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Environmental Impact Assessment Record of Determination

A85 Allt an Deabhtaich

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Project Details

Description

BEAR Scotland is proposing to replace the Allt an Deabhtaich Retaining Wall (hereafter referred to as 'the retaining wall') which is located adjacent to the A85, approximately 3.8km north of Lochearnhead, within the Stirling Council area.

As the retaining wall is in poor condition, it is proposed that the existing retaining wall is demolished and replaced with a passive anchored retaining structure. The existing retaining wall is approximately 35m long with a maximum height of 2.8m. The works include soil nailing (which will involve excavation and removal of the existing retaining wall and replacing this with a concrete skin, with nails then anchored into the bedrock). The new structure will be located further from the carriageway than the existing retaining wall with a Vehicle Restraint System (VRS) proposed to be located within the widened verge. The new structure is expected to be up to 4.5m in height which will vary along its length. Two existing culverts will be upgraded to increase their flow capacity. A new inlet structure with local slope support is proposed for each culvert. Concrete aprons, supported by soil nails will also be constructed at the outlet of the culverts on the embankment slopes below the A85. The proposed scheme includes road drainage works.

The site extents also includes a section of existing low-height masonry wall where minor masonry repairs are to be undertaken where possible. The existing low-height masonry wall extends approximately 50m south-east of the existing retaining wall. The minor masonry repairs include repositioning of loose stones and installation of packers of a similar material to the existing stones. Similarly, voids are to be filled with stones of a similar material to existing.

The site compound location and design will be selected and undertaken by the contractor. If the site compound cannot be contained within the site boundary there is a layby available uplink of the site boundary (northwest) (at approximate Grid Reference NN57092 26756) where the site compound could be located. The works are proposed to begin in Summer 2026 and have a duration of five months.

Location

The retaining wall is located adjacent to the A85, approximately 3.8km north of Lochearnhead. The culverts are located at the approximate Grid References NN 57479 26558 and NN 57440 26593. The site location is shown in Figure 1 below.

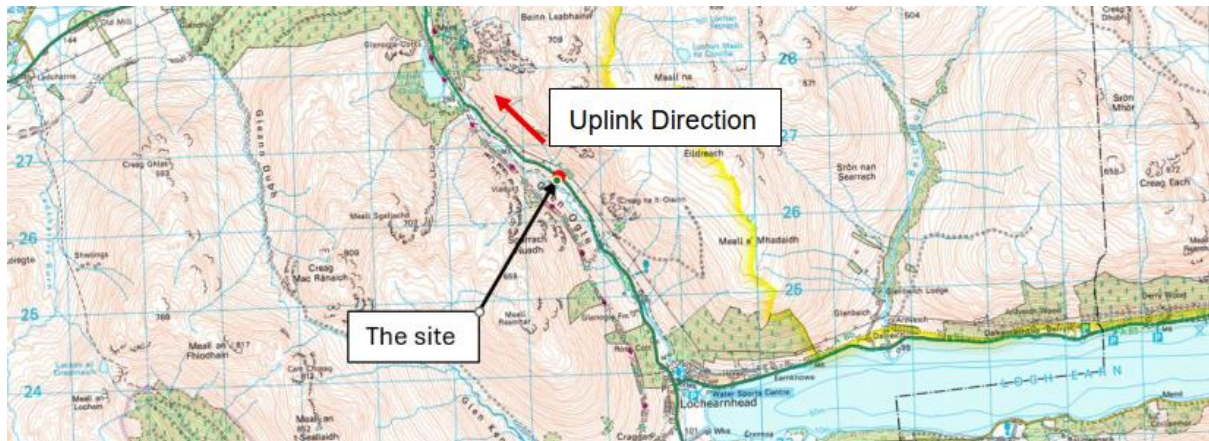


Figure 1. Site Location Plan

Description of local environment

Air quality

The scheme is not located within any [Air Quality Management Areas \(AQMA\)](#), and no [air quality monitoring stations](#) are located within 300m of the works.

The air quality in the vicinity of the scheme is most likely influenced by the road traffic on the A85.

Cultural heritage

A search of the Historic Environment Scotland (HES) [PastMap](#) website indicates that there are two listed buildings within 300m of the proposed scheme:

- Glen Ogle, Bridge on A85 (ID: LB4137); and
- Glen Ogle, Bridge on A85 (ID: LB4138).

Glen Ogle, Bridge on A85 (ID: 4137) is a category C listed structure. It is located outwith the site extents, approximately 295m downlink of the replacement culvert 2.

Glen Ogle, Bridge on A85 (ID: 4138) is a category C listed structure. It is located outwith the site extents, approximately 40m uplink of the replacement culvert 1.

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

The following non-designated cultural heritage assets, which are located outwith the site extents, are recorded by the Historic Environment Record (HER) or the National Record of the Historic Environment (NHRE):

- HER: Glen Ogle – Ford (ID: 65883);
- HER: Glen Ogle – Ford (ID: 65884);
- HER: Glen Ogle – Culvert (ID: 65568);
- HER: Glen Ogle – Bridge (ID: 65341);
- HER: Allt An Deabhataich – Bridge (ID: 65340);
- NHRE: Glen Ogle, Culvert D – Culvert (ID: ID: 154544);
- NRHE: Glen Ogle, Bridge – Road Bridge (18th Century) (ID: 24100); and

- NRHE: Glen Ogle, Allt An Deabhthaich Bridge – Road Bridge (18th Century) (ID: 24099).

Landscape and visual effects

The proposed scheme is located within [Loch Lomond and The Trossachs National Park \(ID: 8621\)](#). There are no National Scenic Areas within 300m of the proposed scheme.

The proposed scheme is located within the 'Upland Glens – Loch Lomond & the Trossachs' (LCT) 252, which has the following key characteristics as described on [NatureScot's Scottish Landscape Character Types Map and Descriptions](#):

- Often narrow with little flat glen floor, strongly enclosed by steep hill slopes of the adjacent Steep Ridges and Hills and Highland Summits.
- Steep glen sides often patterned with rocky outcrops, boulders and screes but also extensively forested, particularly on lower slopes.
- Tributary burns and rivers cut deep gullies into slopes and many feature waterfalls and cascades, pools and rocky outcrops.
- Walled pastures sometimes occasionally occurring on lower (usually south-facing) slopes. Heather covers better drained areas and bright green flushes appear at spring lines on hill slopes.
- Some glens covered with extensive coniferous forestry.
- Notable ancient and semi-ancient woodlands of oak and birch in some glens, Natural regeneration of scrub woodland where grazing has declined as in the Luss Glens.
- Relict wood pasture and Caledonian pine woodlands evident in some areas,
- Scattered trees and native woodland trace the edges of burns.
- Sparsely settled but with some isolated farms in lower reaches of glens, these often south-facing.
- Significant cultural features in more open glens, including shielings and abandoned field systems.
- Areas of crofting evident on some lower slopes.
- Some important historic strategic routes for communications and accommodate key road and rail links today for example.

Classic views channelled up and down the Glens, with steep side slopes framing landscapes that lie beyond them.

Biodiversity

Designated sites

[Lochan Lairig Cheile Site of Special Scientific Interest \(SSSI\)](#) is located approximately 1.56km to the north-west of the proposed scheme.

There are no other ecologically designated sites within 2km of the proposed scheme, including Special Protection Areas, Special Areas of Conservation and Ramsar sites.

Ancient and Native Woodland

There is no ancient woodland recorded on the [Ancient Woodland Inventory \(AWI\)](#) within 300m of the proposed scheme.

There is one area of native woodland recorded on the [Native Woodland Survey of Scotland \(NWSS\)](#) within 300m of the proposed scheme. This area is located approximately 50m south-east of the site extents at its closest point.

Habitats

The land surrounding the proposed scheme is predominantly classified on the [Habitat Map of Scotland](#) as 'woodland fringes and clearings and tall forb stands' (E5) and 'dry grasslands' (E1). There are also patches of 'broadleaved deciduous woodland' (G1) and 'seasonally wet and wet grasslands' (E3) on the north-bound side of the A85.

Invasive non-native species

The [NBN Atlas](#) has one record of invasive and non-native species (INNS) over the past 10 years, under CC-BY and OGL licences within 5km of the proposed scheme:

- Canada goose (*Branta canadensis*).

Ecology surveys

Jacobs has undertaken an extensive programme of ecological survey work at A85 Allt an Deabhtaich since 2019. Survey effort has comprised repeated assessments of the retaining wall, protected species surveys, walkovers, and targeted investigations to inform ongoing and proposed works.

Geology and soils

The proposed scheme is not located within an area designated for its geology, nor is it within 300m of a [Geological Conservation Review site](#). [Soils](#) within the area are humus-iron podzols with peaty gleyed podzols.

[Bedrock geology](#) within the scheme extents is described as Ben Lui Schist Formation - Semipelite, garnet, which is metamorphic bedrock.

[Superficial deposits](#) within the proposed scheme area are described as Till and Morainic Deposits - Diamicton, sand and gravel, which is sedimentary superficial deposit.

Material assets and waste

The proposed works at A85 Allt an Deabhthaich include replacement of the existing retaining wall with a new structure, upsizing two culverts, provision of VRS, road drainage works, and minor masonry repairs. Materials to be used to complete the construction works include:

- Steel threadbars (for the passive anchors)
- Concrete (for the skin wall)
- Structural steel mesh (for reinforced concrete skin wall)
- Square steel plates (for the anchor head plates)
- Concrete pipe (culvert works)
- Class 1a backfill (culvert works)
- Sprayed concrete facing (culvert works)
- Timber post and four rail fence (culvert works)
- Stone slabs (culvert works)
- Concrete aprons (culvert works)
- Asphalt (road resurfacing)
- Steel (VRS)
- Concrete foundations (VRS)
- Concrete gully (road drainage)
- Concrete chamber (road drainage)
- Filter drain materials, including crushed rock and geotextile (road drainage)

Construction works at the site will include the excavation of made ground and natural soils within the site area. It is assumed that soil arisings not re-used from the works will be taken off site and be disposed of in accordance with the Environmental Authorisations (Scotland) Regulations 2018 (EASR). Based on the chemical analysis of ground samples, the excavated material is not assessed to have hazardous properties and, as such, are likely to be classified as either non-hazardous or inert waste depending on compliance with the Waste Acceptance Criteria (WAC).

A Site Waste Management Plan (SWMP) will be prepared for the scheme.

Material re-use and disposal options should be considered during the design and construction stages of the scheme as more information becomes available and construction methods are finalised.

Noise and vibration

The scheme is not located within a [Candidate Noise Management Area \(CNMA\)](#). The scheme is located within a rural area, where the dominant source of noise and vibration is anticipated to be road traffic on the A85.

There are no residential, agricultural and commercial properties located within 300m of the scheme.

The modelled noise level (day-evening-night level (LDEN)) ranges between 65 decibels (dB) and 71dB within the scheme extents ([Scotland's Environment Scotland's Noise](#)).

Population and human health

There are no residential, agricultural and commercial properties located within 300m of the scheme.

[National Cycle Network Route 7](#) is located 360m to the southwest of the proposed scheme; this path is also part of the Rob Roy Way, a popular long-distance walking trail. There are no [core paths](#) within proximity of the proposed scheme.

The A85 is a single carriageway within the scheme extents with a 50 miles per hour (mph) speed limit in place. The closest [traffic count point \(ID: 20774\)](#) on the A85 is located at the northern end of Lochan Lairig Cheile, approximately 2.39km northwest of the proposed scheme. An Average Annual Daily Flow (AADF) for this count point was estimated for 4,020 vehicles in 2024.

A search of the [LLTNP's](#) online planning portal was undertaken to identify planning permissions within the study area from the last 2 years. No planning permissions have been granted within 500m of the proposed scheme.

Road drainage and the water environment

There are two existing culverts either side of the retaining wall. These culverts carry two minor watercourses under the A85 into Glen Ogle. These watercourses are not registered with the Scottish Environment Protection Agency (SEPA) and therefore do not have an ID. The existing culverts are in very poor condition with a combination of blockage and structural damage. Flows which exceed the residual culvert capacity overtop the A85 and flow over and along the carriageway posing a hazard to traffic.

The [River Ogle \(SEPA ID: 6824\)](#) is located approximately 150m to the south-west of the A85 and proposed scheme, which was last classified in 2024 as having an overall status of 'High'. The River Ogle flows into [Loch Earn \(SEPA ID: 100251\)](#), located approximately 3.47km to the south-east, which was last classified in 2024 as having an overall status of 'Moderate ecological potential'.

The scheme is located within the [Killin, Aberfeldy and Angus Glens \(SEPA ID: 150699\) groundwater body](#), which SEPA classified as having overall status of 'Good' in 2024.

The proposed scheme is located within an area of high [surface water flooding](#) from the Allt an Dèabhthaich, with a 10% chance of flooding each year. There is also high [river flooding](#) to the southwest of the proposed scheme, along Glen Ogle. Flooding along the River Ogle would not impact the scheme.

The existing road drainage network consists of a drainage conduit (carrier drain) which commences at an existing gully approximately 12m uplink of Culvert 1. The carrier drain runs downlink beyond Culvert 1, with a second gully located approximately 11m beyond the culvert. The carrier drain eventually discharges upstream of Culvert 2 with a further gully positioned above the culvert which drops directly into the existing pipe.

Climate

[The Climate Change \(Scotland\) Act 2009](#) ('The Act'), and its subsequent amendment under the [Climate Change \(Emissions Reduction Targets\) \(Scotland\) Act 2019](#), sets the framework for the Scottish Government to address climate change. The Act has an ambitious target to reach Net Zero greenhouse gas emissions by 2045, with any residual emissions balanced by removing carbon dioxide from the atmosphere.

The Act was amended to replace interim targets with carbon budgets. Carbon budgets are legally binding caps on greenhouse gas emissions in Scotland over five-year periods. In line with the Act, the Climate Change Committee (CCC) published advice on the level of Scotland's four carbon budgets, covering the period 2026 to 2045, recommending what the Scottish Government sets its carbon budgets at for annual average levels of emissions.

Emissions reductions from surface transport are the largest contribution to meeting the first two carbon budgets. The pathway for surface transport emission reduction is primarily driven by the uptake of electric vehicles, in addition to measures to enable a shift from car use to public transport and active travel, which all play a role in reducing emissions from fossil fuel cars. Ensuring efficiency of existing transport infrastructure and improving/providing new active travel facilities is therefore important to support these carbon reduction budgets.

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

Policies and plans

This Record of Determination (RoD) has been undertaken in accordance with all relevant regulations, guidance, and 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 Assessment for Roads Projects \(transport.gov.scot\)](#)).

Description of main environmental impacts and proposed mitigation

Air quality

During the construction phase, activities undertaken on site could potentially have some minor, localised, and short-term air quality impacts in proximity to the proposed works. The construction phase will, for example, require a range of ancillary plant, vehicles, and non-road mobile machinery (NRMM) which will contribute to local dust and air pollutants. The main sources are likely to be dust generated by soil nailing (which will include excavation and removal of the existing retaining wall), as well as exhaust emissions from ancillary plant and vehicles. As a result, there is potential for dust, particulate matter, and exhaust emissions to be emitted to the atmosphere during construction. However, taking into account the nature and scale of the works and the following mitigation measures, the risk of significant effects are considered to be low.

- Where possible, construction operatives will be encouraged to car-share, use organised company transport or public transport, reducing greenhouse gas emissions.
- All plant, machinery and vehicles associated with the scheme will be maintained to the appropriate standards and switch their engines off when not in use.
- The movement of dusty material will be minimised by appropriately planning material movements.
- All delivery vehicles carrying material with dust potential will be covered when travelling to or leaving the site, preventing the spread of dust beyond the work area.
- Material stockpiles will be reduced as much as reasonably practicable by using a 'just in time' delivery system. All material will also be stored on made ground (e.g., within the A85 trunk road carriageway boundary), away from potential pollution pathways such as drains and watercourses.
- Any stockpiled material on site will be monitored daily to ensure no risk of dust emissions exists. Where a risk of dust emissions exists from stockpiles, these will be dampened down.
- All material will be stored on made ground (e.g., within the A85 trunk road boundary), away from potential pollution pathways such as drains and watercourses.
- Cutting, grinding, and sawing equipment (where required) will also be fitted or used in conjunction with suitable dust suppression techniques e.g., water spray or local exhaust ventilation system that fits directly onto tools.

- Materials will be removed from site as soon as is practical.
- Good housekeeping will be employed throughout the works.

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).

Cultural heritage

There is potential for minor, temporary impacts to the setting of the designated cultural heritage assets in proximity to the scheme during the construction phase. These potential impacts would be as a result of obstructed views due to vehicles and construction machinery.

The following good practice measures will be put in place:

- There will be no storage of vehicles, plant, or materials against any walls or fences.
- Where access outwith areas of made/engineered ground is required for the safe and effective completion of the scheme, it will be reduced as much as is reasonably practicable.
- All site personnel will be briefed on the importance of archaeological finds and are instructed, as part of the site induction, to inform the site supervisor where potential finds are made.
- Should any unexpected archaeological evidence be discovered by the works, construction activities in the vicinity will be halted and the BEAR Scotland NW Environmental Team will be contacted.

With mitigation measures in place, it is anticipated that any cultural heritage effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this 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 obstructed views due to vehicles and machinery. The works have been designed to minimise impacts on the landscape in the construction and operational phase and consultation has taken place with Loch Lomond and the Trossachs National Park (LLTNP) during the design of the proposed works.

Initial consultation was undertaken with the LLTNP in 2019 at the feasibility stage for the proposed scheme design. Two potential options for the scheme were provided:

- (1) a soil nailing solution which would involve soil nail anchors installed with a sprayed concrete facing; and
- (2) a mass gravity wall solution which would require the removal of the existing wall and formation of a temporary slope behind this. For this option once the wall is in place, the area behind the proposed wall would be backfilled.

LLTNP responded in early 2020 to the initial consultation and, in summary, considered that the soil nailing solution appears to be much less disruptive and would be the preferred option. LLTNP recommended that whichever proposal is progressed will require consideration of the surrounding landscape and habitats and species to minimise the natural heritage impacts of the proposal and this should be factored into the design of the scheme.

In 2023 an update on the proposed scheme was provided to LLTNP. It was confirmed that the soil nailing solution had been selected as the preferred design and LLTNP's feedback was sought on the facing options for the wall. Option 1 involved a thin facing with a localised increase in depth over the anchor heads and Option 2 involved a thick uniform facing. LLTNP responded in early 2024 and confirmed that the option which involved localised increase in depth over the anchor heads would be acceptable.

In September 2025, an email was sent to LLTNP to provide an update on the design of the proposed scheme. A general arrangement drawing was provided with the email to the LLTNP and it was confirmed in the email that the proposed scheme included two replacement culverts. No comments were received from LLTNP in response to this email.

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.
- Where applicable, upon completion of the works, any damage to the local landscape (i.e. damage to grass verges or hardstanding) will be reinstated as much as is practicable.
- Works will avoid encroaching on land and areas where work is not required or not permitted. This includes general works, storage of equipment/containers and parking.
- The site will be left clean and tidy following construction.

With the above mitigation 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

The proposed scheme is located within the Loch Lomond and The Trossachs National Park. Lochan Lairig Cheile SSSI lies approximately 1.56km to the north-west of the scheme. There is no connectivity between the SSSI and the scheme extents, and therefore no potential for the works to result in significant negative impacts on the designated features of this site.

A temporary short-term increase in noise levels may cause disturbance to local wildlife. The works will, for example, require a range of ancillary equipment, vehicles and NRMM which will emit noise and create potential disturbance. The works will also require the presence of personnel to facilitate the works. Any species in the area are likely to be accustomed to noise and visual disturbance pertaining to vehicle movements on the A85 and presence of construction vehicles and construction operatives required onsite will be temporary and localised to the scheme and trunk road corridor. The potential for significant species disturbance within the area of likely construction disturbance is therefore considered to be low.

The in-water working area is unsuitable for fish. It is therefore unlikely to support fish or other sensitive aquatic species. Standard pollution-prevention measures will still be applied during works.

Pollution controls and good practice measures to reduce impacts of the works on the local environment will be detailed in the Site Environmental Management Plan (SEMP) and adhered to on site. The following mitigation measures will be put in place to minimise impacts on biodiversity features in the area:

- Works will be strictly limited to areas required for access and works. Unnecessary encroachment onto terrestrial or aquatic areas will not be tolerated.
- Any access to the works area will be appropriately planned and not result in damage to local biodiversity features (i.e. riverbanks). And damage will be reported and appropriately reinstated.
- An Ecological Clerk of Works (ECoW) will attend site intermittently prior to and/or during the works, including undertaking pre-works surveys for protected species to appropriate distances no more than four weeks prior to the commencement of works. The ECoW will also undertake nesting bird checks should the works be planned within the breeding bird season (March – August inclusive).
- No discharges into any watercourses or drainage systems will be permitted. Appropriate containment measures will be in place around all working and

storage areas to ensure that pollution (e.g., fuel, oil) does not enter the surrounding environment. Any dust or other materials produced during works will be contained and removed from site to be disposed of appropriately.

- Site personnel will remain vigilant for the presence of invasive and non-native species (INNS) within the working areas, site compound area, and/or access routes. All construction operatives will receive toolbox talks for INNS prior to works commencing. These talks will cover identification, biosecurity, and legislation. All staff will be informed to stop works where a concern is raised. Works may not commence until advice from an appropriately qualified ecologist is sought and appropriate mitigation is in place, where required.
- Evidence of Japanese knotweed (*Reynoutria japonica*) has previously been recorded in proximity to the site. All personnel will avoid known or suspected INNS. If identified in working or access areas within the scheme extent, these areas will be avoided and a 7m buffer zone put in place. No materials or plant will be stored within the adjacent verges of the trunk road. BEAR Scotland Environment Team can provide further guidance where INNS presence is suspected.
- Site personnel will remain vigilant for the presence of protected species over the works period and will be instructed not to approach or touch any species seen on site. All construction operatives will be briefed through toolbox talks prior to works commencing using the toolbox talk templates. The talks will specifically cover ecology and field signs of protected species, and legislation. Briefings will be clear and unambiguous, with all staff informed to stop works where a concern is raised. Works may not commence until advice from an appropriately qualified ecologist is sought and appropriate mitigation is in place, where required.
- For in-water works site staff will adhere to the Check-Clean-Dry biosecurity process to ensure that any machinery, materials, wastes, or personal protective equipment that has been in contact with the water environment is appropriately washed and dried prior to leaving site.
- Where feasible, no works will take place during night-time hours. If artificial lighting is required during periods of low light levels, it will be directed away from the watercourse banks, or other habitat suitable for protected species, as far as is safe and reasonably practicable.
- If an active bird nest (e.g. eggs or young present, adult sitting on nest, or whilst nest is being built) is identified in the vicinity of the works, all works within 30m of the nest will stop until the BEAR Scotland NW Environment Team can provide advice. If works take place between March – August, nesting bird checks will be required - one survey will be undertaken two weeks prior to the works, and a second survey undertaken 24 hours prior to the works starting.
- If protected species are discovered, exclusion zones may be required, and/or consultation with NatureScot will be undertaken prior to works re-commencing.
- Where protected mammals are encountered or move within 50m of the active works, works will cease until the animal(s) move further away than 50m from the construction site or until the BEAR Scotland NW Environment Team can provide advice.

- All material, machinery, and equipment will be subject to checks for resting mammals daily prior to any works commencing to prevent entrapment or injury to any mammals.
- A 'soft-start' will be implemented on site each day. This will involve switching on vehicles and checking under/around vehicles and the immediate works 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 area 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.

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

Although works will involve excavation, these works are highly localised to the scheme area. As such, the works are anticipated to have a negligible adverse impact on geology and soils. There is potential for local soil exposure and pollution events to occur during construction, however with the following mitigation measures in place, the likelihood of significant negative impacts on geology and soils is low.

- The site compound and any storage or laydowns areas will be located on areas of hard standing where possible.
- The parking of machinery/personnel and storage of equipment on verges will be minimised as far as is reasonably practicable.
- Personnel presence on soft land/verges 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.
- Excavated soil will be re-used on site where possible. Landslide material is not suitable for re-use on site and will be removed.

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

Material assets and waste

The proposed works will require the use of a variety of materials and give rise to several waste streams. Minimising impacts arising from construction materials are focussed upon making the most efficient use of materials onsite to reduce the need for imported primary materials and minimise the creation and disposal of waste through (i) reduction, (ii) re-use, and (iii) recycling. Potential impacts have been assessed for both the construction and operational phases of this scheme. It is anticipated that most material impacts are likely to arise during construction, though long-term residual impacts could occur post construction during the operational phase e.g., during the disposal of materials arising from routine maintenance operations.

There is potential for impacts during works as a result of the improper storage or disposal of waste. It is considered unlikely that material consumption and waste generation will result in significant impacts as all waste will be removed from site and disposed of safely and legally by a licensed waste carrier. Additionally, relevant good practice guidelines are included in the SEMP and adhered to on site. A Site Waste Management Plan (SWMP) will be prepared for the proposed scheme. The SWMP will provide details of the following:

- The quantity and type of waste that will be produced.
- How waste will be minimised, reused, recycled, recovered, or otherwise diverted from landfill.
- How materials that cannot be reused, recycled, or recovered will be removed from site and consigned, transported and disposed of in full accordance with all relevant legislation.

The following mitigation measures will be put in place:

- The contractor will adhere to waste management legislation and ensure compliance with their Duty of Care.
- The waste hierarchy (Reduce, Reuse, Recycle and Dispose) will be employed throughout the construction works.
- All appropriate waste documentation will be present on-site and 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).
- All wastes and unused materials will be removed from site in a safe manner by a licensed waste carrier upon completion of the works, unless otherwise stipulated within the SEMP. The appointed waste carrier will have a valid SEPA waste carrier registration, a copy of which will be retained by BEAR Scotland. A copy of

the waste transfer is also to be provided to BEAR Scotland as early as practicably feasible and retained.

- During the site induction, all staff will be informed that littering will not be tolerated. Staff are also encouraged to collect any litter seen on site.
- Where applicable, all temporary signage will be removed from site on completion of the works.
- All hazardous material will be stored as described in the Road Drainage and the Water Environment section.
- Any contaminated ground as a result of the works will be removed and transferred off site as special waste.
- All storage of hazardous material utilised on site is required to undergo assessment under the Control of Substances Hazardous to Health (COSHH) Regulations 2002. These assessment(s) will contain a section on environment which highlights any precautions and mitigation requirements.
- Any COSHH waste and special waste will be removed from site by a specialised waste carrier. COSHH waste will not be mixed with general waste and/or other recyclables.
- Waste will be transported in a safe and secure manner to prevent the release of contaminated material enroute.
- Any other waste generated will be removed from site and either recycled or disposed of in the appropriate manner.

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. The receptor is not considered further in this RoD.

Noise and vibration

Activities undertaken on site have potential to generate localised short-term noise and vibration impacts in proximity to the works as a result of plant and tool use. However, works do not lie within a CNMA or Candidate Quiet Area (CQA) and are anticipated to follow a daytime working pattern.

There are no residual impacts anticipated that are associated with noise and vibration following completion of works.

The following mitigation measures will be put in place:

- The best practicable means, as defined in Section 72 of the Control of Pollution Act 1974 and BS52282:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites will always be employed to reduce noise to a minimum.

- All construction operatives will be briefed through toolbox talks prior to works commencing using the 'Being a Good Neighbour' toolbox talk.
- 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.
- Where applicable, residents, and businesses will be kept informed of the proposed working schedule, particularly the times and durations of noisy construction activities, and will be provided with a 24-hour contact number for the BEAR Scotland Control Room.
- If any works occur outwith the scheme extent, the contractor will first inform residents within the vicinity of the deliveries and/or additional works. This is particularly important for night works and/or deliveries.
- Plant, machinery, and equipment will be fitted with effective silencers where possible. Where fitted, and where permitted under Health and Safety requirements, white noise reversing alarms will be utilised during construction.
- Where possible, inherently quiet plant will be selected for construction works.
- All plant, machinery, and vehicles will be switched off when not in use.
- All plant will be operated in such a way that reduces noise emissions and will be maintained regularly to the appropriate standards.
- Where ancillary plant such as generators are required, they will be positioned to cause minimum noise disturbance.
- Temporary staff toilets/laydown area will be located as far as is practicable from sensitive receptors.

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 have the potential to have temporary adverse impacts on local residents, vehicle travellers, and non-motorised users (NMUs). Traffic management measures may increase journey times and cause disruption to users of the A85. Traffic management measures will comprise northbound lane closures with temporary traffic lights.

The following mitigation measures will be put in place:

- Appropriate provisions/measures will be implemented within the traffic management to allow the safe passage of NMUs through the site.
- Local access will be retained as far as is reasonably practicable.

- Notification will be issued to residents that may face access restrictions during the works.
- Construction lighting will consider the need to avoid illuminating surrounding properties to avoid a nuisance if there is low light, and non-essential lighting will be switched off.
- Any Traffic Management or lane restrictions will be fully signed on approach.
- 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 Scotland's social media platforms.

The works are expected to result in safer conditions for road users during the operational phase through the provision of VRS, culvert and drainage works.

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

The proposed road drainage arrangements would retain the existing drainage conduit (carrier drain) and gully north of Culvert 1, with a new 225mm filter drain installed between the proposed VRS and wall structure, discharging to Culvert 2. The section of retained carrier drain would outfall to the inlet structure upstream of Culvert 1 with a 150mm connection between the existing carrier drain and inlet chamber. The section of existing carrier drain between Culvert 1 and Culvert 2 would be severed by Culvert 1 and would therefore be removed in its entirety. The proposed filter drain, which would commence approximately 8m downlink of Culvert 1, would replace the existing carrier drain between the two culverts and would include the replacement of two existing gullies: the first located 12m downlink of Culvert 1, replacing a gully in approximately the same location; and the second located 3.5m uplink of Culvert 2, replacing an existing gully which currently sits immediately above the existing culvert pipe.

Measures as described in [SEPA's GBR 10A](#) will be followed for the road drainage works.

Consultation has been undertaken with SEPA regarding the proposed scheme and it was confirmed by SEPA in September 2025 that the proposed scheme would not require permitting as it involves works on minor tributaries that do not show on the 1:50,000 scale Ordnance Survey map. Since 1 November 2025, water activities have been regulated under Environmental Authorisation (Scotland) Regulations 2018 (EASR). EASR replaced several different regulations, including The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR). Several

activities do not require an authorisation under EASR. SEPA's website states that these include 'engineering activities (except culverting for land-gain, dredging or permanent diversions or realignments) on minor watercourses. A minor watercourse is one that is not shown on the 1:50,000 scale Ordnance Survey maps (Landranger series)'. It is concluded that no authorisation is required under EASR for the proposed works.

Taking into account the nature and scale of the works and the good site practice mitigation measures which will be followed during the construction phase (outlined in the SEMP), it is unlikely that the works will pose a significant risk or have an adverse impact on the water environment. The replacement culverts will reduce flood risk on the A85 during the operational phase.

The following mitigation measures will be put in place:

- Temporary measures will be put in place to temporarily convey flows in each watercourse past the culvert replacement works, providing continuity of flowpath and segregating construction works from the live watercourse. Watercourses will not be permitted to flow through un-lined, open trenches during construction works.
- No discharges into any watercourses or drainage systems will be permitted and appropriate containment measures will be in place to prevent any loss of construction materials into the water environment (e.g., dust, debris,). Any dust, concrete debris, or other materials produced during the works will be contained and removed from site to be disposed of appropriately. SEPA's General Binding Rule (GBR) 10a will be followed.
- 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.
- The designated storage area will be on impermeable ground and fully bunded.
- All hazardous material will be stored in line with COSHH in a designated storage area at least 10m from watercourses, drains, and waterbodies. Oils and chemicals will be stored in appropriately bunded storage cabinets. The COSHH store will be locked with only appropriate personnel having access and an inventory register being maintained.
- Where applicable and practicable, bio-degradable hydraulic fluids and oils will be utilised in machinery.
- Where fuel is stored on site and refuelling activities are undertaken, the following will apply:
 - Only suitably double-skinned fuel bowser(s) or tank(s) in line with General Binding Rules will be utilised on site.
 - The fuel bowser(s) and/or tank(s) will be stored away at least 10m from any watercourses, waterbodies or drains and away from being struck by plant and machinery.

- All distribution and fuelling nozzles will be fitted with a shut-off valve.
- All refuelling activities will be undertaken in a designated site with a drip tray positioned underneath the nozzles when not in use.
- All fuel containers and nozzles will be secured, for example with a lock when not in use.
- All staff undertaking refuelling activities will be appropriately trained and undertake these activities in line with site refuelling procedures.
- During refuelling of smaller mobile plant, a funnel and drip trays will be used.
- An incidence response (contingency) plan will be put in place to minimise the risk from pollution incidents or accidental spillages. All necessary containment equipment, including suitable spill kits (for oil and chemicals) and floating booms (designed to retain oil) will be available on site, quickly accessible if needed, and staff trained in their use.
- The ground/stone around the site of a spill will be removed, double-bagged and taken off site as special contaminated waste.
- All spills will be logged and reported. In the event of any spills into the water environment, all works will stop, and the incident reported to the project manager and the BEAR Scotland NW Environment Team. SEPA will be informed of any such incident as soon as possible using the SEPA Pollution Hotline.
- Generators and static plant may have the potential to leak fuel and/or other hydrocarbons and will have internal bunding where possible. A secondary containment system will also be in place during use to catch leaks or spills. For example, plant nappies or drip trays with a capacity of 110% will be placed beneath the equipment.
- Operatives will conduct regular checks of the surrounding ground/drains for any spillages/leakage regularly, especially in periods of heavy wind and rainfall. Pollution prevention measures, as described in SEPA's Guideline for Pollution Prevention 5 (GPP5) and General Binding Rule 9 (GBR9), will be followed.

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

During the works there is potential for impacts as a result of the emission of greenhouse gases through the use of equipment, vehicles, and NRMM, material use and production, and transportation of material/waste. However, considering the nature, duration, size and scale of the scheme, and the mitigation detailed below, the risk of significant impacts to climate are considered to be low.

The following mitigation measures will be put in place:

- BEAR Scotland will adhere to its Carbon Management Policy.
- The requirement for additional lighting will be reduced as far as reasonably practicable.
- 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 waste management facilities.

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.

Vulnerability of the project to risks

For the existing culverts, flows which exceed the residual culvert capacity overtop the A85 and flow over and along the carriageway posing a hazard to traffic. The replacement culverts will reduce flood risk on the A85 during the operational phase.

Road collision risk has been considered, and traffic management is anticipated to comprise a northbound lane closure with temporary traffic lights to reduce this risk.

A SEMP has been produced by BEAR Scotland which sets out a framework to reduce the risk of adverse impacts from construction activities on sensitive environmental receptors. The contractor will comply with all conditions of the SEMP during works and may be subject to audit throughout the contract.

The vulnerability of the project to risks of major accidents and disasters is considered to be low.

Assessment of cumulative effects

The proposed works are not anticipated to result in significant environmental effects. Due to the nature of the proposed works, no cumulative effects are anticipated with any other developments in the vicinity. Any future BEAR Scotland schemes will be programmed to take into account already-programmed works and as such, any cumulative effect will be limited.

A search using LLTNP's planning portals identified no planning applications within 500m of the scheme within the last 2 years.

BEAR Scotland programmes all of its 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 traffic management. 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 traffic management to complete multiple schemes at once. This approach allows BEAR Scotland to effectively manage the potential cumulative effects as a result of traffic management, resulting in minimal disruption to users of the Scottish trunk road network.

Overall, it is unlikely that the proposed works will have significant cumulative effects 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) are situated wholly within Loch Lomond and The Trossachs National Park which is a sensitive area 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 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:

- The proposed scheme has been designed to minimise impacts on the landscape and visual receptors in the construction and operational phase.
- Containment measures of the working area will be in place to prevent debris or pollutants from entering the surrounding environment.
- Works are not expected to result in significant disturbance to protected species that may be present in the wider area.
- The risk of major accidents or disasters is considered to be low.

Location of the scheme:

- The scheme is located within the Loch Lomond and the Trossachs National Park (LLTNP) and the LLTNP have been consulted during the design of the proposed works. In summary, LLTNP considered that the soil nailing solution proposed for the replacement of the retaining wall would be preferred and recommended that whichever proposal is progressed would require consideration of the surrounding landscape and habitats and species to minimise the natural heritage impacts of the proposal. LLTNP confirmed that the proposal for the facing of the replacement structure which involved localised increases in depth over the anchor heads would be acceptable.
- Loch Lairig Cheile SSSI is located approximately 1.56km to the north-west of the proposed works. There is no connectivity between the SSSI and the scheme extents, and therefore no potential for the works to result in significant negative impacts on the designated features of this site.
- The proposed scheme is not located within an area designated for its geology.
- There are no residential, agricultural and commercial properties located within 300m of the scheme.
- The scheme is not located within any sites of historical, cultural or archaeological importance.

Characteristics of potential impacts of the scheme:

- The SEMP includes plans to address environmental incidents.
- Measures will be in place to ensure appropriate removal and disposal of waste.
- Mitigation measures detailed above and in the SEMP are put in place with the objective to prevent and, if required, subsequently control any potential impacts on sensitive receptors.
- No significant cumulative effects are anticipated.

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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