth of the Regional Core will continue to be supported*” (Para. 46, Pg. 20).

Proposed South East Scotland Strategic Development Plan (SDP2) (SESplan, 2016)

- 15.3.14 Aims of the SESplan's second Proposed Strategic Development Plan (SDP2) include helping create strong, sustainable and healthier communities, enabling all residents to enjoy a high quality of life; increasing the number and improve the quality of new homes being built; look after and improve Edinburgh's environment for future generations in a changing climate; and support the growth of the city's economy.
- 15.3.15 As discussed in Chapter 2 - Need for the Scheme, the Proposed SDP was rejected by the Scottish Ministers on 16 May 2019; however, the proposed plan has still been considered within this ES as a draft plan.

Local Policy

Edinburgh Local Development Plan (City of Edinburgh Council, 2016)

- 15.3.16 The CEC adopted Local Development Plan (LDP) states that “*there is a clear link between new development and impact on the transport network*” (Page 36, Paragraph 89) and an LDP transport proposal/safeguard (T13 – Sheriffhall Junction Upgrade) supports the grade separation of the existing A720 Sheriffhall Roundabout.
- 15.3.17 It is also important to note that one of the aims of the LDP is to “*help create strong, sustainable and healthier communities, enabling all residents to enjoy a high quality of life*” (Page 7).

Midlothian Local Development Plan (Midlothian Council, 2017)

- 15.3.18 The Midlothian LDP was prepared within the context of the current SESplan SDP and focuses on providing for, and managing, future change across the MLC area in line with the SESplan requirements.
- 15.3.19 Key strategic strands include ‘Sustainable Place Making’ (e.g. accommodating growth in communities, housing development, protecting amenity) and ‘Promoting Economic Growth’ (e.g. supporting business growth and employment). Shawfair Park and Shawfair Park Extension 1 (policy e27), Shawfair Park Extension 2 (policy Ec1) and Sheriffhall South (policy e32) are identified as key economic development clusters and their location in relation to, and connection with, the strategic road network (including the A720 Sheriffhall Roundabout) and the Borders Railway makes them key sites in the development strategy and represents a major opportunity for growth and employment over the LDP period.

15.3.20 The Midlothian LDP Policy ENV4 (Prime Agricultural Land) precludes development which leads to the permanent loss of prime agricultural land (or land of a lesser quality that is locally important) unless the development:

- Is necessary to meet an established need (such as essential infrastructure);
- Where there is no alternative site available; and,
- Where the need for the development outweighs the environmental or economic interests in retaining the farmland for productive use.

15.4 Consultations

15.4.1 This section provides a summary of the DMRB Stage 3 consultation responses to the Proposed Scheme in relation to issues affecting Community & Private Asset receptors which were considered during the DMRB Stage 3 Proposed Scheme Assessment.

15.4.2 Table 15-5 'Summary of Consultation Responses' below summarises these 2018/2019 DMRB Stage 3 consultation responses. For ease of reference a summary of the consultee responses received during the previous DMRB Stage 2 Scheme Assessment consultation rounds undertaken between 2015 and 2017 are also included.

15.4.3 A full summary of all the DMRB Stage 3 consultation responses is provided in Chapter 7 - Consultation and Scoping and the consultation responses are provided in full in Appendix 7.1 – Copies of Consultation Responses.

Table 15-5 Summary of Consultation Responses

Consultee	Summary of Responses
Transport Scotland	TS's DMRB Stage 3 EA consultation response includes confirmation that the Newton Farm planning application (for housing) has been submitted and the link road connection to the A68 would be formed during the build-out of the development should the application be consented (11/2018).
Forestry Commission Scotland	Forestry Commission Scotland notes that the Proposed Scheme will run through an area of native broadleaved woodland immediately adjacent to the existing A720 (east of Sheriffhall) and the A6106 South (Old Dalkeith Road). Acknowledging that this area of woodland "is neither sizeable nor has any conservation designations on it", Forestry Commission Scotland nevertheless states that its removal would "represent a negative environmental impact" which should be mitigated by compensatory planting – as a specific planning condition (12/2018).
Buccleuch "land ownership vehicles": Buccleuch Property (Sheriffhall South) Ltd; Shawfair LLP; Buccleuch Estates Ltd; and, Dalkeith Country Park.	<p>Buccleuch state that they "need to understand what the likely impact is from the resultant CPO on land required and what/when this will be quantified, both in terms of area and financial/improvement bases" (01/2019).</p> <p>In terms of land take, limit of deviation etc., Buccleuch state the need to "ensure regular dialogue and review, particularly related to where SuDS features both temporary and permanent are located. Buccleuch comment that in their view it "is still quite a basic design proposal in many ways and we haven't enough background to comment on the main carriageway designs in any detail".</p> <p>Buccleuch hold ownership of a significant portion of the land surrounding the A720 Sheriffhall Roundabout under various subsidiaries:</p> <ul style="list-style-type: none"> - "Buccleuch Property Shawfair" at Todhills; - "Buccleuch Estates" (BEL) to the east and northwest of the A7 and south of the A720; <p>Dalkeith Country Park to the south east;</p> <ul style="list-style-type: none"> - "Buccleuch Property (Sheriffhall South)" further south of the BEL ownership. Buccleuch Property is also a joint venture partner in Shawfair LLP in delivering the 4000 housing unit Shawfair development at the old Monktonhall Colliery site. <p>As a specific response on behalf of Dalkeith Country Park (which is in Buccleuch ownership), the proposed A720 Sheriffhall roundabout works are viewed as "a positive development to the roads network and in enhancing the accessibility to the Park".</p> <p>Buccleuch will view any requests for intrusive ground investigation works positively and not obstruct any reasonable requests to access Buccleuch land, should the resultant information be openly presented to them for review once completed.</p>

Consultee	Summary of Responses
Strategic Development Planning Authority for Edinburgh and South-East Scotland (SESplan)	<p>Buccleuch are keen to explore the opportunity to provide directional signage to Dalkeith Park sited on the bypass as part of the Sheriffhall Junction works, and also further at the A68 access point at the mid-point of the Estate as part of, or in advance of the works (03/2015).</p> <p>SESplan state that Sheriffhall has become a “major hot spot” on the A720 and that it is operating at significant over capacity. “This will hamper future economic potential in the region”.</p> <p>SESplan notes that there is a significant scale of development planned in northern Midlothian, East Lothian and Southern Edinburgh and that the delivery of major development sites is also planned and state that “the congestion and delay at Sheriffhall will hamper connectivity between these developments”.</p> <p>Whilst SESplan acknowledge that the design of new developments should seek to minimise additional traffic and promote modal shift, “the volume of new development in the area will impact upon the Sheriffhall junction” (03/2017)</p>

- 15.4.4 These consultations have informed the design of the Scheme as well as additional mitigation measures as discussed in Section 15.7 - Mitigation.
- 15.4.5 Interviews with landowners, property owners and tenants have also been undertaken during DMRB Stage 3 and have informed the design of new accesses.

15.5 Baseline Conditions

Establishment of Study Area Baseline

- 15.5.1 The baseline conditions for community and private assets and human health have been considered within a 500m study area around the Proposed Scheme Extents which has been refined from the 1km study area used at Stage 2. The 1km study area radius baseline conditions which were previously reported in the Sheriffhall Stage 2 Environmental Assessment (AECOM, 2017) have been reviewed and retained to provide the wider baseline conditions context.
- 15.5.2 All residential, community and business and industry receptors identified have been given a reference number and are shown on Figure 15.1 ‘Community and Private Assets - Baseline’.
- 15.5.3 A site visit was undertaken on the 12 February 2019, to review and update baseline information from the previous site visits of 22 October 2014 (Stage 1), 29 January 2017 (Stage 2) and 11 December 2018 (Stage 3). In addition, the baseline conditions were also confirmed through a review of the following:
- The Edinburgh and South East Scotland Strategic Development Plan (SESplan) (2013);
 - The SDP 2 Proposed Strategic Development Plan (October 2016);
 - MLC Local Development Plan (Adopted November 2017);
 - CEC Council Local Development Plan (Adopted November 2016);
 - AECOM's GIS Database;
 - Desk-top documentation review and web-based information sources (relevant references/links provided);
 - Land Capability for Agriculture Map - Edinburgh Sheet 66 (The Macaulay Institute for Soil Research (MLURI); and,
 - Ordnance Survey (OS) Explorer Maps 345 and 350.

Residential Properties

- 15.5.4 Within the 500m study area radius of the Proposed Scheme there are 33 residential property receptors, these are all shown in Figure 15.1 'Community and Private Assets - Baseline' which includes a reference number for each property:
- 5 no. Summerside residences (Ref No.1);
 - 6 no. Campend residences (Ref No 2);
 - 2 no. Old Sheriffhall Farmhouse and Sheriffhall House (Ref No. 3);
 - 6 no. Melville Cottages (Nos. 1 to 6 Gilmerton Road) (Ref No. 4);
 - 1 no. Burndale (Ref No. 5);
 - 4 no. Nos. 612 to 618 Gilmerton Road (Ref No. 6);
 - 4 no. Sheriffhall Mains and Cottages (Ref No.7); and,
 - 2 no. Lugton Braes Residences (Ref No.8).
- 15.5.5 Within the wider 1km study area radius, there are a significant number of residential properties - with the majority of these located to the south of the Sheriffhall Roundabout e.g. in Eskbank, and the north-west side of Dalkeith. To the north of the Sheriffhall Roundabout is the small village of Newton (<500 population) and the settlement of Millerhill (<100 population).
- 15.5.6 Since the publication of the Stage 2 Environmental Assessment (AECOM, 2017), a number of new build residential properties have been constructed, and continue to be constructed, within the wider 1km radius of the Sheriffhall Roundabout e.g. north and south of the west end of Old Craighall Road at Millerhill (part of the Shawfair housing allocation (policy h43) in the 2017 LDP), and along Newton Church Road (part of the South Danderhall housing allocation (policy h45) in the 2017 LDP).
- 15.5.7 It is clear from the review of planning policy and local development plans that the resident population within the wider 1km study area will increase considerably in future years and that the A720 Sheriffhall Roundabout will be a key transport access to/from these locations. For the purposes of assessment, the adopted MLC LDP (2017) and Housing Land Audit (Midlothian, 2018) have been used for the most up to date information on planning allocations in the local area.
- 15.5.8 Table 15-6 'Designated Housing Development Sites within 1km' below shows the housing development proposals (for sites of over 50 houses) within the 1km study area (all of which are in the MLC Local Authority area). A table of all proposed housing developments that may be impacted by the development, in the wider area 1km study area has been included in Appendix 15.1 - Planning Proposals and Applications' to provide context.

Table 15-6 Designated Housing Development Sites within 1km

Name	Site Description	Status
Hs1 – Newton Farm	Expected housing contribution up to 2024: 225 with an overall capacity of 480 homes. Development will need to take account of the impact of its location next to the City Bypass, on the setting of Newton House designed landscape, and on the scheduled monuments in the vicinity. A link road connection from the development to the A68 would be formed during the build-out of the development.	Awaiting planning application decision.
Hs2 & Hs3 – Larkfield North West & South West, Eskbank	Expected housing contribution up to 2024: 95 homes which is the overall site housing capacity.	Awaiting planning application decision.

Name	Site Description	Status
H43 – Shawfair	Shawfair capacity estimated at 3,500 homes and to be delivered in line with Shawfair Masterplan/Shawfair Design Guide/Addenda as well as the LDP site h45 (South Danderhall).	Under development.
H45 – South Danderhall	South Danderhall capacity estimated at 300 homes and to be delivered in line with Shawfair Masterplan/Shawfair Design Guide/Addenda as well as the LDP site h43.	Under development.

Source: *Local Development Plan 2017 (Midlothian Council, 2017)*, *Housing Land Audit (Midlothian Council, 2018)* & *Planning Application Review 22/11/2019*.

15.5.9 The impacts of designated development sites on receptors in combination with the Proposed Scheme have been further assessed in Chapter 19 – Cumulative Assessment.

Community Facilities

15.5.10 There are a number of community facilities within the study area of the Proposed Scheme. These are shown on Figure 15.1 'Community and Private Assets - Baseline' which includes a reference number for each of the receptors listed below;

- Within the 500m radius:
 - Dalkeith Country Park (Ref No. 9).
 - Sheriffhall Park and Ride (Ref No. 10); and
 - Spire Private Hospital, Shawfair Park (Ref No. 11);
- Within the wider 0.5km to 1km study area:
 - Danderhall Leisure Centre and Library (Ref No. 12);
 - Danderhall Police Station (Ref No. 13);
 - Danderhall Medical Practice (Ref No. 14);
 - Calvary Chapel of Edinburgh (Ref No. 15);
 - Newton Parish Church & Cemetery (Ref No. 16); and
 - King's Acre Golf Course (Ref No. 17).

15.5.11 Within the 500m study area radius there are no areas of outdoor recreational/leisure amenity (e.g. public parks and gardens, playing fields, play areas, school grounds).

15.5.12 The LDP (2017) also contains significant new community facility proposals as part of the proposed Shawfair (H43) settlement e.g. recreation, sport and education facility provision as well as the provision of open space, community woodland, green network areas and a range of enhanced landscaping treatments.

15.5.13 It should also be noted that the Royal Infirmary of Edinburgh at Little France is located about 4km on the A7 to the north, and although beyond the study area, it is a regionally important community facility and has been considered in this assessment.

Business and Industry

15.5.14 There are a number of Business and Industry receptors within the 1km study area. These are shown on Figure 15.1 'Community and Private Assets - Baseline' which includes a reference number for each of the receptors listed below:

- With the 1 km radius:

- Innkeeper's Lodge Dalkeith (Ref No. 18)
- Express Autocare Car Wash (Ref No. 19);
- The Old Colliery Pub Restaurant (Ref No. 20);
- Chapter One Childcare Nursery (Ref No. 21);
- Former Lowes Fruit Farm Site, Orocco Joinery (Workshop & Office), Green Deep Clean Home Cleaning Services and the Lamproom Café (Campend Businesses) (all Ref No. 22);
- Shawfair Business Park (tenants at December 2018) – Scottish Qualifications Authority (SQA), Edinburgh Children's Hospital Charity, Mears, PHS Ortholink Scotland Ltd (all Ref No. 23);
- Todhills Business Park and Drum Farm Antiques (Ref No. 24);
- Waterworks Autospa Car Wash (Ref No. 25);
- The Beijing Banquet Chinese Restaurant (Ref No. 26);
- Danderhall Co-operative Supermarket (Ref No. 27);
- Edinburgh Combat Challenge (Ref No. 28).
- The Elginhaugh Farm Pub Restaurant (Ref No. 29);
- Dobbies Garden Centre and Butterfly World (Ref No. 30);
- The Melville Inn Pub Restaurant (Ref No. 31);
- Melville Castle Hotel (Ref No. 32);
- The Royal Bank of Scotland Data Centre (Ref No. 33);
- The Premier Inn Edinburgh (Dalkeith) (Ref No. 34);
- Melville Golf Centre (Ref No. 35); and,
- Esk Valley Table Table Pub Restaurant (Ref No. 36).

15.5.15 In addition to these receptors, the review of planning policy and development plans has identified a number of designated economic development areas located within the wider 1km study area (all of which are located in MLC Local Authority area). These are detailed in Table 15-7 'Designated Economic Development Sites within 1km' below summarises all the proposed designated development sites that may be impacted by the Proposed Scheme. A table of all designated development sites within the wider area has been included in Appendix 15.1 - Planning Proposals and Applications to provide context.

Table 15-7 Designated Economic Development Sites within 1km

Name	Site Description	Status
E32 – Sheriffhall South	Site Area: 18.37 hectares Suitable for business (Class 4) use only and will remain part of the Green Belt to avoid pressure from alternative land uses until all three parts of the site are developed. Site currently includes a restaurant/public house.	Planning application for petrol filling station awaiting planning application decision.
E27 – Shawfair Park	Site Area: 16.61 hectares Site includes Sheriffhall Park and Ride, and the land for its extension. Part of site is developed for business use (both bespoke and speculative office space), and private hospital. Additionally, a restaurant/pub has been developed, as ancillary support use to the employment allocation. Site is allocated for Business (Class 4) use plus ancillary support activities.	No current planning applications.

Name	Site Description	Status
Ec1 – Shawfair Park Extension 2	Site Area: 17.92 hectares The site should be masterplanned and access options reviewed. Access through Shawfair Park Extension 1 is the preferred option, but limited access from alternative points may be possible subject to Transport Appraisal. The Midlothian LDP has identified this site for business (Class 4) and industry (Class 5) uses.	Allocated.

Source: Local Development Plan 2017 (Midlothian Council, 2017), Employment Land Audit (Midlothian Council, 2018) & Planning Application Review 22/11/2019

Agriculture

- 15.5.16 The Macaulay Land Use Research Institute (MLURI) Land Capability for Agriculture (LCA) classification is the official agricultural classification system widely used in Scotland as a basis of land evaluation. Prime agricultural land is classified as Class 1, 2 and 3.1. Land in these classes is capable of being used to produce a wide range of crops.
- 15.5.17 A significant area of the land located within the total 1km study area radius around the Proposed Scheme is agricultural and consists of a mixture of arable and grazing land. The Macaulay Institute mapping (Sheet 66 – Edinburgh) indicates that this land is a combination of Class 1 (Land Capable of Producing A Very Wide Range of Crops); Class 2 (Land Capable of Producing a Wide Range of Crops); and Class 3.1 (Land Capable of Producing a Moderate Range of Crops). Only a small area of agricultural land within the within 1km study area radius around the Proposed Scheme is not of prime agricultural land classification – around the River Esk (Class 5.2) to the east of Sheriffhall.
- 15.5.18 More information regarding agricultural land quality and soils is provided in Chapter 16 – Geology and Soils and Figure 16.6 ‘Land Capability for Agriculture’.
- 15.5.19 The areas of agricultural land take (m²) required for the Proposed Scheme are stated in Table 15-9 ‘Land Take Impacts Assessment’.

Woodland

- 15.5.20 The Scottish Forestry’s Map Viewer (Scottish Forestry, N.D) shows no areas of Forestry Commission owned woodland located within the 1km study area radius. However, the site visits and DMRB Stage 3 consultation correspondence has highlighted three areas of woodland in proximity to the Proposed Scheme alignment:
- An area of woodland/scrubland located between the A720 Edinburgh City Bypass (‘the A720’) (east of Sheriffhall) and the A6106 South (Old Dalkeith Road), north of the Old Sheriffhall Farm House;
 - An area of woodland (Lugton Bogs) located around the Dean Burn immediately north of the A772 Gilmerton Road between the A720 Gilmerton Junction and the A7 Gilmerton Road Roundabout – and which falls within the Edinburgh Green Belt area. Part of this woodland area is also used by Edinburgh Combat Challenge as a laser tag gaming location; and,
 - An area of woodland (within Dalkeith Country Park) located to the east of the A6106 South and south of the A720.
- 15.5.21 Chapter 9 – Nature Conservation provides further details on the woodland within the study area and assesses the effect of its loss.

Network Rail Land

- 15.5.22 The Borders Railway line provides passenger services between Edinburgh (Waverley Station) and Tweedbank in the Scottish Borders. The railway line alignment (on Network Rail land) between Millerhill and Eskbank passes within

300 metres to the east of the existing Sheriffhall Roundabout. The Proposed Scheme would pass over the A720 Borders Railway underbridge – widening the existing A720 to the east of the existing Sheriffhall Roundabout.

- 15.5.23 A new station (Shawfair) with vehicle parking for approximately 60 cars is located north of Newton Village; the station is located just beyond the 1km study area.

Population and Human Health

- 15.5.24 The 2011 Census data shows that the 'Shawfair' and 'Gilmerton South & the Murrays' 2011 Intermediate Zone Boundaries cover the area within which the Proposed Scheme sits and represent the population within 500 m of the study area. The 'Gilmerton South & the Murrays' Intermediate Zone is primarily rural agricultural land however it does contain the southern section of Gilmerton Village. The 'Shawfair' Intermediate Zone while also primarily rural agricultural land includes the villages of Shawfair, Newton Farm, Millerhill and Danderhall.
- 15.5.25 Table 15-8 below shows the Scottish Public Health Observatory's (ScotPHO) key health and wellbeing indicators for the Study Area (the two Intermediate Zones identified above) and Scotland.

Table 15-8 Key Health and Wellbeing Indicators for the Study Area and Scotland

Indicator	Study Area		Scotland		Difference
Population					
Population	6,910		5,424,800		
Female life expectancy (average age)	81.16		81.14		0.02
Male life expectancy (average age)	78.47		77.09		1.38
Positive Indicators					
Babies exclusively breastfed at 6-8 weeks (% of 6 to 8-week-old babies)	32	(37%)	14,414	(29.69%)	7.31%
Bowel screening uptake	671.33	(9.72%)	162,947	(3.00%)	6.71%
Child dental health in primary 1 (% of P1 Students)	52	(67.47%)	36,816	(70.39%)	-2.92%
Child dental health in primary 7 (% of P7 Students)	41	(74.49%)	35,515	(71.15%)	3.34%
Child healthy weight in primary 1 (% of P1 Students)	56	(74.68%)	40,179	(76.48%)	-1.80%
Healthy birth weight	62.33	(81.58%)	40,114.33	(83.52%)	-1.94%
Immunisation uptake at 24 months - 5 in 1 (% of 24-month-old babies)	85.33	(100%)	55,473.67	(97.56%)	2.44%
Immunisation uptake at 24 months - MMR (% of 24-month-old babies)	81.33	(94.96%)	53,905.33	(94.58%)	0.38%
Negative Indicators					
Patients (65+) with multiple emergency hospitalisations	51	(0.74%)	52,290	(0.96%)	-0.23%
Patients hospitalised with asthma	6.67	(0.10%)	5,050.67	(0.09%)	0.01%
Patients hospitalised with COPD	16	(0.23%)	12,776.33	(0.24%)	-0.01%
Patients hospitalised with coronary heart disease	22.34	(0.32%)	19,476	(0.36%)	-0.04%
Patients with emergency hospitalisations	407	(5.89%)	401,037	(7.39%)	-1.50%
People living in 15% most 'access deprived' areas	1,017	(14.72%)	813,698	(15.00%)	-0.28%
Population income deprived	570	(8.25%)	659,920	(12.16%)	-3.92%
Population within 500 metres of a derelict site	2,394	(34.65%)	1,608,284	(29.65%)	5.00%

Indicator	Study Area		Scotland		Difference
Road traffic accident casualties	3.33	(0.05%)	3,169.33	(0.06%)	-0.01%
Single adult dwellings	938	(13.57%)	972,270	(17.92%)	-4.35%
Working age population employment deprived	305	(4.41%)	369,660	(6.81%)	-2.40%
Children in low income families	135	(1.95%)	165,875	(3.06%)	-1.10%
Crime rate	155.29	(2.25%)	165,334.20	(3.05%)	-0.80%
Deaths all ages	56.67	(0.82%)	57,118	(1.05%)	-0.23%
Early deaths from cancer (<75)	8	(0.12%)	7,734	(0.14%)	-0.03%
Early deaths from coronary heart disease (<75)	1.66	(0.02%)	2,525	(0.05%)	-0.02%
Alcohol-related hospital stays	12	(0.17%)	35,917	(0.66%)	-0.49%
All-cause mortality among the 15 to 44-year-olds	1.67	(0.02%)	2,047.33	(0.04%)	-0.01%

Source: The Scottish Public Health Observatory (ScotPHO) (2019) Online Profiles Tool. Accessed: 5/07/2019

15.5.26 Across the board the general health of the population within the Study Area is higher than the national average. It should be noted that 62% of the population living within the Shawfair Intermediate Zone population live within 500 metres of a derelict site (See Appendix 15.2 – Human Health Indicator Data). This statistic is expected to reduce significantly due to the high levels of development being carried out in the area.

15.6 Potential Impacts

Assessment Introduction

- 15.6.1 The potential impacts of the Proposed Scheme on community and private assets, and human health are assessed prior to mitigation. Residual Impacts are identified taking account of the mitigation measures identified in Section 15.7- Mitigation.
- 15.6.2 As noted in DMRB LA104 only those impacts assessed as ‘moderate’ greater are considered potentially significant in the context of the EIA Regulations.
- 15.6.3 The Proposed Scheme would not require the demolition of any built properties (residential, business, industry or community use) or result in temporary or permanent loss of community facilities or land (e.g. local parks and playing fields and public open spaces) during either the construction or operational phases. The Proposed Scheme will also not affect the viability of any businesses within the study area. Therefore, these elements will not be future addressed as part of the assessment.

Land Take Impacts

- 15.6.4 The Proposed Scheme will necessitate land take from a number of receptors. Therefore, for the purposes of this assessment all land identified for the construction of the Proposed Scheme has been assessed as there will no differences identified between temporary construction land take and permanent land take. To facilitate construction enough land has been identified to allow machinery to access the site and provide areas for construction compounds etc. Table 15-9 ‘Land take Impacts Assessment’ below assesses the impacts of the required land take in accordance with the methodology laid out in Section 15.2 – Approach and Methodology. No demolition of property will be required to construct the Proposed Scheme and no planning applications have been submitted at the time of writing for the areas of land designated for future development.
- 15.6.5 A total of approximately 27ha of land is required for the construction of the Proposed Scheme.

15.6.6 Figure 15.1 'Community and Private Assets - Baseline' shows the designated development land which will be impacted by the Proposed Scheme.

15.6.7 Figure 15.2 'Land Ownership' shows the areas of required land take in relation to the landowners named below. For the purposes of this assessment the different parcels of land have been identified by landowner and then represented with letters for ease of assessment. These letter annotations correspond directly with those in Figure 15. 2. In some cases, the same landowner owns more than one parcel of land under different titles where this is the case the parcels of land have been assessed as one entity.

Table 15-9 Land Take Impacts Assessment

Receptor	Total Land (m ²)	Approximate Land Take (m ²)	Loss of Land (%)	Sensitivity of Receptor	Magnitude of Impact	Significance of Effect
Private Property Land Take						
Sheriffhall House (Q)	2011.75	0.18	0.01	Medium	Minor	Slight
Summerside (I)	1031.92	0	0	Medium	No Change	No Change
Loss of Community Land						
Network Rail Land (F & G)	43812.65	2280.61	5	Medium	Minor	Slight
Existing Road – Unknown Owner (U)	283105.87	121877.59	43	Medium	Major	Moderate
Council Owned Scrubland/ Woodland (M)	4350.60	4350.60	100	Low	Major	Slight
Loss of Designated Development Land						
Shawfair Park Extension 2 Site (Ec1) Business & Industry Land (Landowner P)	179200	27802.92	16	High	Major	Very Large
Sheriffhall South (e32) Business & Industry Land (Landowner A)	183700	1985.15	1.1	High	Minor	Moderate
Loss of Agricultural Land¹						
Landholder A	133832.93	1985.15	1	High	Minor	Moderate
Landholder B & O	20445.52	9127.79	45	High	Major	Very Large
Landholder C	886772.42	18112.33	2	High	Minor	Moderate
Landholder D & E	277739.40	12554.73	5	Medium	Moderate	Moderate
Landholder H & K	590428.85	38644.66	7	Medium	Moderate	Moderate
Landowner J	16982.20	16982.19	100	High	Major	Very Large
Landowner L & R	67753.07	18628.75	27	High	Major	Very Large
Landowner P	292542.62	23452.32	8	High	Moderate	Large

Impact on Accesses

15.6.8 This section assesses the impact on residential, community and agricultural receptor accesses where current access arrangements to/from the property will be altered as a result of the Proposed Scheme. All properties are regarded as high sensitivity receptors. Figure 15.2 'Land Ownership' shows the existing accesses that will be affected as part of the Proposed Scheme, as discussed below.

¹ Some agricultural land is currently used for arable farming whereas other land particularly in the south of the scheme contains trees and scrub but has been assessed as prime agricultural land.

Access to Residential Properties

15.6.9 The Proposed Scheme would create disruption to affected A7 North and A6106 South residential properties at construction and operation. The temporary and permanent access disruption is assessed as a negligible impact with the change to the vehicle access journey distance to/from the residences below (<0.1km) resulting in a **slight adverse** effect:

- A7 North 3 (No.) shared Summerside residences accesses; and,
- A6106 South 1 (No.) shared Old Sheriffhall Farmhouse and Sheriffhall House access.

Access to Community Facilities

15.6.10 There will be no alterations to community facility accesses as part of the Proposed Scheme. However, users of the Spire Shawfair Park Private Hospital and the Royal Infirmary Edinburgh (RIE), including RIE ambulances (who under the baseline conditions may access the hospital from the surrounding areas via Sheriffhall) may be disrupted during construction. Access to both facilities from the A720 is via the A7 North. There will be no alteration to their access from the A7 North therefore the significance of effect will be **neutral**.

15.6.11 The human health implications of this are further discussed in Paragraph 15.6.16.

Agricultural Field Accesses

15.6.12 The Proposed Scheme will have temporary and permanent impacts upon baseline agricultural field accesses. As in Table 15-9 above, Landowner P and J's land is of high sensitivity and Landowner H&K's land is of medium sensitivity. The impacted accesses are:

- 2 (No.) accesses to/from Landowner P's land (Field P) from the A7 North – The southernmost access will be removed as part of the Proposed Scheme with access to the field being through the remaining access. Therefore, the effect on these accesses is assessed as **slight adverse**.
- 2 (No.) accesses to/from Landowner P's land (Field P) from the A6106 North (Millerhill Road) – Two field accesses along the existing A6106 North will be moved to the proposed A6106 North as part of the Proposed Scheme leading to a negligible impact on the accesses. Therefore, the effect on these accesses is assessed as **slight adverse**.
- 1 (No.) access to/from Landowner H & K's land (Field K) from A6106 North – One field access along the existing A6106 North will be moved to the proposed A6106 North as part of the Proposed Scheme leading to a negligible impact on the access. Therefore, the effect on these accesses is assessed as **slight adverse**.
- 1 (No.) access to/from Landowner H & K's land (Field K) from A6106 South – One field access will be moved from the western side of the A6106 South to the eastern side of the A7 South leading to a moderate impact on the access. Therefore, the effect on these accesses is assessed as **large adverse**.
- 1 (No.) access to/from Landowner J's land (Field J) from A7 South – This field and associated access will be lost as part of the Proposed Scheme leading to a major impact on the access. Therefore, the effect on these accesses is assessed as **large adverse**.

Agricultural Field Drainage

15.6.13 As the works required to accommodate the Proposed Scheme would be primarily online, changes to the existing drainage network would largely be minimal. Nevertheless, as a consequence of existing topography, cross-fall of the site, and new road construction to the north of Sheriffhall Roundabout, a number of field drains would be intercepted. This includes drainage from the following:

- Landowner O's land;

- Landowner D & E's land; and
- Landowner J's land.

- 15.6.14 The design for the Proposed Scheme has identified a range of drainage networks which need to be accommodated to ensure continuity of discharge to the Dean Burn. There will be very little change in terms of the large sections of field that currently drain beneath the A720 other than pre-earthworks drainage being installed to convey land runoff/intercept existing land drainage. This will take the form of filter drains and ditches. These will either tie in to the existing filter drain system and/or outfall to the Dean Burn.
- 15.6.15 The impact on these agricultural field drainages are therefore assessed as minor, resulting in a **slight adverse** effect on Landowner O and Landowner J's land and a **slight adverse** effect on Landowner D & E's land.

Impact on Human Health

Access to Healthcare Services and Other Social Infrastructure

- 15.6.16 Construction and operation of the Proposed Scheme will not directly impact access to healthcare services or other social infrastructure. As discussed in Paragraph 15.6.10, users of the RIE (including RIE ambulances) and Spire Shawfair Park accessing the hospitals from the surrounding areas via the A7 North and Sheriffhall may be disrupted during construction. This is expected to have an **adverse** effect on human health during construction.

Access to Open Space and Nature

- 15.6.17 Construction and operation of the Proposed Scheme will not impact access to open space and will therefore have a **neutral** effect.

Air Quality, Noise and Neighbourhood Amenity

- 15.6.18 The Proposed Scheme has been designed to minimise impacts on air quality and noise and increase the neighbourhood amenity. There is however the potential for residents and non-motorised users (NMFU) in close proximity to the Proposed Scheme construction activities to be affected by worsening air quality, noise and amenity.
- 15.6.19 Chapter 12 – Noise and Vibration indicates that during construction a large residual adverse effect has been identified for the properties in the area.
- 15.6.20 During operation, minor increases in traffic noise levels are concentrated along the A7 North and the A6106 North, north of the junction. Increases in traffic flows and speeds are anticipated on these roads with the Proposed Scheme in operation. Decreases in traffic noise levels are anticipated at the A772 Gilmerton Road junction to the west of the Proposed Scheme due to a slight reduction in traffic on the A772. This will result in a slight adverse to slight beneficial effect during operation.
- 15.6.21 To ensure that noise and vibration impacts are minimised a Construction Environmental Management Plan (CEMP) for the Proposed Scheme would include a requirement for a Noise and Vibration Management Plan to be produced by the contractor. The Noise and Vibration Management Plan would include a range of industry standard best practice construction phase noise and vibration mitigation measures required during all works undertaken where there is a potential for adverse effects on sensitive receptors. To reduce operational traffic noise impacts low noise surfacing will be used on the A720 mainline and slip roads within the Proposed Scheme Extents.
- 15.6.22 Chapter 13 – Air Quality concludes that the Proposed Scheme will have a negligible and non-significant effect on the air quality within the Study Area during construction and operation. Without mitigation, there is the risk that impacts during construction could have a significant effect. A number of mitigation measures should be adopted to reduce the

production and/or dispersal of dust to lessen the potential for nuisance and limit the human health impacts. Ideally dust should be controlled at the source as once airborne it is more difficult to suppress.

- 15.6.23 Chapter 14 –People and Communities - Effects on All Travellers states that the general impact of the Proposed Scheme on the amenity of NMU routes will be large adverse during construction. During operation, the Proposed Scheme will have a large beneficial effect on the amenity of NMU routes through the Sheriffhall Roundabout, a moderate beneficial effect on NMU routes on the A7 South and the A6106 North and a slight beneficial effect on the amenity of NMU routes on the A6106 South.
- 15.6.24 Overall during operation, the Proposed Scheme on balance will have a **beneficial** effect on the air quality, noise and neighbourhood amenity of the Study Area. However, there will be an **adverse** effect during construction of the Proposed Scheme.

Accessibility and Active Travel

- 15.6.25 Chapter 14 –People and Communities - Effects on All Travellers assesses the impact of the Proposed Scheme on NMU and public transport users' journey times and access.
- 15.6.26 During construction, paths and accesses will be maintained through the junction; however, there may be diversions of up to 500 m therefore this has been assessed as the worst-case scenario. Increased journey lengths during construction on core paths CEC-4 and 4-34 and other off-road paths will result in an adverse effect on NMUs. Increased journey lengths on on-road paths will also result in an adverse effect during construction. To mitigate this impact best practice measures will be included in the CEMP including maintaining NMU access through Sheriffhall, at all times, during the construction programme where possible to avoid temporary NMU route severance and reduce disruption to NMUs. During operation, the Proposed Scheme will have a neutral impact on the journey lengths of NMUs.
- 15.6.27 Two bus stops within the Study Area are expected to be impacted by the Proposed Scheme; however, these will be replaced by alternative temporary bus stops during construction before being restored during operation resulting in a neutral impact on public transport users. Overall this will result in an overall **adverse** effect during construction, on accessibility and active travel as a determinant of human health.
- 15.6.28 During operation, the provision of segregated NMU routes and subways beneath the road reducing NMUs interaction with road users would provide safer opportunities for walking and cycling within the study area. The additional routes also provide additional connections along the A6106 and A7 connecting to planned (A7 Urbanisation Scheme) and existing NMU routes in the local area. Therefore, with the provision of new segregated routes and subways, the influence of the Proposed Scheme on accessibility and active travel as a determinant of human health during operation is assessed to be **beneficial**.

Access to Work and Training

- 15.6.29 No direct impacts on employment are expected as a result of construction or operation of the Proposed Scheme.

Social Cohesion and Lifetime Neighbourhoods

- 15.6.30 During construction, there may be temporary severance issues due to the disruption of existing road usage. The A720 and the existing Sheriffhall Roundabout currently act as a barrier to all users travelling on the A6106 or the A7. Therefore, due to the existing conditions at the junction the effect on social cohesion during construction is assessed to be **neutral**.

- 15.6.31 During operation, the Proposed Scheme will reduce community severance along A720, A7 and the A6106, with free-flowing traffic through the junction reducing congestion and journey times. The new segregated NMU routes through the junction would also reduce existing severance between communities to the north and the south of the junction.
- 15.6.32 Whilst levels of social interaction can be influenced by a number of other factors, including the availability and quality of community facilities, open and play space, the influence of the Proposed Scheme on social cohesion as a determinant of human health during operation and construction is assessed to be **beneficial**.

Cumulative Impacts

- 15.6.33 The following landowners will be affected by cumulative impacts prior to mitigation:

Landowner	Cumulative Impacts
Landowner B & O	<ul style="list-style-type: none"> • Very large impact due to agricultural (Class 2) land take; and, • Slight impact due to the permanent alteration of the field drainage.
Landowner D & E	<ul style="list-style-type: none"> • Moderate impact due to agricultural (Class 2) land take; and, • Slight impact due to the permanent alteration of the field drainage.
Landowner H & K	<ul style="list-style-type: none"> • Moderate impact due to agricultural (Class 2) land take; • Slight impact due to permanent alteration of the field access on the A6106 North; and, • Large impact due to the permanent alteration of the field access on the A6106 South.
Landowner J	<ul style="list-style-type: none"> • Very large impact due to agricultural (Class 2) land take; • Large impact due to permanent alteration of the field access; and, • Slight impact due to the permanent alteration of the field drainage.
Landowner P	<ul style="list-style-type: none"> • Large impact due to agricultural (Class 2) land take; • Slight impact due to permanent alteration of the field access on the A7 North; and, • Slight impact due to the permanent alteration of the field access on the A6106 North.

- 15.6.34 It should be noted that all of Landowner J's land will be purchased under a CPO as part of the Proposed Scheme land take.
- 15.6.35 Due to the local scale of these impacts these cumulative impacts are assessed as having a slight adverse effect.
- 15.6.36 Chapter 19 - Cumulative Assessment assesses the potential for cumulative impacts resulting from the combination of impacts which have been identified as part of this ES which are likely to result in new or different likely significant effects, or an effect of greater significance than any one of the impacts on their own. It also considers impacts which in combination within impacts associated with other proposed development, are likely to result in an effect of greater significance, or a new or different likely significant effect, that the Proposed Scheme in isolation.

15.7 Mitigation

- 15.7.1 Mitigation measures for the Proposed Scheme in relation to impacts on community and private assets, and human health are detailed in Table 15-10 'Summary of Community and Private Assets Mitigation Measures' below, and in Chapter 20 – Schedule of Environmental Commitments, and consider best practice, legislation, guidance and professional experience. Where the Proposed Scheme results in the loss of land, it is assumed landowners will be compensated financially for the loss in accordance with the District Valuers assessment.
- 15.7.2 The Proposed Scheme includes measures to provide revised access arrangements and tie-ins to the road network where required. These have been discussed with affected residents/landowners/tenants as part of the consultation process, and their inclusion in the design is considered to be embedded mitigation.

Table 15-10 Summary of Community, Private Assets & Human Health Mitigation Measures

Item No.	Location/ Approximate Chainage	Timing of Measure	Mitigation Measure	Mitigation Purpose/ Objective	Specific Consultation or Approval Required	Potential Monitoring Requirements
CPA-1	Throughout the Proposed Scheme	Pre-Construction	Secure agreement for temporary and permanent land take of agricultural, woodland, Allocated Development and Network Rail land assets to allow the Proposed Scheme construction and operation. Undertake pre-construction drainage surveys where necessary to reduce the likelihood of damage or disruption.	To secure (via affected landowner/tenant consultations) land take agreements necessary to allow the Proposed Scheme construction and operation.	Pre-Construction & Construction consultations with all affected landowners/tenants. Where necessary provide appropriate financial compensation –and compensatory planting in the case of affected woodland area.	Contractor recording and reporting of the affected landowner/tenant consultations – including agreed compensation events. Approval(s) as required from Transport Scotland (TS).
CPA-2	Throughout Proposed Scheme	Pre-Construction & Construction	Access to/from residential, business, agricultural, and community assets will be maintained throughout the construction period by means of agreed construction methods (including temporary access diversions) where necessary. Temporary access changes, timings and their estimated duration will be discussed with affected landowners/tenants' pre-construction and confirmed in advance before they are put in place. Details should be proposed within the contractor's Construction Environmental Management Plan (CEMP) and Traffic Management Plan	To maintain access to/from residential, business, agricultural, and community assets during the Proposed Scheme construction period.	Pre-Construction & Construction consultations with all affected landowners/tenants.	Contractor recording and reporting of the affected landowner/tenant consultations (including to TS).
CPA-3	The Royal Infirmary Edinburgh (RIE) and Spire Shawfair Park Hospital	Pre-Construction & Construction	Consultations to be undertaken with the RIE and Spire Shawfair Park to inform them of the Proposed Scheme construction programming and to allow both hospitals to plan alternative, advisory routes for staff (including ambulance drivers) and patients if necessary. Details should be proposed within the contractor's CEMP and Traffic Management Plan	To minimise potential journey disruption (including ambulances) for those to whom the Sheriffhall Roundabout and the A7 North provide their most convenient route access option.	Pre-Construction and Construction consultations to be undertaken with the Spire Shawfair Park and RIE.	Contractor recording and reporting of these consultations (including to TS).
CPA-4	Throughout the Proposed Scheme	Pre-Construction	Drainage surveys will be undertaken to reduce the likelihood of disturbance to field and forestry drainage systems during construction.	To minimise potential impacts on field drainages.	Pre-Construction consultations with all affected landowners/tenants.	Contractor recording and reporting of the affected landowner/tenant consultations

15.8 Residual Effects

15.8.1 The following table, Table 15-11 'Potential Community, Private Assets and Human Health Construction and Operation Impacts and Residual Effects' provides a summary of the pre-mitigation construction and operation impacts, mitigation measures and residual effects that have been described within this chapter.

Table 15-11 Potential Community, Private Assets and Human Health Construction and Operation Impacts and Residual Effects

	Predicted Impacts	Sensitivity of the Receptor	Magnitude of Impact	Significance of Effect	Mitigation Measures	Residual Effects (following the implementation of mitigation measures)
Land Take – Private Property						
Construction & Operation	Residential land take at Sheriffhall House (Q) will be required to facilitate construction and accommodate the Proposed Scheme.	Medium	Minor	Slight Adverse	Pre-construction consultations to be carried out with affected landowners in order to agree land take requirements, and where necessary, provide appropriate compensation.	Slight Adverse
Land Take – Community Land						
Construction & Operation	Land take of Network Rail land (F & G) to accommodate the extension of the existing A720 Borders Railway Underbridge.	Medium	Minor	Slight Adverse	Pre-construction consultation with the landowner (Network Rail Infrastructure Ltd) to agree temporary access arrangements and land take requirements.	Neutral
	Land take of existing road (unknown owner - U) to accommodate the Proposed Scheme	Medium	Major	Moderate Adverse	None required as the Proposed Scheme will improve the existing road infrastructure.	Neutral
	Land take of Midlothian Council (MLC) owned woodland/scrubland (M) will be required to facilitate construction and to accommodate the Proposed Scheme.	Low	Major	Slight Adverse	Pre-construction consultations to be carried out with affected landowners in order to agree land take requirements, and where necessary, provide appropriate compensation. Compensatory planting will be undertaken as discussed in Chapter 9 – Nature Conservation.	Neutral
Land Take – Designated Development Land						
Construction & Operation	Land take will be required from Allocated Development Land at Shawfair Park Extension 2 Site (Ec1) to facilitate construction and to accommodate the Proposed Scheme.	High	Major	Very Large Adverse	Pre-construction consultations to be carried out with affected landowners in order to agree land take requirements, and	Large Adverse

	Predicted Impacts	Sensitivity of the Receptor	Magnitude of Impact	Significance of Effect	Mitigation Measures	Residual Effects (following the implementation of mitigation measures)
	Land take will be required from Allocated Development Land at Sheriffhall South (e32) to facilitate construction and to accommodate the Proposed Scheme.	High	Minor	Moderate Adverse	where necessary, provide appropriate compensation.	Slight Adverse
Land Take – Agricultural Land Take						
Construction & Operation	Agricultural (Class 2) land take from the following landowners will be required to facilitate construction and to accommodate the Proposed Scheme:				Pre-construction consultations to be carried out with affected landowners in order to agree land take requirements, and where necessary, provide appropriate compensation.	
	• Landowner A	High	Minor	Moderate Adverse		Slight Adverse
	• Landowner B & O	High	Major	Very Large Adverse		Large Adverse
	• Landowner C	High	Minor	Moderate Adverse		Slight Adverse
	• Landowner D & E	Medium	Moderate	Moderate Adverse		Slight Adverse
	• Landowner H & K	Medium	Moderate	Moderate Adverse		Slight Adverse
	• Landowner J	High	Major	Very Large Adverse		Large Adverse
	• Landowner L & R	High	Major	Very Large Adverse		Large Adverse
	• Landowner P	High	Moderate	Large Adverse		Moderate Adverse
Residential Accesses						
Construction & Operation	There will be permanent alterations (<0.1 km) to the following residential accesses:	High	Negligible	Slight Adverse	Pre-construction consultations to be carried out with affected landowners in order to agree new access location and requirements.	Slight Adverse
	• 3 No. shared accesses to the residences at Summerside from the A7 North					
	• 1 No. shared access to Old Sheriffhall Farmhouse and Sheriffhall House from the A6106 South.	High	Negligible	Slight Adverse		Slight Adverse
Agricultural Field Accesses						
Construction & Operation	There will be permanent alterations to the following agricultural accesses:	High	Negligible	Slight Adverse	Pre-construction consultations to be carried out with affected	Slight Adverse

Predicted Impacts	Sensitivity of the Receptor	Magnitude of Impact	Significance of Effect	Mitigation Measures	Residual Effects (following the implementation of mitigation measures)	
<ul style="list-style-type: none"> 2 No. field accesses to/from Landowner P's land (Field P) from the A7 North will be reduced to 1. 				landowners in order to agree new access location and requirements.		
<ul style="list-style-type: none"> 2 No. field accesses to/from Landowner P's land (Field P) from the A6106 North will be moved <0.1 km to the Proposed A6106 North 	High	Negligible	Slight Adverse		Neutral	
<ul style="list-style-type: none"> 1 No. field accesses to/from Landowner H & K's land (Field K) from the A6106 North will be moved <0.1 km. 	Medium	Negligible	Slight Adverse		Neutral	
<ul style="list-style-type: none"> 1 No. field accesses to/from Landowner H & K's land (Field K) from the A6106 South will be moved >250m to the A7 South. 	High	Moderate	Large Adverse		Moderate Adverse	
<ul style="list-style-type: none"> 1 No. field accesses to/from Landowner J's land (Field J) from the A7 South will be lost. 	Medium	Major	Large Adverse	As the entire field will be purchased, as part of the Proposed Scheme land take, field access will no longer be required.	Neutral	
Agricultural Field Drainage						
Construction & Operation	There will be permanent alterations to the following field drainage: <ul style="list-style-type: none"> Landowner B & O's land (Field O); 	High	Minor	Slight Adverse	Pre-construction drainage surveys will be undertaken to reduce the likelihood of drainage for disturbance to field and forestry drainage systems during construction.	Neutral
	<ul style="list-style-type: none"> Landowner D & E's land (Field D); and, 	Medium	Minor	Slight Adverse		Neutral
	<ul style="list-style-type: none"> Landowner J's land (Field J). 	High	Minor	Slight Adverse	As the entire field will be purchased, as part of the Proposed Scheme land take, field drainage will no longer be required.	Neutral
Access to Healthcare Services and other Social Infrastructure						
Construction	Users of the Royal Infirmary Edinburgh (RIE) and the Spire Shawfair Park Hospital, including RIE ambulances accessing the hospital from the surrounding areas via Sheriffhall) may be disrupted during construction			Adverse	Pre-construction consultations to be undertaken with the RIE and the Spire Private Hospital, Shawfair Park to inform them of the Proposed Scheme construction programming and	Neutral

Predicted Impacts	Sensitivity of the Receptor	Magnitude of Impact	Significance of Effect	Mitigation Measures	Residual Effects (following the implementation of mitigation measures)
				to allow both hospitals to plan alternative, advisory routes if necessary.	
Air Quality, Noise and Neighbourhood Amenity					
Construction			Adverse	A Construction Environmental Management Plan (CEMP) would include a range of industry standard best practice construction phase noise and vibration and air quality mitigation measures.	Adverse
Operation			Beneficial	Low noise surfacing will be used on the A720 mainline and slip roads within the Scheme Extents.	Beneficial
Accessibility and Active Travel					
Construction			Adverse	A CEMP would include best practice measures including maintaining NMU access through Sheriffhall at all times during the construction programme. Temporary bus stops will be provided where necessary.	Adverse
Operation			Beneficial	None required.	Beneficial
Social Cohesion and Lifetime Neighbourhoods					
Construction			Neutral	None required.	Neutral
Operation			Beneficial	None required.	Beneficial

Predicted Impacts	Sensitivity of the Receptor	Magnitude of Impact	Significance of Effect	Mitigation Measures	Residual Effects (following the implementation of mitigation measures)
<p>New segregated NMU routes through the junction would also reduce existing severance between communities to the north and the south of the roundabout.</p>					

15.9 Compliance with Policies and Plans

- 15.9.1 An assessment of the compliance of the Proposed Scheme in relation to the policies and plans previously set out in Section 15.3 is summarised below.

Strategic Compliance

- 15.9.2 The strategic benefits of the Proposed Scheme to the surrounding development of communities and future economic growth are reflected in a number of policies and plans including NPF3 (2014); SPP (2014); SDP (2013), the proposed SDP2 (2016), the CEC LDP (2016); and the MLC LDP (2017).

Residential Property

- 15.9.3 NPF3 states that within Edinburgh, the South East of the City is one of four geographic areas where there will be a focus for growth. NPF3 also aims to facilitate new housing development, and in helping to unlock effective housing land in the Edinburgh and city region, NPF3 identifies a requirement for strategic, cross-boundary transport infrastructure improvements and that road network capacity, including the proposed A720 Sheriffhall Roundabout interventions “*has particular implications for future development*” (Pg. 13). The proposed grade-separation improvements to the A720 Sheriffhall Roundabout will provide a key transport access hub to both existing residential properties and future housing development locations around the south-east of Edinburgh and Midlothian.
- 15.9.4 SPP (2014) supports the housing aims of NPF3. Therefore, the proposed improvements to the A720 Sheriffhall Roundabout are compliant with the identified national cross-boundary transport improvement needs required to support future housing provision.
- 15.9.5 The Proposed Scheme will not physically impact on residential property supply (current or designated housing allocations) and therefore does not have the potential to conflict with the housing policies of the Adopted MLC LDP (2017).

Business and Industry Property

- 15.9.6 SPP (2014) recognises that the relationship between the strategic transport network (which includes trunk roads) and land use has a strong influence on sustainable economic growth. The strategic transport network is identified as being critical in supporting a level of national connectivity that facilitates sustainable economic growth. SESplan (2013) supports the development of strategic transport and infrastructure networks to support economic growth and the A720 Sheriffhall Roundabout is one of the key strategic improvements to transport and other infrastructure which SESplan identifies as being required for existing and future development in the ‘Regional Core’ sub-regional area of the SESplan.
- 15.9.7 The MLC LDP (2017) focuses on providing for, and managing, future change across the MLC Council area in line with the SESplan requirements. The MLC LDP supports business growth and employment in key economic development clusters (e.g. Shawfair Park, Shawfair Park Extension 1 & 2, and Sheriffhall South) and their location in relation to, and connection with, the strategic road network (including the A720 Sheriffhall Roundabout) makes them key sites in the development strategy and represents a major opportunity for growth and employment over the LDP period.
- 15.9.8 Therefore, the Proposed Scheme is compliant with the identified national and regional transport improvement needs required to support business and industry growth.

- 15.9.9 The permanent loss of land required to construct the Proposed Scheme has the potential to conflict with the Business and Industry economic growth policy (Ec1- Shawfair Park Extension 2 site) of the MLC LDP (2017) - although the Ec1 site development considerations include a requirement for contributions to the Shawfair infrastructure requirements "*such as Sheriffhall Junction Upgrade*" (Pg. 87) to be made.

Community Facilities and Woodland

- 15.9.10 The Proposed Scheme would not result in the loss of any commercial woodland and impacts on the woodland area at Lugton Bogs are expected to be negligible whilst the area of woodland at Lugton Bogs currently used by Edinburgh Combat Challenge would not be impacted. As such, no conflict with relevant planning policies is expected.
- 15.9.11 The MLC LDP (2017) contains significant new community facility proposals as part of the proposed Shawfair settlement. The proposed grade-separation improvements to the A720 Sheriffhall Roundabout will provide a key transport access hub to the Shawfair settlement and be a key infrastructure improvement that supports the delivery of these proposals.

Agricultural Land

- 15.9.12 The Proposed Scheme has the potential to conflict with SPP (2014) which states that development on prime Agricultural Land should not be permitted except where it is essential and it also potentially conflicts with the Adopted MLC LDP (Policy ENV4 - Prime Agricultural Land) which states that development should not be permitted if it leads to "*the permanent loss of prime agricultural land (Class 1, Class 2 or Class 3.1)*" (Pg. 48).
- 15.9.13 However, the potential scope for conflict with the loss of Class 2 agricultural land to accommodate the Proposed Scheme layout needs to be considered in the context of the strategic needs for the Proposed Scheme e.g. as essential infrastructure and where the need for the development outweighs the environmental or economic interests in retaining the farmland for productive use.

Population and Human Health

- 15.9.14 Whilst there are no policies related to the impact of development on population and human health beyond general principles to have regard to the need to improve the quality of life in local communities and create more healthy and attractive places to live (as per the SDP), there are national strategies and general guidelines which can be used to assess compliance.
- 15.9.15 The Scottish Government sets out through 'A more Active Scotland' a strategy to increase physical activity and sport, in part through improving active infrastructure. The Proposed Scheme will significantly improve the active travel network within the study area. This is assessed as improving the air quality, noise and neighbourhood amenity, and social cohesion, promoting the uptake of active travel modes within the wider study area.
- 15.9.16 In addition, whilst the effects from construction are likely to have adverse effects on accessibility and active travel (as discussed above), and air quality, noise and amenity, the Proposed Scheme otherwise meets all the relevant eight broad determinants of the Rapid Health Impact Assessment Tool (NHS, 2017). Nevertheless, a CEMP will be implemented to ensure a range of good practice industry standard techniques and plant are used to reduce the construction effects on air quality, noise and amenity. Once the scheme is operational, there is expected to be a slight beneficial effect on these health indicators, thereby meeting all the relevant broad determinants of this assessment tool.

15.10 Statement of Significance

15.10.1 This section provides a summary of the anticipated moderate to large (i.e. significant) residual effects remaining following the application of the mitigation measures described in Table 15-10.

Land Take Impacts

15.10.2 As discussed in Section 15.6, for the purposes of this assessment, the Scheme Extents has been used to represent the worst-case scenarios during construction and operation as it is not known at this stage if it is possible to return parcels of land to the original owners should this be desired.

15.10.3 The Proposed Scheme will require land take during construction and operation. The total land take is estimated to be in the order of 27ha. This land take will be a combination of private property land, community land, designated development land and agricultural land as shown in Table 15-12 'Residual Community and Private Assets land take Effects' below.

Table 15-12 Residual Community and Private Assets Land Take Effects

Receptor	Total Land (m ²)	Approximate Land Take (m ²)	Loss of Land (%)	Significance of Residual Effects
Private Property Land Take				
Sheriffhall House (Q)	2011.75	0.18	0.01	Slight Adverse
Loss of Community Land				
Network Rail Land (F&G)	43812.65	2280.61	5	Neutral
Existing Road – Unknown Owner (U)	283105.87	121877.59	43	Neutral
Council Owned Woodland (M)	4350.60	4350.60	100	Neutral
Loss of Designated Development Land				
Shawfair Park Extension 2 Site (Ec1) Business & Industry Land	179200	27802.92	16	Large Adverse
Sheriffhall South (e32) Business & Industry Land	183700	1985.15	1.1	Slight Adverse
Loss of Agricultural Land²				
Landowner A	133832.93	1985.15	1	Slight Adverse
Landowner B & O	20445.52	9127.79	45	Large Adverse
Landowner C	886772.42	18112.33	2	Slight Adverse
Landowner D & E	277739.40	12554.73	5	Slight Adverse
Landowner H & K	590428.85	38644.66	7	Slight Adverse
Landowner J	16982.20	16982.19	100	Large Adverse
Landowner L & R	67753.07	18628.75	27	Large Adverse
Landowner P	292542.62	23452.32	8	Moderate Adverse

Impacts on Accesses

15.10.4 There will be alterations to seven baseline field accesses during construction and operation and these changes are generally assessed as being not significant. However, one field access will be moved from the western side of the

² Some agricultural land is currently used for arable farming whereas other land particularly in the south of the scheme contains trees and scrub but has been assessed as prime agricultural land.

A6106 South to the eastern side of the A7 South, this will result in a **moderate adverse** effect on access to/from Landowner H & K's land.

15.11 Monitoring

- 15.11.1 The significant adverse effects identified for land take of designated development land and agricultural land would remain permanently with no mitigation possible. The affected landowners would be entitled to appropriate compensation. It would not be necessary to undertake any associated monitoring.
- 15.11.2 A moderate adverse effect has been identified on one field access (Field K) as it will be moved over 250m from its existing location. There will be no requirements to monitor this as pre-construction consultation will be undertaken with the landowner to determine final access location and requirements.
- 15.11.3 Given there are no other likely significant adverse effects identified it would not be necessary to undertake any associated monitoring.

15.12 References

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- City of Edinburgh Council (2018) Edinburgh by Numbers 2018 - Annual Statistics Overview
- Edinburgh Health and Social Care Partnership (2016) Strategic Plan (2016-2019)
- The Highways Agency, et al. (1993) Design Manual for Roads and Bridges, Volume 11, Section 3, Part 8 'Pedestrians, Cyclists, Equestrians & Community Effects'
- The Highways Agency, et al. (2001) Design Manual for Roads and Bridges, Volume 11, Section 3, Part 6 'Land Use'
- The Highways Agency, et al. (2008) Design Manual for Roads and Bridges, Volume 11, Section 2, Part 5 'Assessment and Management of Environmental Effects' (HA205/08)
- The Highways Agency (2009) Design Manual for Roads and Bridges, Interim Advice Note (IAN) 125/09 'Supplementary Guidance for Users of DMRB Volume 11 Environmental Assessment'
- The Highways Agency (2015) Design Manual for Roads and Bridges, Interim Advice Note (IAN) 125/15 'Environmental Assessment Update'
- Highways England, et al. (2019) Design Manual for Roads and Bridges, Volume 11, Section 2, Part 4 'Environmental assessment and monitoring' (LA104)
- Highways England, et al. (2019) Design Manual for Roads and Bridges, Volume 11, Section 3, Part 6 'Population and human health' (LA112)
- Macaulay Institute for Soil Research (1983) Land Capability for Agriculture 1:50000 scale map (Edinburgh - Sheet 66)
- Midlothian Council (2017) Midlothian Local Development Plan (Adopted November 2017)
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- Scottish Government (2014a) National Planning Framework 3 (NPF3) (Adopted June 2014)
- Scottish Government (2014b) Scottish Planning Policy (SPP) (Adopted June 2014)
- Scottish Government (2018) A More Active Scotland - Summary of Sources of Active Scotland Outcome Framework Indicators (July 2018)
- The Scottish Public Health Observatory (ScotPHO) (2019) Online Profiles Tool [Online]. Available at:
https://scotland.shinyapps.io/ScotPHO_profiles_tool/
- SESplan (2013) South East Scotland Strategic Development Plan (SDP) (Adopted June 2013)
- SESplan (2016) Proposed South East Scotland Strategic Development Plan (SDP2) (October 2016)