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Environmental Impact Assessment Record of Determination

A898 Erskine Bridge

Contents

Project Details

Description

The purpose of this determination is to assess the suite of works scheduled for the A898 Erskine Bridge (hereafter referred to as 'the Bridge') during the 2026 calendar year. These works form part of the South West (SW) Network Management Contract (NMC), and are essential to ensure the continued safe operation, structural integrity and heritage value of the Bridge as a key transport route across the River Clyde.

If there is the requirement for any additional works, not detailed within this document, a separate environmental assessment and determination will be undertaken.

Scope of Works

The following work activities will be undertaken:

External painting works

- Blasting, painting, strengthening and weld repairs of the east and west cantilevers, with full containment in place.
- Painting of external deck box and bridge towers.
- Works undertaken from temporary platforms and gantries.

Plant and machinery will include the following: a blast pot, compressors, dehumidifiers, heaters, mixers, paint can crusher, paint spraying equipment, paint test equipment, power washer, shot blasting equipment, surveying equipment and vacuum, circular saw, jigsaw, lifting gear, saw, Stihl saw, charger, container, drill, gas products, grinder, heat gun, impact wrench, sander, shear wrench, small tools, surveying equipment, testing kit, ventilation and extraction systems and weld set.

Nosing joint replacement and surfacing trial/patching

- Replacement of the south abutment nosing joint and surfacing application.
- Removal of steel upstand and welding on new steel inserts.
- Renewal of white lines and cyclic surfacing maintenance.

Plant and machinery will include the following: milling machines, welding gear and burning gear.

Cable re-tensioning

- Investigations and surveys only to be undertaken within the 2025/26 financial year, with no construction activities required. Investigations are likely to include testing of welds.

Trough to deck welds remedial works

- Refurbishing of the trough to deck welds following internal inspections, involving removal and repair of welds, retesting and repainting.

Plant and machinery will include the following: drills, gas products, grinder, heat gun, impact wrench, sander, shear wrench, small tools, surveying equipment, testing kit, ventilation and extraction systems, charger, container, weld set and gas monitors.

Inspection and servicing of access equipment

- Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)-compliant inspection regime for underdeck gantries and tower access cradle.
- Servicing will be undertaken continuously as per the recommendations made within the inspection reports.

Plant and machinery will include the following: hand tools and non-destructive testing equipment.

Carriageway resurfacing

- Milling of asphalt layer;
- Inspection and repair of waterproofing layer;
- Laying of surface course and reinstatement of road markings.

Plant and machinery will include the following: milling machines, planers, rollers and hand tools.

Concrete repairs

- Repairs to reinforced concrete piers due to defects including cracking and spalling.
- Breaking out of concrete beneath the Bridge deck, cleaning exposed area with compressed air, sealing cracks, replacing reinforcement if required.
- Hand application of cement-based mortar and protective coating.

Plant and machinery will include the following: hand tools, access equipment such as a mobile elevated moving platform (MEWP) or similar long armed boom.

Internal electrical maintenance and principal, general and safety inspections

- Repairs to defective electrical components (lighting, navigation aids, cameras).
- Principal, general and safety inspections.

Dehumidification/fire protection

- Installation of dehumidification and fire protection for the cables.
- Removal of the cable bands, wedge separation, inspection, repainting and shroud installation.

Plant and machinery will include: specialist access equipment, cable wedges, cranes, Hiabs.

Structural health monitoring

- Installation of sensors and permanent survey equipment.
- Access via deck box manholes.
- Maintenance or installation of existing and new electronic sensors as required.

Plant and machinery will include the following: surveying equipment and associated fixings.

Met forecasting equipment

- Met Office contracted to provide weather forecasts to inform gantry operations. No construction work is expected.

Programme and Phasing

Works are anticipated to occur during both day and night-time working hours, with day working preferred unless carriageway closures are required.

Night-time works will include carriageway resurfacing, nosing joint replacement and associated surfacing trial/patching.

Traffic Management

Traffic management (TM) will vary with each individual works package, but will typically include lane closures, hard shoulder closures, and temporary traffic lights/ contraflow.

Cycleway/footway closures will be required at times, however, at least one cycleway/footway will remain open to pedestrians and cyclists throughout the duration of the works.

Location

The A898 Erskine Bridge spans the River Clyde, connecting Renfrewshire (southern extents) and West Dunbartonshire (northern extents). The Bridge is located at the following National Grid References (NGR) (Figure 1).

- **Northern extents:** NS 46928 72752
- **Southern extents:** NS 45788 72116
- **Midspan:** NS 46218 72421

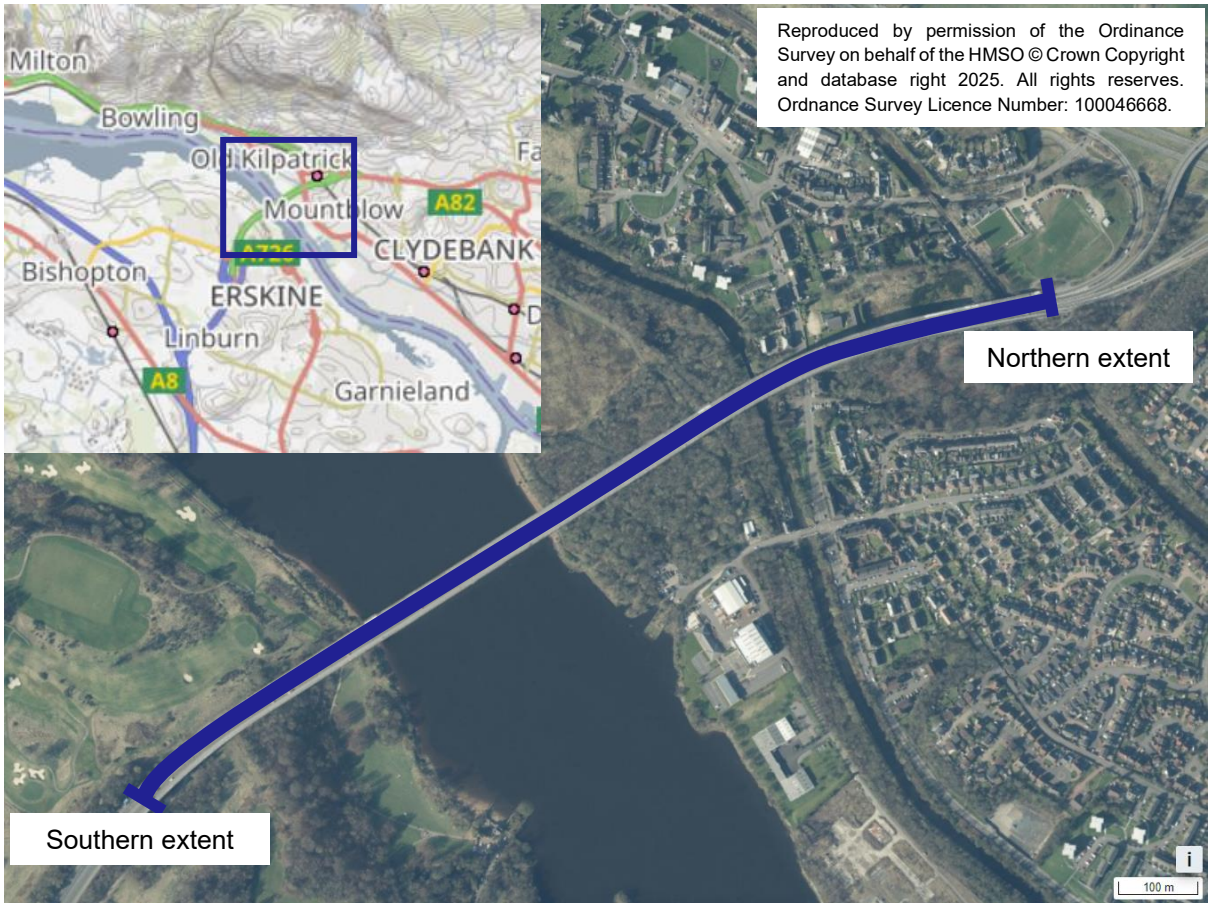

Figure 1. Scheme Location Map.

Description of local environment

Air quality

Baseline air quality surrounding the scheme extents is influenced by traffic flow along the A898 and A82 trunk roads, surrounding roads (A72), and rail activities at the Bridge's northern extent. Annual Average Daily Flow (AADF) in 2024 north of the scheme extents (site number: 74450) was recorded at 50,149 total vehicles with 1,566 (3.1%) Heavy Goods Vehicles (HGVs).

Over 100 residential receptors are located within 200m of the Bridge, primarily surrounding the Bridge's northern extent in West Dunbartonshire. The closest properties are located just east and west of the Bridge, beneath it, along the A814 Dumbarton Road.

The following non-residential air quality-sensitive receptors are located within 200m of the Bridge:

- *Old Kilpatrick Bowling Club* (approximately 60m north);
- *Kilpatrick Braes Park* (approximately 20m north);
- *St. Patrick's Roman Catholic Church* (approximately 10m north);
- *Lusset Glen Woodland* (beneath the Bridge);
- *The Saltings Woodland* (beneath the Bridge);
- *Boden Boo Woods* (beneath the Bridge);
- *Erskine Beach* (beneath the Bridge); and
- *Mar Hall Hotel, Golf and Spa Resort* (approximately 10m west of the Bridge).

Renfrewshire Council have three currently declared Air Quality Management Areas (AQMAs):

- *Renfrew Town Centre AQMA* located approximately 6.5km southeast of the Bridge and declared in 2016 for nitrogen dioxide (NO_2);
- *Paisley AQMA (Amended)* located approximately 7.3km south of the Bridge and declared in 2006 for NO_2 and particulate matter of a diameter less than 10 micrometres (PM_{10}); and
- *Johnstone High Street AQMA* located approximately 9.3km south and declared in 2016 for NO_2.

West Dunbartonshire Council does not have any currently declared AQMAs.

The Scottish Pollutant Release Inventory (SPRI) has identified the *Dalmuir Sewage Treatment Works* located along Beardmore Street, Clydebank located approximately 1.95km southeast of the Bridge. No other pollution facilities identified on the SPRI are located within 1km.

There are no real-time air quality monitoring stations (Air Quality in Scotland)

Cultural heritage

A desktop study using PastMap has been undertaken, where an asset has been listed more than once, its highest statutory designation has been recorded. This refers to designations including World Heritage Sites, Scheduled Monuments, Battlefields and Listed Buildings.

The following designated cultural heritage assets are located within 300m:

Listed Buildings

- *Erskine Bridge*, Category A (Ref: LB52482) (the Bridge);
- *Erskine Hospital Ferry Lodge,* by Erskine Ferry, Category B (Ref: LB12375) located approximately 285m southeast;
- *Two K8 Telephone Kiosks to East and West of Carriageway at South End of Erskine Bridge*, Category B (Ref: LB52515) located approximately 10m south of the Bridge's southern extent;
- *Old Secession Church*, Category B (Ref: LB14407) located approximately 20m north of the Bridge;
- *Lusset Road, Lusset House*, Category B (Ref: LB18987) located approximately 65m north of the Bridge; and
- *Two K8 Telephone Kiosks to North and South of Carriageway at Northeast End of Erskine Bridge,* Category B (Ref: LB52508) located approximately 20m north of the Bridge's northern extent.

Scheduled Monuments

- *Forth And Clyde Canal: Old Kilpatrick - Linnvale* (Ref: SM6778) located beneath the Bridge (northern extents), along the Forth and Clyde Canal.

World Heritage Sites

- *Antonine Wall World Heritage Site Buffer Zone* located approximately 300m north of the Bridge.

Conservation Areas

- *Lusset Road, Old Kilpatrick* located approximately 20m north.

Non-Designated Features

Historic Environment Records (HERs) and National Record of the Historic Environment (NRHE) provide local and national level information on Scotland's historic environment. There are approximately 20 records listed on the HER and NRHE located within 200m, however, none are located within the scheme extents. The closest is located approximately 60m west of the Bridge, *Archaeological Evaluation and Excavation: Mar Hall Golf Course, Erskine, Renfrewshire* Historic Environment Record (HER) (Ref: 3825).

Landscape and visual effects

Landscape

The Bridge spans a transitional landscape setting, with rural raised beach landscapes to the south and urban infrastructure and residential areas to the north. The southern extent is classed as Landscape Character Type (LCT) 197, *Raised Beach, Glasgow and Clyde Valley,* characterised by mudflats, hanging woodland, historic sites and expansive views. The Bridge's northern extent is classed as 'Urban'.

Scotland's Historic Land-Use Map identifies the surrounding land as designed landscape, rough grazing, industrial/commercial areas, urban areas and managed woodland.

The scheme is not located within any National Scenic Areas, National Parks, or other sites designated for their landscape character or quality.

Four areas of woodland, all classified as 'Long-established (of plantation origin)' under the Ancient Woodland Inventory (AWI) are located within the surrounding area:

- An unnamed area (ID: 27950) located approximately 50m south (NS 468727);
- *Boden Boo Plantation* (ID: 27962) located approximately 75m southeast (NS 459718);
- An unnamed area (ID: 27961) located approximately 245m southeast (NS 462718); and,
- An unnamed area (ID: 27959) located approximately 325m west (NS 452721).

Various trees designated under a Tree Preservation Order (TPO) are located beneath the Bridge, with some located within the woodland areas noted above. None of which are located within the Bridge extents. These TPOs include:

- TPO reference 02_5;
- TPO reference 02_4; and,
- TPO reference CDC12.

Visual

Given the predominantly urban setting of the Bridge's northern extent, a range of residential, community, commercial and industrial receptors have sensitive direct views of the Bridge. Similarly, recreational and residential areas within the southern scheme extent have direct sight of the Bridge, with the structure being a prominent feature within the existing landscape setting.

Biodiversity

Protected areas

The Bridge spans the Inner Clyde Estuary, an internationally important area for wintering birds. Two European designated biodiversity sites lie 40m beneath the Bridge along the northern and southern banks (Sitelink):

- *Inner Clyde Special Protection Area* (SPA) (NatureScot ID: 8514); and
- *Inner Clyde Ramsar* site (NatureScot ID: 8429).

Given the proximity of the works on the Bridge, an Appropriate Assessment (AA) has been undertaken as part of the Habitats Regulations Appraisal (HRA).

Noise surveys and watching briefs were undertaken by an acoustic specialist and qualified ecologist in November 2024 to support the marine licensing process and focused on the identification and level of disturbance of the proposed works affecting the integrity of the species. Disturbance 'flush' events were primarily linked to public activity (particularly dog walkers), rather than the ongoing construction works on the Bridge. It is therefore likely that the main disturbance to wading birds in this area is human interaction, which is anticipated to result in birds, favouring locations less accessible to the public as their primary foraging habitats.

In addition, the Inner Clyde is also a nationally designated site, *Inner Clyde Site of Special Scientific Interest* (SSSI) (NatureScot ID: 1701).

A site of local importance, *The Saltings Local Nature Reserve* (LNR) is located beneath the Bridge's northern extents and bounded by the River Clyde and Forth and Clyde Canal.

Please refer to the *Landscape and Visual Effects* section above for details on Ancient Woodland and TPOs.

Invasive plants

No Invasive Non-Native Species (INNS) or injurious weeds have been recorded within 500m of the Bridge by Transport Scotland's Asset Management Performance System (AMPS). However, NBN Atlas has identified the following INNS and injurious weeds within 500m, outwith the Bridge extents:

INNS:

- Himalayan balsam *(Impatiens glandulifera);*
- Japanese knotweed (*Fallopia japonica);* and,
- Rhododendron *(Rhododendron ponticum).*

Target Species:

- Rosebay willowherb *(Chamerion angustifolium);*
- Creeping thistle *(Cirsium arvense);* and,
- Curled dock *(Rumex crispus).*

Geology and soils

Geology

No sensitive geological receptor sites such as Geological Conservation Review Sites (GCRS) or SSSIs are located within 300m of the Bridge or the wider area that may be affected by works (Sitelink).

Bedrock geology at the northern and southern Bridge extents comprises igneous basaltic rock of the Strathgryfe Lava Member formed between 344.5 and 330.9 million years ago (Mya) during the Carboniferous period (BGS Geology Viewer).

Superficial deposits are sedimentary, dating from the Quaternary period (116 to 11.8 thousand years ago), comprising raised marine beach deposits of sand and gravel.

Soils

The southern Bridge extent is characterised by brown soils, while the northern extent has no recorded soil type, due to the urbanised nature of the surrounding environment (Scotland's Soils Map).

There is no evidence of historical industrial activity or hazardous material storage that could give rise to significant land contamination within the study area.

All works are contained to the existing structure, with no disturbance to geology or soils. As such, geology and soils have been scoped out of requiring further assessment in line with DMRB Guidance document LA 109: Geology and Soils.

Material assets and waste

The works package entails the ongoing maintenance of the Bridge. As such, a variety of materials will be required and different waste streams will be generated, depending on the specific activity undertaken.

Materials and wastes associated with the works include (but are not limited to):

External painting

- Materials: paint, thinner, solvents, blasting materials and steel.
- Wastes: paint and spent blasting material.

Nosing joint replacement and surfacing

- Materials: waterproofing material, bituminous surfacing materials (TS2010, binder/base), thermoplastic paint and road studs.
- Wastes: road planings, nosing joints, bollards, road markings and studs.

Cable re-tensioning

- Materials: N/A
- Wastes: obsolete cable re-tensioning equipment.

Inspection and servicing of access equipment

- Materials: gas products.
- Wastes: obsolete access equipment.

Trough to deck welds remedial works

- Materials: gas products.
- Wastes: Sanded materials (surface course, concrete, metals).

Carriageway resurfacing

- Materials: waterproofing material, bituminous surfacing materials (TS2010, binder/base), road marking materials and studs.
- Wastes: road planings, nosing joints, bollards, road markings and studs.

Concrete repairs

- Materials: siloxane water propellant material, concrete reinstatement materials and corrosion inhibiting sika ferrogard.
- Wastes: removed concrete and alkaline wastewater.

Dehumidification/fire protection

- Materials: metal paint products, cable shrouding materials and fire protection materials.
- Wastes: packaging and cable bands.

Internal electrical maintenance

- Materials: miscellaneous electrical equipment such as cameras and lighting.
- Wastes: obsolete electrical equipment and packaging.

General activities

- Materials: survey equipment and fixings, vehicle fuel and oil.
- Wastes: packaging and general construction debris.

Site Waste Management Plans (SWMPs) will be prepared for each individual scheme on Erskine Bridge, prior to the works which will detail how resource use and waste arising from the works will be managed throughout the scheme. This is required due to the schemes exceeding £350,000 in value and will help control and reduce the amount of waste produced, resulting in less landfilled waste.

Noise and vibration

The Bridge spans a transitional setting, with rural areas to the south, and more built-up, residential areas of Old Kirkpatrick to the north. Local noise levels are likely to be primarily influenced by vehicle traffic on the A898 and A82 carriageways, with secondary sources from local roads, rail, and residential and commercial/industrial activities within the surrounding areas of Erskine, Old Kilpatrick, Bishopton and Clydebank. For AADF details, refer to the *Air quality* section above.

Approximately 200 noise sensitive receptors (NSRs) are located within 300m of the Bridge including residential properties, religious, recreational and community facilities.

- *Old Kilpatrick Bowling Club* (approximately 60m north);
- *Kilpatrick Braes Park* (approximately 20m north);
- *St. Patrick's Roman Catholic Church* (approximately 10m north);
- *Lusset Glen Woodland* (beneath the Bridge);
- *The Saltings Woodland* (beneath the Bridge);
- *Boden Boo Woods* (beneath the Bridge);
- *Erskine Beach* (beneath the Bridge); and,
- *Mar Hall Hotel, Golf and Spa Resort* (approximately 10m west of the Bridge).

The closest constant NSRs are residential properties located directly beneath the Bridge along Dumbarton Road. NSRs located on Dumbarton Road, Glen Road, Lusset Glen, Dalnottar Terrace, Dalnottar Avenue, Lusset Road, Ashtree Crescent, Station Road and Mount Pleasant Drive (Old Kilpatrick) currently experience modelled day-evening-night noise levels (L_{den}) of 55 to 75dB from the A898 carriageway (the Bridge). Night noise levels (L_{night}) for the period 23:00-07:00 range from <50 to 65dB (Scotland's Noise Map).

The Bridge is located approximately 5km north of Glasgow International Airport which includes many flight paths.

The works are not located within a Candidate Noise Management Area (CNMA) or a Candidate Quiet Area (CQA) as defined by the Transportation Noise Action Plan (Road Maps) Transportation Noise Action Plan (TNAP).

Population and human health

There are over 200 sensitive receptors located within 500m, including residential receptors, community facilities (recreational and religious) and local businesses. For details on sensitive receptors, please refer to the *Noise and Vibration* section above.

Eight Core Paths are located within 500m of the Bridge:

Renfrewshire Council Core Paths:

- Core Path EI/2 is a shared use pedestrian walkway and cycle lane located on the Bridge;
- The Clyde walkway (EI/1 leading to EI/5) runs directly under the Bridge; and,
- Boden Boo Woods walking route (EI/6) is located approximately 95m south of the Bridge.

West Dunbartonshire Council Core Paths:

- Core Path 123 and 124 is a shared use pedestrian walkway and cycle lane located on the Bridge.
- Core Path 114 runs parallel to the River Clyde beneath the Bridge;
- Core Path 110 runs beneath the Bridge at the Forth and Clyde Canal;
- Core Path 127 runs along Lusset Glen and adjoins two other Core Paths 130 and 131 which adjoin to Core Path 127, and lead northward towards the Bridge; and,
- Core Path 129, which also adjoins Core Path 127 and runs east towards Great Western Road.

Whilst no bus stops exist along the Bridge extents, services 757 Paisley - Clydebank and X22 Greenock - Clydebank utilise the A898 carriageway along the Bridge. The A898 carriageway is street-lit on the Bridge and contains both northbound and southbound footways.

National Cycle Network route 7 travels beneath the Bridge parallel to the Forth and Clyde Canal. No laybys or crossover points are located on the Bridge.

Whilst no access roads exist within the Bridge extents, on and off-slip roads connecting the A898 carriageway to the A82 (Great Western Road) are present beyond the northern extent of the Bridge.

Road drainage and the water environment

Surface water

The Bridge spans the Clyde Estuary, Inner (ID: 200510), a statutory transitional waterbody designated under the Water Framework Directive (WFD). It exhibits a 'Moderate' ecological potential and 'Poor' water quality under SEPA's 2023 water classification data (SEPA Water Classification Hub).

This area of the Inner Clyde is located below Mean High Water Springs (MHWS), and as such, under the Marine (Scotland) Act 2010, a Marine Licence is required for the works. A 10-year Marine Licence was granted on the 18th December 2024 (MS-00010790).

Another statutory water body, the Forth and Clyde Canal (ID: 10710) flows beneath the Bridge's northern extents and exhibits 'Good' ecological potential.

Dalnottar Burn, a non-designated watercourse and tributary of the River Clyde flows west beneath the Bridge and into the River Clyde.

At present, drainage along the length of the Bridge is provided by gullies within the main span of the structure, draining down the main columns to outlets at the base of the Bridge's piers of which then drain into the River Clyde.

Groundwater

The southern Bridge extents are within the Erskine and Linwood Sand and Gravel groundwater body (ID: 150782) with an overall 'Good' WFD status. The northern Bridge extents are within the Clydebank Sand and Gravel groundwater body (ID:150775) classified with a 'Good' status.

The Bridge is not located within a Scottish Government Nitrate Vulnerable Zone (NVZ).

Flood risk

The scheme is not located within areas identified at risk of fluvial or pluvial flooding (SEPA's Flood Map), or within a 2028-2034 potentially vulnerable area (PVA) (Potentially Vulnerable Areas (PVAs) 2028-2034).

The Clyde Estuary is identified as having a high (10%) likelihood of coastal water flooding annually. Forth and Clyde Canal and Dalnottar Burn are both identified at a high risk of pluvial flooding each year (SEPA Flood Maps).

Climate

Carbon Goals

The Climate Change (Scotland) Act 2009, as amended by the Scottish Carbon Budgets Amendment Regulations 2025 sets out the statutory framework for reducing greenhouse gas (GHG) emissions in Scotland. The prior annual and interim targets have been replaced by five-year carbon budgets, which sets limits on the amount of GHGs that can be emitted in Scotland.

The proposed carbon budgets are aligned with advice from the UK Climate Change Committee (CCC) and calculated in accordance with the 2009 Act. The 2025 Regulations define the baseline years for emissions reductions as 1990 for greenhouse gases including carbon dioxide, methane, and nitrous oxide, and 1995 for others such as hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride (as set out in Section 11 of the Act). The budgets are as follows:

- 2026 - 2030: Average emissions to be 57% lower than baseline.
- 2031 - 2035: Average emissions to be 69% lower than baseline.
- 2036 - 2040: Average emissions to be 80% lower than baseline
- 2041 - 2045: Average emissions to be 94% lower than baseline.

These budgets are legally binding and will be supported by a new Climate Change Plan, which will outline the specific policies and actions required to meet the targets.

Transport Scotland remains 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, and Transport Scotland 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.

Policies and Plans

This Record of Determination (RoD) has been undertaken in accordance with Roads (Scotland) Act 1984 (Environmental Impact Assessment) Regulations 2017 (RSA EIA Regulations) along with Transport Scotland's Environmental Impact Assessment Guidance (Guidance – Environmental Impact Assessments for road projects (transport.gov.scot)). Relevant guidance, policies and plans accompanied with the Design Manual for Roads and Bridges (Design Manual for Roads and Bridges (DMRB)) LA 101 and LA 104 were used to form this assessment.

Description of main environmental impacts and proposed mitigation

Air quality

Construction activities associated with the various works on the Bridge may temporarily impact local air quality surrounding the Bridge for the period of the works. Activities such as carriageway resurfacing, nosing joint repairs and concrete repairs may emit dust and particulate matter emissions. Increased HGV and construction plant presence may also contribute to short-term emissions. TM will likely cause congestion and elevated traffic-related emissions during the works.

However, there are no changes to traffic flow characteristics post-construction (composition, speed or flows) and any air quality impacts will be short-term.

Mitigation measures will follow best practice guidance from the Institute of Air Quality Management (IAQM), from the 'assessment of dust from demolition and construction (January 2024)' including:

- Materials that have a potential to produce dust will be removed from site as soon as possible, unless being re-used on site (cover or fence stockpiles to prevent wind whipping);
- Cutting, grinding or sawing equipment will be fitted or used in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems;
- Drop heights from conveyors and other loading or handling equipment will be minimised;
- Vehicles entering and leaving the work area will be covered/sheeted to prevent escape of materials during transport;
- Equipment will be readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods;
- Surfaces will be swept where loose material remains, for example following planing; and
- Containment measures such as scaffolding and sheeting will be in place to contain debris and dust during the external painting works.

The following additional mitigation measures will be implemented:

- When not in use, plant and vehicles will be switched off and there will be no idling vehicles.

- All plant and fuel-requiring equipment used during construction will be well maintained to minimise emissions.

No significant air quality impacts are anticipated and therefore in accordance with DMRB Guidance document LA 105: Air Quality no further assessment is required.

Cultural heritage

The Bridge is a Category A Listed Building, with the works therefore having potential impacts with regard to this designation. The works, however, are required to ensure the long-term viability and structural integrity of the Bridge and therefore protecting and maintaining a statutory heritage asset.

As works consist largely of maintenance and like-for-like replacements with no anticipated visual, or character changes to the Bridge, no significant adverse impacts are anticipated due to the works.

There is no anticipated impact to the Scheduled Monument, Conservation Area or World Heritage Site located within 300m as the works are contained to the existing footprint of the Bridge. Furthermore, the Bridge stands a prominent feature in the landscape, and thus the works are not anticipated to introduce significant visual impacts or impact views to or from the identified designated heritage features.

The potential for exposure of undiscovered cultural heritage features is not anticipated as construction of the Bridge is likely to have removed any archaeological finds that may have been present, and with works contained to the existing structure, there are no anticipated impacts upon the identified cultural heritage features within the surrounding study area.

The following mitigation measures will be in place:

- As part of the marine licensing process, initial consultations with Historic Environment Scotland (HES), Renfrewshire Council and West Dunbartonshire Council were undertaken. HES had no comments to make, while the relevant local authorities were content that listed building consent would not be required due to the works operating on a generally like-for-like basis. Further consultations will be undertaken on a scheme-by-scheme basis prior to works activities if there is to be a change to the character or appearance of the Bridge, which may give further consideration to the requirement for appropriate consents.
- All site operatives will be informed of the historical value of the Bridge, and its designated status.

No significant effects are anticipated to cultural heritage. Therefore, in line with DMRB Guidance document LA 106: Cultural Heritage Assessment, no further assessment is required.

Landscape and visual effects

Due to the setting of the Bridge, a number of residential, community, commercial and industrial and recreational receptors have a direct sight of the Bridge. Temporary adverse impacts on visual receptors are anticipated during the construction phase(s) of the works due to the presence of plant, machinery, TM and vehicles. This is particularly relevant where external painting works are being undertaken, and a visual operative presence is prolonged upon the Bridge. However, the Bridge itself is a prominent and distinctive landscape feature along the Clyde corridor, with works forming part of the existing character of the wider setting.

Upon completion of each works activity, no residual landscape or visual impacts are anticipated, as works are restricted to the already engineered structure, with only minor changes, such as an improved road surface being the only discernible change.

The following mitigation measure will be in place during works:

- Throughout all works phases, the site will be kept clean and tidy, with materials, equipment, plant and wastes appropriately stored, reducing the landscape and visual effects as much as possible.

With the above mitigation measures in place, no significant effects are anticipated upon landscape and visual effects associated with the works will not be significant. Therefore, in accordance with DMRB Guidance document LA 107: Landscape and Visual Effects no further assessment is required.

Biodiversity

The works, although confined to the existing structure and not extending into the surrounding landscape, may have potential impacts on the sensitive biodiversity and designated sites within the surrounding area, namely the Inner Clyde SPA, Ramsar site and SSSI. Potential disturbances, such as noise, vibration, and lighting, could disrupt bird species' behaviour, particularly during sensitive wintering periods.

The Bridge spans an area of the Inner Clyde below MHWS and as such, under the Marine (Scotland) Act 2010, a Marine Licence is required for the works. A 10-year Marine Licence was granted on the 18th of December 2024 (MS-00010790).

Following the statutory consultation process, Marine Directorate has undertaken an Appropriate Assessment (AA) due to the potential for the works to have a likely significant effect on the qualifying interest of the sensitive areas located directly beneath the Bridge and works.

This AA concludes that providing the below condition is adhered to, there will be no adverse effect on the qualifying interest of the Inner Clyde SPA, either in isolation or in combination with other projects. This condition, as detailed within the granted Marine Licence is that the licensee must ensure that no lancing activities, which form part of the construction and maintenance works are carried out between mid-September and mid-March. To ensure this condition is being adhered to, regular scheduled programme meetings between Amey's Environmental Team and the scheme managers are undertaken.

Pollution prevention controls will be implemented as standard to minimise the risk of pollution to watercourses, regardless of European designations. Please see *Road Drainage and the Water Environment* section below for details.

INNS have been identified within 500m, beneath the Bridge in the surrounding landscape, however as works are contained on the structure, there is no permanent (or temporary) land-take, and there is no requirement to import topsoil, there is limited potential to introduce or spread such species.

The following mitigation measures will be in place:

- Site operatives will be made aware of the sensitivity of the Inner Clyde SPA, Ramsar site and SSSI prior to any construction activities.
- Where night-time or winter working is required, directional lighting will be used for all construction activities and aimed away from sensitive ecological receptors including trees and wooded areas at the Bridge's northern and southern extents.
- In the unlikely event a protected species is encountered on site, works will be temporarily halted until the animal has moved on, or until Amey's Environmental Team can provide advice.
- A 'soft start' will be implemented on site during construction activities. This involves switching on plant/vehicles sequentially as opposed to simultaneously, to ensure a gradual increase in noise for minimal disturbance for surrounding biodiversity and protected species.

With best practice mitigation measures in place, no significant effects are predicted for biodiversity. Therefore, in accordance with DMRB Guidance document LA 108: Biodiversity no further assessment is required.

Material assets and waste

Minimising impacts arising from construction materials are focussed upon making the most efficient use of materials on site to reduce the need for imported primary materials and minimise the creation and disposal of waste through reduction, re-use, and recycling.

There is potential for impacts as a result of resource depletion through use and transportation of new materials, for example aggregates. However, recycled, secondary or re-used materials will be used and sourced locally as far as is practicable within design specifications. For example, the binder and base courses used for resurfacing will contain a percentage of recycled material.

Potential impacts related to pollution from materials and waste may result if these are not appropriately managed during construction. Therefore, the following regulatory requirements will be adhered to:

- A SWMP will be prepared prior to the works which will detail how resource use and waste will be managed. This will help control and reduce the amount of waste produced, resulting in less landfilled waste.
- The Contractor is responsible for the management and disposal of road planings arising from the works. All waste will be managed in accordance with the Environmental Authorisations (Scotland) Regulations 2025, under the relevant SEPA waste authorisation for recovery, reuse or disposal. For example, road planings will be prioritised for recovery or reuse, through recycling into new asphalt, in line with the waste hierarchy. Landfill disposal will only be considered where recovery or reuse options are not practicable.
- Any hazardous wastes will be treated as special wastes and be transported by a suitably licenced contractor and will be accompanied by a correctly completed special waste consignment note (SWCN) providing information about the waste source, hazardous properties and disposal/treatment facility. Special waste will be segregated from general waste and other recyclables.
- Waste will be transferred to SEPA-authorised facilities by carriers with valid waste carrier registration. A waste transfer note (WTN) will be completed for removal of waste from site and retained for two years, in line with statutory Duty of Care requirements.
- All electrical waste, such as that produced during internal electric maintenance works will be disposed of in accordance with the Electrical and Electronic Equipment (WEEE) Regulations.

The following mitigation measures will be implemented:

- Waste will be stored in suitable, covered containers, and segregated at the source where possible.
- The waste hierarchy (Reduce, Reuse, Recycle and Dispose) will be employed throughout the construction works.
- Good materials management methods (e.g., ‘just-in-time’ delivery) will be used to minimise and prevent the disposal of unused materials.
- Containment measures will be in place to prevent debris or pollutants from entering the surrounding environment.

With best practice mitigation measures in place, no significant effects are predicted for Material Assets and Waste. Therefore, in accordance with DMRB Guidance document LA 110: Material Assets and Waste, no further assessment is required.

Noise and vibration

Construction activities associated with the works have the potential to cause noise and vibration impacts through the use of equipment and construction vehicles for the proposed activities. This will likely impact NSRs beneath and surrounding the Bridge, in particular where noise-heavy works such as blasting are required. Noisy construction activities also have the potential to disturb bird populations of the SPA and Ramsar site located on the riverbanks beneath the Bridge. Please see *Biodiversity* section above for more details.

Noise surveys were conducted in November 2024 in accordance with British Standard (BS) *7445-1: 2009 +A1: 2014 Description and measurement of environmental noise. Part 1: Guide to quantities and procedures* to obtain baseline data and noise levels anticipated during the blasting activities. These were undertaken with watching briefs to support the marine licensing process and focused on the identification and level of disturbance of the proposed works affecting the integrity of the sites.

Work activities will be undertaken during both day and night-time working programmes; however contractual agreements are currently in place regarding noise heavy works such as that required for the external painting contract. This includes the following measures:

- The Best Practicable Means, as defined in Section 72 of the Control of Pollution Act 1974, will be employed at all times to reduce noise to a minimum.
- The Contractor is responsible for adhering to restrictions as documented by the specification of the contract - Appendix 1/9: Noise and Vibration.
- All vehicles and mechanical plant used for the purpose of the works will be fitted with effective exhaust silencers which will be maintained in good and efficient working order.
- Sources of significant noise will be enclosed with acoustic screening. If compressors are used, they will be sound reduced models fitted with properly lined and sealed acoustic covers which will be kept closed whenever the machines are in use and all ancillary pneumatic percussive tools will be fitted with mufflers or silencers of the type recommended by the manufacturers.
- All machines in intermittent use will be shut down in the intervening periods between work or throttled down to a minimum.
- Items of plant will be maintained in good and condition so that extraneous noises from mechanical vibration, creaking and squeaking will be reduced to a minimum.

- Plant, equipment and processes developed for and/or used in the execution of the works will produce the minimum noise commensurate with their required functions.
- Static machines will be sited as far away as practicable from inhabited buildings.
- All materials and equipment will at all times be so handled as to minimise noise due to impact.
- Operatives will receive training to effectively employ techniques to reduce noise.

The Bridge is not located within a CNMA or CQA. Although there are residential receptors in close proximity, and beneath the Bridge and works area, it is expected that the proximity of the Bridge, and railway line to the north suggests that residents within the local area will have a degree of tolerance to noise and disturbance. Following the completion of the works, replaced bridge joints and road surfacing will reduce the noise and vibration currently produced by passing vehicles over the A898 carriageway.

The following additional mitigation measures will be in place:

- When there is a requirement for night-time working, NSRs within 300m, and the relevant local authorities will be notified ahead of works activities on the Bridge. Pre-notification will include details of proposed timings, works duration and a contact number.
- Rubber linings will be used in, for example, chutes and dumpers to reduce impact noise.
- A ‘soft start’ to works will be in place, whereby plant/machinery/vehicles are started sequentially as opposed to simultaneously.
- A condition as part of the granted marine licence (MS-00010790) is that the licensee must ensure that no lancing activities, which form part of the construction and maintenance works are carried out between mid-September and mid-March.

With best practice mitigation measures in place, no significant effects are predicted for noise and vibration. Therefore, in accordance with DMRB Guidance document LA 111: Noise and Vibration and no further assessment is required.

Population and human health

During construction, activities undertaken on site may have temporary adverse impacts on local residents and vehicle travellers as a result of construction presence, and associated noise, and delays where TM will be required for individual work activities. There is potential for temporary adverse impacts on the shared use path (Core Path EI/2) that crosses the Bridge as it may be required to be temporarily closed for specific suites of works. Bus services utilising the Bridge may experience

delays during construction periods. No impacts are anticipated on National Cycle Route 7.

The following mitigation measures will be in place:

- Through access will be maintained at all times on one of the dedicated paths which run along the northbound and southbound sides of the Bridge and accommodate the Core Path EI/2. If access must be restricted, appropriate signage will be in place, at either end of the bridge, to direct travellers along the shared use path on the other side of the Bridge.
- Appropriate signage and site safety features will be installed with advance notice given to the local communities affected.
- TM arrangements will be advertised on approach and ahead of each works activity commencing.
- Non-essential lighting will be switched off at night to minimise visual disturbance to receptors surrounding the Bridge.
- Appropriate health and safety measures will be considered when working upon the bridge deck to avoid any debris falling on the residential properties, amenity grounds and ecological receptors located below the Bridge.

With best practice mitigation measures in place, no significant effects on population and human health are predicted. Therefore, in accordance with DMRB Guidance document LA 112: Population and Human Health, no further assessment is required.

Road drainage and the water environment

During the various work activities, there is potential for temporary impacts on the water environment. Potential changes in water quality from pollution events (either by accidental spillage of fuels or waste material or by mobilisation of these in drainage systems and surface water) during the works could have a direct or indirect effect on the surrounding water environment, in particular the Inner Clyde Estuary and The Forth and Clyde Canal.

This may include paint and dust particles produced from external painting works, however, full containment will be in place for the blasting works to control and capture all debris, dust, and particles generated.

The Bridge spans an area of the Inner Clyde below MHWS as such, under the Marine (Scotland) Act 2010, a Marine Licence is required for the works. A 10-year Marine Licence was granted on the 18th of December 2024 (MS-00010790). Conditions within the licence will be adhered to, with any deviations from the method statement communicated to Amey's Environmental Team to determine the requirement for a licence variation.

The following mitigation measures will be implemented:

- To prevent pollution to surface watercourses, there will be appropriate containment and disposal of painting works waste and dust. Please see *Material Assets and Waste* section for regulatory requirements regarding waste disposal.
- All operatives will be aware of SEPA's Guidance for Pollution Prevention (GPP) documents.
- The Contractor will implement measures to minimise the risk of debris, dust, sediment, and accidental spillages entering the road drainage system. This can be via the use of drain covers or similar to ensure full segregation of the works from the road drainage system.
- 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 both during and following the works.
- All site operatives will be made aware of site spillage response procedures and in the event of a spill all works associated with the spill will stop, and the incident reported. Spill kits will also be available within all site vehicles and spill kits will be replenished onsite when required.
- The Amey control room will be contacted if any pollution incidences occur (24 hours, 7 days a week).
- In the event of a pollution incident, SEPA will be notified without delay.
- Weather reports will be monitored prior to and during the works with all construction activities temporarily halting in the event of adverse weather or a flooding event. The works will only continue when it is deemed safe to do so and runoff/ drainage can be adequately controlled to prevent pollution.
- All storage areas (fuels, machinery, plant, materials) where required will be located/stored:
    - Away (>10m) from watercourses and surface water drainage systems;
    - Away from areas that see high vehicular movement (as far as reasonably practicable) to prevent damage by collision or extremes of weather;
- Fuels stored within a drip tray, bund or other form of secondary containment with at least 110% of the maximum volume of a single container.
- Where the mixing of concrete on site is required, site operatives will apply suitable controls to prevent the mixture escaping to the surrounding environment:
    - All mixing will take place a minimum of 10m away from watercourses and drains.
    - All drains within proximity to any mixing will be securely covered or sealed off.
    - No washout from concrete mixing will be allowed to enter the water environment and will be taken off site for appropriate treatment.

With the above mitigation measures in place, no significant water environment impacts are anticipated. Therefore, in accordance with DMRB Guidance document

LA 113: Road drainage and the water environment no further assessment is required.

Climate

Construction activities associated with the works have the potential to cause local air quality impacts as a result of the emission of greenhouse gases (GHGs) through the use of vehicles and machinery, material use and production, and transportation of materials to and from site. However, by undertaking the works the lifespan of the Bridge is increased. This promotes 'Build Less' principles outlined within the carbon reduction hierarchy. Furthermore, the execution of timely routine maintenance and repairs to the structure aims to reduce the number of future maintenance interventions and hence this leads to an overall reduction in traffic disruption, construction and material-related carbon emissions.

The following mitigation measures will be in place:

- Where possible, materials and suppliers will be sourced locally to reduce GHG emissions associated with travel distance, materials movement, and waste will be disposed at a local waste management facility.
- Further actions, considerations and regulatory requirements for this scheme are detailed in the above *Material Assets and Waste* section.

With best practice mitigation measures in place, no significant impacts are anticipated on Climate. Therefore, in accordance with DMRB Guidance document LA 114: Climate, no further assessment is required.

Vulnerability of the project to risks

The Bridge is not identified at risk of surface water flooding and there will be no change to the likelihood of flooding on the Bridge as a result of the various works activities. Where cycleway/footway closure is required as part of the works, at least one cycleway/footway will remain open to pedestrians and cyclists throughout the duration of the works.

Works are contained to the existing structure and thus 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.

Improvement of the road surface following carriageway resurfacing works will enhance skid resistance, and thus overall road safety on completion of the scheme.

TM will be designed in line with existing guidance for each suite of work.

Considering the above, the vulnerability of the project to risks of major accidents and disasters is considered to be low.

Assessment cumulative effects

The works are not anticipated to result in significant environmental effects. Due to the nature of the works, no cumulative effects are anticipated with any other developments in the vicinity.

The West Dunbartonshire and Renfrewshire Council Planning Portals have not identified any extant planning applications within the Bridge surroundings that would result in significant cumulative effects.

The Scottish Road Works Commissioner's Interactive Map has not highlighted any works programmed to occur on the surrounding carriageways in close proximity to the Bridge.

Assessments of the environmental effects

The works on Erskine Bridge, as detailed within this RoD are covered within a 10-year Marine Licence (MS-00010790), as granted on the 18th December 2024. A part of the licensing and statutory consultation process, Marine Directorate has undertaken an AA due to the potential for the works to have a likely significant effect on the qualifying interest of the sensitive areas located directly beneath the Bridge and works area. This AA concluded that providing the below condition is adhered to, there will be no adverse effect on the qualifying interest of the Inner Clyde SPA, either in isolation or in combination with other projects. This condition, as detailed within the granted Marine Licence is that the licensee must ensure that no lancing activities, which form part of the construction and maintenance works are carried out between mid-September and mid-March.

An Environmental Scoping Assessment has been undertaken for these works by Amey's Environmental Team in December 2025.

As detailed in the Description of Main Environmental Impacts and Proposed Mitigation section within this Record of Determination, there are no significant effects anticipated on any environmental receptors as a result of the works.

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, and are situated in whole or in part in the Inner Clyde Ramsar and SPA which are sensitive areas within the meaning of regulation 2(1) of the Environmental Impact Assessment (Scotland) Regulations 1999.

The projects have 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:

- All works are restricted to the existing structure of Erskine Bridge.
- The works seek to maintain the structural integrity of the Bridge and improve its safety to prevent future deterioration of the structure. Thus, minimising the extent of future works required to the Bridge.
- Any potential impacts of the works are expected to be temporary, short-term, not significant and limited to the construction phase.
- No in-combination effects have been identified.
- The risk of major accidents or disasters is considered to be low.

Location of the scheme:

- The works are taking place above the Inner Clyde Ramsar, SPA and SSSI. An AA has been undertaken for the works.

- The Bridge is recorded as a 'Category A' listed building. As the works will not result in any material or significant visual changes to the structure and as such Listed Building consent is therefore not required prior to works commencing.
- Land use will not change as a result of the works.
- The works do not require any private land acquisition.
- The scheme does not lie within any sites designated for geology or soils.

Characteristics of potential impacts of the scheme:

- The waste hierarchy will be followed to reduce waste to landfill. Measures will also be in place to ensure appropriate removal and disposal of waste.
- Any potential impacts to walkers or cyclists will be temporary, short-term, and limited to the duration of each works activity.
- 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.
- No impacts on the environment are expected during the operational phase as a result of the works.

References of supporting documentation

- An Appropriate Assessment undertaken carried out by Marine Directorate in December 2024 to support a renewed 10-year Marine Licence Application.
- Marine Licence (MS-00010790) granted and issued by Marine Directorate on 18th December 2024 and valid until 18th December 2034. This process included consultations with statutory bodies, such as NatureScot.
- A yearly Environmental Scoping Assessment carried out by the Amey Environment Team in March 2024 to support a renewed 10-year Marine Licence Application.
- Noise Survey and Watching Brief carried out by the Amey Environment Team in December 2024 to support a renewed 10-year Marine Licence Application.

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.

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