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Environmental Impact Assessment Record of Determination

A83 Rest and Be Thankful

Phase 3A / 3B Slip

Contents

Project Details

Description

BEAR Scotland has been commissioned by Transport Scotland to carry out a suite of works to address landslide and associated rock fall risk on the A83 Trunk Road at Rest and be Thankful (RaBT) between Tarbet and Cairndow, which has been identified as an area of high risk for landslides.

As part of this overall works package, this scheme has been instructed following identification of hillside movement between Phase 3A and 3B channels in February 2024. The proposed works are to install a landslide debris barrier / catchfence (Geobrugg SL-150) on the hillside, offset 10m back from the crest of the existing retaining wall. Based on immediate availability a barrier length of 60m is available for these works although a barrier length of 75m may be required.

The works will include some vegetation clearance and excavation to facilitate installation. Plant to be utilised will include excavators, drilling rig, breaker, and hand tools. It is expected that helicopter flights will be utilised during these works for delivery of materials to the slope, however frequency and timings of these flights is yet to be confirmed.

These works are currently programmed to commence in August 2024 for a duration of eight weeks. Site working hours will be between 06:00 and 18:00. Traffic management (TM) will involve a single lane closure with two-way temporary traffic lights and 30mph speed restriction. There is a possibility that full road closures may be required for short periods during helicopter deliveries to the slope.

A site compound may be set up at existing sites, either within the TM or at the small quarry immediately south of the RaBT.

Construction will be highly dependent on hillside conditions as a result of weather and associated surface water flows. Factors to be considered during construction include potential slope instability, and the topography of the area and the associated limitations placed on plant, materials and operatives.

Construction activities are to be timed to avoid prolonged periods of heavy rainfall, high surface water flows, and significant hillside saturation. It is therefore essential that a suitable weather window is identified, considering overhead and underfoot conditions, so that works can be undertaken safely.

Through the excavation works it is likely that boulders may be encountered which are difficult to remove, and may require breaking up with an excavator, breaking with small pyrotechnics or nailing through to secure them to the slope.

Location

The scheme is located adjacent to a southbound (SB) section of the A83 carriageway south of RaBT viewpoint, within Argyll and Bute (Figure 1).

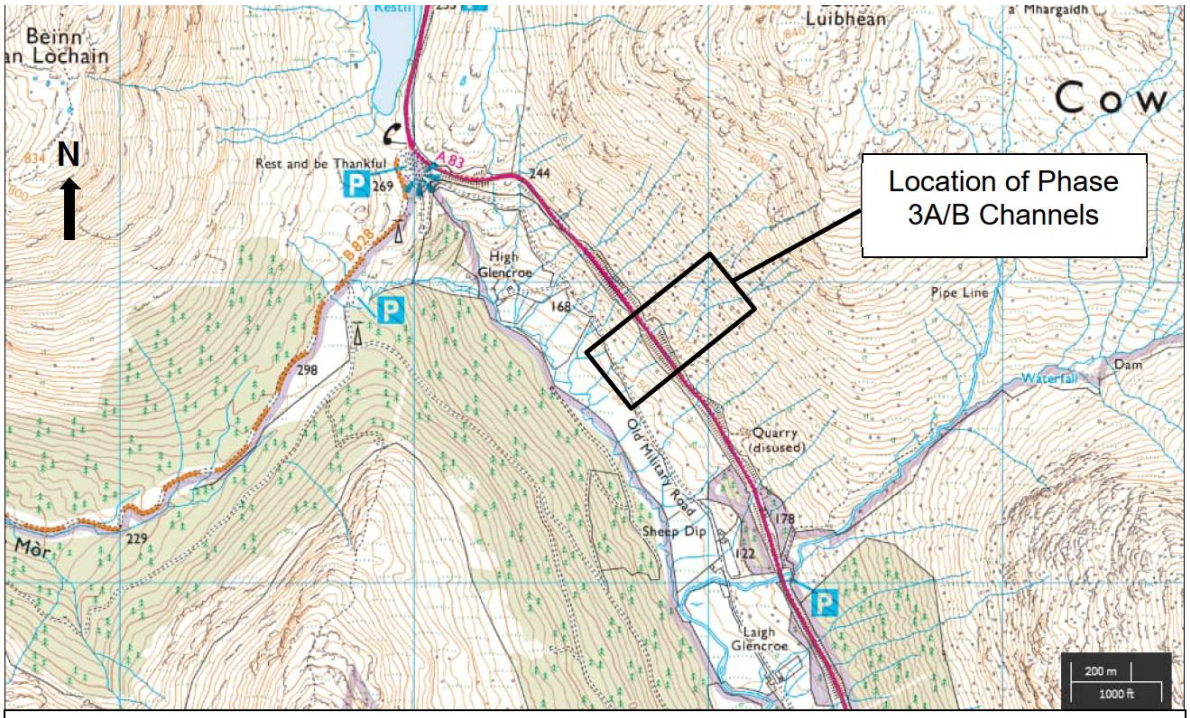

Figure 1. Scheme Location

The area is remote and set among steep hillsides in the rural area of Glen Croe, which lies to the north-west of Loch Lomond and Loch Long. The proposed scheme is located within Loch Lomond and the Trossachs National Park (LLTNP).

The scheme has the following approximate National Grid References (NGRs).

- Start (south): NN 23868 06755
- End (north): NN 23820 06836

The proposed footprint of the new debris barrier / catchfence can be viewed in Figure 2 below.

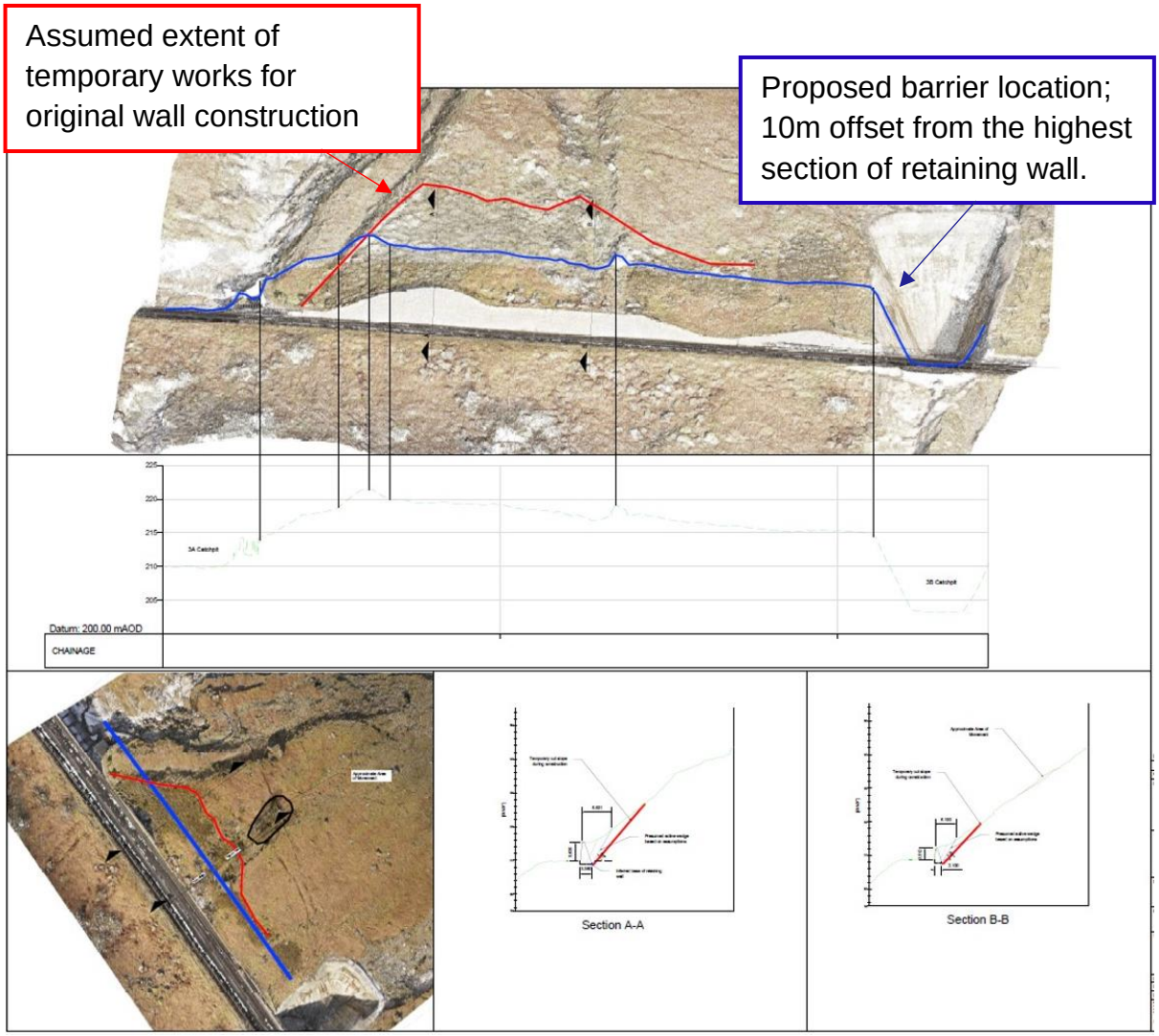

Figure 2. Proposed barrier location

Description of local environment

Air quality

The proposed scheme is not located within an air quality management area (AQMA) (Air Quality Scotland). No air quality monitoring stations are located within proximity to the scheme, with the closest being located approximately 31km south in Greenock (Air Quality Scotland). Pollution levels at the scheme location are expected to be lower than in Greenock due to the more rural surroundings of the scheme location.

There are no registered sites on the Scottish Pollutant Release Inventory (SPRI) (Scotland's Environment) for air pollutant releases within 10km of the works.

The scheme is located within a rural landscape where vehicular traffic travelling along the A83 and agricultural/forestry activities are anticipated to be the dominant impacts to local air quality.

Cultural heritage

There are no designated cultural heritage assets within 300m of the proposed scheme (PastMap).

Other undesignated cultural heritage items recorded within 300m of the scheme include three features noted on the Historic Environment Record, including the 18th Century Dumbarton - Tarbet - Inveraray - Tyndrum Military Road (Canmore Number: 126550). This asset, which was a reconstruction of the original military road, is located to the immediate south of Channel 3B and can be seen at a lower level to the west of the present A83 trunk road. The old road was superseded by the present road in the 1930s.

Landscape and visual effects

The proposed scheme is wholly located within the LLTNP (NatureScot Sitelink), which has the following Special General Qualities:

- A world-renowned landscape famed for its rural beauty
- Wild and rugged highlands contrasting with pastoral lowlands
- Water in its many forms
- The rich variety of woodlands
- Settlements nestled within a vast natural backdrop
- Famous through-routes
- Tranquillity
- The easily accessible landscape splendour

The proposed scheme is not located within a National Scenic Area (NSA) (Scottish Government).

The Landscape Character Type in the scheme area is identified as '252 Upland Glens – Loch Lomond & the Trossachs', the key characteristics of which are (NatureScot):

- 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.

Visual receptors within the area include:

- residents of the Glen Croe area; and
- visitors to the RaBT Viewpoint and LLTNP, including those seeking access to a number of popular hill summits, munros, forest walks and the Cowal Way via the A83 and Glen Croe area.

Consultation was carried out with LLTNP during a prior package of works to identify any concerns regarding visual impacts to the landscape as a result of works. Additional notification will be issued for this upcoming scheme.

The RaBT Viewpoint is located approximately 1km north-west of the proposed scheme, and provides several facilities including a catering van, bus shelter, car park and telephone box, and is therefore likely to support recreational activities in the area.

The area of Glen Croe is also a very important for informal recreation and provides access to a number of popular hill summits, munros, forest walks and Cowal Way, one of Scotland's Great Trails (Forestry Land Scotland).

The A83 Trunk Road connects Tarbet with Lochgilphead, Kennacraig and Campbeltown. It commences at the A82 / A83 junction within Tarbet leading generally south-westwards for a distance of 158 kilometres to (and including) its junction with New Quay Street at the Campbeltown Ferry Terminal. The A83 is a single carriageway along its length.

Biodiversity

The scheme is located 2.7km south of Glen Etive and Glen Fyne Special Protection Area (SPA).

No local or nationally designated biodiversity sites are located within 300m of the scheme (NatureScot).

The NBN Atlas hold 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), or injurious weeds, as listed under the Weeds Act 1959, or invasive native perennials, as listed in the Trunk Road Inventory Manual under the same criteria.

Similarly, Transport Scotland's Asset Management Performance System (AMPS) holds no records of INNS, injurious weeds or invasive native perennials within 300m of the scheme.

There are no areas of woodland as listed on the Ancient Woodland Inventory (Scotland's Environment) located within 300m of the scheme.

Habitats surrounding the scheme consist of predominantly sloped exposed grassland with some small willow (*Salix* spp.) trees in places. Various watercourses are located in proximity, which mainly consist of steep rocky channels.

Ecological Survey Data

Surveys for protected species and INNS were carried out by Jacobs ecologists in May 2022 at this location ahead of separate landslip remediation works.

Surveyors from the BEAR Scotland Environment Team conducted an updated PEA on 28th June 2024. Due to weather-related access constraints on site, this was predominantly undertaken from the A83 carriageway utilising binoculars.

Geology and soils

The National Soil Map of Scotland indicates that the scheme is underlain by peaty podzols (Scotland's Soils). Bedrock geology within the proposed works area comprises Beinn Bheula Schist Formation (Pelite, Semipelite and Psammite) (British Geological Survey). Superficial deposits within the proposed scheme location are recorded as Till – Diamicton (British Geological Survey).

The scheme is not located within a geological Site of Special Scientific Interest (SSSI) or a Geological Conservation Review (GCR) site (Scotland's Environment Webmap).

Soils within the scheme are recorded as peaty gleyed podzols (Scotland's Soils), and are categorised as 'Class 5' on the Carbon and Peatland Map. Class 5 is regarded as peat soil, and may also include areas of bare soil.

Material assets and waste

The proposed works are required to reduce risk of debris / rockfall on the A83. The works will require the following materials:

- Geobrugg SL-150 landslip catchpit fence (high-tensile steel wire)

- Concrete
- Rock anchors
- Grout

The value of the scheme exceeds £350,000 (currently valued at £550,000) and therefore a Site Waste Management Plan (SWMP) is required.

Expected wastes will include unacceptable fill material washed out by landslides, and any removed vegetation. Any waste material generated from excavation will be disposed of at a licenced facility.

Noise and vibration

There are no designated Candidate Noise Management Areas (CNMAs) or Candidate Quiet Areas (CQAs) within 10km of the proposed works area (Scotland's Noise).

There are no residential properties located within 2km of the works area. Agricultural buildings along the Old Military Road are occasionally used for agricultural purposes. The nearest settlement is Ardgartan, located approximately 5km east of the scheme.

The scheme is located within a rural landscape where vehicular traffic travelling along the A83 is anticipated to be the dominant source of noise and vibration emissions.

Population and human health

A Loch Lomond and the Trossachs National Park Authority (LLTNPA) core path is located approximately 650m south of the scheme within the Ardgartan Forest (Scotland's Environment Webmap). There are some other informal paths to the south including the former military road, which is located approximately 90m south of the proposed scheme.

The proposed scheme is in a rural setting, with the closest property (High Glencroe), which is understood to be ordinarily uninhabited, located approximately 500m to the west of the proposed scheme. There are several other agricultural buildings located approximately 1.4 km southeast of the proposed scheme, along the Old Military Road. The settlement of Lochgoilhead is located approximately 5.5km to the southwest and Ardgartan Holiday Park is located approximately 5km to the east.

The A83 Trunk Road is one of only two east-west strategic trunk road network connections between Argyll and Bute and the central belt of Scotland. It is a key route for local, commuter and tourist traffic. The A83 provides the main link between Tarbet and Campbeltown. In recent years it has been affected by a number of landslide events, particularly in 2020, necessitating diversion routes along the Old Military Road through Glen Croe when the A83 is impassable.

There is a car park at RaBT which provides a parking area and viewpoint for visitors to the area.

Vehicle count data taken from the nearest point on the A83 (ID: 764), located approximately 710m to the north-west of the proposed scheme, shows an average annual daily flow (AADF) count of 4,146 vehicles, with a heavy goods vehicle (HGV) percentage of 10% (count data taken in 2023) (Road Traffic Statistics).

Road drainage and the water environment

A number of minor/unclassified water bodies are culverted below the A83 carriageway wihtin 300m of the scheme, all discharging into Croe Water. Two watercourses are located immediately north and south of the scheme (Channel 3A and 3B). The northern watercourse (3A) appears on a '1:50,000 scale Ordnance Survey (OS) Map, as such is subject to authorisation by SEPA under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) ('*CAR*') (NGR Tool - SEPA).

One watercourse, the Croe Water (ID: 10215), is located approximately 260m to the south of Channel 3B. This watercourse was classified by SEPA as having an overall status of "Moderate" in 2022 (SEPA Water Classification Hub).

The proposed scheme is located within the Cowal and Lomond (ID 150689) groundwater body, which was classified by SEPA as having an overall status of 'Good' in 2022. This groundwater body is a Drinking Water Protected Area (Ground Water) (Scottish Government). The scheme is also located within a Drinking Water Protected Area (Surface Water) (Scottish Government).

The scheme is not located in an area at risk of flooding (SEPA Flood Map).

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 (The Climate Change (Scotland) Act 2009). The Act includes 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 (Climate Change (Emissions Reduction Targets) (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 (Mission Zero for transport | Transport Scotland). 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 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. The main sources are likely to be dust generated by excavation and breaking out, and emissions from transportation of materials, the presence of construction traffic and vehicles idling. As a result, there is potential for dust, particulate matter, and exhaust emissions 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.

- Ancillary plant, vehicles and non-road mobile machinery (NRMM) will have been regularly maintained, paying attention to the integrity of exhaust systems. These will also be switched off when stationary to prevent exhaust emissions (e.g., there will be no idling vehicles).
- Cutting, grinding, and sawing equipment (if required) will be fitted or used in conjunction with suitable dust suppression techniques e.g., local exhaust ventilation system that fits directly onto tools.
- Regular monitoring (e.g., by engineer or Clerk of Works) will take place when activities generating air pollution are occurring. In the unlikely event that unacceptable levels of air pollution are emanating from the site, the operation will, where practicable, be modified and re-checked to verify that the corrective action has been effective. Actions to be considered include: (a) minimizing cutting and grinding on-site, (b) reducing the operating hours, (c) changing the method of working, etc.
- 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.
- 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 will be removed from site as soon as is practicable.
- Good housekeeping will be employed throughout the work.
- Cement bags will remain closed when not in use to prevent cast off to the surrounding environment.

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

It is assessed that the planned works will not adversely impact any nearby sites of cultural heritage interest as the works are not located within the footprint or direct proximity to any designated or undesignated cultural heritage sites. The following mitigation measures will be included in the SEMP to address any potentially unforeseen impacts on cultural heritage during construction:

- If there are any unexpected archaeological finds, works will stop temporarily in the vicinity, the area will be cordoned off and a member of the BEAR Scotland Environment team will be contacted for advice.
- Laydown areas will be sensitively located to avoid areas of cultural heritage interest.
- There will be no storage of plant, materials or equipment against buildings, bridges, walls or fences.

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

Landscape and visual effects

There will be a short-term impact on the landscape character and visual amenity of the site as a result of the presence of construction plant, vehicles, and TM.

The works are predicted to have a negligible adverse impact on the landscape character during construction and no effect once constructed. Some debris fencing is already in place along nearby sections of this slope and the proposed new fencing will be in keeping with that. Previous consultation with LLTNP was undertaken as part of previous catch-pit/channel works at 3A and 3B, in which LLTNP responded that they had no major comments to make and appreciated that due to the fragility of the geomorphology the options are very limited. LLTNP did request that if any vehicle access is required to the site of the previous works, this should be micro-sited where possible to avoid more sensitive habitat areas. Notification of these new works will be given to LLTNP to provide any further comment.

Works will be carried out in line with good practice measures for managing the construction environment as outlined in the SEMP as follows:

- Throughout all stages of the works, the site will be kept clean and tidy, with materials, equipment, plant and wastes appropriately stored, minimising the landscape and visual effects.
- LLTNP advice, if received, will be complied with.
- 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.

- Mitigation measures described in the Biodiversity: Habitats Section will be followed to reduce potential impacts on the landscape.

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

The works area is located approximately 2.7km to the southeast of the Glen Etive and Glen Fyne SPA. An Appropriate Assessment was undertaken as part of a Habitats Regulations Appraisal (HRA) to comply with the Conservation (Natural Habitats &c.) Regulations 1994 (as amended). The Appropriate Assessment concluded that, although Likely Significant Effects (LSE) on Glen Etive and Glen Fyne SPA could not be ruled out, the proposed activities will not result in an adverse effect on site integrity (AESI) with the specified mitigation in place, including VP surveys prior to works and watching briefs during helicopter flights.

During works, activities undertaken on site have the potential to result in adverse impacts on species that may be active within proximity of the proposed works. However, other than the potential for nesting birds – which will be checked prior to construction if the works commence prior to the end of the breeding bird season - ecological surveys have not identified any specific ecological features that require additional protection or licensing in advance of the proposed works. If nesting birds are found during the pre-works check, consultation with NatureScot will be carried out and a licence will be sought if advised by NatureScot. If required, all conditions of any licences will be adhered to.

Toolbox Talks will be prepared to inform workers what to do should protected species or breeding birds be encountered during works, and these will be included in the SEMP. Further measures to be included in the SEMP are as follows:

- Mitigation as outlined within the HRA, and where further advised by NatureScot, will be enacted on-site.
- Site personnel will be instructed not to approach or touch any animals seen on site.
- Site personnel will remain vigilant for the presence of protected species throughout the works period. Should a protected species be noted during construction, works will temporarily halt, until such time that the species has sufficiently moved on.
- Measures to be implemented to protect the aquatic environment are detailed in the Road Drainage and Water Environment section below.
- Tracking of machinery through watercourses will not be permitted.
- No discharges into any watercourses or drainage systems will be permitted.
- All construction operatives will be briefed through toolbox talks prior to works commencing using the toolbox talks for protected species and nesting birds. The talks will specifically cover ecology, 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 will not recommence until advice from an appropriately qualified ecologist is sought and appropriate mitigation is in place, where required.

- 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 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 must be provided, allowing free passage for mammals and preventing entrapment.
- Artificial lighting used during hours of darkness will be restricted to the immediate working area and will be directed away from areas of suitable habitat (e.g. watercourses, woodland, shrubs) as far as is safe and reasonably practicable.
- If works will commence during the breeding bird season (March to August inclusive), a nesting bird check will be carried out prior to works commencing.
- If any vegetation clearance or tree trimming is necessary during the breeding bird season a nesting bird check will be carried out prior to vegetation clearance.
- If an active bird nest is found in the vicinity of works, all works within 30m of the nest will stop until the BEAR Scotland Environment Team can provide advice.
- If nesting birds are found during the pre-works check or during works, consultation with NatureScot will be carried out and a licence will be sought if advised by NatureScot. If required, all conditions of any licences will be adhered to.

There is potential for temporary, indirect impacts on fish during construction due to mobilisation of sediment as a result of construction works, particularly as the works are being carried out during the most sensitive period for salmonids, which may be present in Croe Water below the site. With the following mitigation in place, impacts are not anticipated to be significant:

- Mitigation measures described in the Water Section will be followed to minimise potential impacts on the water environment.
- Pollution prevention measures will be in place for the duration of construction.
- Robust containment measures will be in place around the culverts at 3A and 3B to prevent sediments traveling downstream to the Croe Water.

The proposed works will result in some loss of habitats which are ubiquitous in the wider area. Therefore, the loss of small areas of these habitats compared to the wider area is not expected to be significant. During the operational phase, the works are not expected to significantly impact surrounding habitats as no on-going activities or maintenance of the barrier is expected except following a landslide event.

The following mitigation measures will be adhered to during construction to ensure potential impacts on habitats are not significant and minimised where possible:

- Construction methods will take place sensitively to reduce as far as possible encroachment of plant and machinery on habitats outside of the work footprint.
- Material storage areas and site compound will be sited sensitively to avoid requirement for further land take. Where practical, this will be in existing hardstanding areas on level ground.
- Mitigation measures described in the Water Section will be followed to minimise potential impacts on the water environment.
- Mitigation measures described in the Geology and Soils Section will be followed to minimise potential impacts on habitats.

Taking into account the nature and scale of the works and the good site practice mitigation measures which will be adopted during the works, it is anticipated that any biodiversity effects associated with the proposed works will not be significant. This receptor is not considered further in this RoD.

Geology and soils

The works will have a negligible adverse impact on geology and soils based on the fact that the scheme is not located within a GCRS and excavation works will entail removal of landslip debris and material. In addition, any excavations will be carried out with good practice measures detailed in the SEMP as follows:

- Excavated soil and rock will be stored in a designated area on level ground where practicable.
- If the soil is to be re-used on site, then it will be wetted (if necessary) during periods of dry weather to prevent drying out.
- 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.
- Mitigation measures to prevent contamination of soils through loss of containment are discussed in the Water Section.
- Mitigation measures described in the Biodiversity: Habitats Section will be followed to reduce potential impacts on soils.

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

During construction, there will be a temporary impact as a result of material consumption and waste production. 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.

Provided the following mitigation measures are followed during works, impacts during construction are not anticipated to be significant:

- The waste hierarchy (Reduce, Reuse, Recycle and Dispose) will be employed throughout the construction works.
- Bulk material will be delivered to site without packaging where possible.
- Supplies will be requested to minimise all packaging where possible.
- Care will be taken to only order the correct quantity of required materials, preventing disposal of unused materials.
- Materials will be reutilised where possible.
- Facilities on site will be provided in a designated area to enable the correct segregation of waste, maximising recycling on site. These will be clearly marked and labelled.
- Wastes not suitable for recycling will be sent to landfill or special waste treatment facilities, depending on the nature of the waste.
- All waste stored on site will be adequately protected against the elements and vermin.
- All appropriate waste documentation will be present on-site and be available for inspection.
- All wastes and unused materials will be removed from site in a safe 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 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.
- If required, an exemption from SEPA will be secured to allow for the reuse of materials.
- During the site induction, all staff are to 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 in line with the Road Drainage & Water Environment section.
- 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).

- Any contaminated ground as a result of the works will be removed and transferred off site as special waste.
- Any special waste (if generated) will be removed from site by a licenced waste carrier. Special waste will not be mixed with general waste and/or other recyclables.

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

With the implementation of the following mitigation, noise and vibration impacts during the construction phase are not predicted to be significant:

- The best practicable means, as defined in Section 72 of the Control of Pollution Act 1974 and BS5228-1:2009+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.
- Where possible, inherently quiet plant will be selected for construction works.
- All plant, machinery and tools will be well maintained, including parts relating to noise minimisation.
- All plant, machinery, and vehicles will be switched off when not in use.
- Where ancillary plant such as generators are required, they will be positioned so to cause minimum noise disturbance.
- Movement of plant onto and around the site will have regard to minimising noise and will not be left running if not required for immediate use.
- All plant will be operated in a mode that minimises noise emissions and must have been maintained regularly to comply with relevant national and international standards.

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

Construction of the proposed schemes are not anticipated to have an adverse effect on residents, properties or land use in the area. Pedestrians at the RaBT viewpoint and those using the Core Path or other routes in the vicinity are likely to be unaffected due to the distance from the works.

Traffic management will be designed in line with Chapter 8 of the Traffic Signs Manual and will accommodate pedestrians and non-motorised road users, and all construction activities will operate in line with good practice measures for construction as outlined in the SEMP.

During operation, it is anticipated that there will be a slight to moderate beneficial impact on safety for non-motorised users of the trunk road at this location with infrastructure in place to reduce the risk of impact from landslide / rockfall events.

Taking into account the nature and scale of the works and the good site practice mitigation measures to be adopted during the works (outlined in the SEMP), 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

There is potential for an impact on water quality during construction as a result of potential spillage of fuels, oils and mobilisation of silt. Standard procedures and conditions are in place to mitigate impacts on the water environment, as listed below.

Works are not required within the watercourses, and as such no authorisation under CAR is required. SEPA General Binding Rules (GBRs) will be adhered to.

Provided the following mitigation measures are adhered to throughout the works, impacts during the construction phase are not predicted to be significant:

- SEPA GBRs will be adhered to.
- No discharges into any watercourses or drainage systems will be permitted.
- 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.
- All on-site activities will operate in accordance with relevant SEPA Guidance for Pollution Prevention (GPPs).
- All 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 for storage.
- All hazardous material will be stored in line with COSHH data within a designated COSHH storage area at least 10m from watercourses, drains, or 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.
- The designated storage area will be on impermeable ground and fully bunded.
- Where applicable and practicable, bio-degradable hydraulic fluids and oils will be utilised in machinery.
- Where fuel is stored on site and refuelling actives are undertaken, the following will apply:
    - Only suitably bunded fuel bowser(s) or tank(s) in line with General Binding Rules the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) will be utilised on site.

  - The fuel bowser(s) and/or tank(s) will be stored at least 10m away 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 actives 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.
- 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 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 available, then drip trays with a capacity of 110% will be placed beneath the equipment.
- A spillage control procedure will be in place in which all staff are to be trained.
- Suitable spill kits will be available on site.
- 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 Environment Team. SEPA will be informed of any such incident as soon as possible using the SEPA Pollution Hotline.
- Mitigation detailed in Biodiversity Section will be strictly adhered to.
- Pollution prevention measures will be installed to prevent sediments from reaching the Croe Water via nearby channels.
- Pollution prevention measures will be checked daily and more regularly during periods of heavy rainfall.

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, material use and production and transportation of materials and wastes. However, considering the nature, short-term duration, size and scale of the scheme, and the mitigation detailed below, the risk of significant impacts to climate are considered to be low.

Proposed climate mitigation measures:

- All mitigation measures detailed within 'Air Quality' and 'Material Assets and Waste' will be adhered to.
- BEAR Scotland will adhere to its Carbon Management Policy.
- Where possible, materials will be sourced locally to reduce greenhouse gas emissions associated with materials movement, and waste will be disposed at local landfill, where required.

Vulnerability of the project to risks

Works will be programmed as far as is reasonably practicable to avoid periods of adverse weather or heavy rainfall. The management of site works and road operations will be largely driven by estimates of soil saturation and current and/or forecasted rainfall, which will provide an indication of landslide risk. Saturation hazard charts will be updated on a daily basis and, when it is deemed that there is a heightened risk of a landslide, the works and the operation of the A83 will be altered or suspended accordingly.

A SEMP will be put in place which will set out a framework to reduce adverse impacts from construction activities on sensitive environmental receptors. The SEMP will set out the commitments and constraints and will identify the procedures and measures that will be used to manage and control these aspects. The Contactor will be required to comply with all conditions of the SEMP.

The scheme is not located in an area at risk of flooding.

Traffic management will involve a single lane closure with two-way temporary traffic lights and 30mph speed restriction Traffic management will ensure any potential impacts on traffic accident risk are negligible. It is not anticipated that TM will have an impact on pedestrian routes, however pedestrians or other NMUs will be accommodated within the traffic management setup if required.

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

During construction, activities associated with the works may create several types of minor temporary disturbances such as changes to noise and vibration and air quality. However, these impacts will be temporary in nature and are not anticipated to result in a significant cumulative effect.

Existing TM is still in place along this stretch of the A83 carriageway due to long-term landslip monitoring/remediation works. Various phases of protection works and/or remediation works have been ongoing for several years with some additional localised works planned later this year. Any future BEAR Scotland schemes will be programmed to take into account already programmed works and traffic management arrangements. As detailed in the Landscape and Visual section above, landscape and visual effects associated with the proposed works are unlikely to be significant. No cumulative landscape and visual impacts are expected.

There are no other known projects currently planned or recently completed that have the potential to contribute to in-combination or cumulative effects on the nearby designated sites or protected species in the vicinity of Glen Croe.

A search of the Argyll and Bute Council Planning Portal (Map Search) did not highlight any planning applications within 300m of the scheme in the last year.

A search of the Scottish Roads Works Commissioner website (Map Search) has identified that no other roadworks are currently ongoing, or noted as being planned, on the trunk road at the same time as this scheme. Due to the nature of the proposed works, no cumulative effects are anticipated with any other developments in the vicinity.

The proposed works will improve the condition of the road and protect against future landslides. Consequently, carrying out these works now will reduce the risk that additional major works will be required in the future. This in turn will reduce the amount of work required at this location. Therefore, it is not expected that the works will contribute to long-term significant cumulative effects on the environment in the vicinity of Glen Croe.

Likewise, the in-combination effect or all potential environmental impacts are not considered to be significant.

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.

A Habitats Regulations Appraisal was undertaken which concluded that, with mitigation measures and best practice implemented, there will be no adverse effects on site integrity.

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 in whole in the LLTNP 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 involves the installation of a debris barrier in the vicinity of an existing road (A83). The scale of the works is therefore considered to be very small and will involve minor alterations to rock/scree slopes to mitigate potential land-slide impacts on road users and erosion.
- Construction activities are restricted to an area of 0.3ha along a 120m stretch of slope adjacent to the A83.
- The works will last up to eight weeks depending on the local geotechnical conditions and prevailing weather.
- The risk of major accidents or disasters is considered to be low.

Location of the scheme:

- While located within LLTNP, the works do not involve any significant changes to the landform or vegetation, and they are predicted to have a negligible effect on its special landscape qualities.
- No AESI on the Glen Etive and Glen Fyne SPA has been identified.
- The works area does not lie within a densely populated area, any sites of historical, cultural or archaeological significance, or sites designated for their geology or soils.
- The site compound will be located on made ground within TM.

Characteristics of potential impacts of the scheme:

- No impacts on any features of cultural heritage interest are anticipated.
- Any impacts on air quality or noise levels are temporary during the construction period. Due to the distance of the works from sensitive receptors and with mitigation measures in place, impacts are minor and not significant.
- Any short-term impacts on vehicle travellers, pedestrians, cyclists or equestrians are considered negligible, particularly as works will be completed outside of the key tourist period.
- There will be a minor loss of some habitats which are ubiquitous in the wider area.
- There is potential for an impact on water quality during construction as a result of potential spillage of fuels, oils and mobilisation of silt. However, with pollution prevention measures in place, this risk is considered to be negligible.
- No impacts on biodiversity are expected due to lack of protected species in proximity of the works.
- No impacts on breeding birds are anticipated; works are located at a sufficient distance and a pre-works bird nesting check will be undertaken due to works commencing within the bird breeding season (March to August inclusive).
- With pollution prevention measures in place, there are no risks to human health from water contamination or air pollution.
- Measures will be in place to ensure appropriate removal and disposal of waste.
- No change in land use is anticipated, but a minor loss of low-quality hillside grazing land, ubiquitous to the wider area, is expected.
- No impacts on geology and soils are anticipated.
- During construction, there will be a temporary impact as a result of materials and waste.

References of supporting documentation

HRA Proforma - A83 Rest and Be Thankful Phase 3A / 3B Slip'. BEAR Scotland, July 2024.

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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