



**TRANSPORT
SCOTLAND**
CÒMHDHAIL ALBA

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Record of Determination

A82 Allt Coire Chailein

Contents

Project Details

Description

BEAR Scotland has been commissioned by Transport Scotland to undertake a package of scour repair works at A82 Allt Coire Chailein culvert. Repairs are required to rectify scour damage and deterioration to the culvert and wing walls. The package of works will include:

- Scour repairs to concrete invert and downstream apron;
- Filling of scour holes under existing downstream wing wall footings;
- Extension of existing concrete footing of downstream wing wall to end of the wing wall to lessen effects of scour damage;
- Concrete repairs to existing wing walls to bring them up to original thickness;
- Repair and cleaning of various joints throughout the interior of the culvert;
- Repair and/or unblocking of all drainage pipes within the culvert;
- Removal of rocky debris in watercourse on upstream end to northern bank to widen existing flow channel and reduce the velocity of water;
- Re-use of boulders removed from watercourse where possible and set in place on concrete bed with all gaps to be infilled. Rip-rap rock armour may be required;
- Installation of rock filter units or equivalent on the right-hand bank upstream of the culvert;
- Installation of rock filter units or equivalent across the width of the watercourse just below the downstream apron;
- Removal of vegetation from faces of structure and cut back from top on both sides of the culvert by a minimum of 2.5m;
- Cleaning of concrete faces of culvert and wing walls;
- Installation of three-rail timber fencing around headwall at upstream and downstream ends of culvert.

In-stream works will be required to complete scour repairs, which are currently scheduled to commence in September 2021 for a duration of three weeks. Works will be carried out in a dry working area created by damming the watercourse upstream of the culvert and over-pumping the water through the area of works. The dam will be installed just downstream of a natural pool, which will act as a sump for stored water. Where concrete works are required, measures to ensure full containment will be adhered to in order to prevent loss of material into surface water bodies.

The site compound will be located in a large layby on the southbound carriageway of the A82 approximately 900m south of the culvert. Site access will be taken from the south along the downstream end of the culvert due to steep terrain on the upstream side of the culvert. There is a gate in the fence on this side of the A82 just south of the culvert; however, part of the fence will need to be removed to allow access for a 20-tonne excavator, which will remain on the downstream end of the culvert and will be used to move plant and materials into the working area. Access to the upstream end of the culvert will be taken by foot through the culvert and with a small 4-tonne excavator capable of passing through the culvert. Traffic management will be required to allow machines and site staff to safely access the site. Traffic management will consist of a single lane closure and will be removed/reinstated and the end/start of each work shift.

The works are necessary to rectify scour damage and deterioration of the culvert and wing walls. This will ensure that the culvert remains structurally sound and that road users remain safe. Alternatively, if repair works are not undertaken, scour damage and deterioration would continue to worsen, likely requiring far more intensive repairs in future. No alternative options to repair have been identified.

The scheme does not fall within Annex I of the Environmental Impact Assessment (EIA) Directive 2011/92/EU as amended by 2014/52/EU. However, works will be undertaken within the Allt Coire Chailein Site of Special Scientific Interest (SSSI) and Geological Conservation Review Site (GCRS), which are 'sensitive areas' as defined by the Roads (Scotland) Act 1984 as amended by the Roads (Scotland) Act 1984 (Environmental Impact Assessment) Regulations 2017. Therefore, the scheme is considered to be a 'relevant project' falling within Annex II of the above EIA Directive and has been screened against the criteria in Annex III of the EIA Directive. The conclusions have been recorded in this Record of Determination (RoD).

Location

The A82 Allt Coire Chailein culvert is located on the A82 trunk road north of Tyndrum in Argyll and Bute (centre point NN 32229 33778).

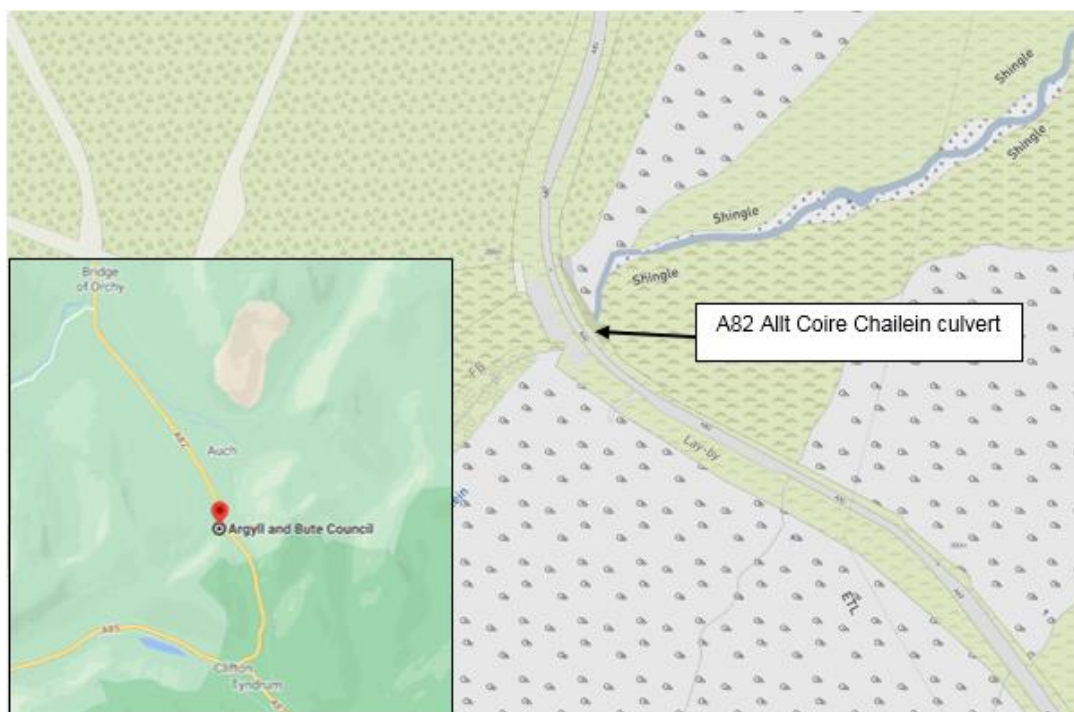


Figure 1. Location of A82 Allt Coire Chailein culvert

Description of Local Environment

Population and Human Health

The scheme lies in a remote location north of Tyndrum on the A82 trunk road. There are no residential or commercial properties located within 300m of the scheme.

There are no [National Cycle Network](#) (NCN) cycle routes or walking routes listed on [WalkHighlands](#) within the scheme extent. However, the West Highland Way walking route and [core path](#) passes the scheme along the Old Military Road approximately 490m east of the scheme. There are no paved footpaths along the A82 across the culvert.

The scheme is in a remote location where noise and vibration levels will be primarily influenced by trunk road traffic in the surrounding area. There are no designated [Candidate Noise Management Areas](#) (CNMAs) or Candidate Quiet Areas (CQAs) within proximity to the works location.

The A82 is a single carriageway trunk road that provides a key transport route between Inverness and Glasgow in the west of Scotland. The national speed limit applies throughout the scheme.

Biodiversity

Designated Sites

The scheme lies wholly within [Allt Coire Chailein SSSI](#), which is designated for fluvial geomorphology of Scotland.

Due to the location of the scheme within Allt Coire Chailein SSSI, consultation with NatureScot was undertaken to determine whether consent was required to carry out works within the designated site.

Terrestrial Ecology

The [National Biodiversity Network](#) (NBN) Atlas does not record the presence of any protected or invasive non-native species (INNS) within 2km of the scheme within the previous 10 years. Only records with open use attributions (OGL, CCO CC-BY) were included in the search parameters.

The NBN Atlas records the presence of the injurious weeds spear thistle (*Cirsium vulgare*), rosebay willowherb (*Chamaenerion angustifolium*), common ragwort (*Jacobaea vulgaris*), curled dock (*Rumex crispus*), and broad-leaved dock (*Rumex obtusifolius*) using the same criteria as above.

A site visit was carried out by the BEAR NW Environment Team on 4th March 2020. The culvert was assessed to have negligible bat roost potential for both summer and winter due to a lack of potential roost features. No trees within 50m of the culvert were identified to provide bat roost potential. One fresh otter spraint was recorded downstream of the culvert; however, no resting places were recorded and the habitat surrounding the culvert did not contain suitable structure for otter resting places. The surrounding area offers suitable habitat for nesting birds. No signs of other protected species were recorded and no INNS were identified; however, the timing of the survey was suboptimal for identifying INNS.

Aquatic Habitat

The walkover survey carried out by BEAR Scotland's NW Environment Team in March 2020 noted that the watercourse downstream of the culvert did not appear suitable for fish due to large areas of exposed bedrock and multiple barriers in the form of small waterfalls. In addition, larger hydraulic drops were present immediately downstream and upstream of the culvert.

Due to the requirement for in-stream works to complete scour repairs, consultation with the Argyll District Salmon Fishery Board (DSFB) and Argyll Fisheries Trust was undertaken to identify any concerns regarding fish habitat or populations.

Land

The scheme does not lie within any area of land designated as a [National Park or National Scenic Area](#).

Land cover in the surrounding area is dominated by alpine and subalpine grassland to the east, west, and south of the culvert and coniferous woodland to the north. Heathland is present further west.

Commercial forestry plantation is located to the northwest of the culvert. Recreation such as hill-walking also takes place in the area (e.g. along the West Highland Way).

Soil

The scheme is located within [Allt Coire Chailein GCRS](#), which occupies the same area as the SSSI described above.

Bedrock geology within the scheme extents is recorded as Auch Gleann Psammite Formation – Psammite, which is a metamorphic bedrock of sedimentary origin.

Superficial geology within the scheme extent is recorded as Till and Morainic Deposits (undifferentiated) – Diamicton, Sand and Gravel, which are sedimentary deposits.

Soils within the scheme extent are recorded as peaty podzols.

Water

The Allt Coire Chailein watercourse flows through the culvert and is unclassified by the Scottish Environment Protection Agency (SEPA), but it is shown on the 1:50,000 OS map. It joins the Allt Kinglas watercourse to the north of the scheme.

Allt Kinglas was classified by [SEPA](#) in 2018 as having ‘moderate ecological potential’. It has been designated as a heavily modified water body on account of physical alterations that cannot be addressed without significant impact on water storage for hydroelectricity generation.

The scheme falls within the boundary of the Upper Glen Coe groundwater body, which was classified by SEPA in 2018 as having ‘Good’ condition. It is also a [Drinking Water Protected Area](#) (Ground).

Due to the requirement for in-stream works, consultation with SEPA was undertaken to identify the appropriate level of Controlled Activities Regulations (CAR) authorisation required to allow works.

Air

The works are not wholly or partially located within an [Air Quality Management Area](#) (AQMA).

No air quality monitoring stations are located in proximity to the scheme, with the closest located approximately 55km east in Crieff. Air pollution levels at the scheme location are likely to be less than levels at this monitoring station due to the more rural nature of the works site. Air quality within the scheme extent is likely to be primarily influenced by trunk road traffic in the area.

Climate Change

The Climate Change (Scotland) Act 2009 creates mandatory climate change targets to reduce Scotland’s greenhouse gas emissions. BEAR Scotland have a Carbon Management Policy in place with the core aim of reducing the carbon footprint that the company measures and reports annually.

Material Assets

Transport Scotland has a statutory obligation to maintain Scotland’s trunk road network in a safe condition for road users. The proposed works on A82 Allt Coire Chailein culvert are required to rectify scour damage and deterioration of the culvert and wing walls and to ensure that the culvert remains structurally sound. The following materials will be used to complete scour repair works:

- 1.2m-high three-rail fencing with timber posts (18 posts in total)

- In situ concrete mix for repairs on culvert apron (21m³)
- Normal flow concrete for repairs to wing walls (3m³)
- Sprayed concrete for repairs to wing walls (3m³)
- Straight and curved formwork for concrete repairs (30m²)
- Fabric structural reinforcement mesh for wing walls (30m²)
- Polysulphide joint sealant (42m)
- Filter unit rock bags or equivalent (20m³)
- Rip-rap rock armour (7m³)

Waste

Waste materials will comprise old concrete and vegetation removed from the culvert. Expected waste is categorised below along with estimated amounts to be reused or removed from site to licensed facilities.

Site clearance

- Undergrowth/vegetation – 78m² area to be cleared of undergrowth from steep inclines around structure; waste removed from site.
- Moss/vegetation – 104m² surface area of culvert faces and wing walls to be cleaned of moss and vegetation; waste removed from site.
- Existing fence (x1) and associated debris overhanging the culvert to be removed from site.
- Excavated soil – 1m³ removed from site during installation of new timber fence posts.

Culvert repairs

- Excavated Class U1A or U1B unacceptable material – removal of 10m³ broken concrete from the existing structure; waste removed from site.
- Excavated Class 5A material – 10m³ removed from site.
- Excavated boulders and rocky debris in watercourse – 5m³ to be reused as scour protection along wing walls.
- Existing joint sealant – 42m to be removed from site.

Cultural Heritage

According to [Pastmap](#), there is one feature of local cultural heritage listed on Historic Environment Record located within 300m of the scheme. The feature is a 'Desk-

based assessment and walkover survey: Auch Estate (Areas 2, 3 and 4), Bridge of Orchy, Argyll' adjacent to the watercourse to the south and southwest.

There are no Listed Buildings, Scheduled Monuments, Inventory Battlefields, Garden & Designed Landscapes, or World Heritage Sites within 300m of the scheme.

Vulnerability of the Project to Risks

The following environmental factors were identified as potential risks to the project:

- Unidentified ecological constraints
- Disturbance of protected species
- High water levels
- Pollution incidents

Description of Main Environmental Impacts and Proposed Mitigation

Population and Human Health

During scour repair works, activities undertaken on site may have temporary adverse impacts on road users as a result of vehicle noise and delays due to traffic management measures. However, considering the nature and small scale of the works and the following mitigation measures in place, the risk of significant impacts on population and human health is considered to be low.

- A traffic management plan will be developed in accordance with Chapter 8 of the Traffic Signs Manual to reduce disruption to vehicle travellers. Traffic management is required for safe access to the site and is expected to consist of a single lane closure that will be removed/reinstated at the end/start of each work shift.
- Traffic management will include appropriate provisions for non-motorised users of the road such as pedestrians and cyclists who may take longer than motorised vehicles to travel the length of the traffic management.
- The Best Practicable Means, as defined in Section 72 of the Control of Pollution Act 1974 and BS5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites, will be employed at all times during works.
- In general, works will be carried out during daylight hours, although some night works may be required.
- Good practice measures to reduce noise and vibration disturbance from works will be detailed in the Site Environmental Management Plan (SEMP) and adhered to on site.

With the above mitigation measures in place, the risk of significant effects on population and human health during the construction phase is considered to be low and this receptor is not considered further.

Biodiversity

Designated sites

There is potential for scour repair works to impact the protected geological features in Allt Coire Chailein SSSI; consequently, consent from NatureScot was determined to be required to allow works to proceed within the SSSI and was granted by NatureScot on 10th June 2021. In addition, the following mitigation measures will be in place during works to reduce the risk of impacts to the SSSI:

- Works are to be strictly limited to areas required for access and repair works. Unnecessary encroachment onto terrestrial or aquatic areas will not be tolerated.

- Machinery required for works will only enter the SSSI as needed and will be stored out with the SSSI when not in use.
- Ground works in the SSSI will be limited to works on the concrete culvert structure and minor excavation of soil to install new fencing above the culvert. These activities will not affect the sensitive geological features in the SSSI associated with the watercourse.
- The site compound and designated storage areas must be located out with the boundary of Allt Coire Chailein SSSI.

Terrestrial Ecology

The culvert was assessed as having negligible bat roost potential for both summer and winter and no trees with bat roost potential were identified in the survey area. Although evidence of otter was recorded on site, no resting places were identified within 200m of the works. No evidence of other protected mammals or invasive non-native plants was recorded. Previous evidence of nesting birds was recorded on site; however, the works are scheduled to be carried out in September, which is out with the main nesting bird season. In addition, the following mitigation measures will be in place during works to reduce impacts terrestrial species:

- Site personnel should remain vigilant for protected species and are instructed not to approach or touch any animals seen on site.
- Toolbox talks on protected species and breeding birds will be provided to all site staff prior to works commencing. Briefings are to be clear and unambiguous, with all staff informed to stop works where a concern is raised. Works may not recommence until advice from an appropriately qualified ecologist is sought and appropriate mitigation is in place, where required.
- Checks for nesting birds will be carried out prior to any vegetation clearance.
- If an active bird nest (e.g. eggs present, adult sitting on nest) is identified in the vicinity of works, all works within 30m must stop until the BEAR Scotland NW Environment Team can provide advice.
- Where protected mammals are encountered or move within 50m of the active works, works will cease until the animal(s) move at least 50m away from the construction site or until the BEAR Scotland NW Environment Team can provide advice.
- All material, machinery, and equipment will be subject to checks for resting mammals daily prior to any works commencing to prevent entrapment or injury of any mammals.
- A 'soft start' will be implemented on site each day. This will involve switching on vehicles and checking under/around vehicles and the immediate 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 works to avoid mammals falling in and becoming trapped.
- Suitable passage for otter under the bridge (both upstream and downstream) must be maintained for the duration of works.
- If fencing is utilised at any point during works, a gap of 200mm from ground level must be provided, allowing free passage for mammals and preventing entrapment.
- If night working or night deliveries are required, artificial lighting should be directed away from the Allt Coire Chailein watercourse, woodland, or other suitable habitat as much as is safe and reasonably practicable.

Aquatic Habitat & Fish Populations

Due to the requirement for in-stream works to complete scour repairs, there is potential for works to impact aquatic habitat and fish populations. Consequently, advice was sought from the Argyll DSFB and Argyll Fisheries Trust. Works will be carried out during September 2021, which is out with the sensitive period for salmonids. In addition, the following mitigation measures will be in place during works to reduce the risk of impacts on aquatic habitat and fish populations:

- In-stream works must be completed between 1st June 2021 and 30th September 2021.
- All conditions of SEPA's General Binding Rules (GBRs) 6,9, and 13 will be adhered to during works.
- Relevant SEPA Pollution Prevention Guidelines (PPGs) and Guidance for Pollution Prevention (GPPs) will be strictly adhered to.
- Works will take place within a dry working area.
- Works should not impede the passage of substrates from upstream of the culvert to downstream.
- No discharges into the water environment are permitted and containment measures must be in place to ensure this, particularly in regard to wet cement.
- All mitigation measures listed under the 'Water' heading below will be followed to reduce the risk of pollution and other impacts to the water environment.
- Good practice measures will be detailed in the SEMP and adhered to on site.

Due to the requirement for in-stream works and consultation with Argyll DSFB and Argyll Fisheries Trust, this receptor is considered further in the 'Assessments of the Environmental Effects' section below.

Land

Land use will not change as a result of the works and no land take is required. However, there is potential for minor, temporary adverse impacts during scour repair works as a result of damage to roadside verges, littering, or obstructed views due to vehicles and machinery. Considering the nature and small scale of works and with the following mitigation measures in place, the risk of significant impacts to land are considered to be low.

- 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.
- 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 (i.e. damage to grass verges or hardstanding of the A82) should be reinstated as much as is practicable.
- The working area and site compound location will be appropriately reinstated following works and the site will be left clean and tidy following construction.

With the above mitigation measures in place, the risk of significant effects on land during the construction phase is considered to be low and this receptor is not considered further.

Soil

During scour repair works, there is potential for impacts on soil and geology due to the location of the scheme within Allt Coire Chailein SSSI and GCRS, which are designated for geological features. Consent from NatureScot is required to carry out works within the SSSI and was granted on 10th June 2021. Provided that the following mitigation measures are adhered to during the works, the risk of significant impacts on soil and geology as a result of the works are considered to be low.

- Ground works in the SSSI will be limited to works on the concrete culvert structure and minor excavation of soil to install new fencing above the culvert. These activities will not affect the sensitive geological features in the SSSI associated with the watercourse.
- The site compound and any storage or laydown areas must be located out with the boundary of Allt Coire Chailein SSSI and GCRS.

- The parking of machinery/personnel and storage of equipment within the boundary of Allt Coire Chailein SSSI and GCRS and 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.

Due to the location of the works within Allt Coire Chailein SSSI and GCRS, consent from NatureScot was determined to be necessary to allow works to proceed. This receptor is considered further in the 'Assessments of the Environmental Effects' section below.

Water

During scour repairs works, there is potential for temporary adverse impacts on the water environment due to the requirement for in-stream works and the risk of pollution incidents. Potential contaminants include fuel and oils from mechanical plant and dirty water run-off from the construction site. Consultation carried out with SEPA confirmed that a CAR Registration was required to allow in-stream works to proceed. The CAR Registration CAR/R/SEPA2021-415 was issued by SEPA on 22nd July 2021. 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 Site Environmental Management Plan (SEMP) and adhered to on site. These measures include the following:

- All in-stream works must be completed between 1st June 2021 and 30th September 2021.
- All conditions of the CAR Registration (CAR/R/SEPA2021-415) issued by SEPA must be complied with. A copy of the CAR Registration will be retained on site and made available for inspection as required.
- All conditions of SEPA's General Binding Rules (GBRs) 6,9, 10b, and 13 will be adhered to during works.
- Pollution control measures, including relevant SEPA Pollution Prevention Guidelines (PPGs) and Guidance for Pollution Prevention (GPPs), as well as other good practice measures for working in or near water, will be detailed in the SEMP and adhered to on site to prevent sediment or other materials entering the water environment.
- A toolbox talk on silt and sediment containment will be delivered to all site staff as part of the site induction.
- No discharges into any watercourses or drainage systems are permitted and appropriate containment measures must 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 must be contained and removed from site to be disposed of appropriately.

- In-stream works will be carried out within a dry working area created by damming the watercourse and over-pumping through the site. The contractor is responsible for designing and implementing the dry working area and will provide a method statement for review prior to works commencing.
- Works should not result in the impediment of substrate movement from upstream of the culvert to downstream.
- Concrete batching must be carried out on an impermeable surface at least 10m away from drains and water bodies.
- Concrete and other materials must not be stored within the dry working area. Site staff should take only the minimum amount necessary to carry out works in the dry working area during each work period.
- Rip-rap rock armour must be washed off site prior to installation to remove fine sediments.
- The subcontractor is required to produce an incident response plan for dealing with spills or environmental incidents. The incident response (contingency) plan will be put in place to minimise the risk from pollution incidents or accidental spillages. All necessary containment equipment, including suitable spill kits (for oil and chemicals) and floating booms (designed to retain oil), will be available on site, quickly accessible if needed, and staff trained in their use.
- Standard good practice measures for working in or near water will be detailed in the SEMP and adhered to on site for the duration of works.

Due to the requirement for in-stream works to carry out scour repairs, CAR authorisation from SEPA was determined to be necessary to allow works to proceed. This receptor is considered further in the 'Assessments of the Environmental Effects' section below.

Air

During scour repair works, there is potential for short-term negative impacts on air quality. Activities undertaken on site may cause dust and particulate matter to be emitted to the atmosphere. However, considering the nature and small scale of the works as well as the following mitigation measures, the risk of significant impacts to air quality are considered to be low.

- Appropriate containment measures must be in place to prevent debris from entering the environment.

- All plant, machinery and vehicles associated with the scheme must be maintained to the appropriate standards and must switch their engines off when not in use.
- The movement of dusty material will be minimised by appropriately planning material movements.
- A designated laydown area will be established at the site compound location.
- 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 (e.g. within the A82 carriageway boundary) and, where feasible, 10m away from potential pollution pathways such as drains and watercourses.
- Cement bags will remain closed when not in use to prevent cast-off to the surrounding environment.
- Any stockpiled material on site will be monitored daily to ensure no risks of dust emissions exists. Where a risk of dust emissions exists from stockpiles, these are to be dampened down. This is likely to require the use of mobile water bowsers.
- Materials should be removed from site as soon as is practical.
- Good housekeeping will be employed throughout the work.
- All construction activities will operate in line with good practice measures for construction as outlined in the SEMP.

With the above mitigation measures in place, the risk of significant effects on air quality during the construction phase is considered to be low and this receptor is not considered further.

Climate Change

During scour repair works, there is potential for 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. However, considering the nature and small scale of the works as well as the following mitigation measures, the risk of significant impacts to climate are considered to be low.

- BEAR Scotland will adhere to the company's Carbon Management Policy.
- BEAR Scotland will undergo annual CEEQUAL Assessment.
- Where possible and in line with Covid-19 restrictions, construction operatives will be encouraged to car-share, used organised company transport or public transport, reducing greenhouse gas emissions.

- All plant, machinery and vehicles associated with the scheme must be maintained to the appropriate standards and must switch their engines off when not in use to reduce and control emissions.
- Where possible, materials are to be sourced locally to reduce greenhouse gas emissions associated with materials movement.

With the above mitigation measures in place, the risk of significant effects on the climate during the construction phase is considered to be low and this receptor is not considered further.

Material Assets

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 boulders removed from the watercourse will be reused as rock armour where possible. With the following mitigation measures in place, significant impacts on material assets are not anticipated as a result of works:

- Boulders removed from the watercourse will be appropriately stored for reuse on site.
- Other 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.

With the above mitigation measures in place, the risk of significant effects on the environment due to the use of material assets is considered to be low and this receptor is not considered further.

Waste

During scour repair works, there is potential for impacts as a result of the improper storage or disposal of waste. However, provided the following mitigation measures are in place, the risk of significant impacts as a result of the works is considered to be low.

- 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.
- 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 to 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.
- Any COSHH waste and special waste should be removed from site by a specialised waste carrier. COSHH waste should not be mixed with general waste and/or other recyclables. Any contaminated ground as a result of the works should be removed and transferred off site as special waste.

With the above mitigation measures in place, the risk of significant effects on the environment due to waste produced during the construction phase is considered to be low and this receptor is not considered further.

Cultural Heritage

Scour repair works are not expected to have an adverse impact on cultural heritage as there is only one feature of cultural heritage recorded within 300m of the scheme, and it is a record of a walkover survey area. Although the feature is adjacent to the scheme on the southwest end of the working area, the risk of significant impacts to cultural heritage is considered to be low provided that the following mitigation measures are in place.

- No excavations will take place within the boundary of the walkover survey area feature.
- There shall be no parking of construction vehicles, placement of plant, or storage of materials adjacent to walls, buildings, or fences.
- People, plant, and materials should, as much as is reasonably practicable, only be present on areas of made/engineered ground. Where access out with these areas is required for the safe and effective completion of the scheme, it should be reduced as much as possible and ideally be limited to access on foot.

- All site personnel are to be briefed on the importance of archaeological finds and are instructed, as part of the site induction, to inform the site supervisor where potential finds are made.
- Should any unexpected archaeological evidence be discovered during works, construction activities in the vicinity should be halted, the area of interest should be cordoned off, and the BEAR Scotland NW Environmental Team should be contacted to arrange a competent archaeologist to survey the site.

With the above mitigation measures in place, the risk of significant effects on cultural heritage features during the construction phase is considered to be low and this receptor is not considered further.

Vulnerability of the Project to Risks

There is potential for minor impacts on the project as a result of environmental risks such as the discovery of a protected species on site, high water levels, pollution incidents, or complaints from road users on the A82. However, ecological surveys have been carried out prior to works to identify potential risks to protected species and licences and mitigation measures will be adhered to during works. The dry working area will be created by damming the watercourse upstream of the culvert in front of a natural pool which will act as a sump for stored water. Damming the watercourse at this point will provide better capacity to store higher flows of water and ensure that the working area remains dry and contained. The majority of works will be undertaken from out with the A82 carriageway boundary, and any traffic management required for site access will be designed in line with existing guidance. These measures, along with mitigation measures and standard working practices, will be detailed in the SEMP and adhered to on site. Therefore, the vulnerability of the project to risk is considered to be low.

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

Cumulative Effects

A search of the [Argyll and Bute Council Planning Portal](#) showed a proposal to replace two antennas on a telecommunications mast located approximately 380m southeast of A82 Allt Coire Chailein culvert. The proposal was approved to proceed under permitted development rights in January 2021. Although there is no indication of a start date or duration for these works, access to the mast will be taken from the A82 layby just south of A82 Allt Coire Chailein culvert. The telecommunications works are relatively minor and will not change the height or footprint of the existing mast. In addition, the mast is located out with Allt Coire Chailein SSSI, is over 300m from the culvert, and will not entail any in-stream works. Therefore, the risk of in-combination or cumulative impacts on environmental receptors is low. Aside from the proposed telecommunications scheme, there are no known projects currently planned or recently completed that have the potential to contribute to in-combination

or cumulative effects on environmental receptors in the vicinity of A82 Allt Coire Chailein culvert.

The proposed scour repairs will improve the condition of the culvert and protect against future deterioration of the structure. Consequently, carrying out these maintenance works now will reduce the risk that additional major refurbishment works will be required in the future. This in turn will reduce the amount of work required at this location. Therefore, it is not expected that the works will contribute to long-term significant cumulative effects on the environment in the vicinity of A82 Allt Coire Chailein culvert.

Assessments of the Environmental Effects

This assessment has identified potential effects on the following environmental receptors as a result of the proposed work: biodiversity, water, and soils. These receptors are considered in further detail below.

Biodiversity

The Biodiversity receptor is considered further in this section due to the potential for impacts on freshwater fish, aquatic habitats, and terrestrial mammals as well as the requirement for consultation with the Argyll DSFB and Argyll Fisheries Trust. The Argyll Fisheries Trust provided advice on the potential impacts of works but no response was received from the Argyll DSFB. Further consideration of potential impacts on the geological features of Allt Coire Chailein SSSI and GCRS, including consultation with NatureScot, is included in the assessment of the Soil receptor below.

Aquatic Habitat & Fish Populations

Although in-stream works are required to complete scour repairs, the aquatic habitat in the area of works at the culvert is considered to be unsuitable for fish and does not support spawning salmonids. Consultation with the Argyll Fisheries Trust and Argyll DSFB confirmed that the area of works at the culvert is located upstream of known spawning areas for Atlantic salmon (*Salmo salar*) and brown trout (*Salmo trutta*). Therefore, scour works will not result in direct habitat loss for salmonids.

The Argyll Fisheries Trust advised that there is suitable habitat for salmonids downstream of the culvert and the transfer of substrate through the culvert should be maintained to support spawning areas downstream. The works are designed to strengthen the culvert structure and banks upstream of the culvert to better handle high water flows, but will not impede the movement of substrates through the culvert. Therefore, the works will not result in impacts to salmonid spawning areas downstream of the culvert.

There is potential for salmonids downstream of the culvert to be indirectly affected by works due to pollution caused by loss of containment. The Argyll Fisheries Trust highlighted the importance of maintaining good water quality through sediment management and pollution prevention measures during works. The scheme is scheduled to be completed by the end of September 2021, which is out with the sensitive period for salmonids. In-stream works will be carried out within a dry working area created by damming the watercourse upstream of the culvert and over-pumping through the site. Robust containment measures will be in place to ensure

that debris or pollutants do not enter the watercourse. Containment measures will be detailed in the SEMP and adhered to during works. With these measures in place, the risk of indirect impacts on salmonids as a result of scour works is considered to be low.

As in-stream works will not directly impact any fish spawning habitat, and provided that transfer of substrates is maintained, containment measures are in place, and good practice measures detailed in the SEMP are adhered to during works, the risk of significant impacts on fish populations and aquatic habitat as a result of works is considered to be low.

Water

As scour works will include in-stream activities, consultation with SEPA was carried out by BEAR Scotland to determine the level of CAR authorisation required to allow works to proceed. SEPA confirmed that a CAR Registration was required and granted Registration CAR/R/1192248 in 2020. However, works were delayed in 2020 due to the Covid-19 pandemic and the scope of works was subsequently expanded, necessitating a new Registration application to include additional in-stream activities. An updated application was submitted to SEPA in June 2021 and the Registration (CAR/R/SEPA2021-415) was granted to BEAR Scotland on 22nd July 2021.

There is potential for scour works to result in impacts to the water environment. Works will be carried out within a dry working area with robust pollution prevention measures in place. Standard working practices, including appropriate containment measures, 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 during works, along with all conditions of the CAR Registration. With these measures in place, the risk of significant impacts to the water environment as a result of scour repair works is considered to be low.

Soil

As the scheme is located within Allt Coire Chailein SSSI and GCRS, there is potential for scour works to result in impacts to the qualifying geological features of these sites. Consultation with NatureScot was carried out to determine the potential risks to the SSSI and GCRS. NatureScot advised that some of the proposed works may affect the movement of rocky substrate downstream, which is a key process of the local geology. Therefore, NatureScot confirmed that consent was required to allow works in the SSSI/GCRS. An application was submitted on 28th April 2021 and consent was granted on 10th June 2021.

The proposed working methods include the use of a 4-tonne excavator and a 20-tonne excavator within the SSSI. The larger machine will be required to move plant and materials into place and will only be used when necessary. It will be positioned on the downstream right-hand bank of the watercourse, avoiding a sensitive feature of cobbled pavement which is located further downstream on the left-hand bank. The smaller machine will be used in the area of works as required. Both machines will be removed from the SSSI when not in use. NatureScot has confirmed that these proposed methods are acceptable.

Aside from the advice to avoid the sensitive cobbled pavement feature downstream of works, NatureScot did not specify any conditions to reduce the potential impacts

of works on the SSSI and GCRS in the SSSI consent. However, a range of good practice measures have been identified that will reduce the risk of significant impacts on the SSSI and GCRS as a result of works. These will be detailed in the SEMP. Provided that these and other good practice measures (e.g. pollution prevention) are followed, the risk of significant impacts to the geological features of Allt Coire Chailein SSSI and GCRS as a result of scour repair works is considered to be low.

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 in part in Allt Coire Chailein SSSI and GCRS, which is a sensitive area within the meaning of regulation 2(1) of the Environmental Impact Assessment (Scotland) Regulations 1999.

The project has been subject to screening using the Annex III criteria to determine whether a formal Environmental Impact Assessment is required under the Roads (Scotland) Act 1984 (as amended by The Roads (Scotland) Act 1984 (Environmental Impact Assessment) Regulations 2017). Screening using Annex III criteria, reference to consultations undertaken and review of available information has not identified the need for a statutory EIA.

The project will not have significant effects on the environment by virtue of factors such as:

Characteristics of the scheme:

- The works will be temporary, localised, and short-term (less than 1 month in duration) and will be completed during daylight hours.
- The works will not damage or alter the footprint of A82 Allt Coire Chailein culvert.
- Ground works in the SSSI/GCRS will be limited to works on the concrete culvert structure and minor excavation of soil to install new fencing above the culvert. These activities will not affect the sensitive geological features in the SSSI/GCRS associated with the watercourse.
- Containment of the working area will be in place to prevent debris or pollution from entering the surrounding environment.

Location of the scheme:

- The total working area is less than 1ha.
- NatureScot granted consent for works to take place within Allt Coire Chailein SSSI and GCRS.

- The site compound will be located on made ground out with the boundary of Allt Coire Chailein SSSI and GCRS.
- Land use will not change as a result of the works.
- The scheme is not located within a densely populated area.
- The works will not result in altered views from the A82, and minor impacts to view during the construction phase will be temporary and short-term.

Characteristics of potential impacts of the scheme:

- Any potential impacts of the works are expected to be temporary, short-term, and limited to the construction phase.
- CAR authorisation has been granted by SEPA to carry out in-stream works to complete scour repairs.
- Mitigation measures and consents will be in place to ensure no short-term or long-term significant negative impacts on biodiversity, water, and soils/geology.
- Measures will be in place to ensure no short-term or long-term significant negative impact on road users.
- 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.
- Mitigation measures detailed above and in the SEMP will ensure no significant negative 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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