



**TRANSPORT  
SCOTLAND**  
CÒMHDHAIL ALBA

# **Environmental Impact Assessment Record of Determination**

## **A830 Banavie Swing Bridge – Winter Works**

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## Project Details

### Description

BEAR Scotland has been commissioned by Transport Scotland to carry out replacement and/or repair of mechanical and electrical components of A830 Banavie swing bridge in order to maintain the bridge in good working order. The works will include:

Electrical maintenance works:

- Generator replacement with new larger unit - Install 80kVA generator.
- Generator cabin - Install new cabin to suit new generator requirements.
- SSE board modification - Install new SSE Board
- Replace wig-wags with new 24V - Install all new wig-wag panels throughout.

Mechanical maintenance works:

- Modify Hydraulic Power Unit (HPU) pack - Adapt HPU pack by adding a second full size drive motor and pump, to incorporate duty and standby motor / pump sets.
- Replace tail blocks, rams and tail block sensors with new rams which have built-in linear transducer - Install new rams with integral linear transducer sensors, reverse engineer the tail blocks and replace with new blocks without the on-site cut out when installed.
- Replace electric motors with braked motors - Install new slew motors, incorporating brakes.
- RAM emergency recovery process - Develop temporary jacking points capable of support bridge under live load (for maintenance) and also a recovery system using manually operated portable jacks with a portable drive system, running completely independently of the duty systems. Jacks will lift the bridge at the same locations as the temporary jacking points.

The works are programmed to be completed within the 2022/2023 financial year (January 2023 to March 2023 inclusive) during the Caledonian Canal closed season. Works are expected to be completed over thirty days (6 weeks) by utilising a mixture of daytime and night-time working patterns. Traffic management (TM) is currently anticipated to consist of full road closures with a diversion route in place during night works. However, if the programme changes, this may result in amendments to the exact TM requirements. Alternative pedestrian routes will be included in the TM setup during daytime works. Works which will require the bridge to be swung open (thereby closing the A830) will be carried out at night to reduce impacts to road users

and pedestrians. However, there are alternative crossing points over the Caledonian Canal near Banavie swing bridge which can be used by pedestrians during full road closures.

## Location

The A830 Banavie swing bridge is located within Fort William (Figure 1).

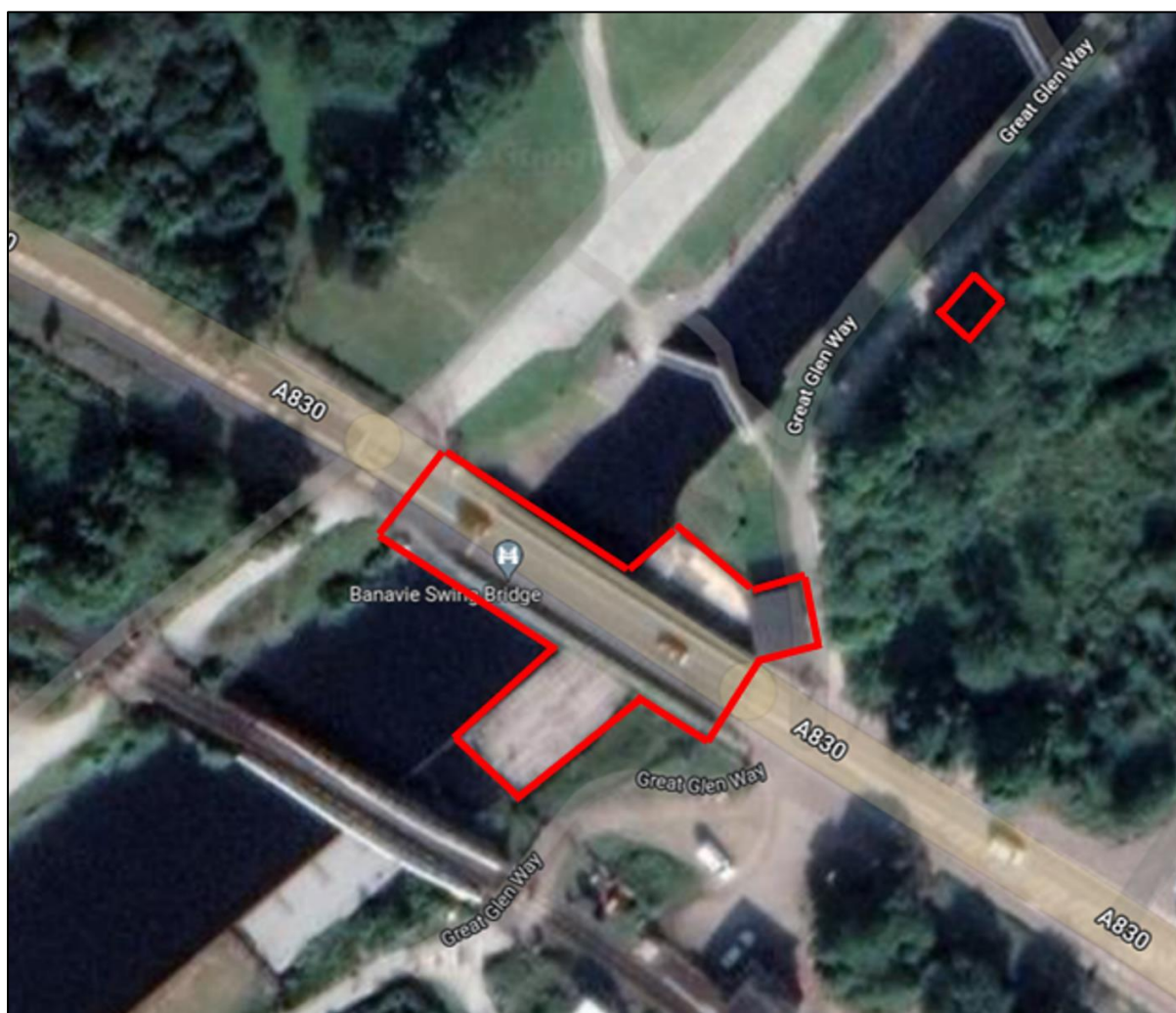


Figure 1. Location of the scheme extent of the proposed mechanical & electrical works at A830 Banavie swing bridge. Source: Google maps.

## Description of local environment

### Air quality

The scheme is not located within any Air Quality Management Area (AQMA) and no air quality monitoring stations are located in the vicinity of works ([Air Quality Scotland](#)). The nearest air quality monitoring site to the scheme is located within the

town centre of Fort William, approximately 1.7km south of the scheme ([Air Quality Scotland](#)). Pollution levels in the general vicinity of works are anticipated to be the same or lower than those at the monitoring station due to the scheme being within the less dense urban environment.

There are no sites registered on the Scottish Pollutant Release Inventory (SPRI) ([Scotland's Environment](#)) for air pollutant releases within 1km of the scheme.

Baseline air quality at the scheme location is likely to be primarily influenced by traffic along the A830 trunk road and Caledonian Canal. Secondary sources are likely derived from day-to-day urban activities. The West Highland Line railway spans the Caledonian Canal 30m south of the scheme. Rail traffic will therefore also have an impact on air quality in the area.

## Cultural heritage

According to Historic Environment Scotland's PastMap ([PastMap](#)), two Scheduled Monuments and six Listed Buildings lie within 300m of the bridge.

A830 Banavie swing bridge spans 'Caledonian Canal, Corpach to Banavie' (SM6491). The monument comprises that stretch of inland waterway known as the Caledonian Canal running east and north-east from the locks and basin at Corpach, on Loch Linnhe, to the south (or bottom) end of the flight of locks at Banavie (otherwise known as Neptune's Staircase). The area to be scheduled includes all the canal in water and the strip of ground extending up to a maximum of 30m from the water on either side and containing the towpaths and embankments and any associated capstans, bollards, mooring hooks, mile posts, weirs and overflows. The scheduling excludes the road swing bridge at Banavie, the railway swing bridge and its associated signal box also at Banavie, as well as all modern moorings, pontoons, slipways, walls and fences, power cables, lampposts and other street furniture.

Previous consultation with Historic Environment Scotland (HES) confirmed that maintenance works on the swing bridge would not require Scheduled Monument Consent (SMC). Updated consultation has been carried out with HES to confirm that SMC will not be required for these works.

The next section of Caledonian Canal Scheduled Monument 'Caledonian Canal, Neptune's Staircase, Canal Locks, Banavie' lies 40m upstream of the bridge.

There is no connectivity between the bridge and Listed Buildings as the nearest of these lies approximately 40m from the scheme.

Of lesser cultural heritage value, numerous Historic Environment Records (HERs) and Canmore National Records (CNRs) lie within 300 m of the scheme extents. Two

of these, a HER and a CNR, pertain to the A830 Banavie swing bridge. There is no connectivity between the scheme and remaining cultural heritage records as the nearest of these lies approximately 5m west of the scheme.

There are no World Heritage Sites, Garden and Designed Landscapes, Conservation Area or Inventory Battlefields within 300m of the scheme ([PastMap](#)).

## Landscape and visual effects

The scheme does not lie within an area of land designated as a National Park (NP) or a National Scenic Area (NSA) ([Scotland's Environment](#)). The Landscape Character Type (LCT) within the scheme extent is the Lochs with Settled Edges (No. 234) ([Scottish Landscape Character Types](#)). The Lochs with Settled Edges LCT key characteristics are:

- Flat landscape contained between steep loch sides and open water.
- Extensive agriculture and settlement confined within a narrow lochside fringe, whose foreshore is subject to tidal influence.
- Loch heads and river mouths that permit more extensive farming and built development, including housing and small industrial estates.
- Communications confined to narrow loch edges where shingly beaches, rocky headlands, wooded banks and marshy platforms form a diverse water's edge.
- Extensive tracts of oak-birch woodland climbing from the lochside up into the foothills, often engulfing the settled edge and providing an enclosed micro landscape.
- Dense commercial forests descend to loch shore in some locations.
- Occasional policy grounds of big houses along the loch edge give rise to a proliferation of rhododendron and other ornamentals in some places, providing a lush and sheltered character.
- Linearly arranged crofting communities with vivid green croft fields contrast with the more subdued duller colours of surrounding hills.

Land cover surrounding the scheme is a mixture of urban development, temperate shrub heathland, cultivated areas of gardens and parks and woodland areas ([Scotland's Environment](#)).

## Biodiversity

Numerous bird species were recorded on NBN within 2km over a 10-year period. Under the Wildlife and Countryside Act 1981, all wild birds and their active nests are protected.

The following records of invasive non-native species (INNS) of plants, as listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (WCA) (noted below with \*), and injurious weeds, as listed under the Weeds Act 1959, or an invasive native perennial, as listed in the Trunk Road Inventory Manual were found on NBN using the same search criteria:

- Giant knotweed (*Fallopia sachalinensis*)\*
- Himalayan knotweed (*Persicaria wallichii*)\*
- Japanese knotweed (*Reynoutria japonica*)\*
- Broad-leaved dock (*Rumex obtusifolius*)

The Asset Management Performance System (AMPS) notes no records of INNS within the scheme extents. Ecological surveys to date have confirmed these findings of no INNS in proximity to the proposed works area.

The A830 Banavie swing bridge spans Caledonian Canal 1.7km northeast of transitional waters, which provides significant freshwater and partially saline water habitat for a wide variety of fish, amphibians, reptiles, birds and mammals. The swing bridge also has potential to support nesting birds (between March and August).

A range of ecological surveys undertaken by BEAR Scotland and subcontractors at the A830 Banavie swing bridge over the past several years noted the swing bridge functions as a temporary feeding roost for bats during the active season (April to October, inclusive). DNA analysis of bat droppings collected at the bridge confirmed that it has been used by Daubenton's bats (*Myotis daubentonii*). No evidence of hibernating bats has been identified during winter hibernation inspections (WHIs) of the swing bridge.

The most recent WHI at A830 Banavie swing bridge was carried out by Highland Ecology & Development (HED) Ltd in February 2021, which found no evidence of hibernating bats. Bat surveys are typically considered valid for 18-24 months depending on professional judgement. As this bridge has been assessed as being unsuitable for roosting bats in winter, the existing WHI data is considered valid for 24 months and therefore is valid to permit the proposed start date in January 2023. BEAR Scotland are however still planning on conducting an updated WHI of this bridge in January 2023 to renew the data validity for this bridge.

In addition, if works are delayed within the bat active season (April to October inclusive), bat activity surveys will be carried out prior to works to support an application for a bat derogation licence from NatureScot, which would be required for works during the bat active season.

## Geology and soils

The scheme does not lie within a Geological Conservation Review Site (GCRS) ([SiteLink](#)).

Bedrock within the scheme extents is comprised of Great Glen Fault Zone (fault-gouge) ([BGS GeoIndex](#)).

Superficial deposits within the scheme extent are comprised of Raised Marine Beach Deposits of Holocene Age (sand and gravel) ([BGS GeoIndex](#)).

There is no data of the Generalised Soil Type or the Major Soil Group Type beneath the scheme extents ([Scotland's Soils](#)).

## Material assets and waste

The proposed works entail routine replacement and/or repair of mechanical and electrical elements on the A830 Banavie swing bridge. Materials used will consist of:

- Steel
- Electrical / electronic components
- Glass reinforced plastic (GRP)
- Timber shed elements

Wastes are anticipated to be <0.5 tonnes of metals and Waste Electrical and Electronic Equipment (WEEE). Recyclable materials will be recycled, with any other wastes disposed of at a suitably licenced facility.

## Noise and vibration

Works are not located within a Candidate Noise Management Area (CNMA) or Candidate Quiet Area (CQA) ([Scotland's Noise Scotland's Environment](#)).

There is no daytime or night-time modelled noise levels available at the scheme extents ([Scotland's Noise Scotland's Environment](#)). Baseline noise levels are likely to be influenced by traffic along travelling along the trunk road and Caledonian Canal. Secondary sources are likely derived from day-to-day urban activities associated with Fort William. Railway traffic on the West Highland Line which spans the Caledonian Canal 30m south of the scheme is also likely to contribute to noise levels in the area.



## Population and human health

The bridge lies within Fort William and as such numerous business, community and residential properties lie within 300m of the scheme extents. The nearest of these, Banavie train station, lies 30m south of the scheme and has no screening from the scheme extents. The remaining properties are set back and screened from the bridge by tree belts and/or properties.

The Core Path 'Lochybridge to Blar Mhor to Corpach' (ID: 24551) crosses the swing bridge within the scheme extent and Core Path 'Banavie to Torcastle to Strone by Caledonian Canal and Great Glen Way' (ID: 1490) follows the banks of Caledonian Canal within the scheme extents ([Scotland's Environment](#)).

'Neptune's Staircase and the Canal, Banavie', a walking route listed on WalkHighlands, lies along the banks of the Caledonian Canal within the scheme extents. In addition, paved pedestrian footways lie either side of the bridge ([WalkHighland](#)). Alternative pedestrian crossings over the Caledonian Canal are present over lock gates near Banavie swing bridge.

The National Cycle Network (NCN) route Nr78 lies within the scheme extents ([OS Maps](#)).

The area in proximity to the scheme is popular with tourists and outdoor recreationists. The A830 at the scheme extents is a single carriageway trunk road known as the Road to the Isles (though it forms only a part of the historic route) and is a major road in Lochaber, Scottish Highlands. It connects the town of Fort William to the port of Mallaig. The 40mph speed limit applies throughout the scheme extents.

The nearest traffic count point (ID 793) on the A830 is located approximately 1.4km southeast of the scheme ([Road traffic statistics](#)). Vehicle count data taken from this point in 2021 shows an Average Annual Daily Traffic (AADT) count of 8,334 motor vehicles, of which 407 were heavy goods vehicles ([Road traffic statistics](#)).

## Road drainage and the water environment

The A830 Banavie swing bridge spans Caledonian Canal - Loch Linnhe to Top of Neptune's Staircase, a classified waterbody (ID: 20336) 1.7km upstream of Transitional waterbody, a classified estuary (ID: 200089) ([SEPA water environmental hub](#)). Caledonian Canal - Loch Linnhe to Top of Neptune's Staircase is a canal in the River Lochy catchment of the Scotland river basin district. The main stem is approximately 9.7 kilometres in length. The water body has been designated as an artificial water body on account of physical alterations that cannot be addressed

without a significant impact on navigation. Caledonian Canal - Loch Linnhe to Top of Neptune's Staircase has been assigned a Water Framework Directive 2000/60/EC (WFD) overall classification of 'Good' ([SEPA water environmental hub](#)).

Numerous minor unclassified waterbodies lie in proximity to the scheme.

The scheme falls within the 'Fort William' and 'Spean and Lochy Sand and Gravel' groundwaters which have been classified as 'Good' ([SEPA water environmental hub](#)).

The A830 within the scheme extent has a high risk of surface water flooding, which means that each year, these areas have a 10% chance (high 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 CO<sub>2</sub> 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 (RoD) has been undertaken in accordance with all relevant regulations, guidance, policies and plans, notably including the Environment

and Sustainability Discipline of the Design Manual for Roads and Bridges ([Design Manual for Roads and Bridges \(DMRB\)](#)) and Transport Scotland's Environmental Impact Assessment Guidance ([Guidance - Environmental Impact Assessments for road projects \(transport.gov.scot\)](#)).

## Description of main environmental impacts and proposed mitigation

### Air quality

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

- All plant, machinery and vehicles associated with the scheme must be maintained to the appropriate standards and must be switched off when not in use.
- 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 much as 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 should be removed from site as soon as is practicable.
- Good housekeeping will be employed throughout the work.

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

### Cultural heritage

The proposed works are not anticipated to have an adverse impact on cultural heritage as the works will be restricted to made ground within the A830 carriageway boundary and the control and generator cabins. Although the A830 Banavie swing bridge spans the Scheduled Monument 'Caledonian Canal, Corpach To Banavie' (SM6491). Updated consultation has been carried out with HES to confirm that SMC will not be required for these works.

The proposed works are not anticipated to have an adverse impact on cultural heritage as the works and any storage or laydown locations will be restricted to areas outside of the Scheduled Monument boundary and involve routine maintenance of the bridge. As such, there will not be any alteration of bridge visual features or characteristics.

Six Listed Buildings lie within 300m of the scheme, however there is no connectivity between the scheme and noted listed features. The following good practice measures will be in place to reduce the risk of impacts to undiscovered features of cultural heritage interest:

- The site compound and any storage or laydown areas will be located outside of the Caledonian Canal Scheduled Monument area (i.e., at least 30m from the canal banks).
- Should any unexpected archaeological evidence be discovered, works will stop temporarily in the vicinity and the BEAR Scotland Environment Team contacted for advice.
- People, ancillary plant, vehicles, non-road mobile machinery (NRMM) and materials will be restricted to areas of made/engineered ground on the A830 carriageway boundary and the control and generator cabins.
- People, plant, and materials should, as much as is reasonably practicable, only be present on areas of made / engineered ground. Where access outwith these areas is required for the safe and effective completion of the scheme, it should be reduced as much as is reasonably practicable and ideally be limited to access on foot. There should be no storage of vehicles, plant, or materials against any buildings, walls or fences.

With the above 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 littering or obstructed views due to vehicles and machinery. However, proposed works will be restricted to made ground within the A830 carriageway and swing bridge control and generator cabins. Works will be carried out during a mixture of daylight and night-time hours over 30 days, and land use will not change as a result of the works. Furthermore, the scheme does not lie within an area of land designated as an NSA or NP. In addition, the following mitigation measures will be put in place during works:

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

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

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

## Biodiversity

During works, activities undertaken on site could potentially have a temporary adverse impact on biodiversity in the area as a result of an increased vehicle presence and the potential for disturbance to protected species and pollution of habitats.

The scheme is not situated within or have a connectivity with a 'sensitive area' designated for biodiversity features e.g., Special Area of Conservation, Special Protection Area, Ramsar, SSSI, etc.

The works at A830 Banavie swing bridge are programmed to be completed during January to March 2023, which is the closed season on the Caledonian Canal. The timing of works also falls during the bat hibernation season. The most recent WHI at A830 Banavie swing bridge confirmed that the bridge is not used as a hibernation roost for bats. This WHI is still within its validity period, however an updated WHI will be carried out in January 2023. In addition, if works are delayed within the bat active season (April to October inclusive), bat activity surveys will be carried out prior to works to support an application for a bat derogation licence from NatureScot, which would be required for works during the bat active season.

Although the swing bridge has potential to support nesting birds, the works are programmed to commence outside of the breeding bird season, however will still be ongoing at the beginning of March when the breeding bird season starts. As such, any birds that chooses to nest within the proximity to the scheme, will be appropriately acclimatised to the ongoing disturbance from the proposed works. Any such instance of birds establishing nests during the works phase will be reported to BEAR Scotland's Environment Team, who will advise on any suitable mitigation required.

A search of NBN identified numerous INNS in the wider area of the scheme extents, however ecology surveys to date have not noted any in proximity to the proposed works area. A toolbox talk for working near INNS will be included in the Site Environmental Management Plan (SEMP) and adhered to on site. Pre-works surveys will also reconfirm that no INNS are present onsite that could be impacted by works.

Pollution controls and good practice measures to reduce impacts of works on the local environment will be detailed in the SEMP and adhered to on site. Any protected species in the area are likely to be accustomed to road noise on the A830 and the scheme is of short duration and restricted to winter season when bats are not using the bridge. Therefore, with the following mitigation measures in place, the risk of significant impacts on biodiversity are considered to be low:

- Works are to be strictly limited to areas required for access and routine maintenance works. Unnecessary encroachment onto terrestrial or aquatic areas will not be tolerated.
- Works must be completed by 31<sup>st</sup> March 2023 to avoid the active season for bats. If works are delayed beyond this point and will take place during the bat active season (April to October inclusive), additional surveys and a bat licence from NatureScot will be required prior to works.
- Works will not entail any tree-felling or vegetation clearance.
- A site visit will be undertaken to assess requirements (if any) for invasive and injurious weeds management.
- No in-stream works are permitted.
- Site personnel should remain vigilant for the presence of any protected species throughout the works period. Should a protected species be noted during construction, works should temporarily halt until the species has sufficiently moved on. Any sightings of protected species should be reported to the BEAR Scotland Environmental Team.
- Site personnel should remain vigilant for the presence of any protected species throughout the works period. Should a protected species be noted during construction, works should temporarily halt until the species has sufficiently moved on. Any sightings of protected species should be reported to the BEAR Scotland Environmental Team.
- Artificial lighting will be directed away from road verges, woodland, and waterbodies as far as is safe and reasonably practicable.
- A 'soft start' will be implemented on site each day. This will involve switching on vehicles and checking under/around vehicles and the immediate work area for mammals prior to works commencing to ensure none are present and that there is a gradual increase in noise.
- Any excavations, exposed pipes/drains, or areas where an animal could become trapped (e.g., storage containers) will be covered over when not in use, at the end of each shift, and following completion of the works to avoid animals falling in and becoming trapped.

- If fencing is utilised at any point during the works, a gap of 200mm from ground level must 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**

Construction activities will be restricted to made/engineering ground of the A830 carriageway boundary and the control and generator cabins and are not anticipated to have an adverse impact on geology and soils. With the following mitigation measures in place, the likelihood of significant impacts on the geology and soils is low.

- The parking of machinery/personnel and storage of equipment on road 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) should be reinstated as much as is practicable.
- Mitigation measures to prevent contamination of soils through loss of containment will be strictly adhered to.

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

## **Material assets and waste**

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

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

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

- The waste hierarchy (Reduce, Reuse, Recycle and Dispose) will be employed throughout the construction works.

- The subcontractor will adhere to waste management legislation and ensure they comply with their Duty of Care.
- Containment measures will be in place to prevent debris or pollutants from entering the surrounding environment.
- All wastes and unused materials must be removed from site in a safe and legal manner by a licensed waste carrier upon completion of the works. The appointed waste carrier must have a valid SEPA waste carrier registration, a copy of which will be provided to and retained by BEAR Scotland as early as possible.
- All appropriate waste documentation must be present on site and be available for inspection. A copy of the Duty of Care paperwork should be provided and filed appropriately in accordance with the Code of Practice (as made under Section 34 of Environmental Protection Act 1990 as amended).
- Re-use and recycling of waste will be encouraged, and the subcontractor will be required to fully outline their plans and provide documentary evidence for waste arising from the works (e.g., waste carrier's licence, transfer notes, and waste exemption certificates).
- Staff will be informed that littering will not be tolerated. Staff will be encouraged to collect any litter seen on site.
- Where applicable, all temporary signage will be removed from site on completion of the works.

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

## Noise and vibration

Construction activities associated with the proposed scheme works have the potential to cause noise and vibration impacts through the use of equipment and construction vehicles for the proposed activities. The works will employ a mixture of daytime night-time working and numerous business, community and residential properties lie within 300m of the scheme extents, however only Banavie train station has no screening from the scheme extents. The remaining properties are set back and screened from the bridge by tree belts and/or properties. The proposed scheme is anticipated to result in temporary minor adverse noise impacts.

On completion of the works, the replacement of the generator has the potential to have an adverse or beneficial residual effect on noise levels in proximity to the structure. It is currently thought that replacement generators will not result in any significant alteration to noise levels, as new generators will be of a similar type to those already in place. BEAR Scotland have undertaken acoustic monitoring at the bridge to identify current noise levels when the generator is in operation. On completion of the works, an additional phase of acoustic monitoring will be



undertaken to ensure that noise levels have not increased. In the event where an increase to noise levels has occurred as a result of the new generator, noise mitigation will be appropriately designed and installed.

The following mitigation measures will be put in place:

- The Best Practice Means, as defined in Section 72 of the Control of Pollution Act 1974, will be employed at all times to reduce noise to a minimum.
- For any night works, the Environmental Health Officer (EHO) and local residents will be notified of works and provided with a 24-hour contact number for the BEAR Scotland Control Room.
- On-site construction tasks should be programmed to be as efficient as possible, with a view to limiting noise disruption to local sensitive receptors.
- For any night works within 300m of residential properties, the noisiest works should be programmed to be completed before 23:00 each night where possible.
- All site personnel will be fully briefed in advance of works regarding the need to minimise noise during works and of the site-specific sensitivities.
- All plant, machinery and vehicles will be switched off when not in use.
- All plant will be operated in such a way that minimises noise emissions and will have been maintained regularly to the appropriate standards.
- Where fitted, and where permitted under Health and Safety requirements, white noise reversing alarms should be utilised during construction.
- Where ancillary plant such as generators are required, they will be positioned so as to cause minimum noise disturbance. Where deemed necessary, acoustic screens will be utilised.

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

## **Population and human health**

During construction, activities undertaken on site may have temporary adverse impacts on local residents, vehicle travellers, and non-motorised road users (NMUs) as a result of vehicle noise and delays due to traffic management measures. Local residents will be notified of works via letter drop and road users will be informed of works through a media release, which will provide details of construction dates and times and diversion routes. With the following mitigation measures in place, the risk of significant impacts on population and human health is considered to be low:

- Any changes of schedule must be communicated to local residents, business premises and community facilities throughout the programme.

- Where possible, appropriate provisions / measures should be implemented within the traffic management to allow the safe passage of NMUs of all abilities through the site.
- Journey planning information will be available for drivers online at the [trafficscotland.org](http://trafficscotland.org) website. Journey planning information will also be available for drivers online through BEAR's social media platforms.
- Local access to properties within the scheme extents will be maintained during construction.
- Two types of traffic management (night-time road closure with diversions and daytime lane closures with temporary lights) will be employed during the works to minimise disruption to road users.

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

## **Road drainage and the water environment**

During the works, there is potential for temporary impacts on the water environment. Potential changes in water quality from pollution events (either by accidental spillage of sediments, particulate matter, chemicals, fuels or by mobilisation of these in surface water caused by rain) during works have the potential to have a direct or indirect effect on the Caledonian Canal. The following mitigation measures will be put in place to reduce the risk of pollution incidents as a result of works:

- The scheme will not entail any in-stream works.
- Standard working practices to comply with The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) for works in or near water will be detailed in the SEMP and adhered to on site.
- No discharges into any watercourses or drainage systems are permitted. Appropriate containment measures must be in place to prevent any loss of construction materials into the water environment.
- An incident response (contingency) plan will be put in place to reduce the risk from pollution incidents or accidental spillages. All necessary containment equipment, including suitable spill kits (for oil and chemicals) will be available on site, quickly accessible if needed, and staff trained in their use.
- All spills must be logged and reported. In the event of any spills into the water environment, all works must stop and the incident must be reported to the project manager and the BEAR Scotland Environmental Team. SEPA must be informed of any such incident as soon as possible using the SEPA Pollution Hotline.
- All plant and equipment must be regularly inspected for any signs of damage and leaks. A checklist must be present to make sure that the checks have been carried out.
- 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.

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

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

## Climate

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

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

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

## Major Accidents and Disasters

The A830 within the scheme extent has a high risk of surface water flooding, which means that each year, these areas have a 10% chance (high risk) of flooding.

Works are restricted to the made/engineered ground of the A830 carriageway boundary and the control and generator cabins and any traffic management will be designed in line with existing guidance. The proposed works are anticipated to last 30 days (6 weeks). Traffic management will consist of a mixture of daytime temporary traffic lights and night-time road closures with diversions. Alternative pedestrian routes will be included in the traffic management setup during daytime works. Works which require the bridge to be swung open (thereby closing the A830) will be carried out at night to reduce impacts to road users and pedestrians. However, there are alternative crossing points over the Caledonian Canal near Banavie swing bridge which can be used by pedestrians during full road closures.

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 of cumulative effects

The proposed works are not anticipated to result in significant environmental effects. A search of the Highland Council Planning Portal ([Map Search](#)) confirmed that there are no planning applications within 300m of the scheme.

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.

BEAR Scotland programme all of their 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.

## Assessments of the environmental effects

As detailed in the Description of Main Environmental Impacts and Proposed Mitigation section, 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 swing bridge which spans Scheduled Monument 'Caledonian Canal, Corpach To Banavie' (SM6491), 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 EIA is required under the Roads (Scotland) Act 1984 (as amended by The Roads (Scotland) Act 1984 (Environmental Impact Assessment) Regulations 2017). Screening using Annex III criteria, 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 total working area is less than 1 ha.
- The works will be temporary and localised.
- 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.
- A toolbox talk for INNS will be provided to site staff and they will be instructed to stop works within 7m of any INNS identified on site. In the event that INNS are found on site, additional measures to prevent potential INNS spread will be implemented.
- No in-combination effects have been identified.
- The risk of major accidents or disasters is considered to be low.

Location of the scheme:

- Consultation with HES has confirmed that SMC is not required for these works, which are adjacent to the Caledonian Canal Scheduled Monument.
- The site compound and any storage or laydown areas will be located on made ground outside of the Scheduled Monument boundary.
- The scheme is not situated within, and does not share connectivity with, a 'sensitive area' designated for biodiversity features e.g., Special Area of Conservation, Special Protection Area, Ramsar, Site of Special Scientific Interest, etc.
- Any impacts to the local landscape during the construction phase will be minor, temporary and not considered significant. In addition, no operational impacts are anticipated.

Characteristics of potential impacts of the scheme:

- Any potential impacts of the works are expected to be temporary, short-term, non-significant, and limited to the construction phase.
- Measures will be in place to ensure appropriate removal and disposal of waste.
- The SEMP will include plans to address environmental incidents.
- No impacts on the environment are expected during the operational phase as a result of works. The works are expected to result in positive impacts on road users during the operational phase.
- 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.

## 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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