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Environmental Impact Assessment Record of Determination

A9 1900 C88 Lochend – Scour repairs

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Project Details

Description

BEAR Scotland has been commissioned by Transport Scotland to carry out scour repair works and bridge maintenance works at the A9 1900 C88 Lochend bridge on the A9 carriageway, near Loch Rangag, approximately 7km north of Latheron. The bridge is a box culvert structure with parapets, wingwalls and training walls.

The scheme will involve the following works:

- Establishment of laydown area and access arrangements
- Set-up of dry working area
- Fill scour hole with mass concrete
- Re-point upstream training walls
- Install flap valves over drainage outfalls upstream
- Excavate vegetated bar in upstream bed of watercourse
- Take down and re-build downstream parapet and wing walls
- Install coir geotextiles and pin on downstream right-hand bank
- Install rip-rap rock armour to protect downstream right-hand bank
- Removal of dry working area and site demobilisation.

Repairs are required on the structure to rectify scour damage and ensure that the bridge is structurally safe for road users. Scour repairs and bank reinforcement will prevent further undermining of the structure and reduce the risk of future scour damage. The accumulated vegetation will be removed to allow better flow of water in the existing streambed and prevent erosion of the watercourse banks.

In-stream works will be carried out in a temporary dry working area and are required to complete scour repairs, which are currently scheduled to be completed by 30th September to avoid the main breeding bird season as well as the most sensitive period for freshwater fish.

As the works are focussed on the structure, the scheme covers an area less than 1ha over a length of approximately 10m. Traffic management (TM), if required, will be set up prior to any works starting and removed once the works are completed. It is envisaged that this will be a single lane closure with temporary traffic lights. The works are currently programmed to be completed within the 2023/2024 financial year (April 2023 to March 2024 inclusive). Works are expected to be completed over 2-3 weeks, operating between the hours of 07:30 and 17:30. If the programme changes, this may result in amendments to the exact TM requirements and working hours.

Location

The works are located on the A9 carriageway towards Thurso, and 7km north of Latheron, within the Highland Council area (Figure 1). The bridge centre point is located at the following approximate National Grid Reference: ND 18219 40885.



Figure 1. Location and scheme extent of the proposed resurfacing works at A9 1900 C88 Lochend. Source: BEAR Scotland. F108 – Environmental Assessment Request (Scheme ref: 19/NW/1201/004).

Description of local environment

Air quality

The scheme does not fall within any Air Quality Management Areas (AQMA) (<u>Air</u> <u>Quality Scotland</u>) and no Air Quality Monitoring Stations are located in the vicinity of works (<u>Air Quality Scotland</u>). The nearest air quality monitoring station is located in Inverness, approximately 108km southwest of the scheme (<u>Air Quality Scotland</u>). Pollution levels in the general vicinity of works are anticipated to be lower than those at the monitoring station in Inverness due to the remote nature of the scheme location. Baseline air quality at the scheme location is likely to be primarily influenced by traffic along the A9 trunk road.

No sites are registered on the Scottish Pollutant Release Inventory (SPRI) (<u>Scotland's Environment</u>) for air pollutant releases within 1km proximity of the scheme.

Average Annual Daily Flow (AADF) was estimated for the nearest traffic count point on the A9 carriageway, which is located approximately 2km north of the scheme, in 2021, and accounted for 882 vehicles, of which 16% were heavy goods vehicles (HGV) (<u>Road Traffic Statistics</u>).

Cultural heritage

A desktop study using PastMap (<u>PastMap</u>) identified that two features listed on the Historic Environment Records (HERs) database are located within 300m of the scheme extents. The nearest is for a clearance cairn, which lies 35m west of the scheme and as such, it is set back from the trunk road and working area.

All works are restricted to the bridge structure and therefore the works do not include any alterations that would affect the historic and architectural character of the abovementioned features.

There are no World Heritage Sites, Scheduled Monuments, Listed Buildings, Canmore features, Conservation Areas, Garden and Designed Landscapes or Inventory Battlefields identified within 300m of the scheme.

Construction of the A9 road corridor, at the Lochend structure, is likely to have encountered and removed any archaeological remains that may have been present within the existing footprint. Though works will include excavation of a vegetated bar, this will comprise of accumulated sediment and grass within immediate upstream habitat only, located adjacent to the existing training wall. As this accumulated material is considered to be mainly sedimentary deposits transported by the stream, it is unlikely to include features of cultural heritage interest. Similarly, installation of downstream bank reinforcement requires localised soil excavations within a 4m stretch of an area of bank erosion. However, these excavations are of small scale and will take place on the riverbank (under relevant guidance and consents issued by the Scottish Environmental Protection Agency (SEPA)) in soils that are also likely to be comprised of accumulated sediment. These areas are also adjacent to the existing made ground of the A9 trunk road, which has likely affected the composition of the riparian soils. Therefore, the risk of encountering features of cultural heritage value has been assessed to be negligible. The works are not expected to result in direct or indirect impacts to features of cultural heritage importance.

As such, the impact has been assessed as being 'no change' and has been scoped out of requiring further assessment.

Landscape and visual effects

The scheme does not fall within a National Park (NP) or National Scenic Area (NSA) (<u>Sitelink</u>).

The Landscape Character Type (LCT) at the scheme extent is categorized as 'Sweeping Moorland and Flows' (no. 134) (<u>Scottish Landscape Character Types</u>), which is characterised by:

- Gently sloping or undulating landform which lies generally below 350 metres.
- Occasional isolated hills of limited height form local landmark features.
- Lochs and mature, meandering rivers.
- Very distinct flora, dominated by sphagnum mosses, produced by the wetness and infertility of the flows.
- Areas of peat cuttings and hagging.
- Pockets of improved grazing, mainly within the outer fringes of sweeping moorland.
- Coniferous forest forming a dominant characteristic within some parts of this landscape character type.
- Ribbons of broadleaf woodland occasionally run along the watercourses and loch edges.
- Very sparsely settled with dispersed crofts, farms and estate buildings largely found on the outer edges of this landscape or near a strath.
- Vehicular tracks within parts of the landscape.
- Wind farms, transmission lines, the A9 and a network of minor roads are key features within the more modified outer fringes within Caithness.
- Long, low and largely uninterrupted skylines offering extensive views across this landscape and result in a feeling of huge space.
- Consistent views to the distant Lone Mountains and Rugged Mountain Massif

 Caithness & Sutherland.
- Great sense of exposure on areas of flat peatland on upland plateau.
- A strong sense of remoteness is associated within the largely uninhabited, inaccessible core flows and moorlands of this landscape.

Historic Environment Scotland's HLAMap (<u>HLAMap</u>) has highlighted the surrounding landscape to consist of a combination of rough grazing and traditional peat cutting with a freshwater area covering Loch Rangag. The area north of the scheme is classified as smallholdings including a nearby residential property. The scheme location and the habitat in its immediate vicinity have not been classified, however, rough grassland, heath and pasture have been noted during site visits. The A9 carriageway forms an engineered linear corridor in the landscape.

Biodiversity

A desktop study using NatureScot's SiteLink (<u>SiteLink</u>) has noted that the scheme lies near a number of sensitive areas, which are all located approximately 185m west and overlap each other, including:

- Caithness and Sutherland Peatlands Special Protection Area (SPA)
- Caithness and Sutherland Peatlands Special Area of Conservation (SAC)
- Caithness and Sutherland Peatlands Ramsar site, with the following features
- Coire na Beinne Mires Site of Special Scientific Interest (SSSI)

Consultation with NatureScot was carried out in 2019 and 2023 and a Habitats Regulations Appraisal (HRA) was completed in line with NatureScot's advice to assess potential impacts of the proposed works on the above designated sites.

The NBN Atlas (<u>NBN Atlas</u>) has records of a number of bird species within 2km over a 10-year period.

The NBN Atlas (<u>NBN Atlas</u>) holds no records of invasive non-native species (INNS) of plants, as listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (WCA), injurious weeds, as listed under the Weeds Act 1959, or invasive native perennials, as listed in the Trunk Road Inventory Manual:

Transport Scotland's Asset Management Performance System (AMPS) noted no records of INNS or injurious weeds within 300m of the scheme.

No areas of woodland listed as Ancient (of semi-natural origin) on the Ancient Woodland Inventory (AWI) (<u>Scotland's environment</u>) were identified within 300m of the works.

Habitats in the surrounding area are dominated by temperate shrub heathland and blanket bog which are typically quite wet, and with a lack of tree cover, are less suitable for protected mammal species. Loch Rangag is located approximately 250m northwest of the scheme and provides some freshwater habitats in the area (<u>Scotland's Environment</u>).

A Preliminary Ecological Appraisal (PEA) carried out by BEAR Scotland in 2019 did not record any signs of protected species, apart from a bird nest under the bridge.

The most recent PEA and Preliminary Roost Assessment (PRA) at A9 Lochend Bridge were carried out in November 2022.

Nesting bird checks will be carried out prior to works and pre-construction surveys will be undertaken. If required, protected species licences will be sought to permit works and all conditions will be adhered to.

Geology and soils

The scheme does not lie within 300m of a Geological Conservation Review Site (GCRS) or a geological SSSI (<u>SiteLink</u>).

Bedrock within the scheme extents is comprised of the Berriedale Sandstone Formation (Siltstone, mudstone and sandstone), which is a sedimentary bedrock (<u>BGS Geology Viewer</u>).

Information about superficial deposits is not available at the scheme location, but the nearest superficial deposits are comprised of peat which are sedimentary deposits (<u>BGS Geology Viewer</u>).

Soils within the scheme extent are recorded as peaty-gleyed podzols (<u>Scotland's</u> <u>Soils</u>).

Material assets and waste

Please note that this list is not comprehensive at this stage but will likely consist of:

- Concrete
- Lime mortar
- Steel reinforcement
- Rip-rap rock armour
- Woven coire geotextile
- Masonry material (with stones similar to those found in structure).

Additional materials will be used temporarily during the works and removed upon completion of the scheme, such as sandbags or tonne bags to establish the dry working area.

Waste materials will consist of excavated material and vegetation, old mortar and concrete, and damaged stonework removed from the parapet and training wall. Some materials will be reused on site where possible, including undamaged stonework. Otherwise, waste materials will be contained and removed off site to a licensed facility. A Site Waste Management Plan (SWMP) is not required.

Noise and vibration

The works are located in a rural setting with open habitat in the surrounding area.

There is a single residential receptor located approximately 110m north of the scheme. It is provided with limited screening from the works by a short line of conifer trees, which provides some visual and noise barrier.

The works do not fall within a Candidate Noise Management Area (CNMA) as defined by the Transportation Noise Action Plan (<u>TNAP</u>).

There is no noise modelled data available for the scheme extent (<u>Scotland's Noise</u>). However, given the rural nature of the area and the low AADT flow, it is considered likely that noise levels will be low, with noise mainly influenced by vehicles travelling along the trunk road.

Population and human health

There is one residential property located within 300m of the scheme, which is located approximately 110m north of the scheme and is afforded limited screening from the works by a coniferous tree line.

There are no National Cycle Network (NCN) routes (<u>OS Maps</u>), core paths (<u>Scotland's Environment</u>) or walking routes as listed on WalkHighlands (<u>Walkhighlands</u>) within the scheme extents. There are also no paved footpaths, bus stops, or other pedestrian facilities along the A9 within the scheme extent. One layby is located along the northbound carriage, approximately 80m south of the scheme.

If required, TM will likely consist of daytime single lane closures with temporary traffic lights. Full road closure is not expected and access to properties will be maintained.

The A9 Trunk Road, within the North West NMC, connects Perth with Thurso. It commences immediately north of Inveralmond Roundabout in Perth leading generally northwards for a distance of 357 kilometres to its junction with an unclassified road leading to Holborn Head lighthouse at Scrabster. The A9 is a mixture of single carriageway, '2+1' carriageway and stretches of two-lane dual carriageway. The A9 north of Inverness is a single carriageway trunk road and is a key route to the far north of Scotland.

The area is likely to attract a number of outdoor recreationists and tourists travelling around the north of Scotland, especially during the summer months.

Road drainage and the water environment

There are no waterbodies classified by SEPA under the Water Framework Directive 2000/60/EC (WFD) spanned or culverted beneath the A9 within the scheme extent. However, the Burn of Lochend watercourse is culverted beneath the A9 at the

scheme location and also appears on the 1:50k Ordnance Survey map. The watercourse is considered to be a minor tributary and discharges into Loch Rangag. Multiple other unclassified burns are located around the scheme extent (<u>SEPA water</u> environmental hub).

The scheme falls within the 'Caithness' groundwater body, which was classified by SEPA in 2020 as having 'Good' overall condition (<u>SEPA water environmental hub</u>).

Consultation with SEPA, which was most recently carried out in April 2023, has determined that part of the works, including installing rock armour and rebuilding downstream wingwalls, will require an Activity O Grey Bank reinforcement Registration level of authorisation to comply with The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR) whereas other parts of the works will be permitted under SEPA's General Binding Rules (GBRs). The CAR registration is in place (CAR/R/5005284), and all conditions of the registration will be strictly adhered to during works.

This section of the A9 as well as land in the immediate surrounding is noted as having no risk of river flooding or surface water flooding (<u>SEPA Flood Map</u>).

Climate

The Climate Change (Scotland) Act 2009 sets out the target and vision set by the Scottish Government for tackling and responding to climate change (<u>The Climate</u> <u>Change (Scotland) Act 2009</u>). The Act included a target of reducing CO₂ emissions by 80% before 2050 (from the baseline year 1990). The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 amended the Climate Change (Scotland) Act 2009 to bring the target of reaching net-zero emissions in Scotland forward to 2045 (<u>Climate Change (Emissions Reduction Targets</u>) (Scotland) Act 2019).

The Scottish Government has since published its indicative Nationally Determined Contribution (iNDC) to set out how it will reach net-zero emissions by 2045, working to reduce emissions of all major greenhouse gases by at least 75% by 2030 (Scotland's contribution to the Paris Agreement: indicative Nationally Determined Contribution - gov.scot (www.gov.scot)). By 2040, the Scottish Government is committed to reducing 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 and this commitment is being enacted through the Mission Zero for Transport (<u>Mission Zero for transport | Transport Scotland</u>). Transport is the largest contributor to harmful climate emissions in Scotland. In response to the climate emergency, Transport Scotland are committed to reducing their emissions by 75% by 2030 and to a legally binding target of net-zero by 2045.

Policies and plans

This Record of Determination (RoD) has been undertaken in accordance with all relevant regulations, guidance, policies and plans, notably including the Environment and Sustainability Discipline of the Design Manual for Roads and Bridges (Design Manual for Roads and Bridges (DMRB)) and Transport Scotland's Environmental Impact Assessment Guidance (Guidance - Environmental Impact Assessments for road projects (transport.gov.scot)).

Description of main environmental impacts and proposed mitigation

Air quality

Construction activities associated with the proposed works have the potential to temporarily cause local air quality impacts. Activities undertaken on site may cause dust and particulate matter to be emitted to the atmosphere. However, taking into account the nature and scale of the works and the following mitigation measures, the risk of significant impacts to air are considered to be low.

- All plant, machinery and vehicles associated with the scheme will be maintained to the appropriate standards and will be switched off when not in use.
- Green driving techniques will be adopted, and effective route preparation and planning will be undertaken prior to works.
- All delivery vehicles carrying material with dust potential will be covered when travelling to or leaving site, preventing the spread of dust beyond the work area.
- Cement bags will remain closed when not in use to prevent cast-off to the surrounding environment.
- Material stockpiles will be reduced as far as is reasonably practicable by using a 'just in time' delivery system. All material will also be stored on made ground.
- Any stockpiled material on site will be monitored daily to ensure no risks of dust emissions exists.
- Materials must be removed from site as soon as is practicable.
- Good housekeeping will be employed throughout the work.

With the above mitigation measures in place, it is anticipated that any air quality effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this Record of Determination (RoD).

Landscape and visual effects

There is potential for minor, temporary visual impacts to the local landscape during the construction phase as a result of littering or obstructed views due to vehicles and machinery. However, proposed works will be highly localised on the A9 carriageway boundary and immediate areas upstream and downstream of the structure, and will require limited plant and machinery only. Land use will not change as a result of the works. Furthermore, the scheme does not lie within an area of land designated as an NSA or NP. In addition, the following mitigation measures will be put in place during works:

- Throughout all stages of the works, 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.
- Works will avoid encroaching on land and areas where work is not required or does not have permission to do so. This includes general works, storage of equipment/containers and parking.
- Where applicable, upon completion of the works, any damage to the local landscape must be reinstated as much as is practicable.
- The site will be left clean and tidy following construction.

With the above mitigation measures in place, it is anticipated that any landscape and visual effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Biodiversity

Activities undertaken on site could potentially have a temporary adverse impact on biodiversity in the area as a result of an increased vehicle presence and the potential for disturbance to protected species and pollution of habitats. However, a range of standard good practice measures will be in place to reduce the risk of pollution in the surrounding environment as well as the risk of disturbance to protected species that may be present on site or in the vicinity of works. The below measures would be in place regardless of the presence of the nearby designated sites and will be detailed in the Site Environmental Management Plan (SEMP) and adhered to on site:

- Works will be strictly limited to areas required for access and scour and refurbishment works. Unnecessary encroachment onto terrestrial or aquatic areas will not be tolerated.
- All works will be completed over approximately 3 weeks by utilising daytime working pattern (negating requirement for artificial lighting). As works will take place during the day only, a quiet period for the rest of the day will allow species to forage without potential noise or disturbance from the works.
- No discharges will be permitted to the water environment and appropriate containment measures will be in place during works.
- In-stream works will be completed outside of the sensitive period for salmonids to reduce the potential impacts on local fish populations.

- The scour repair works will be carried out in a dry working area. Though electrofishing was not advised by the Caithness DSFB, the importance of complying with pollution prevention measures was highlighted.
- Should works commence between mid and end August, a nesting bird check will be carried out within 48h prior to works.
- A pre-construction survey will be carried out prior to works.
- Site personnel will remain vigilant for the presence of any protected species throughout the works period. Should a protected species be noted during construction, works will temporarily halt until the species has sufficiently moved on. Any sightings of protected species will be reported to the BEAR Scotland Environmental Team.
- Relevant protected species Toolbox Talks will be included in the SEMP and provided to all site staff prior to works commencing.
- Site personnel will remain vigilant for the presence of potentially unrecorded instances of INNS or injurious weeds in road verges throughout the works period. Should any INNS be identified in working areas, no works will take place within 7m of these areas until the BEAR Scotland Environmental Team can provide further advice on additional mitigation measures.
- A 'soft start' will be implemented on site each day. This will involve switching on vehicles and checking under/around vehicles and the immediate work area for mammals prior to works commencing to ensure none are present and that there is a gradual increase in noise.
- Any excavations, exposed pipes/drains, or areas where an animal could become trapped (e.g., storage containers) will be covered over when not in use, at the end of each shift, and following completion of the works to avoid animals falling in and becoming trapped.
- If fencing is utilised at any point during the works, a gap of 200mm from ground level will be provided, allowing free passage for mammals and preventing entrapment.

Designated sites

The scheme is located within the vicinity of four designated sites. BEAR Scotland carried out a HRA to assess potential impacts of proposed works on the designated sites and completed the HRA Proforma document in line with NatureScot's advice. The HRA assessment concluded that, with the below listed best practice measures in place, the works would not result in any likely significant effects (LSE) upon the qualifying features of the nearby designated sites. The consultation response received from NatureScot in April 2023 confirmed that NatureScot is in agreement with this assessment.

 The scheme is scheduled outwith the main breeding bird season (15th March to 15th August inclusive), and as such, will not directly affect the populations of breeding birds that were listed as qualifying features for the nearby designated sites.

- There will be no works within the boundary of the designated sites and therefore, the works will not result in direct impacts on the qualifying habitat features or marsh saxifrage.
- A pre-construction survey will be carried out within 4 weeks of the construction start date.

With the above mitigation measures in place, it is anticipated that any biodiversity effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Geology and soils

The requirement to undertake excavation works on site has potential to result in minor impacts on geology and soils. The vegetated bar within the stream bed will be excavated; however, the accumulated material is considered to consist of deposited riparian sediment and removal will follow all conditions of SEPA's GBR13 as outlined below. There is a requirement for small-scale soil excavation over a 4m-stretch at the downstream lefthand side bank to allow for installation of coire geotextile and riprap rock armour. Though this excavation will create a minor impact on soil, the stabilisation of the embankment will prevent future soil erosion. It is anticipated to remove the excavated soil from site. In addition, there is no requirement for heavy plant and machinery to be placed outside the trunk road boundary; therefore, the potential for soil compaction is limited.

The following measures will be applied to on site:

- All conditions of SEPA's GBR13 will be strictly adhered to, with most relevant rules for removing the vegetated bar summarised below:
 - Sediment removal will not result in the bed of the upstream watercourse to be lower than the base of the culvert, and no steps will be created.
 - Removed sediment will not be placed on the bank of the watercourse.
 - Activity will not pollute the water environment.
- The parking of machinery/personnel and storage of equipment on road verges and adjacent habitats will be minimised as far as is reasonably practicable.
- Upon completion of the works, any damage to the local landscape (i.e. damage to grass verges) will be reinstated as much as is practicable.

- Best practice measures to prevent contamination of soils through loss of containment will be strictly adhered to.
- Topsoil and subsoil reused onsite will be spread evenly in a single layer <200 mm in height to ensure the soil profile is maintained across the works location.
- Multiple handling of soil derived from excavations will be minimised. The extent and duration of exposed soil will be kept to the minimum required for the works.

With the above mitigation measures in place, it is anticipated that any geology and soils effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Material assets and waste

There is potential for impacts as a result of resource depletion through use and transportation of new materials. However, materials will be sourced locally where possible and the following mitigation measures will be put in place:

- Materials will be sourced from recycled origins as far as reasonably practicable within design specifications.
- Care will be taken to order the correct quantity of required materials to prevent the disposal of unused materials.
- Where possible, minimal packaging will be requested on required deliveries to reduce unnecessary waste and production of packaging materials.

There is potential for impacts during works as a result of the improper storage or disposal of waste. The following mitigation measures will be put in place:

- The waste hierarchy (Reduce, Reuse, Recycle and Dispose) will be employed throughout the construction works.
- The subcontractor will adhere to waste management legislation and ensure they comply with their Duty of Care.
- Containment measures will be in place to prevent debris or pollutants from entering the surrounding environment.
- All wastes and unused materials will be removed from site in a safe and legal manner by a licensed waste carrier upon completion of the works. The appointed waste carrier will have a valid SEPA waste carrier registration, a

copy of which will be provided to and retained by BEAR Scotland as early as possible.

- All appropriate waste documentation will be present on site and will be available for inspection. A copy of the Duty of Care paperwork will be provided and filed appropriately in accordance with the Code of Practice (as made under Section 34 of Environmental Protection Act 1990 as amended).
- Re-use and recycling of waste will be encouraged, and the subcontractor will be required to fully outline their plans and provide documentary evidence for waste arising from the works (e.g., waste carrier's licence, transfer notes, and waste exemption certificates).
- Staff will be informed that littering will not be tolerated. Staff will be encouraged to collect any litter seen on site.
- Where applicable, all temporary signage will be removed from site on completion of the works.

With the above mitigation measures in place, it is anticipated that any material assets and waste effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Noise and vibration

Construction activities associated with the proposed works have the potential to cause noise and vibration impacts through the use of equipment and construction vehicles for the proposed activities. The works will employ a daytime working pattern, and the only residential property identified is set back from the scheme by approximately 110m. The proposed scheme is anticipated to result in temporary minor noise impacts. The following mitigation measures will be put in place:

- The Best Practice 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.
- On-site construction tasks will be programmed to be as efficient as possible, with a view to limiting noise disruption to local sensitive receptors.
- All site personnel will be fully briefed in advance of works regarding the need to minimise noise during works and of the site-specific sensitivities.
- All plant, machinery and vehicles will be switched off when not in use.
- All plant will be operated in such a way that minimises noise emissions and will have been maintained regularly to the appropriate standards.

- Where fitted, and where permitted under Health and Safety requirements, white noise reversing alarms will be utilised during construction.
- Where ancillary plant such as generators are required, they will be positioned so as to cause minimum noise disturbance. Where deemed necessary, acoustic screens will be utilised.

With the above mitigation measures in place, it is anticipated that any noise and vibration effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Population and human health

During construction, activities undertaken on site may have temporary adverse impacts on local residents, vehicle travellers, and non-motorised road users (NMUs) as a result of vehicle noise and delays due to traffic management measures. The works will require limited plant and machinery and are highly localised. Only one local residential property is located in proximity to the scheme and has some screening from the scheme, with no local access likely to be obstructed by presence of works and TM. Road users will be informed of works through a media release, which will provide details of construction dates and times. With the following mitigation measures in place, the risk of significant impacts on population and human health is considered to be low:

- If access to local properties is restricted, then residents will be notified of the impending works. Information will provide contact details (office phone number and e-mail address) for the Project Engineer as well as a 24-hour contact number for the BEAR Scotland Control Room.
- Appropriate provisions / measures will be implemented within the traffic management to allow the safe passage of NMUs of all abilities through the site.
- Journey planning information will be available for drivers online at the trafficscotland.org website. Journey planning information will also be available for drivers online through BEAR's social media platforms.

With the above mitigation measures in place, it is anticipated that any population and human health effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Road drainage and the water environment

During resurfacing works, there is potential for temporary impacts on the water environment. Potential changes in water quality from pollution events (either by accidental spillage of sediments, particulate matter, chemicals, fuels or by mobilisation of these in surface water caused by rain or tidal movements) during works have the potential to have a direct or indirect effect on the surrounding waterbodies. In addition, consultation with SEPA has confirmed that a Registration level of authorisation is required under the CAR legislation to permit the proposed works. The works have been authorised by SEPA as Activity O Grey bank reinforcement. All conditions of the Registration will be adhered to during works. The following mitigation measures will be put in place to reduce the risk of pollution incidents as a result of works:

- All in-stream works will be completed outside the sensitive period for freshwater fish, by 30th September.
- In-stream works will be carried out within a dry working area. The contractor is responsible for designing and implementing the dry working area and will provide a method statement for review prior to works commencing.
- The works will be carried out following SEPA Guidance for Pollution Prevention (GPP), including for example GPP1, 5, and 21.
- All relevant SEPA General Binding Rules (GBRs) will be followed, such as GBR 6, 9, 10B and 13.
- All conditions of the SEPA CAR registration (CAR/R/5005284) will be adhered to during works..
- Standard working practices to comply with The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) for works in or near water are detailed in the SEMP and will be adhered to on site.
- No discharges into any watercourses or drainage systems will be permitted. Appropriate containment measures will be in place to prevent any loss of construction materials into the water environment.
- Concrete batching will be carried out on an impermeable surface at least 10m away from drains and water bodies.
- An incident response (contingency) plan will be put in place to reduce the risk from pollution incidents or accidental spillages. All necessary containment equipment, including suitable spill kits (for oil and chemicals) will be available on site, quickly accessible if needed, and staff trained in their use.
- All spills will be logged and reported. In the event of any spills into the water environment, all works will stop, and the incident will be reported to the project manager and the BEAR Scotland Environmental Team. SEPA will be informed of any such incident as soon as possible using the SEPA Pollution Hotline.
- All plant and equipment will be regularly inspected for any signs of damage and leaks. A checklist will be present to make sure that the checks have been carried out.
- Storage of hazardous material, oil and fuel containers will be distanced more than 10m away from any watercourses.

- If required, a designated refuelling area will be identified. Fuel bowsers will be stored on an impermeable area and will be fully bunded. This will be distanced more than 10m from any watercourses.
- During refuelling of smaller mobile plant, a funnel will be used, and drip trays will be in place. Care will be taken to reduce the chance of spillages. Spill kits will be quickly accessible to capture any spills should they occur. The ground / stone around the site of a spill will be removed, double bagged and taken off site as special contaminated waste.
- Generators and static plant may have the potential to leak fuel and / or other hydrocarbons and will have bunding with a capacity of 110%. If these are not bunded then drip trays must also be supplied beneath the equipment with a capacity of 110%.

With the above mitigation measures in place, it is anticipated that any road drainage and the water environment effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Climate

Construction activities associated with the proposed scheme works have the potential to cause local air quality impacts as a result of the emission of greenhouse gases through the use of vehicles and machinery, material use and production, and transportation of materials to and from site. The following mitigation measures will be put in place:

- BEAR Scotland will adhere to their Carbon Management Policy.
- Local contractors and suppliers will be used as far as practicable to reduce fuel use and greenhouse gas emitted as part of the works.
- Where possible, materials will be sourced locally to reduce greenhouse gas emissions associated with materials movement, and waste will be disposed at local landfill.

With the above mitigation measures in place, it is anticipated that any climate effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Major Accidents and Disasters

The trunk road, within the scheme extents, is not at risk of river flooding and surface water flooding.

Works are restricted to the engineered ground and immediate surrounding of the A9 carriageway and TM will be designed in line with existing guidance. The proposed works are anticipated to last only 2-3 weeks. If required, TM will consist of single lane closure facilitated by temporary traffic lights. Where required, alternative

pedestrian routes will be included in the traffic management setup, to minimise impact of the works on NMUs.

These measures, along with mitigation measures and standard working practices, will be detailed in the SEMP and adhered to on site. The vulnerability of the project to risks of major accidents and disasters is considered to be low.

Assessment cumulative effects

The proposed works are not anticipated to result in significant environmental effects. A search of the Highland Council Planning Portal (<u>Map Search</u>) identified no active planning applications within 300m of the scheme.

A search of the Scottish Roads Works Commissioner's website (<u>Map Search</u>) has identified that no other roadworks are currently ongoing, or noted as being planned at the same time as this scheme, on the trunk road at the schemes location and within 3km of the scheme. Due to the nature of the proposed works, and absence of other developments in the vicinity or the works, there are no cumulative effects anticipated.

BEAR Scotland programme all proposed works in line with appropriate guidance and contractual requirements. All schemes are programmed to take into account existing and future planned works, with a view of limiting any cumulative effects relating to TM. As a result of this exercise, where a potential for cumulative impacts is identified, BEAR will reprogramme schemes to avoid / limit any cumulative effects or will utilise existing TM to complete multiple schemes at once. This approach allows BEAR Scotland to effectively manage the potential cumulative effects as a result of TM, resulting in minimal disruption to users of the Scottish trunk road network.

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

Assessments of the environmental effects

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 proposed 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) with connectivity to a number of areas including a SPA, SAC, SSSI and Ramsar, which are sensitive areas within the meaning of regulation 2(1) of the Environmental Impact Assessment (Scotland) Regulations 1999.

The project has been subject to screening using the Annex III criteria to determine whether a formal Environmental Impact Assessment (EIA) 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 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:

- The total working area does not exceed 1 ha.
- The works will be temporary, localised, and completed during daytime working hours.
- Any potential impacts of the works are expected to be temporary, shortterm, non-significant, and limited to the construction phase.
- No impacts on the environment are expected during the operational phase as a result of works. The works are expected to result in positive impacts on road users during the operational phase.
- Works are not expected to result in significant disturbance to protected species that may be present in the wider area.
- No in-combination effects have been identified.
- The risk of major accidents or disasters is considered to be low.

Location of the scheme:

- Although the works have connectivity to multiple sensitive areas, the HRA assessment confirmed that the works will not result in LSE on the qualifying features of the SPA, SAC or Ramsar site. NatureScot is in agreement with this assessment.
- The scheme will not have a significant impact on the SSSI.
- The scheme is not located within any areas designated for landscape interests.
- The scheme is not located within a densely populated area.
- The scheme does not lie within any sites of historical, cultural, or archaeological significance.

- The majority of the works will be carried out within the footprint of the 1900 C88 Lochend structure. Temporary access and works immediately upstream and downstream of the structure are required; however, these works will result in improved waterflow and reduced bank erosion.
- Any impacts to the local landscape during the construction phase will be minor, temporary and not considered significant. In addition, no operational impacts are anticipated.

Characteristics of potential impacts of the scheme:

- No works will take place until the CAR Registration is in place and all conditions of the Registration and relevant GBRs will be adhered to during works.
- Measures will be in place to ensure appropriate removal and disposal of waste.
- Containment measures of the working area will be in place to prevent debris or pollutants from entering the surrounding environment.
- In the event that INNS are found on site, measures to prevent potential INNS spread will be implemented.
- The SEMP will include plans to address environmental incidents.
- Mitigation measures detailed above (and in the SEMP) will be put in place with the objective to prevent and, if required, subsequently control any potential impacts on sensitive receptors.

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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Published by Transport Scotland, August 2023



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