DIRECTIVE 2011/92 as amended by DIRECTIVE 2014/52/EU

ROADS (SCOTLAND) ACT 1984 (as amended)

THE ROADS (SCOTLAND) ACT 1984 (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017

RECORD OF DETERMINATION

Name of Project:	**Location:**
Allt Na H-Innse Beag Bridge Replacement	A887 at Allt Na H-Innse Beag bridge near Glenmoriston

Description of Project:

The existing bridge is in poor condition and to ensure public safety BEAR Scotland are proposing to construct a new culvert just east of the existing bridge.

The new bridge structure will consist of a reinforced concrete box culvert, and the new alignment of the structure will accommodate the widening of the carriageway to permit two lanes of traffic to pass over the structure at any time. The proposed alignment of the new structure is approximately 8m east of the existing structure and consequently requires the realignment of the Allt Na H-Innse Beag watercourse.

To allow the new structure to be constructed, a temporary road including temporary pipes for the watercourse will be constructed. This temporary structure will divert traffic from the existing bridge onto the road diversion and will allow work to be undertaken at the permanent structure location. To facilitate the construction of the proposed scheme, a partial demolition of the existing bridge structure will be required.

The works are programmed to be undertaken in two distinct phases:

1. Temporary Diversion: construction of a temporary road, commencing in September 2020 and to be completed by the end of October 2020; and

2. Main works: diversion of traffic onto the temporary road, instream construction works, including installation of a new, permanent box culvert and wingwalls, re-opening of the A887 and removal of the temporary diversion; scheduled to be undertaken between June and October 2021.

Construction will take place 5 days a week (Monday to Friday), with working hours for the duration of the phases expected to be between the hours of 0800 and 1800.

A location plan of the proposed scheme is provided in Appendix A.

Project Procurement:

The scheme is executed by the operating company as site operations – 'As of Right' scheme.

Description of Local Environment:

The sections below provide a brief description of the local environment in the vicinity of the proposed works. The baseline information is based on a review of currently available information, obtained from desk-based study and environmental surveys.

AIR QUALITY AND CLIMATE:

The proposed works are not wholly, or partially, located within an air quality management area (AQMA). No air quality monitoring stations are located within proximity to the works, with the closest monitoring station in Fort William, approximately 43km south west of the proposed works. At the time of writing, levels of the air pollutants Nitrogen dioxide (NO2) and Ozone (O3) were recorded as 'Low (1)' at the Fort William monitoring station. Fort William, being urbanised, is not representative of the rural setting of the Allt Na H-Innse Beag Bridge Replacement scheme. The local air quality around the proposed scheme is anticipated to be greater than in Fort William and is likely to be mainly influenced by existing road traffic emissions on the A887 trunk road.

Appendix A includes a map of the locations of human receptors that may be sensitive to changes in air quality.

CULTURAL HERITAGE:

A search of the Historic Environment Scotland (HES) PastMap website indicates that there are no Scheduled Monuments, Listed Building, Inventory Battlefields, Inventory Gardens and Designed Landscapes, Canmore or Historic Environment Record (HER) sites within 300m of the proposed works[1].

The existing Allt Na H-Innse Beag Bridge is not a designated cultural heritage asset. The existing bridge was built in 1948 and consists of precast reinforced concrete deck beams with masonry parapets, on full height concrete abutments.

BIODIVERSITY:

Appendix B details the SNH Sitelink and National Biodiversity Network Atlas search results.

Allt Na H-Innse Beag is a tributary of the River Moriston, which is designated as a Special Area of Conservation (SAC).

Evidence of breeding birds (adults carrying food and adults with young or in a family group) was observed during a site visit undertaken in May 2019, and there is abundant suitable habitat for nesting birds, although no nests were observed within the scheme footprint.

The Allt Na H-Innse Beag bridge itself has been identified as having low potential to support both summer roosting and hibernating bats, however, no evidence of roosting bats was found in the bridge during three activity surveys undertaken in 2019.

Allt Na H-Innse Beag does not offer suitable supporting habitat for freshwater pearl mussels or the migratory passage of Atlantic salmon. Electrofishing and freshwater pearl mussel surveys undertaken in May 2019 confirmed the absence of both within Allt Na H-Innse Beag.

[1] https://pastmap.org.uk/map [Accessed 03/09/19]

LANDSCAPE:
The proposed works are not located within a National Scenic Area (NSA), National Park or Special Landscape Area. The existing bridge is located in a rural area, with broadleaved woodlands being the dominant immediate view from the road.

The study area landscape character is Wooded Glen – Inverness landscape type. This landscape type is characterised by broad glens with steep upper slopes, undulating lower slopes and a narrow floor mostly occupied by river terraces. In addition to this, balance between open and enclosed space is formed by the diverse mix of landscape patterns, land uses, woodlands and fields[2].

The woodland within the proposed scheme boundary is not listed on the Ancient Woodland Inventory[3].

NOISE AND VIBRATION:
There are no candidate noise management areas (CNMAs) within proximity to the works[4]. The primary source of noise and vibration levels in the study area is likely to be road traffic using the A887 and noise associated with activities at the Inchmore Salmon Hatchery (approximately 30m north of the proposed works).

There are three residential properties located within 300m of the proposed works, these are:
- Inchmore, approximately 70m south west of the proposed works;
- Inchmore Bungalow, approximately 210m west of the proposed works; and
- Caberfeidh, approximately 150m south west of the proposed works.

Appendix A includes a map of the locations of human receptors that may be sensitive to changes in noise and vibration.

POPULATION AND HUMAN HEALTH:
Land use within proximity of the scheme is predominately moorland on the higher slopes with deciduous woodland, rough grazing and improved pasture on the lower gradients. The land surrounding the proposed scheme is non-prime agricultural land of Land Capability for Agriculture (LCA) Class 4.1[5].

There are three residential properties located within 300m of the proposed works, these are:
- Inchmore, approximately 70m south west of the proposed works;
- Caberfeidh, approximately 150m south west of the proposed works; and
- Inchmore Bungalow, approximately 210m west of the proposed works.

Two commercial/industrial properties are located within 300m of the proposed works, these are:
- Marine Harvest Inchmore Salmon Hatchery; and
- Industrial yard currently occupied by Balfour Beatty Utility Solutions Ltd.

No community land or assets are within 300m of the proposed works.

There are no planning applications within 300m of the proposed works[6].

[2] https://www.nature.scot/sites/default/files/2018-01/Publication%201999%20-%20SNH%20Review%20114%20-%20Inverness%20District%20landscape%20character%20assessment.pdf [accessed 03/09/19]
[3] https://map.environment.gov.scot/sewebmap/ [accessed 30/01/20]
[4] https://noise.environment.gov.scot/pdf/RoundThree/Transportation/Transportation%20CNMA%20Road.pdf [Accessed 03/09/19]
[5] https://map.environment.gov.scot/sewebmap/ [Accessed 16/07/20]
[6] https://wam.highland.gov.uk/wam/spatialDisplay.do?action=display&searchType=Application [Accessed 16/07/20]

There are no core paths or pedestrian pavements within proximity of the works. There are no National Cycle Network (NCN) routes in the vicinity of the scheme, however, the road may still be used by cyclists.

TRAFFIC:
The A887 within the scheme extents is single carriageway up to the bridge and becomes a single lane over the bridge structure. The nearest traffic count point (CP ID: 40958) is located approximately 7.8km north east of the works location and records an average annual daily traffic (AADT) of 1,043 vehicles in 2018, of which, approximately 13% were heavy goods vehicles[7].

WATER ENVIRONMENT:
The Allt Na H-Innse Beag flows underneath the trunk road (A887) within the proposed work extents. The watercourse has an estimated catchment area of 1.25km^2 and originates approximately 2.5km upstream of the A887.

The watercourse divides into two channels, likely due to anthropogenic modification, approximately 190m upstream of the bridge structure. The main flow follows the eastern channel and the confluence of the eastern (diversion) and western (relict) channels is <5m upstream of the A887 bridge structure. There is also evidence of artificial modification downstream of the A887, through the fish farm works.

The Allt Na H-Innse Beag is not classified by SEPA under WFD, however is a tributary of the River Moriston. River Moriston is classified as having an overall WFD status of 'Good' and the underlying Northern Highlands Groundwater Body is also classified as having an overall WFD status of 'Good' (SEPA, 2017). The River Moriston is forecast by SEPA to have an overall status of Good in 2021, 2027 and beyond.

The confluence with the River Moriston, approximately 175m downstream of the proposed works, falls within the designated River Moriston Special Area of Conservation (SAC).
Geomorphology surveys were undertaken in May 2019 to determine the natural processes and anthropogenic pressures on the Allt Na H-Innse Beag. This identified multiple locations in both channels which have been artificially dammed to create ponds. The survey concluded the Allt Na H-Innse Beag is stable at the A887 under the existing hydrophysiographic conditions and artificial constraints and appears to be competent to transport the water and sediment supplied from upstream without excessive erosion or deposition.

The SEPA flood maps (2019) show the River Moriston and the Allt Na H-Innse Beag, downstream of the A887, have a high likelihood of river flooding. The Allt Na H-Innse Beag upstream of the A887 is not within the SEPA flood extents.

GEOLOGY AND SOILS:
There are no statutory geological designations covering the site. Soil types within proximity to the works are dominated by Humus-Iron Podzols and Peaty Gleyed Podzols. British Geological Survey mapping shows the bedrock geology in the area as Tarvie Psammite Formation – Psammite. The superficial geology (deposits overlying the bedrock) within the area comprises of Glaciofluvial deposits, Devensian – gravel, sand and silt[8].

[7] https://dft-statistics.s3.amazonaws.com/road-traffic/downloads/aadf/local_authority_id/dft_aadf_local_authority_id_44.csv (Accessed 20/11/2019)
[8] http://mapapps.bgs.ac.uk/geologyofbritain/ [Accessed 3/09/19]

Description of the main environmental impacts of the project and proposed mitigation:

As a result of a desktop study and site visits, issues requiring consideration have been identified and the potential for significant residual environmental effects during construction and operation have then been considered. Effects have been split into construction and operational effects and the residual effects are based on consideration of potential impacts (i.e. impacts in the absence of mitigation measures) and the implementation of mitigation measures.

In some cases, compliance with environmental consents, authorisations and licences will also form part of the measures in place to minimise environmental impacts.

Unless otherwise stated, the study area considered for the assessment of potential impacts extends 200 m in each direction from the centre of the road.

AIR QUALITY AND CLIMATE:
There is potential for a temporary localised decrease in air quality and a potential increase in greenhouse gas emissions during construction due to emissions from site plant, machinery and vehicles. Disturbance and exposure of soils will lead to minor dust generation as will handling of materials such as cement. There is the potential for fugitive dust emissions during the partial demolition of the existing bridge structure. With mitigation in place as outlined below, effects on air quality and climate during construction are not anticipated to be significant.

It is not anticipated that the operation of the proposed scheme will result in an increase in vehicle movement along the A887. The proposed works are likely to improve traffic flows and dynamics due to the widening of the road, allowing two lanes of traffic to use the bridge at any one time, reducing idling (and potentially reducing greenhouse gas emissions) in the area. Consequently, no significant effects on air quality and climate are anticipated during operation.

In relation to the vulnerability from flooding associated with climate, the proposed scheme would allow for a 1 in 200-year event including an allowance for climate change, as discussed in the Water Environment section.

Mitigation proposed:

- plant, machinery and vehicles will have been regularly serviced;
- plant, machinery and vehicles associated with the scheme must switch off engines when not in use in order to minimise emissions;
- material stockpiles, should they be required, will be minimised;
- where material stockpiles are required, those which could be affected by wind blow will be covered or a wind break used while being kept on site;
- any loose materials, such as soil, will be covered during transportation to and/or from the site;
- the road surface will be swept regularly, and wheel washes used as required;
- exposed earth will be wetted where required to reduce potential for fugitive dust emissions; and
- daily visual dust monitoring will be implemented, noting weather and construction activities.

CULTURAL HERITAGE:
During the desk-based study, no cultural heritage assets were identified in proximity to the proposed works. As such, no significant effects on cultural heritage during construction or operation are anticipated.

Mitigation proposed:

- should any unexpected archaeological evidence be discovered, works will stop temporarily in the vicinity and the BEAR Environment Team contacted for advice.

BIODIVERSITY:
During construction, the proposed works would have the potential to impact the localised area as a result of the following:

- removal of trees and other vegetation to create access and a corridor for the temporary road;
- construction and removal of a temporary road;
- demolition of the existing bridge;
- construction of a new box culvert; and
- carriageway resurfacing.

SNH have been consulted in regard to the proximity of the works to the complex multispecies bat roost at Inchmore, and to advise on key details to include within the bat licence application.

A Habitats Regulations Appraisal (HRA) has been undertaken to determine if the proposed works have the potential to produce likely significant effects (LSE) on SAC qualifying species. The results of this have been captured in a Statement to Inform an Appropriate Assessment (SIAA), which will be issued to SNH prior to the commencement of works in September 2020. The results of targeted FWPM, electrofishing and redd surveys showed that Allt Na H-Innse Beag does not support FWPM and is not likely to support spawning Atlantic salmon, due to a lack of suitable supporting habitat and poor connectivity between Allt Na H-Innse Beag and the main stem of the River Moriston. Mitigation measures to prevent construction-associated pollution from entering the watercourse, removal of juvenile fish from the works area and regular checks to ensure no smolts are entrained upstream of the works area will ensure no adverse effects on site integrity for the River Moriston SAC and it's qualifying features.

Ness District Salmon Fisheries Board have been consulted and further mitigation has been developed following consultee response.

With mitigation in place, residual effects on biodiversity during construction are not anticipated to be significant.

Based on the design of the proposed works, the operational phase will not differ significantly from the existing Allt Na H-Innse Beag bridge. As such, effects on biodiversity during the operation phase are anticipated to be negligible and therefore not significant.

General mitigation

- measures detailed in the 'Water' section will be adhered to in order to protect any fish and other aquatic fauna using the watercourses;
- 'Ecological Toolbox Talk' to be provided to all site personnel prior to commencement of tree felling and construction;
- works staff must not approach or touch any animals seen on site;
- a nesting bird check within 30m of the works footprint is required within 24 to 48 hours prior to works taking place during the core breeding bird season (March to August inclusive);

- if an active bird nest is found, works must stop and the BEAR Environment Team consulted, and further recommendation made, which may include no works exclusion zones to be erected around the nest until they become inactive;
- the work area will be checked at the start of each shift for the presence of any animals. In addition, before being used, machinery will be checked at the start of each shift for the presence of any resting animals; and
- excavations, entrances to pipes/drains, or storage containers will be covered over and/or sealed off when not in use, at the end of each shift, and following completion of works, to prevent wildlife and members of the public falling into them and becoming trapped or injured.

Bat mitigation**:**
In addition to the above mitigation points the following will also be applied on site regarding bats:

- The first phase of the programmed works is proposed to commence in September 2020 and conclude in October 2020. The second phase of the works is proposed to commence in June 2021 and end in October 2021. This programme is an attempt to balance project constraints (e.g. constraints on in channel works under SEPA's General Binding Rule 6) and disturbing bat maternity colonies during the core maternity season, May to August inclusive) to cause the least overall disturbance to the ecology and environment on the site.
- Prior to work commencing a bat licence will be required from SNH. This licence is required due to the residual disturbance impacts from works.
- As a precautionary measure bats will be excluded from the bridge. A bat licenced ecologist will undertake the exclusion immediately prior to works commencing in September 2020, with exclusion devices being checked prior to decommissioning works. Any exclusion devices should remain in place for two weeks prior to being removed and replaced with permanent blocks once the bat licenced ecologist is satisfied the exclusions were successful. Any failed devices will need to be replaced and the process repeated until the exclusion is deemed successful by the bat licenced ecologists.
- Bat mitigation fencing will be installed to reduce potential vehicle collision mortality, disturbance from noise and artificial light and to maintain the site landscape and habitat composition around the maternity roosts.
- No-works exclusion zones will be applied during the most sensitive bat periods (June to August inclusive).
- During the bat active season (March to October inclusive), artificial lighting used outwith daylight hours will be avoided where possible and safe to do so across site. If lighting is required during the hours of darkness during the active season, it will be angled in such a way (where it is possible and safe to do so) so as to not act as a barrier for roosting, commuting or foraging in the area.
- Work construction activities deemed most likely to disturb bats (i.e. the installation and decommissioning of the temporary diversion road) will be scheduled to be undertaken in the active season (installation September to October 2020 and decommissioning September and October 2021 inclusive) but outwith the core maternity season. Where possible, these works will also be undertaken outwith May;
- If bats are observed flying around during the day, works are to stop and BEAR Environment Team consulted. Works will not recommence until advised by an appropriately experienced bat licenced ecologist.
- Any evidence of vehicle collision mortality (e.g. dead bats in or around the site) will be reported to the ecologist immediately.
- A toolbox talk will be delivered via the site induction to all employees working on site. A copy of the bat licence and supporting information will also be held on site. The toolbox talk should include working methods outlined above and contact details of ecologists to be consulted.

- Surveys monitoring the effectiveness of the bat mitigation and the impact on local bat populations will be undertaken during works and changes or further mitigation applied if required.

Fish mitigation:

- in-stream works should be undertaken between June and September inclusive to avoid the sensitive salmonid spawning and emergence period (October to May);
- if over-pumping is required, a suitable sized screen should be placed over the intake to prevent impingement or entrainment of juvenile fish;
- standard pollution prevention methods (GPPs) should be employed during construction;
- any areas of permanent realignment should incorporate pool habitat to replace those lost as these provide important fish refuge areas in low flow conditions;
- the permanent culvert should be designed in such a way as to pose no barrier to fish movement as per SEPAs good practice guide and position statement relating to the culverting of watercourses;
- fish rescue and relocation will be undertaken prior to the commencement of in-channel works (all fish rescue and relocation activities will be carried out under licence from Marine Scotland); and
- an ecological or environmental Clerk of Works will conduct regular checks for smolts gathering upstream of the works area and will conduct fish translocation if required.

LANDSCAPE:

During the estimated seven-month construction period there will be short-term impacts on the landscape character and visual amenity of the area due to the presence of construction plant, vehicles, traffic management, site compounds, stockpiles of materials and the temporary road. There will also be medium-term impacts as a result of vegetation clearance to facilitate construction of the temporary road. Impacts during construction are localised and therefore significant residual effects are not anticipated.

During operation, the temporary road will be disassembled, and all works-related machinery and stockpiles will be removed from the area. Mitigation will include the reinstatement of felled trees and vegetation, there will be a medium-term impact on landscape character and visual amenity while the vegetation establishes. Residual effects during operation are not likely to be significant.

Mitigation proposed:

- BEAR Scotland will ensure all landscape mitigation pre-construction and construction activities for the downstream works will be supervised by their Chartered Landscape Architect (LA).
- Mitigation detailed in the 'Waste and Material use and Re-use' section will be strictly adhered to.
- The removal of trees will be kept to a minimum that is required for construction. No trees are to be removed outwith the agreed working corridor.
- The site will be left clean and tidy following felling. If any plant material is to be left on site, this should be left in a tidy manner, situated away from the road, and in accordance with an appropriate licence exemption (refer to: Waste, Materials and Use of Natural Resources' mitigation).
- Works must avoid encroaching on land and areas where work is not required or does not have permission to do so. This includes general works, excavating, storage of equipment/containers and parking.
- Consideration should be given to the installation of more mature trees to return the height of vegetation as quickly as possible. Planting should be undertaken with guidance provided by a suitable qualified landscape consultant.
- The site will be left clean and tidy following construction.

NOISE AND VIBRATION:

There will be increased noise levels during construction as a result of activities from plant, machinery and vehicles, as well as an increased human presence within the area. Construction will take place 5 days a week (Monday to Friday), with working hours for the duration of the phases expected to be between the hours of 0800 and 1800. The temporary road is not any closer to Inchmore Cottage than the existing A887, as such it is anticipated that there will be no significant effects on Inchmore Cottage as a result of the temporary road during construction.

It is not anticipated that the number of road users will increase as a result of this scheme. As such, no significant effects are anticipated as a result of operation of the proposed scheme.

Mitigation proposed:

- the Best Practicable 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;
- local residents will be notified of construction activities at least 7 days prior to the works;
- working hours for the duration of the phases are expected to be between the hours of 0800 and 1800; if night time working is required, the Contractor will consult with The Highland Council's Environmental Health Officer to determine the need for a quantitative noise and vibration assessment to be undertaken and additional mitigation, if required, to meet agreed construction noise and vibration limits;
- all plant will be operated in a mode that minimises noise emission and will have been maintained regularly to comply with relevant national and international legislation;
- where possible, plant and equipment will be sound insulated;
- reversing on site will be minimised;
- all plant vehicles will be switched off when not in use;
- where fitted Health and Safety requirements allow, white noise reversing alarms will be used on plant to reduce noise; and
- the BEAR Scotland 'Being a Good Neighbour' toolbox talk will be provided by the contractor to all site personnel.

POPULATION AND HUMAN HEALTH:

During construction there will be a temporary land-take of approximately 0.16ha south of the proposed works to facilitate construction of a temporary road for trunk road traffic during the construction phase. This land is to be secured under agreement with the landowner and returned at the end of the project.

Approximately 0.3ha of permanent land-take will also be required to widen the road over the existing structure.

The temporary land-take for the temporary road, and any land rented for use as a site compound will revert to the landowner post construction. Effects on land use as a result of the scheme are not anticipated to be significant.

The temporary and permanent land take from landowners and occupiers is shown in Table 1. Permanent land-take from one commercial/industrial property has been identified. There is no land-take required from residential properties.

Table 1: Temporary and permanent land take from landowners and occupiers

Landowner/occupier	Temporary land-take	Permanent land-take
Glenmoriston Estates	0.12ha	0.2ha

Balfour Beatty Utility Solutions Ltd*	0.04	0.1
Total Land-take	**0.16ha**	**0.3ha**

*Balfour Beatty Utility Solutions Ltd are current occupier, land is owned by Barlea Farm

Considering the lack of dedicated pedestrian, cyclist and community (PCEC) provisions within the scheme extents, it is anticipated that the number of non-motorised users travelling along the A887 carriageway will be low. As such, the impact on PCEC has been assessed as being negligible adverse in magnitude throughout the construction phase and no significant residual effects are anticipated.

In relation to human health, the number of human receptors within proximity to the proposed scheme is limited (three residential properties and no PCEC provisions). The impacts of the proposed scheme on human health during construction will be mitigated through the mitigation described below and within the Air Quality and Climate and Noise and Vibration sections. As such, effects on human health during construction and operation are not anticipated to be significant.

Mitigation proposed:

- Works must avoid encroaching on land and areas where work is not required or does not have permission to do so. This includes general works, excavating, storage of equipment/containers and parking.
- appropriate provisions/measures should be implemented within the traffic management to allow the safe passage of pedestrians, cyclists, equestrians and community (PCEC) road users, of all abilities, through the site
- The construction site will be secured by fencing to maintain a safe working area.

TRAFFIC:
The works have been programmed during daytime hours, when the AADT along the A887 will likely be at its highest. The temporary diversion road will be single lane therefore traffic management will be required, however this will be a temporary impact and the temporary road diversion will allow vehicles to continue to use the A887 while construction is underway at the existing structure rather than closing the road in full and implementing a long diversion route.

During operation, no significant effects on vehicular travellers are anticipated. Driver stress is likely to be reduced slightly through the widening of the road from a single-track alignment to a single carriageway width of the bridge.

Mitigation proposed:

- media releases and local consultation will be used to reduce disruption; and
- an appropriate traffic management plan will be implemented with the aim of limiting disruption.

WATER ENVIRONMENT:
Impacts during construction are likely to be temporary, localised and short term in nature. Possible impacts include:

- risk of pollution to the watercourse for example, from disturbance of soil and mobilisation of soil particles which could then be washed into the watercourse via existing or new drainage pathways; and
- pollution risk during proposed carriageway resurfacing from inadvertent release of oil, fuel and/or tack coat.

Impacts during operation may be ongoing and long term in nature. These may include:

- change or increase to flood risk up or down stream of the A887 due to the replacement of the culvert;
- risk of erosion to the downstream left bank of the watercourse as flows will be directed against this bank;
- risk of fluvial scour and perching of the culvert; and
- changes to the geomorphological regime of the watercourse due to realignment upstream and downstream of the new structure.

Following the application of mitigation measures, no significant residual effects during construction and operation are anticipated.

Mitigation measures would include:

- Offline positioning of the new culvert, to allow for constructing 'in the dry', reducing the risk of pollution incidents to the watercourse during construction.
- Compliance with relevant guidance documents and incorporation of relevant good practice measures. This includes but is not limited to The Water Environment (Controlled Activities) (Scotland) Regulations 2011, SEPA Pollution Prevention Guidelines (PPGs) and Guidance for Pollution Prevention (GPPs) and SEPA Engineering in the Water Environment Good Practice Guide: Temporary Construction Methods.
- The design of the culvert to convey the 1-in-200-year flood (plus climate change) event.
- Inclusion of a low-flow channel within the new culvert, which is sized based on the observed pool widths under normal flow.
- The new culvert design to maintain the existing channel width and gradient.
- Bed and bank protection will be implicated as appropriate. Around the culvert inlet and outlet, grey bank protection will be used, necessary to comply with DMRB and provide protection to the highway inlet. Elsewhere green bank protection is proposed which will allow reinstatement of the riverbanks and provide short term erosion protection whilst vegetation re-establishes. Grey bank protection is proposed to be formed of rock 'rip-rap', buried beneath riverine materials where applicable. Green measures include but may not be limited to biodegradable geotextile supplemented by a rock toe beneath normal (up to Qmed) water level.
- A stilling basin will be provided to dissipate energy at the culvert outlet and also act as a resting pool for fish.
- A natural channel bed will be reinstated using sediment taken from the original channel during construction, stored and then placed to a minimum thickness of 300mm on the channel bed of the new culvert and realignment. Upstream and downstream channel realignment design methodologies will be appropriate for the proposed channel bed gradients. The designs will thereby allow for sufficient energy dissipation to reduce the risk of fluvial scour and aim to maintain or improve morphological capacity and sediment continuity.
- Adopting sensitive channel realignment and culvert low flow channel designs will improve the potential for fish passage and reinstate a range of channel bed features and meso-habitat.
- The contractor will produce and comply with a method statement. This method statement will include all mitigation measures, including compliance with the requirements of the CAR licence. The CAR licence shall cover the relevant engineering activities and associated works for both the permanent and temporary crossings. There is unlike to be any significant effects on the water environment from the construction, demolition and culvert works, as pollution control measures shall be in place and works will be undertaken outside of the fish spawning and emergence times, i.e. October to May.

GEOLOGY AND SOILS:

Excavations of approximately 765m^3 of topsoil is required for the construction of the new culvert structure and excavations of approximately 680m^3 of existing material is required to partially demolish the existing structure.

Mitigation proposed:

- topsoil and subsoil will be stored carefully and separately for reuse on site where possible, this may include wetting and covering them during prolonged dry and windy conditions;
- accidental damage to the verge must be fully reinstated upon completion of the works;
- no parking of vehicles or storage of materials or plant is permitted on verges; and
- the tracking of machinery/personnel and storage of equipment on verges will be minimised as far as is reasonably practicable.

During operation no significant effects on soil and geology are expected.

MATERIAL ASSETS AND WASTE:

Imports of Class C1 material (required for the temporary embankment, permanent embankment and existing structure fill) and Class 6N material (required for the structural backfill) with a combined volume of approximately 5750m^3 will be required.

Waste material will likely include road planings, masonry and concrete, excavations of approximately 680m^3 of existing material are expected. General arrangement drawings showing the typical cross section of the existing structure indicate the presence of 50mm diameter asbestos-containing pipes/weep holes draining into the channel (refer to typical cross section shown in Image 1).

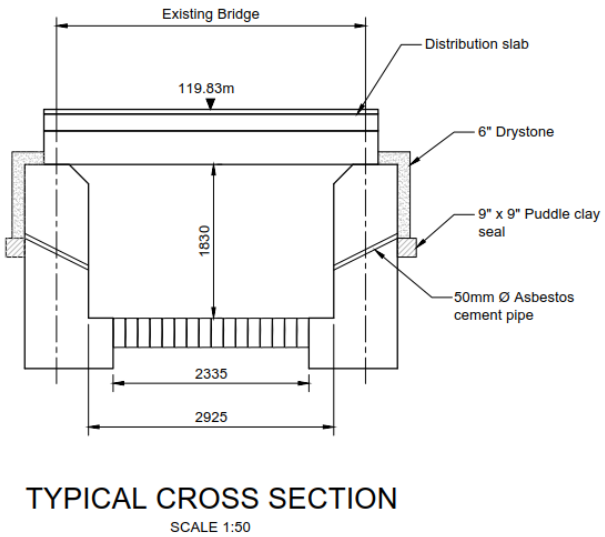

Image 1: General Arrangement Drawing showing typical cross section of existing bridge.

Excavated silty sand material could potentially be used to infill the existing drainage channel following re-alignment. Excavations of approximately 765m^3 of topsoil are expected. This topsoil has potential be reused when reinstating the area once the temporary alignment is removed.

Waste will be disposed of appropriately and in accordance with the waste hierarchy and current Waste Management Licensing Regulations.

Mitigation proposed:

- All waste should be removed from site in a safe manner by a licenced waste carrier. The waste carriers should have a valid SEPA waste registration. A copy of the waste transfer note must be provided to BEAR timeously.
- A specific Site Waste Management Plan will be prepared and will be reviewed and updated weekly during the construction. All reasonable steps will be taken to ensure all waste from site is dealt with in accordance with Section 34 of the Environmental Protection Act 1990 (Waste Duty of Care) and the Environmental Protection (Duty of Care) (Scotland) Regulations 2014.
- The Contractor shall, in order to reduce the need for waste disposal, minimise the generation and environmental impacts of wastes arising during the works and shall maximise opportunities for the re-use and recovery of wastes. The Contractor shall undertake the identification and segregation of wastes arising from the works, with appropriate handling, storage and protection associated with that waste(s) to prevent contamination of surrounding/underlying land/other stockpiles.
- All temporary road signs and traffic cones will be removed from site on completion of the works.
- Road planings will be re-used or recycled under a SEPA Paragraph 13(a) waste exemption.
- Site will be monitored regularly for signs of litter and other potential contaminants. Litter should be removed before and after work taking place.
- All waste and excess materials (those not required for the works) will be removed from the site (at the latest) on completion of the works.
- 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).
- 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.
- Prior to construction, appropriate health and safety and waste management procedures will be established. Waste management procedures will take account of inter alia: Waste Management Licence (Scotland) Regulations 2011 (as amended by the Waste Management Licensing (Scotland) Amendment Regulations 2016), HSE Guidance Note MS31 (rev2) (HSE, 2018) and the Health and Safety Commission Approved Code of Practice and Guidance Note. These procedures will be implemented as appropriate during construction.
- Construction staff will be trained to identify asbestos-containing material.

RISK OF MAJOR ACCIDENTS OR DISASTERS:
The proposed scheme is not located within a geographical region that is subject to natural disasters. As identified above, the culvert has been designed to convey a 1:200 year (plus allowance for Climate Change) flood event.

During construction, vehicle users and non-vehicular travellers will be made aware of lane closures through implementation of appropriate signage and traffic management.

It is therefore considered that the residual effects of the proposed scheme to risks from major accidents or disasters are not anticipated to be significant.

CUMULATIVE EFFECTS:
With the implementation of best practice, management and appropriate mitigation measures, as reported under each topic section in this document), the potential cumulative effects as a result of

interaction between the environmental components of the project on receptors are not considered significant.

At the time of writing there is one bridge preplacement scheme planned along the A887 trunk road at Allt an Lagain Bhàin, approximately 1.3km north-east of the proposed works. The works associated with this project are anticipated to commence in April 2021 and there is potential for cumulative effects when the two construction periods overlap between June 2021 – October 2021. No cumulative effects are anticipated during operation as both schemes are associated with upgrading and maintaining functionality of the two watercourse crossings on the A887. With the implementation of best practice, management and appropriate mitigation measures, as reported under each topic section in this document), the potential cumulative effects are not anticipated to be significant.

Extent of EIA work undertaken and details of consultation:

The following environmental parameters have been considered within this Record of Determination:

- Air Quality and Climate
- Cultural Heritage
- Biodiversity
- Landscape
- Noise and Vibration
- Population and Human Health
- Traffic
- Water Environment
- Geology and Soils
- Material Assets and Waste
- Risk of Major Accidents or Disasters
- Cumulative Effects

Consultation with SNH, the Ness District Fisheries Board and The Highland Council was undertaken with regards to potential impacts on bats, fish and flooding respectively.

Mitigation measures were proposed and agreed and it is considered that following the implementation of the mitigation measures that significant environmental effects are not anticipated.

As detailed above, an HRA proforma has been undertaken and concluded that the proposed works have a limited potential to affect the integrity of the River Moriston SAC either alone or in-combination with other plans or projects, with respect to the site's structure and function. With the proposed mitigation in place there would be no adverse effect on site integrity for the SAC qualifying features assessed (Atlantic Salmon and FWPM).

Statement of case in support of a Determination that a formal EIA and EIA Report is not required:

Screening Determination:

The works are considered to constitute a relevant project falling within Annex II of the Environmental Impact Assessment Directive 2014/52/EU, since the site has connectivity to a 'sensitive area'.

The project has been subject to screening using the Annex III criteria to determine whether the proposed development needs to be made subject to an Environmental Impact Assessment (EIA) under 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 an EIA.

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

- Following construction and implementation of mitigation outlined, the area in which the works are to be completed will not be significantly different from that which currently exists.

- No nationally or internationally designated nature conservation sites will be significantly affected by the proposed works.

Characteristics of the scheme:

- The works involve the replacement of the existing Allt Na H-Innse Beag Bridge, with a new structure which will accommodate the widening of the carriageway which requires the realignment of the Allt Na H-Innse Beag watercourse.

Location of the scheme:

- At the Allt Na H-Innse Beag Bridge on the A887 near Glenmoriston.

Characteristics of potential impacts of the scheme:

- Increases in traffic volume or changes in noise levels generated from traffic are not anticipated as a result of the proposed works.
- Potential construction effects on local air quality, ecology, water quality, land use and landscape, and noise and vibration will be minimised through best practice working procedures and implementation of appropriate mitigation.
- It is anticipated that during construction, there could be delays to vehicle travellers and non-vehicular road users. These impacts will be mitigated through appropriate traffic management.

APPENDIX A: SCHEME LOCATION, EXTENTS AND RECEPTORS

Figure A1: Approximate location of scheme (shown in red)

Figure A2: Scheme plan