



**TRANSPORT
SCOTLAND**
CÒMHDHAIL ALBA

Environmental Impact Assessment Record of Determination

A82 Fruin Bridge

Expansion Joint Replacement

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Project Details

Description

BEAR Scotland has been commissioned by Transport Scotland to carry out a replacement of the existing expansion joint on the downlink end of the A82 Fruin bridge. The current expansion joint needs to be replaced to ensure safety of road users and prevent seepage of water onto the bearing shelf.

The works will include:

- Set up of traffic management (TM) – two-way traffic lights, convoy vehicle and lane closure.
- Use of road saw to cut the existing joint profile into sections.
- Removal of existing joint.
- Cleaning of expansion cavity and preparation of deck.
- Seating of new metal rails and welding at centreline and cranks at kerbs.
- Pouring of new nosing material.
- Application of anti-skid finish.
- Insertion of new elastomeric seal.
- Removal of TM.

The works are currently programmed to be completed within the first half of the 2023/2024 financial year (April to September 2023 inclusive) and are expected to begin on 19th June 2023. Works are expected to be completed over 2 nights between 19:00 and 07:00 due to network restriction. TM will consist of lane closures facilitated using two-way traffic lights. If the programme changes, this may result in amendments to the exact TM requirements. Where required, alternative pedestrian routes will be included in the TM setup.

Location

The scheme is located on the A82 trunk road in the Argyll and Bute Council area, approximately 5km north of Balloch, at the National Grid Reference NS 35595 85658 (Figure 1).

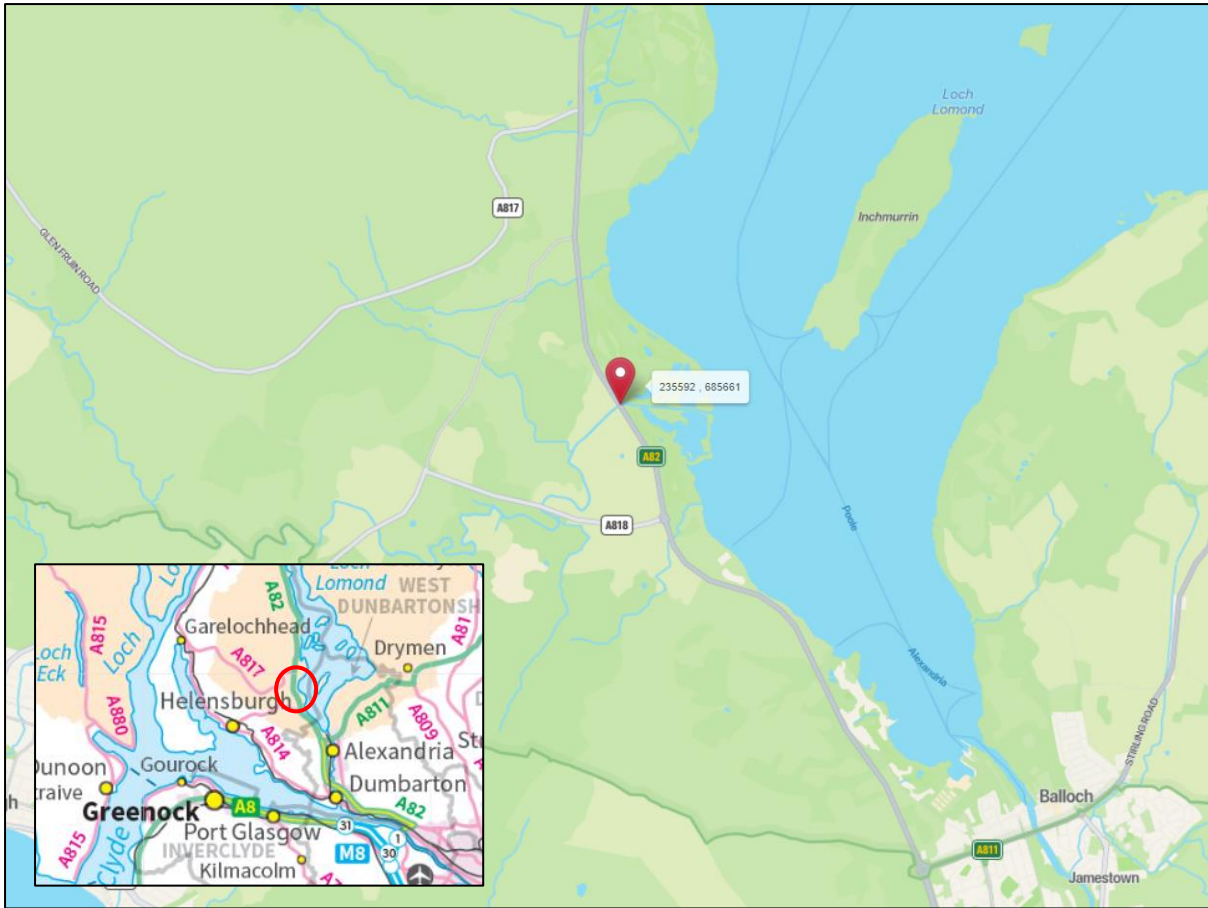


Figure 1. Location of the proposed expansion joint replacement works at A82 Fruin.

Description of local environment

Air quality

The scheme is not located within any Air Quality Management Areas (AQMA) and no air quality monitoring stations are located in the vicinity of works ([Air Quality Scotland](#)). The nearest air quality monitoring site to the scheme is located in Dumbarton, approximately 11.5km south 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 Dumbarton due to the more rural 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 agricultural emissions from the surrounding farmland.

Cultural heritage

According to Historic Environment Scotland's [PastMap](#), there are thirteen features of cultural heritage significance listed on the Historic Environment Record and the Canmore databases which are located within 300m of the scheme. None of these records lie within the proposed works area. The nearest record is located directly adjacent to the bridge and is a broad record of an archaeological evaluation. Due to the like-for-like nature of the works, none of these features will be affected by the works.

One Category B Listed Building 'Low Bridge' (LB43975) is located 10m downstream of the A82 Fruin Bridge. No works will take place on, or in the immediate vicinity of this structure.

No records of Scheduled Monuments, Garden & Design Landscapes, Battlefields, or Conservation Areas are found within 300m of the bridge ([PastMap](#)).

As a result of the works taking place strictly within the existing man-made footprint, it has been determined that the proposed project does not carry the potential to cause direct or indirect impact to cultural heritage features. As such, impact has been assessed as being 'no change' and has been scoped out of requiring further assessment.

Landscape and visual effects

The scheme is located within the Loch Lomond & The Trossachs National Park (LLTNP) ([Sitelink](#)) which has the following special qualities:

1.0 General Qualities

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

2.0 Argyll Forest

- A remote area of high hills and deep glens
- A land of forests and trees
- Arrochar's mountainous and distinctive peaks
- The variety of glens
- The slender jewel of Loch Eck
- The dramatic pass of Rest and Be Thankful
- The seaside architecture of Kilmun and Blairmore

3.0 Loch Lomond

- Immensity of loch and landscape
- Two lochs in one
- A multitude of beautiful islands
- Distinctive mountain groups
- Ben Lomond, widely known, popularly frequented
- Banks of broadleaved woodland
- Peaceful side glens

4.0 Breadalbane

- Steep mountains and long glens
- Crossroads within remote mountain ranges
- A landscape of distinctive glens and straths
- The narrow Strathyre and Loch Lubnaig ribbon
- Beautiful Balquhiddy
- Wide and straight Loch Earn
- The rocky pass of Glen Ogle
- Killin and the Falls of Dochart
- Expansive Glen Dochart
- Wide Strath Fillan
- Sinuous Glen Falloch

5.0 The Trossachs

- A traditional 'Gateway to the Highlands'
- A harmonious concentration of lochs, woods and hills
- Rugged Ben Venue, the centrepiece of the Trossachs
- Loch Katrine, the 'Queen of the Trossachs'
- A landscape of beautiful lochs
- The romance of the Trossachs
- The resort of Aberfoyle and the Duke's Pass
- The curious wooded hillocks of Aberfoyle
- The gateway town of Callander
- The tranquil Lake of Menteith

The Landscape Character Type (LCT) within the scheme extent is Lowland Loch Basin – Loch Lomond & The Trossachs (no. 263) ([Scottish Landscape Character Types](#)). The Lowland Loch Basin – Loch Lomond & The Trossachs LCT is characterised by:

- Expansive loch basin rising to steep-sided hills and mountains to the east and west, and a low ridge to the south.
- Rivers flowing into the loch and their floodplains, with associated gently undulating valley sides, forming an integral part of the basin.
- Indented shores and some pronounced broad promontories on the west coinciding with alluvial fans from water courses flowing into the loch.
- Shoreline of rocky promontories and sand or pebble beach.
- Many wooded islands in the Loch appear to coalesce with shoreline promontories, breaking down the expanse of water visible in loch or shore views to form narrow straits and more intimately scaled areas of water.
- Extensive native oak dominated woodlands fringing the eastern side of the loch and wisps of birch threading up through narrow gullies which cut deeply into bracken/rough grass covered hill slopes.
- Well-settled loch margins with tourism and recreation developments such as chalet parks, golf courses and hotels, some accommodated in former estates.
- A number of small planned estate-influenced settlements on the shores of the Loch and the southern Luss small planned estate village. The settlement of Balloch has a more urban character.
- Loch shores a focus for estates and their designed landscapes with mixed policy woodlands and parkland contributing to the diversity of the loch basin. Twisting deadend road providing access on the east side of the loch, contrasting with the heavily trafficked A82 aligned close to western side of the loch. Views from these

roads to the Loch often restricted by shoreline vegetation. Tourist facilities located close to these routes.

- Boating activities including sailing, canoeing, kayaking, and power boats and other sport activities such as jet skis on Loch Lomond. Ferries are a feature of the water bodies.
- Highly scenic landscape composition of island, water and indented shoreline, especially when viewed from surrounding hills and the south of the loch.

The scheme also lies within the Loch Lomond National Scenic Area (NSA) ([SiteLink](#)) which is noted for the same special qualities as the National Park.

The scheme lies within a rural area, approximately 5km north of Balloch. Land use surrounding the scheme is largely dominated by agricultural grassland and patches and margins of mixed woodland types. Loch Lomond forms a major freshwater landscape feature in the vicinity of the scheme ([Scotland's Environment](#)).

Biodiversity

The scheme is not situated within or immediately adjacent to a Statutory Designated Site e.g. Special Area of Conservation (SAC), Special Protection Area (SPA), Site of Special Scientific Interest (SSSI), Ramsar, National Nature Reserve (NNR), etc ([SiteLink](#)).

The NBN Atlas holds records of numerous bird species within 2km over a 10-year period. Under the Wildlife and Countryside Act 1981, all wild birds and their active nests are protected ([NBN Atlas](#)).

No records of invasive non-native species (INNS) of plants and injurious weeds were recorded on the NBN Atlas or Transport Scotland's Asset Management Performance System (AMPS) within 200m of the scheme. Due to the restriction of works to the bridge deck, INNS are not anticipated to be encountered during works.

Habitat in the surrounding area is largely dominated by agricultural and recreational grassland, mixed woodland types and freshwater bodies including the Fruin Water watercourse which flows directly under the A82 within the scheme extents.

There is an area of woodland 250m south of the scheme which is listed on the Ancient Woodland Inventory Scotland as being 'Ancient (of semi-natural origin)' ([Scotland's Environment](#)).

Field Surveys

An initial PEA was conducted by Jacobs on behalf of BEAR Scotland NW Environment in January 2020. This survey was based around the adjacent Fruin Old bridge located 10m downstream of the current scheme.

Due to the time elapsed since this survey was carried out, an updated walkover was carried out on 11th May 2023 by the BEAR NW Environment team, this time centred around Fruin New. The following ecological observations were made:

- Fruin New was once again assessed as having negligible summer roosting and winter hibernation potential for bats.
- Fruin Old was assessed as having low-moderate summer roosting potential and low winter hibernation potential for bats.
- A single tree was identified within 30m of Fruin New as having low summer roosting and negligible winter hibernation potential for bats.
- Aquatic habitat was assessed as being suitable for both adult and juvenile salmonids.
- Four instances of Japanese knotweed (*Fallopia japonica*) were identified within 100m of the bridge. No other INNS were observed.
- No bird nests were observed during the survey however both bridges and the surrounding trees and scrub present suitable nesting areas.

Geology and soils

The scheme does not lie within a Geological Conservation Review Site (GCRS) or geological SSSI ([SiteLink](#)). There are no Local Geodiversity Sites (LGS) with connectivity to the scheme extents ([SiteLink](#)).

Bedrock within the scheme extent is comprised of sedimentary rock from the Rosneath Conglomerate Formation ([BGS GeoIndex](#)). Superficial deposits within the scheme extent are comprised of alluvium comprised of clay, silt, sand, and gravel ([BGS GeoIndex](#)).

Soils within the scheme extent are recorded as humus-iron podzols with a parent material of fluvioglacial and raised beach sands and gravels derived from acid rocks ([Scotland's Soils](#)).

As a result of the works taking place strictly within the existing man-made footprint, it has been determined that the proposed project does not carry the potential to cause direct or indirect impact to geology or soils.

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

Material assets and waste

The proposed works are required to replace an existing expansion joint on the bridge. Materials used are expected to consist of:

- Elastomeric in metal runners (EIMR) joint rails
- Nosing material
- Primer
- Anti-Skid finish
- QC-10 Rapid deck repair
- Elastomeric seal

The main waste produced during the construction phase will be concrete (estimated 2 tonnes) with a small amount of metals (estimated 0.2 tonnes) and road planings (estimated 0.1 tonnes).

The scheme does not require a Site Waste Management Plan (SWMP).

Noise and vibration

Works are not located within a Candidate Noise Management Area (CNMA) or Candidate Quiet Area (CQA) ([Transportation Noise Action Plan](#)).

Scotland's strategic noise maps show that day-time noise levels pertaining to the trunk road within the scheme extents range between 60 and >80 decibels with night-time noise levels ranging between <50 and 60 decibels. There are no residential or other sensitive receptors within 300m of the scheme. Baseline noise level at the scheme location is likely to be primarily influenced by traffic along the A82 trunk road and day-to-day agricultural activities.

Population and human health

There are no residential or commercial receptors within 300m of the scheme.

There are no National Cycle Network routes ([OS Maps](#)), walking routes listed on WalkHighlands ([WalkHighlands](#)), core paths ([Loch Lomond & The Trossachs](#)), local footpaths or other community facilities within the scheme extent, however Core Path RCR40 spans the old Fruin road bridge which lies 10m downstream of the existing

bridge. There are surfaced raised verges present on either side of the structure however these are not footpaths for pedestrian use and there are also no footpaths on approach to the structure.

The nearest traffic count point (ID: 81104) on the A82 is located 1km north of the scheme ([Road traffic statistics](#)). Vehicle count data taken from this point in 2021 shows an Average Annual Daily Traffic (AADT) count of 12,533 motor vehicles, of which 606 (5%) were heavy goods vehicles ([Road traffic statistics](#)).

Road drainage and the water environment

The bridge spans the Fruin Water watercourse (ID: 10158) which was classified by Scottish Environment Protection Agency (SEPA) in 2020 under the Water Framework Directive 2000/60/EC (WFD) as having 'Moderate' condition ([SEPA water environment hub](#)). The Fruin Water flows into Loch Lomond [South] (ID: 100257) 850m downstream of the bridge. Loch Lomond was classified by SEPA in 2020 as being in 'Moderate' condition ([SEPA water environment hub](#)).

There are also a number of ponds of varying sizes in proximity to the Fruin Water but which are not directly connected and are likely artificial waterbodies associated with the landscape of the adjacent Carrick Golf Course which they lie within.

The scheme falls within the 'Trossachs' groundwater body which has been classified as 'Good' and is also a Drinking Water Protected Area (Ground) ([SEPA water classification hub](#)).

The trunk road within the scheme extents is at a low likelihood of flooding (0.1% chance per year) ([SEPA Flood Map](#)).

Climate

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

The Scottish Government has since published its indicative Nationally Determined Contribution (iNDC) to set out how it will reach net-zero emissions by 2045, working to reduce emissions of all major greenhouse gases by at least 75% by 2030 ([Scotland's contribution to the Paris Agreement: indicative Nationally Determined](#)

[Contribution - gov.scot \(www.gov.scot\)](#)). By 2040, the Scottish Government is committed to reducing emissions by 90%, with the aim of reaching net-zero by 2045 at the latest.

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

Policies and plans

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

Description of main environmental impacts and proposed mitigation

Air quality

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

- All plant, machinery and vehicles associated with the scheme will be maintained to the appropriate standards and will be switched off when not in use.
- Where a risk of dust emissions exists from activities, then on-tool extraction or dampening down will be used where appropriate.
- 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 shall be removed from site as soon as is practicable.
- Good housekeeping will be employed throughout the work.

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

Landscape and visual effects

There is potential for minor, temporary visual impacts to the local landscape during the construction phase as a result of littering or obstructed views due to vehicles and machinery. However, works will be restricted to the A82 Fruin bridge and will be limited to the replacement of an existing expansion joint. Works will be carried out during over two nights and land use will not change as a result of the works.

Therefore, the works will not create any significant change to the local landscape and no change to the special qualities of the LLTNP are expected. In addition, the following mitigation measures will be put in place during works:

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

- The working area will be appropriately reinstated following works. Where applicable, upon completion of the works, any damage to the local landscape shall be reinstated as much as is practicable.
- Works will avoid encroaching on land and areas where work is not required or permission has not been granted. This includes general works, storage of equipment/containers and parking.
- 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 disturbance to protected species via increased vehicle/workforce presence, and the potential for pollution of habitats.

The scheme is not situated within or immediately adjacent to a Statutory Designated Site e.g. SAC, SPA, SSSI, Ramsar, NNR, etc.

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. Therefore, with the following mitigation measures in place, the risk of significant impacts on biodiversity are considered to be low:

- Works will be strictly limited to areas required for access and works. Unnecessary encroachment onto terrestrial or aquatic areas will not be tolerated.
- No tree felling or in-stream works are permitted.
- If works will take place during the breeding bird season (March to August inclusive), nesting bird checks will be undertaken two weeks prior and within 48 hours of works commencing.
- All construction operatives will be briefed through toolbox talks prior to works commencing. The toolbox talks will provide information on the legislation, general ecology, and best practice measures for relevant protected species and INNS.
- Site personnel shall remain vigilant for the presence of any protected species throughout the works period. Should a protected species be noted during construction, works shall temporarily halt until the species has sufficiently moved on. Any sightings of protected species shall be reported to the BEAR Scotland Environmental Team.

- Where artificial lighting is required, it shall 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 evening. This will involve switching on vehicles and checking under/around vehicles and the immediate work area for mammals prior to works commencing to ensure none are present and that there is a gradual increase in noise.
- Any excavations, exposed pipes/drains, or areas where an animal could become trapped (e.g. storage containers) will be covered over when not in use, at the end of each shift, and following completion of the works to avoid animals falling in and becoming trapped.
- If fencing is utilised at any point during the works, a gap of 200mm from ground level will be provided, allowing free passage for mammals and preventing entrapment.
- Site personnel shall remain vigilant for the presence of INNS in road verges throughout the works period. Should any INNS be identified in working areas, no works are permitted to take place within 7m of these areas until the BEAR Scotland Environmental Team can provide further advice.
- Additional disturbance/pollution mitigation measures as outlined in the *Noise and vibration* and *Road drainage and the water environment* sections below will be adhered to.

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.

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 will be removed from site in a safe and legal manner by a licensed waste carrier upon completion of the works. The appointed waste carrier will have a valid SEPA waste carrier registration, a copy of which will be provided to and retained by BEAR Scotland as early as possible.
- All appropriate waste documentation will be present on site and be available for inspection. A copy of the Duty of Care paperwork shall 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. There are no residential properties within 300m of the scheme. 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.
- The relevant Environmental Health Office (EHO) will be contacted regarding the night-time programming of works.
- On-site construction tasks shall be programmed to be as efficient as possible, with a view to limiting noise disruption to local sensitive receptors.
- All site personnel will be fully briefed in advance of works regarding the need to minimise noise during works and of the site-specific sensitivities.
- All plant, machinery and vehicles will be switched off when not in use.
- All plant will be operated in such a way that minimises noise emissions and will have been maintained regularly to the appropriate standards.

- Where fitted, and where permitted under Health and Safety requirements, white noise reversing alarms shall 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 vehicle travellers, and non-motorised road users (NMUs) as a result of potential delays due to traffic management measures. There are no residential or commercial receptors within 300m of the scheme. Road users will be informed of works through a media release, which will provide details of construction dates and times. The works will be of short duration. With the following mitigation measures in place, the risk of significant impacts on population and human health is considered to be low:

- Works shall be carried out during night-time hours to minimise impacts on road users.
- Appropriate provisions / measures shall be implemented within the traffic management to allow the safe passage of NMUs of all abilities through the site.
- Journey planning information will be available for drivers online at the trafficscotland.org website. Journey planning information will also be available for drivers online through BEAR's social media platforms.

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

Road drainage and the water environment

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

- Prior to works commencing on the A82 Fruin bridge, a containment system will be in place to prevent the loss of any materials (e.g. dust, debris, wet concrete and water) to the local water environment, from activities such as dust suppression, as well as concrete pouring and repairs. The integrity of the containment system shall be checked frequently (at least daily) and should containment fail, operations will cease immediately, and necessary repairs undertaken.
- The scheme will not entail any in-stream works.
- Standard working practices will 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 and appropriate containment measures will be in place to prevent any loss of construction materials into the water environment (e.g. dust, debris, wet concrete). Any dust, concrete debris, or other materials produced during works will be contained and removed from site to be disposed of appropriately.
- An incident response (contingency) plan will be put in place to reduce the risk from pollution incidents or accidental spillages. All necessary containment equipment, including suitable spill kits (for oil and chemicals) will be available on site, quickly accessible if needed, and staff trained in their use.
- All spills will be logged and reported. In the event of any spills into the water environment, all works shall stop and the incident will be reported to the project manager and the BEAR Scotland Environmental Team. SEPA will be informed of any such incident as soon as possible using the SEPA Pollution Hotline.
- All plant and equipment will be regularly inspected for any signs of damage and leaks. A checklist will be present to make sure that the checks have been carried out.
- Storage of hazardous material, oil and fuel containers shall be distanced more than 10m away from any watercourses.
- If required, a designated refuelling area will be identified. Fuel bowsers shall be stored on an impermeable area and be fully bunded. This shall be distanced more than 10m from any watercourses.
- During refuelling of smaller mobile plant, a funnel will be used, and drip trays will be in place. Care will be taken to reduce the chance of spillages. Spill kits will be quickly accessible to capture any spills should they occur. The ground / stone around the site of a spill will be removed, double bagged and taken off site as special contaminated waste.
- Generators and static plant may have the potential to leak fuel and / or other hydrocarbons, and will have bunding with a capacity of 110%. If these are not bunded then drip trays shall 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 the Carbon Management Policy.
- Where possible, the works will be undertaken utilising a daytime work pattern to reduce the requirement for additional lighting.
- Local contractors and suppliers will be used as far as practicable to reduce fuel use and greenhouse gas emitted as part of the works.
- Where possible, materials will be sourced locally to reduce greenhouse gas emissions associated with materials movement, and waste will be disposed at local landfill.

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

Major Accidents and Disasters

The trunk road, within scheme extents, is at a low risk of surface water flooding.

Works are restricted to the made ground of the A82 carriageway and traffic management will be designed in line with existing guidance. The proposed works are anticipated to only last two nights. Traffic management will consist of lane closures facilitated using two-way traffic lights.

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 Argyll and Bute Council Planning Portal ([Map Search](#)) confirmed that there are no planning applications less than five years old within 300m of the scheme.

A search of the Scottish Roads Works Commissioner's 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 (which is presumed to have a start date after 1st June 2023). No smaller scale traffic restrictions / roadworks are found on the local authority road network in proximity to the proposed works, and as such, no cumulative effect is assessed. Due to the nature of the proposed works, no cumulative effects are anticipated with any other developments in the vicinity.

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

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

Assessments of the environmental effects

As detailed in the Description of Main Environmental Impacts and Proposed Mitigation section, there are no significant effects anticipated on any environmental receptors as a result of the proposed works.

Statement of case in support of a Determination that a statutory EIA is not required

This is a relevant project in terms of section 55A(16) of the Roads (Scotland) Act 1984 as it is a project for the improvement of a road and the completed works (together with any area occupied by apparatus, equipment, machinery, materials, plant, spoil heaps, or other such facilities or stores required during the period of construction) are situated in whole or part in the Loch Lomond & The Trossachs National Park and the Loch Lomond NSA which are sensitive areas within the meaning of Regulation 2(1) of the Environmental Impact Assessment (Scotland) Regulations 1999.

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

Roads (Scotland) Act 1984 (as amended by The Roads (Scotland) Act 1984 (Environmental Impact Assessment) Regulations 2017). Screening using Annex III criteria, 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, localised, and completed over the course of two nights.
- 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.
- Field surveys to date have not identified any additional protected species shelters or roosts and no protected species licences have been required.
- It is not anticipated that INNS will be encountered during the works however in the event that INNS are found on site, 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:

- The scheme is not located in proximity to any protected sites such as SACs, SPAs, or SSSIs.
- There are no residential or commercial properties located within 300m of the scheme.
- Works will not result in any adverse visual impact, and as such will not have a resulting adverse impact on the LLTNP or Loch Lomond NSA.
- The scheme will be confined within the existing carriageway boundary and as a result will not require any land take and will not alter any local land uses.
- 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.
- The site compound will be located on made ground.

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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