



**TRANSPORT
SCOTLAND**
CÒMHDHAIL ALBA

Environmental Impact Assessment Record of Determination

A78 IBM Dual Eastbound

Contents

Project Details	4
Description.....	4
Location	4
Description of local environment.....	5
Air quality	5
Cultural heritage	5
Landscape and visual effects	6
Biodiversity	6
Geology and soils	7
Material assets and waste	7
Noise and vibration	8
Population and human health	8
Road drainage and the water environment.....	9
Climate	9
Description of main environmental impacts and proposed mitigation	11
Air quality	11
Impacts.....	11
Mitigation.....	11
Biodiversity	12
Impacts.....	12
Mitigation.....	12
Material assets and waste	12
Impacts.....	12
Mitigation.....	13
Noise and vibration	13
Impacts.....	13
Mitigation.....	14
Population and human health	14
Impacts.....	14
Mitigation.....	14
Road drainage and the water environment.....	15
Impacts.....	15

Mitigation.....	15
Climate	16
Impacts.....	16
Mitigation.....	16
Vulnerability of the project to risks	16
Assessment cumulative effects.....	16
Assessments of the environmental effects	17
Statement of case in support of a Determination that a statutory EIA is not required.....	17
Characteristics of the scheme.....	17
Location of the scheme.....	18
Characteristics of potential impacts of the scheme.....	18
Annex A.....	19

Project Details

Description

These works are being undertaken due to surface defects (fretting/chip loss) and structural defects (rutting/longitudinal/transverse/cracking) which were identified during investigations.

The construction activities will include structural inlays from depths between approximately 30mm-300mm and will consist of the following:

- Implementation of Traffic Management (TM).
- Milling of existing bituminous material by road planer.
- Additional bituminous material removed by jack hammer/excavator, where not accessible by planer.
- Resurfacing of carriageway using TS2010 surface course.
- Road sweeper to collect any loose material.
- Heavy Goods Vehicles (HGVs) for removal and replacement of material.
- New bituminous material laid by a paver.
- Material compacted using a heavy roller.
- Reinstatement of thermoplastic road markings where required.
- Road studs replaced where necessary.
- Removal of TM.

A programme of works is still to be confirmed; however, works are due to be undertaken in August 2023 and will potentially consist of daytime and night-time works. TM is still to be confirmed but likely to be full lane closures.

Location

The scheme is located on the A78 north of Inverkip, Inverclyde. The scheme is located at the following National Grid References (NGRs):

- Start: NS 22389 73703
- End: NS 23539 74722

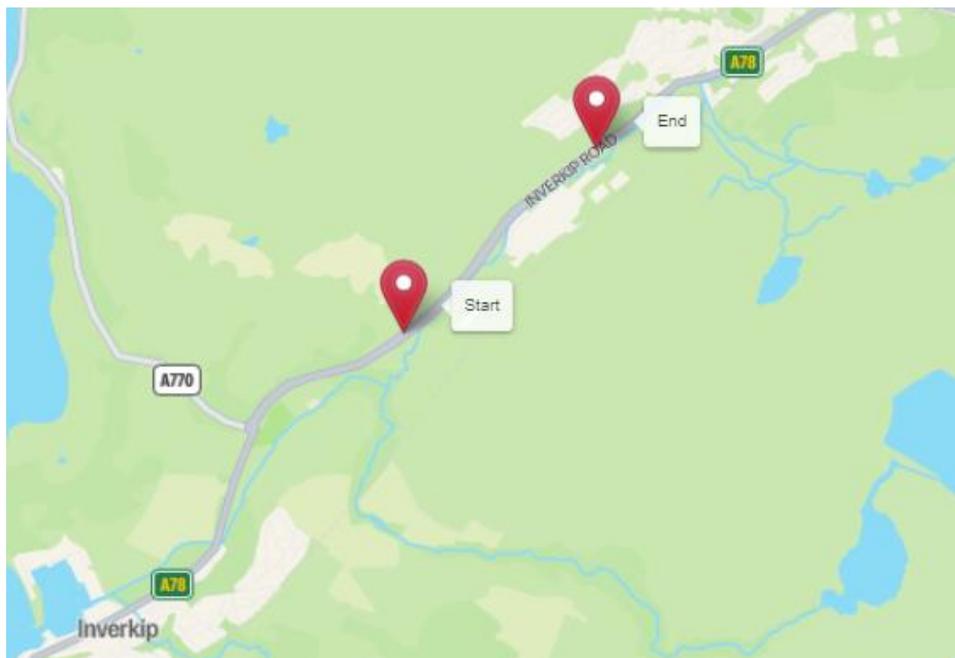


Figure 1: Scheme Location

Description of local environment

Air quality

The scheme is located in a primarily rural area on the A78 north of Inverkip. The closest residential property is in the small residential area of Drumillan Hill (approx. 160m northwest).

The most recent traffic statistic data on the A78 where works are to be undertaken ([manual count point](#) 78593) is from 2019 which notes that the Annual Average Daily Flow (AADF) for all vehicles was 12,858, with 353 of those being HGVs. The key sources of air quality issues within the area are from the A78 and vehicles; there are no other key sources of air quality issues within the area.

Inverclyde Council has not declared any [Air Quality Management Areas](#) (AQMAs).

Cultural heritage

A desk study was undertaken using [Pastmap](#) and there are several cultural heritage designations within 300m of the scheme including:

- [Chrisswell Chapel Canmore](#) (ID: 41393) and [Chrisswell Canmore](#) (ID: 41383) (approx. 65m north)
- [Wellyard Canmore](#) (ID: 170921) (approx. 110m northwest)

- [Spango Farm Canmore](#) (ID: 199390) (approx. 250m southeast)
- [Greenock, Spango Valley, Inverkip Road, Ibm Greenock Plant Canmore](#) (ID: 70152) (approx. 250m southeast)
- [Kingston Canmore](#) (ID: 196422) (approx. 250m southeast)

No impact is predicted as the works will be like-for-like in nature and will require no excavation and will remain within the scheme extent. Therefore, cultural heritage has been scoped out for further assessment.

Landscape and visual effects

A desk study was undertaken using [Pastmap](#) and [SiteLink](#) which confirmed no landscape designations were identified within 500m of the scheme.

The [HLA map](#) notes the surrounding land either side of the A78 is a combination of industrial and commercial, as well as rough grazing.

[Scotland's Soils Map](#) notes the land is classified as:

- Land capable of producing a narrow range of crops primarily grassland with short arable breaks of forage crops and cereal.

The works are like-for-like in nature and while there will be temporary landscape impacts during construction, there will be no permanent change or impact to the landscape and therefore has been scoped out for further assessment.

Biodiversity

The scheme is located in a primarily rural area on the A78 north of Inverkip with large area of woodland and grassland surrounding the scheme. There are also several watercourses within 200m of the scheme which flows into the Kip Water (ID: 10372) approximately 300m from the scheme extent These include:

- Unnamed burn which breaks off Kip Water (ID: 10372) approximately 80m south; and
- Sprango Burn is approximately 70m south.

There are no European designated sites within 2km of the scheme. [Dunrod Hill Site of Special Scientific Interest](#) (SSSI) is approximately 590m east however this is designated for its geological features.

Transport Scotland's Asset Management Performance System (AMPS) has noted that no protected species or INNS have been identified within 500m of the scheme.

Geology and soils

[Dunrod Hill Site of Special Scientific Interest](#) (SSSI) is approximately 590m east and is designated for its geological features.

[Scotland's Soils Map](#) notes the soils within the scheme extent are made up of brown soils.

[The British Geological Survey Map](#) has identified the following geological features within the scheme extent:

- Bedrock Geology:
- Strathgryfe Lava Member – Mugearite.

The works are like-for-like in nature and require no excavation and so therefore there will be no impact on geology and soils, therefore geology and soils has been scoped out for further assessment.

Material assets and waste

Table 1: Key Materials Required for Activities

Activity	Material Required	Origin/ Content
Site Construction	<ul style="list-style-type: none"> • TS2010 surface course • AC20 bituminous binder • AC32 bituminous base • Road paint and studs • Lubricant • Vehicle fuel • Oil 	<p>TS2010 Surface Course allows a wider array of aggregate sources to be considered when compared to typical SMA. As a result, the use of TS2010 will reduce the usage of imported aggregates and increase the use of a wider range of sustainable aggregate sources.</p> <p>A proportion of reclaimed asphalt pavement (RAP) is used in asphalt production. Typical RAP values for base and binder are 10% - 15% with up to 10% in surface course.</p>

Table 2: Key Waste Arising from Activities

Activity	Waste Arising	Disposal/ Regulation
Site Construction	<ul style="list-style-type: none"> • Asphalt planings • Possibility of coal tar (TBC) 	Uncontaminated road planings generated as a result of the required works, will be fully recycled in accordance with the criteria stipulated within SEPA document 'Guidance on the Production of Fully Recoverable Asphalt Road Planings.'

Noise and vibration

The scheme is located in a primarily rural area on the A78 north of Inverkip. The closest residential property is in the small residential area of Drumillan Hill (approx. 160m northwest). There are large areas of grassland and trees screening the property from the A78. There are no other sensitive receptors to note within 300m of the scheme.

[Scotland's Noise Map](#) notes noise levels on the A78 where works are to be undertaken range from 65-<75dB during daytime hours and range from 55dB-<65dB during night-time hours. The A78 and vehicles are the key sources of noise in the area.

The scheme is not within a [Candidate Noise Management Area](#) (CNMA).

Population and human health

There are [no core paths](#) or [National Cycle Network Routes](#) within the scheme extent.

There are two bus stops on the A78 within the scheme extent.

Access to residential properties can be taken from the scheme extent, however there are other access routes out with the scheme extent.

The most recent traffic statistic data on the A78 where works are to be undertaken ([manual count point](#) 78593) is from 2019 which notes that the Annual Average Daily Flow (AADF) for all vehicles was 12,858, with 353 of those being HGVs.

Road drainage and the water environment

There are several watercourses within 200m of the scheme which flows into the Kip Water (ID: 10372) approximately 300m from the scheme extent. These include:

- Unnamed burn which breaks off Kip Water (ID: 10372) approximately 80m south; and
- Sprango Burn is approximately 70m south.

The [Scottish Environment Protection Agency \(SEPA\) Flood Risk Map](#) notes the unnamed burn which breaks off of Kip Water (ID: 10372) as having a 'high-risk' of river flooding; this area of high-risk river flooding runs adjacent to the A78 along the full stretch of the scheme extent. High-risk river flooding is defined as the area having a 10% chance of flooding each year.

The Kip Water itself is approximately 300m south and the [SEPA Water Classification Map](#) notes it as being in 'bad' condition and has a 'high risk' of river flooding.

Sprango Burn is approximately 70m south of the scheme and has a 'high-risk' of river flooding which also continues adjacent to the A78 along the full stretch of the scheme extent.

The A78 where works are to be undertaken also has several large areas of 'high-risk' surface water flooding within the scheme extent. High-risk surface water flooding is defined as the area having a 10% chance of flooding each year.

The drainage on this section of the carriageway is via top entry gullies with a stretch of filter drain (approx. 250m) at the start point of the scheme.

Climate

Carbon Goals

The Climate Change (Scotland) Act sets out the target and vision set by the Scottish Government for tackling and responding to climate change. The Act includes a target of reducing CO₂ emissions by 80% before 2050 (from the baseline year 1990).

The Scottish Government has since published its indicative Nationally Determined Contribution (NDC) to set out how it will instead reach net-zero by 2045, working to reduce emissions of all major greenhouse gases by at least 75% by 2030. By 2040, the Scottish Government is committed to reduce emissions by 90%, with the aim of reaching net-zero by 2045 at the latest.

Transport Scotland is committed to reducing carbon across Scotland's transport network, this commitment is being enacted through the [Mission Zero for Transport](#). Transport is the largest contributor to harmful climate emissions in Scotland. In response to the climate emergency, TS are committed to reducing their emissions by 75% by 2030 and to a legally binding target of net-zero by 2045.

Amey's Company Wide Carbon Goal is to achieve Scope 1 and 2 net-zero carbon emissions, with a minimum of 80% absolute reduction on our emissions by 2035. Amey is aiming to be fully net-zero, including Scope 3 emissions, by 2040.

Amey are working towards a contractual commitment to have carbon neutral depots on the SW NMC network by 2028. Amey have set carbon goals for the SW NMC contract as a whole to be net-zero carbon by 2032.

Monitoring, Management and Opportunities

To support our journey towards carbon neutral and zero waste we include potential opportunities for enhancement utilising circular economy principals within assessment of material assets.

Amey (working on behalf of Transport Scotland) undertake carbon monitoring. Emissions from our activities are recorded using Transport Scotland's Carbon Management System.

Further information identifying how Amey will obtain the above Carbon Goals can be viewed within the Carbon Management and Sustainability Plan Roadmap to net-zero: STRNMC – South West.

Description of main environmental impacts and proposed mitigation

Air quality

Impacts

- During construction there is the potential for an increase in dust and emissions from plant and machinery. This is likely to cause a slight deterioration in air quality within the local area. These impacts will last for the duration of the works only.
- An increase in congestion as a result of TM and travel delays will likely have an impact on air quality within the local area.
- An increase in the use of HGVs during construction will likely have an impact on air quality within the local area.

Mitigation

Best Practicable Means and Best Practice Guidelines of reducing dust and emissions will be followed as outlined in the [Guidance on the Assessment of Dust from Demolition and Construction \(2014\) published by the IAQM](#), which includes the following mitigation relevant to this scheme:

- The necessary equipment to promptly clean up dry spills and address any spillages will be conveniently accessible at the location, utilizing wet cleaning techniques as soon as reasonably possible following the incident. Vehicle engines will be switched off when stationary.
- All plant and fuel-requiring equipment utilised during construction will be well maintained in order to minimise emissions.
- All vehicles will switch off engines when stationary; there will be no idling vehicles.
- Planing operations will be wetted to reduce dust arising.
- Drop heights to haulage vehicles and onto conveyors will be minimised where practicable.
- Lorries will be sheeted when carrying dry materials.
- Surfaces will be swept where loose material remains following planing.

The residual effects are considered not significant and do not warrant any further assessment in accordance with DMRB Guidance document LA 105 Air Quality.

Biodiversity

Impacts

- Additional noise from construction activities could cause disturbance to any surrounding protected species.
- Misdirected site lighting during night time working hours could cause disturbance to any surrounding nocturnal species.
- It is unlikely there will be any impact on surrounding watercourses as works are resurfacing and will remain with the carriageway.
- As no records of INNS were found within the scheme extent, it is unlikely there will be any impact.

Mitigation

- In the event that protected species is noticed on site, works will temporarily be suspended until the animal has moved on. Any sightings will be reported to the E&S Team.
- Vehicles and materials will not be stored or parked on grass verges where possible. Where damage occurs, the reinstatement of the grass verge will be carried out.
- If night-works are required, where lighting is required, hoods will be used and lights directed at works and away from ecological receptors including any watercourses, to minimise disturbance to nocturnal species.

On the condition that the above mitigation measures and best practice are adhered to, the residual effect on local biodiversity is considered not significant. Therefore, in accordance with DMRB Guidance document LA 108: Biodiversity, no further assessment is required.

Material assets and waste

Impacts

- The design life for the TS2010 surfacing proposed is estimated to be 20 years. This will reduce the requirement for maintenance to this section of road over the period.
- The works will result in contribution to resource depletion through use of virgin materials.
- Transportation and recovery of materials/waste will require energy deriving from fossil fuel, a non-renewable source.

Mitigation

- Materials will be derived from recycled, secondary or re-used origin as far as practicable within the design specifications to reduce natural resource depletion and associated emissions.
- The contractor will adhere to waste management legislation and ensure they comply with waste management Duty of Care.
- Uncontaminated road planings arising from the works will be fully recycled under a SEPA Paragraph 13(a) Waste exemption in accordance with guidance on the Production for Fully Recovered Asphalt Road Planings.
- All waste will be removed from site by a licence waste carrier. All waste documentation will be provided when requested.
- Use of TS2010 will reduce the usage of imported aggregates and increase the use of a wider range of sustainable aggregate sources thus reducing GHG emissions.
- Where possible, materials will be obtained locally, and operatives deployed from the local depot to reduce haulage and scheme associated journeys, reducing impact of associated GHG emissions.
- Where possible all materials will be reused throughout the network, if not possible they will be recycled locally. Not all materials will be able to be reused/recycled and will require landfilling.
- The use of TS2010 Surface Course will prolong the period before future resurfacing is required, compared to other types of road surface. Future repairs can be able to be carried out easily via inlay.
- All waste will be stored in secure containers and segregated into different waste streams.
- Waste will only be disposed of at suitably licenced waste management site.

It has been determined that the proposed project will not have direct or indirect significant effects on the consumption of material assets or creation of waste.

Noise and vibration

Impacts

- There will likely be an increase in noise levels during construction.
- Post construction the works will not alter the speed, alignment or traffic volumes on the road.
- The improvements to the road surface will improve the noise levels generated by road users.

Mitigation

- Site staff will avoid unnecessary revving of engines and switch off equipment when not in use.
- Site staff will minimise drop height of materials.
- Site staff will start-up plant and vehicles sequentially rather than all together.
- Any noise heavy works will be undertaken before 23:00.
- If night-time works are required, the Inverclyde Council and residential properties within 300m will be notified of the works which will include dates, times and duration as well as TM details.

With best practice mitigation measures in place, the residual construction effects associated with Noise and Vibration is considered not significant.

Therefore, in accordance with DMRB Guidance document LA 111: Noise and Vibration no further assessment is required.

Population and human health

Impacts

- TM is likely to cause travel delays for road users.
- It is unlikely access to bus stops will be affected, however is still to be confirmed.
- There will be no impact to access to local residential properties.

Mitigation

- Traffic Management restrictions/arrangements and any expected travel delays will be publicised within the local and wider area, in an effort to minimise disturbance to vehicular travellers.
- In the unlikely event that access to bus stops is limited, temporary bus stops will be provided and bus companies will be notified.

With best practice mitigation measures in place, the residual construction effects associated with Population and Human Health is considered not significant.

Therefore, in accordance with DMRB Guidance document LA 112: Population and Human Health no further assessment is required.

Road drainage and the water environment

Impacts

- If not adequately controlled, debris and run off from the works could be suspended in the surface water. In the event of a flooding incident, this debris may be mobilised and could enter the road drainage having a detrimental effect on the surrounding local water environment.
- Potential for spills, leaks or seepage of fuels and oils associated with plant to escape and reach drainage systems and watercourses if not controlled, which may negatively affect the water environment.

Mitigation

- All debris which has the potential to be suspended in surface water and wash into the local water environment will be cleaned from the site following the works.
 - Debris and dust generated as a result of the works will be prevented from entering the drainage system. This can be via the use of drain covers or similar.
 - Appropriate measures will be implemented onsite to prevent any potential pollution to the natural water environment (e.g., debris, dust, and hazardous substances). This will include spill kits being present onsite at all times, and the use of funnels and drip trays when transferring fuel.
 - The control room will be contacted if any pollution incidences occur.
 - Visual pollution inspections of the working area will be conducted in frequency, especially during heavy rainfall and wind.
 - Weather reports will be monitored prior and during all construction activities. In the event of adverse weather/flooding events, all activities will temporarily stop, and only reconvene when deemed safe to do so, and run-off/drainage can be adequately controlled to prevent pollution.
 - All site operatives will be briefed on the [Guidance for Pollution Prevention \(GPP\)](#) documents (namely, GPP 1, GPP 2, GPP 5, PPG 6, GPP 8 and GPP 22) prior to working on site. This guidance will be adhered to on site at all times.

Providing all works operate in accordance with current best practice, as demonstrated by the Scottish Environment Protection Agency's (SEPA's) GPPs, the residual effect on Road Drainage and the Water Environment is considered not significant.

Therefore, in accordance with DMRB Guidance document LA 113 Road drainage and the water environment no further assessment is required.

Climate

Impacts

- Greenhouse Gas (GHG) emissions will be emitted through the use of machinery, vehicles and materials used (containing recycled and virgin materials) and transporting to and from site.

Mitigation

- Local suppliers will be used as far as reasonably practicable to reduce travel time and GHG emitted as part of the works.
- Vehicles/plant will not be left on when not in use to minimise and prevent unnecessary emissions being emitted.
- Further actions and considerations for this scheme are detailed in the above Material assets and waste section.

It has been determined that the proposed project will not have direct or indirect significant effects to climate.

Vulnerability of the project to risks

As the works will be limited to the like-for-like resurfacing of the carriageway, there will be no change in vulnerability of the road to risk, or in severity of major accidents/disasters that would impact on the environment.

It has been determined that the proposed project is not expected to alter the vulnerability of the existing trunk road infrastructure to risk of major accidents or disasters.

Assessment cumulative effects

[The Scottish Road Works Commissioner's Interactive Map](#) has not highlighted any ongoing works during the proposed timescale and at the location of the proposed works.

[Amey's current programme of works](#) has not highlighted any ongoing works during the proposed timescale and at the location of the proposed works.

[Inverclyde Council's Planning Portal](#) has not highlighted any ongoing works during the proposed timescale and at the location of the proposed works.

Any future schemes will be programmed to take into account already programmed works, and as such any effect (such as from TM arrangements and potential construction noise) will be limited.

Overall, it is unlikely the proposed works will have a significant cumulative effect with any other proposed works in the local area.

Assessments of the environmental effects

Following assessment as detailed within this Record of Determination, and provided that mitigation measures are in place and best practice is followed, the residual impact is deemed neutral and there will be no significant effects on the environment.

The following environmental surveys/reviews have been undertaken:

- An Initial Environmental Review (IER) of the scheme, undertaken by the Environment and Sustainability Team at Amey in June 2023.

Statement of case in support of a Determination that a statutory EIA is not required

This is a relevant project in terms of section 55A(16) of the Roads (Scotland) Act 1984 as it is a project for the improvement of a road and the completed works (together with any area occupied by apparatus, equipment, machinery, materials, plant, spoil heaps, or other such facilities or stores required during the period of construction) exceed 1 hectare in area.

The project has been subject to screening using the Annex III criteria to determine whether a formal Environmental Impact Assessment is required under the Roads (Scotland) Act 1984 (as amended by The Roads (Scotland) Act 1984 (Environmental Impact Assessment) Regulations 2017). Screening using Annex III criteria, reference to consultations undertaken and review of available information has not identified the need for a statutory EIA.

The project will not have significant effects on the environment by virtue of factors such as:

Characteristics of the scheme

- Construction activities are restricted to the approximate 12,159m² area of existing carriageway.
- The works will be temporary and localised and completed during both daytime and night-time hours.
- Containment measures of the working area will be in place to prevent debris or pollutants from entering the surrounding water environment.
- No disturbance is anticipated to protected species within the wider area.
- At end of life, components can be recycled, reducing waste to landfill.

- Any uncontaminated road planings will be recycled in accordance with Guidance on the Production for Fully Recovered Asphalt Road Planings.
- Materials will be derived from recycled, secondary or re-used origin as far as practicable within the design specifications.
- The chosen material TS2010 Surface Course allows a wider array of aggregate sources to be considered when compared to typical SMA.
- The design option conveys sustainability benefits by significantly reducing the quantity of maintenance interventions required at the location.

Location of the scheme

- The scheme will be confined within the existing carriageway boundaries and as a result will not require any land take and will not alter any local land uses.

Characteristics of potential impacts of the scheme

- As the works will be limited to the like-for-like replacement of the structural components, there is no change to the vulnerability of the road to the risk or severity of major accidents/disasters that would impact on the environment.
- The successful completion of the scheme will afford benefits to carriageway users and residential properties in proximity, due to improved condition and ride quality of the carriageway surface.
- No impacts on the environment are expected during the operational phase as a result of works. The use of TS2010 road surfacing affords the benefits of a reduction in mid to high frequencies of traffic noise and a reduction in ground vibrations. As a result, ambient noise levels should decrease post construction.

Annex A

“sensitive area” means any of the following:

- land notified under sections 3(1) or 5(1) (sites of special scientific interest) of the Nature Conservation (Scotland) Act 2004
- land in respect of which an order has been made under section 23 (nature conservation orders) of the Nature Conservation (Scotland) Act 2004
- a European site within the meaning of regulation 10 of the Conservation (Natural Habitats, &c.) Regulations 1994
- a property appearing in the World Heritage List kept under article 11(2) of the 1972 UNESCO Convention for the Protection of the World Cultural and Natural Heritage
- a scheduled monument within the meaning of the Ancient Monuments and Archaeological Areas Act 1979
- a National Scenic Area as designated by a direction made by the Scottish Ministers under section 263A of the Town and Country Planning (Scotland) Act 1997
- an area designated as a National Park by a designation order made by the Scottish Ministers under section 6(1) of the National Parks (Scotland) Act 2000.



**TRANSPORT
SCOTLAND**

CÒMHDHAIL ALBA

© Crown copyright 2023

You may re-use this information (excluding logos and images) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit <http://www.nationalarchives.gov.uk/doc/open-government-licence> or e-mail: psi@nationalarchives.gsi.gov.uk

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Further copies of this document are available, on request, in audio and visual formats and in community languages. Any enquiries regarding this document / publication should be sent to us at info@transport.gov.scot

This document is also available on the Transport Scotland website:
www.transport.gov.scot

Published by Transport Scotland, July 2023

Follow us:



transport.gov.scot



**Scottish Government
Riaghaltas na h-Alba
gov.scot**