



**TRANSPORT  
SCOTLAND**  
CÒMHDHAIL ALBA

# **Environmental Impact Assessment Record of Determination**

## **A82 Aberchalder 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 A82 Aberchalder 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 80VA generator.
- Generator cabin - Install new cabin to suit new generator requirements.
- SSE board modification - Install new SSE board, with separated critical and ancillary circuits
- Replace wig-wags (flashing warning lights at bridge approaches) with new 24V - Install all new wig-wag panels throughout.

Mechanical maintenance works:

- Rear track replacement (and slew drive rack bolts) - Replace rear roller track with a new element set in new fixings. Remove and replace slew drive rack holding down bolts. Take a moulding of the slew drive track element to facilitate fabrication of a spare.
- Centre roller stool modification - Remove centre roller stools, remove 5mm from each face, and reinstall with shims to the correct spacing between each side roller and its track.
- Replace nose wedges - Fabricate and fit new nose wedges.
- Steel run-on strip at tail (possibly also at nose) - Replace the steel run-on strip at the tail, and also replace the nose run-on strip if required.
- Hydraulic hard lines - Replace hydraulic hard lines, with separate single feed and return from/to Hydraulic Power Unit (HPU).
- Replace HPU pack - New HPU pack, incorporating duty and standby motor / pump sets.
- Replace rams and nose sensors with new rams which have built in linear transducer - Install new rams with integral linear transducer sensors.
- Centre wedges - Refurbish with linear transducer rams.

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 forty days (eight weeks) by utilising a mixture of daytime and night-time working pattern. Traffic management (TM) is currently anticipated to consist of temporary traffic lights during the daytime and full road closures with a diversion route in place during the 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 daytime TM setup. Works requiring the bridge to be swung open (thereby closing the A82) will be carried out during night-time road closures to reduce disruption to road users and pedestrians.

## Location

The A82 Aberchalder swing bridge is located approximately 6.8km southwest of Fort Augustus (Figure 1).



Figure 1. Location of the scheme extent of the proposed mechanical & electrical works at A82 Aberchalder 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 in Fort William, approximately 34km southwest of the scheme ([Air Quality Scotland](#)). Pollution levels in the general vicinity of works are anticipated to be lower than those at the monitoring station in Fort William due to the remote nature of the scheme location.

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 A82 trunk road and Caledonian Canal. Secondary sources are likely derived from day-to-day urban activities associated with the small settlement of Aberchalder.

### Cultural heritage

According to Historic Environment Scotland's PastMap ([PastMap](#)), A82 Aberchalder swing bridge spans Scheduled Monument 'Caledonian Canal, Loch Oich To Culloch Lock' (SM6495). The area to be scheduled includes all the canal in water and the strip of ground extending up to 20m 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 scheduled area also includes the abutments belonging to the former accommodation swing bridge to the north of the road swing bridge at Aberchalder but excludes that road swing bridge as well as all modern moorings, pontoons, slipways, walls and fences, power cables, lampposts and other street furniture.

Three Listed Buildings lie within 300m of the scheme extents. There is no connectivity between the scheme and the Listed Buildings as the nearest of these lies approximately 30m north of the scheme.

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.

Of lesser cultural heritage value, thirteen Historic Environment Records (HERs) and nine Canmore National Records (CNRs) lie within 300 m of the scheme extents. Two of these, a HER and a CNR, pertain to the A82 Aberchalder swing bridge. There is no connectivity between the scheme and remaining cultural heritage records as the nearest of these lies approximately 30m north of the scheme.

There are no World Heritage Sites, Garden and Designed Landscapes, Inventory Battlefields or Conservation Areas identified 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 Broad Steep-Sided Glen (No. 225) ([Scottish Landscape Character Types](#)). The Broad Steep-Sided Glen LCT key characteristics are:

- A clearly defined, broad, linear, steep sided, v-shaped glen and deep loch cutting through mountains and hills, with limited areas of flatter ground.
- A clearly defined, broad, linear, steep sided, v-shaped glen and deep loch cutting through mountains and hills, with limited areas of flatter ground.
- Large-scale conifer forests with small areas of open moorland covering most of the glen sides, particularly the lower slopes.
- Small patches of broad-leaved woodlands, mostly in side glens and close to the shore.
- Agricultural land on less steep slopes, glen intersections and alluvial plains.
- A few settlements, with a well-defined core, located at glen intersections and on gentler slopes, separated by long stretches of relatively uninhabited land.
- Contrast between the busy trunk road and larger settlements on the west side and the quiet minor road on east side which has fewer settlements separated by large undeveloped areas.
- Strong evidence of past settlement in the number and diversity of archaeological and historic sites from prehistoric times to the 20th Century.
- Contrast between the visual and seasonal diversity of broadleaf woodland and bright, open pockets of farmland and the forested and moorland surroundings.
- Contrast between the smaller scale landscapes of settled, lower slopes and the large-scale moorland and forested backdrop.
- A simple linear and enclosed visual composition of bands of land, water and sky, with long skylines of even height, and the glen and loch as unifying features.
- Visual focus directed along the linear route of the glen or across the water to the opposite shore and up to the skyline.

Land cover surrounding the scheme being a mixture of agriculturally improved, re-seeded and heavily fertilised grassland, including sports fields and grass lawns, Atlantic parkland and road network ([Scotland's Environment](#)).

## Biodiversity

Twenty-one 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.

There are 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), 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 using the same search criteria. Ecological surveys to date have confirmed these findings.

The Asset Management Performance System (AMPS) confirmed no records of INNS within the scheme extents.

Expanses of woodland listed on the Ancient Woodland Inventory (AWI) as 'Ancient' (of semi-natural origin) lie within 300m of the scheme. In Scotland, Ancient Woodland is defined as land that is currently wooded and has been continually wooded, at least since 1750 ([Scotland's Environment](#)). There will be no works or tree felling within AWI woodland; therefore, no impacts to AWI woodland are expected as a result of works.

A82 Aberchalder swing bridge spans the Caledonian Canal 325m north of Loch Oich, which provides significant freshwater habitat for a wide variety of fish, amphibians, reptiles, birds and mammals. Large expanses of woodland in proximity to the scheme provide excellent habitat for a variety of species.

Due to the exposed nature of the bridge abutments and resulting temperature fluctuations, the bridge was assessed as unsuitable for roosting opportunities during the winter hibernation period. The most recent winter hibernation inspection (WHI), which found no bats, at A82 Aberchalder swing bridge was carried out by HED Ltd on 03/11/2021. 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.

No further bat surveys are required provided that works are completed by 31st March 2023 as planned. However, if works are delayed beyond this point and will take place during 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 West Highland Granite Gneiss Intrusion (granite, gneissose) ([BGS GeoIndex](#)).

Superficial deposits within the scheme extent are comprised of Alluvium (sand, gravel and boulders) and Lacustrine Shoreface and Beach Deposits (gravel, sand, silt and clay) ([BGS GeoIndex](#)).

The Generalised Soil Type beneath the scheme extents is Mineral podzols and the Major Soil Group beneath the scheme extents is Podzols ([Scotland's Soils](#)).

## Material assets and waste

The proposed works entail replacement and/or repair of mechanical and electrical components of the A82 Aberchalder swing bridge. Materials used will consist of:

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

Wastes are anticipated to be <1 tonne of metals, <0.5 tonnes of concrete/hard core and <0.1 tonnes of Waste Electrical and Electronic Equipment (WEEE). Concrete will be disposed in a licensed waste facility whereas WEEE and metals will be fully recycled.

## 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 mainly influenced by vehicles travelling along the trunk road and Caledonian Canal. Secondary sources are likely derived from day-to-day urban activities associated with Aberchalder.

## Population and human health

The bridge lies within a small settlement of Aberchalder and as such only three residential properties lie within 300m of the scheme extents. The nearest of these lies adjacent to the A82 Aberchalder swing bridge and has no screening from the scheme. The remaining properties are screened from the bridge by topography and intervening trees.

National Cycle Network (NCN) route Nr73 ([OS Maps](#)), also noted as Core Paths 'Great Glen Way Aberchalder to North Laggan' (ID: 24033) ([Scotland's Environment](#)) and 'Caledonian Canal from Bridge of Oich to Fort Augustus' (ID: 30070) crosses the trunk road immediately east of the scheme.

'Loch Oich circuit, Invergarry' a walking route listed on WalkHighlands ([WalkHighland](#)). crosses the A82 Aberchalder swing bridge and a walking route 'Fort Augustus to Mandally' follows the banks of Caledonian Canal within the scheme extents.

The area in proximity to the scheme is popular with tourists and outdoor recreationists. The A82, at the scheme extents, is a single carriageway trunk road that runs south to north across Scotland between Glasgow and Inverness. The A82 is a key route for local, commuter, and tourist traffic. The national speed limit applies throughout the scheme.

The nearest traffic count point (ID 40762) on the A82 is located approximately 0.4km southwest of the scheme ([Road traffic statistics](#)). Vehicle count data taken from this point in 2021 shows an Average Annual Daily Traffic (AADT) count of 2,117 motor vehicles, of which 148 were heavy goods vehicles ([Road traffic statistics](#)).

## Road drainage and the water environment

A82 Aberchalder swing bridge spans Caledonian Canal - Loch Oich to Loch Ness, a classified waterbody (ID: 20249) 325m north of Loch Oich, a classified loch (ID: 100188) ([SEPA water environmental hub](#)). Caledonian Canal - Loch Oich to Loch Ness boundary is a canal in the River Ness catchment of the Scotland river basin district. The main stem is approximately 8.1 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 ([SEPA water environmental hub](#)). Loch Oich lies 325m south and is a lake in the River Ness catchment of the Scotland river basin district. It is 1.9 square kilometres in area. Both, Caledonian Canal - Loch Oich to Loch Ness and Loch Oich have been assigned a Water Framework Directive 2000/60/EC (WFD) overall classification of 'Good' ([SEPA water environmental hub](#)).

River Oich, classified waterbody (ID: 20253) lies parallel to the canal, 70m west of the A82 Aberchalder swing bridge. River Oich is a river in the River Ness catchment of the Scotland river basin district. The main stem is approximately 9.0 kilometres in length. River Oich has been assigned a WFD 2000/60/EC overall classification of 'Good' ([SEPA water environmental hub](#)).

One minor unclassified surface waterbody considered to be a pond lies within 300m of the scheme extents.

The scheme falls within the 'Northern Highlands' groundwaters which has been classified as 'Good' ([SEPA water environmental hub](#)).

The A82 within the scheme extent has a high risk of river 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 A82 carriageway boundary and the control and generator cabins. Although the A82 Aberchalder swing bridge spans the Scheduled Monument 'Caledonian Canal, Loch Oich to Cullochry Lock' (SM6495). 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.

Three Listed Buildings lie within 300m of the scheme, however the nearest of these lies at least 30m from the scheme extents and none have connectivity with the bridge.

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 20m 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 A82 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 A82 carriageway and swing bridge control and generator cabins. Works will be carried out during a mixture of daylight and night-time hours over 40 days (8 weeks), 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 nor has connectivity with a 'sensitive area' designated for biodiversity features e.g., Special Area of Conservation, Special Protection Area, Ramsar, SSSI, etc.

The works at A82 Aberchalder 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 A82 Aberchalder 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. Therefore, no impacts to bats are expected and no additional surveys (other than the planned update to the WHI) are required provided that works are completed by 31<sup>st</sup> March 2023 as planned.

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.

Pollution controls and good practice measures to reduce impacts of works on the local environment will be detailed in the Site Environmental Management Plan (SEMP) and adhered to on site. Any protected species in the area are likely to be accustomed to road noise on the A82 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.
- No works will take place within nearby AWI woodland.
- No in-stream works are permitted.
- No INNS have been recorded within the scheme extents, however due to works within the roadside verges a site visit will be undertaken to identify any signs of protected species and INNS.
- 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/engineered ground of the A82 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 and night-time working, however only three properties lie within 300m of the bridge with only the nearest of these having no screening from the works. The remaining properties are screened from the bridge by topography and intervening trees.

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 proposed scheme is anticipated to result in temporary minor adverse noise impacts. The following mitigation measures will be put in place:

- The Best Practice Means, as defined in Section 72 of the Control of Pollution Act 1974, will be employed at all times to reduce noise to a minimum.
- For 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 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 throughout the programme.
- 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 and Loch Oich. 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 banded 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 A82 within the scheme extent has a high risk of river 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 A82 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 40 days (8 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 daytime traffic management setup. Works requiring the bridge to be swung open (closing the A82) will be carried out during night-time road closures to minimise impact of the works on road users and NMUs.

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

## Assessment 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 Scotland 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, Loch Oich To Cullochry Lock' (SM6495), 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.
- 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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