A82 Ballachulish Bridge: Five Year Marine Licence

Record of Determination

	Name	Organisation	Signature	Date
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Checked By				17/05/2018
Client:	Transport Scotland			

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ROADS (SCOTLAND) ACT 1984 (as amended)

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

RECORD OF DETERMINATION

Name of Project: A82 870 Ballachulish Bridge - Five-Year Marine Licence	**Location: Ballachulish, Loch Leven** **NN 05195 59797**

Description of Project:

As part of the 4G NW contract with Transport Scotland for the management and maintenance of the Scottish trunk road network, BEAR Scotland (NW Unit) are responsible for maintenance and improvement works on the bridge. The Ballachulish Bridge is a two-lane steel truss road bridge that carries the A82 trunk road across Loch Leven as shown in Figure 1.

Figure 1: Ballachulish Bridge

The following maintenance works are proposed to be undertaken on the Ballachulish Bridge over the next five years:

- Carriageway and footpath resurfacing
- Bearing Replacement

- Painting
- Concrete repairs
- Gulley and drainage cleaning
- Parapet replacement
- Joint renewal
- Minor bridge maintenance
- Bird Guano removal
- Static and mobile underbridge access units for inspections and minor maintenance
- Point cloud surveys.

The supporting information for the Ballachulish Bridge Five-Year Marine Licence Application is provided in Appendix G.

Project Procurement:

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

Description of Local Environment:
The following baseline descriptions have been sequenced to follow the appropriate Design Manual for Roads and Bridges (DMRB) chapters for environmental assessment and do not reflect a ranking of sensitivity

Refer to Figure 1 above for the location of the proposed works.

AIR AND CLIMATE:

There are no Air Quality Monitoring Areas (AQMAs) within the vicinity of the scheme (AQIS, 2018). The closest site is located in Fort William, 13 miles from the bridge. There are thirteen sensitive receptors within the vicinity of the scheme, comprising of approximately eight residential properties north-east within 200m and approximately five additional residential properties within 200m to the south. There is a small industrial estate containing four commercial properties to the north-east of these scheme within 200m. The Ballachulish Hotel is located approximately 80m south-west of the southern extent of the scheme. Existing air quality at the scheme location is likely to be reasonable due to the open nature of the area.

CULTURAL HERITAGE AND MATERIAL ASSETS:

The Ballachulish Hotel and Garden Walls is a Category B listed building, located approximately 80m south-west of the southern extent of the scheme. There are three Scheduled Monuments located within the vicinity of the scheme: the Rubha Mor Cairn is within 200m to the north-west; the Ballachulish Prehistoric Ritual Site is within 200m to the north-east; and the Ballachulish Home Farm Burial Mound is approximately 250m to the south-west.

Refer to Figure C1 in Appendix C for Historic Environment Scotland (HES) PastMap results.

BIODIVERSITY:

<u>Designated Sites</u>

Onich to North Ballachulish Woods and Shore Sites of Special Scientific Interest (SSSI) is located 1km north of the scheme. It is designated for alkaline fen, Dalradian rocks, upland mixed ash woodland, and upland oak woodland.

Onich to North Ballachulish Woods Special Area of Conservation (SAC) is located 1km north of the scheme. It is designated for old sessile oak woods with *Ilex* and *Blechnum* in the British Isles, alkaline fens and *Tilio-Acerion* forests of slopes, screes and ravines (SNH 2018).

The Glen Etive and Glen Fyne SPA is 900m to the south-east at its closest location. The SPA is designated for breeding golden eagle *(Aguila chrysaetos)*. The nesting, breeding and optimal foraging habitat for the golden

eagle are found away from roads and on higher elevations.

St John's Church SSSI is located 1.5km south-east of the scheme and is designated for its geology. It is unlikely that the scheme would have any significant effect (direct or indirect) on the features of St John's Church SSSI. Given the localised nature of the scheme, the temporary nature of the activity, and the absence of a reasonable pathway to affect the features; it is our conclusion that there would be no significant effect on the features from the proposed maintenance activities. Therefore, we conclude that there would be no significant effect on the SSSI.

This scheme is located immediately north of two patches of woodland listed as long-established of plantation origin on the Ancient Woodland Inventory. This same area is also noted as a Native Woodland by the Forestry Commission.

The following species and signs of potential species habitat were recorded during a site visit on 22/03/2018:

Otter
Otter (*Lutra lutra*) field signs (spraint of varying ages, including fresh) have been recorded along loch shoreline to south-east of bridge. A well-used otter spraint site was recorded to the south-east of the bridge at NN 05301 59619. Fresh spraint was also recorded further along this bedrock embankment (NN 05373 59588).

Breeding Birds
Breeding bird habitat within woodland to the south of the bridge and potentially along shoreline to the north, although it was noted that there was human disturbance along the beach here (easily accessible).

A single kingfisher (*Alcedo atthis*) was sighted flying across the water and perching on shore habitat beneath the bridge both on the north and south sides during surveys.

Grey herons (*Ardea cinerea*) were recorded nesting in mature conifers approximately 65m south-east of the bridge within the mixed woodland (NN 05256 59611). Although only one nest seemed to be occupied here, a number of large nests were present in the trees.

Bats
Potential foraging and roosting opportunities for bats within the large area of woodland south of the bridge. No suitable features with the potential to support roosting bats were identified on the bridge.

The following PMF habitats have also been recorded in the general vicinity of the Ballachulish Bridge:

- Tide-swept algal communities (*Laminaria hyperborea* on tide-swept infralittoral mixed substrata) on the east and west sides of the bridge (approximately 200m away) and further upstream in Loch Leven;
- Horse mussel beds approximately 400m east of the bridge; and
- Sea loch eggwrack beds in Bishops Bay, approximately 800m north-east of the bridge.

A small watercourse flows down the shore at NN 05033 59687. This area contains the algae *Fucus ceranoides*, characteristic of marine areas with freshwater input.

Fish

As with many other Scottish sea lochs, the area is likely to be utilised by diadromous fish species such as Atlantic salmon (*Salmo salar*), anadromous brown trout (sea trout) (*Salmo trutta*) and European eel (*Anguila anguila*). All three species are listed on PMF and the Scottish Biodiversity List (SBL). Atlantic salmon are also listed on Annex II of the Habitats Directive, whilst European eel are considered Critically Endangered and are on the IUCN Red List.

A small watercourse flows down the shore at NN 05033 59687. This area contains the seaweed species *Fucus ceranoides*, specific to areas of freshwater input.

LANDSCAPE:

The scheme is located within the Ben Nevis and Glen Coe National Scenic Area (NSA). The landscape around the Ballachulish bridge is characterised by rolling valleys including the Ben Nevis mountain range. There are

views of Loch Leven and Glen Coe to the east and Loch Linnhe and the Garbh Bheimm peak to the west.

As described in the Air and Climate section, several residential and commercial properties are visible to the north of the bridge. To the south, woodland dominates the landscape with a small number properties visible, including the Ballachulish Hotel.

LAND:

Land use to the south of the scheme is comprised mainly of forestry land and Dragon's Tooth Golf Course occupies a large section of land south-west of the scheme. There are a small number of residential and commercial properties within the vicinity of the scheme (refer to Air and Climate).
Land use to the north of the scheme is comprised of open grassland, forestry and a small number of commercial and residential properties (refer to Air and Climate).

NOISE:

Existing noise levels within the vicinity of the scheme are influenced by vehicles using the A82.

Noise sensitive receptors will include protected species and residential / properties as identified in the Biodiversity and Air and Climate sections.

POPULATION AND HUMAN HEALTH:

The bridge carries the National Cycle Network (NCN) Route 78 'The Caledonia Way' which runs from Oban to Campbelltown. There is a stepped-up pavement adjacent to each carriageway on the bridge. A traffic count of pedal cycles recording Annual Average Daily Traffic Flow (AADF) was carried out in 2016 and recorded 18 daily pedal cycle movements across the bridge.

Core path LO19.02 is located approximately 170m east of the northern extent of the bridge.

A vehicle traffic count recording AADF was carried out on the bridge in 2016 and recorded 6675 daily vehicle movements. Traffic volumes are expected to be signifincantly higher in summer months (May-September) due to increased tourist traffic.

There are three bus stops in the vicinity of the scheme. The nearest bus stop is approximately 60m east of the southern extent of the bridge on the A828. Two additional stops are located on the A828 adjacent to the Ballachulish Hotel, approximately 180m west of the southern extents of the scheme. All stops are served by the 114, a once daily service from Fort William to Duror or Kinlochleven and the 918, a once daily service from Fort William to Oban..

WATER:

There are two waterbodies within the vicinity of the scheme, one of which; Loch Leven is directly below the bridge.

Loch Leven is a coastal water body (ID: 20080) of 8.5km^2 in area located east of the scheme and is rated as follows (2016):

- Overall status: Good
- Overall Ecology: Good
- Physio-chemical status: High
- Hydromorphology: High
- Biological elements: High

Loch Linnhe (south) is a coastal water body (ID: 20080) of 148.7km^2 in area located west of the scheme and is rated as follows (2016):

- Overall status: Good
- Overall ecology: Good
- Physio-chemical status: High
- Hydromorphology: High

- Biological elements: High

The SEPA flood map indicates that there is a high likelihood of coastal flooding in North Ballachulish. It also indicates a Medium likelihood of coastal flooding on the A828 road which runs below the southern approach to the bridge.

The bridge is not located wholly within a SEPA surface water drinking area. There is a surface drinking water protected area 400m south-west of the scheme. The bridge is located within a ground-water drinking protected area.

SOILS AND GEOLOGY:

The bedrock geology north of the scheme is comprised of Leven Schist Formation – Semipelite, Quartzile and Pelte. This is metamorphic bedrocked that formed approximately 541 to 100 million years ago.

The bedrock geology south of the scheme is comprised of Ballachulish Pluton – Quartz-diorite. It is an igneous Bedrock formed approximately 419 to 444 milllion years ago. There is also another portion of the Leven Schist Formation south-west of the proposed scheme.

There are no designated geological sites within the study area.

WASTE, MATERIALS AND USE OF NATURAL RESOURCES:

Materials to be used for the maintenance programme will include but not be limited to:

Paint;
Replacement bearings;
Replacement expansion joints;
New road surface;
Concrete; and
Replacement parapets.

Waste material will include old paint flakes that have been grit-blasted off the structure, bird guano, and the redundant fixtures and fittings of the bridge that are to be replaced.

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

As a result of a desktop study and site visit, issues requiring consideration have been identified and potential effects, their magnitude and overall significance (based on the sensitivity of receptor) have been considered. Effects have been split into construction and operational effects and the magnitude of effect is based on designing mitigation measures into the programme. Where reference is made to 'mitigation measures', this will also include embedding good practice and environmental management. Mitigation measures are noted in Table 1: Environmental Impacts and Mitigation Measures Summary.

In some cases, compliance with environmental consents, authorisations and licences will also form part of the measures in place to minimise environmental impacts. Table 1 will also include reference to the conditions of various licences, where relevant.

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

AIR AND CLIMATE:

The proposed work is not expected to affect air quality during the operational stage, as it will not result in

change in traffic levels or dynamics.

During the construction phase, air quality impacts are likely to stem from construction vehicles and plant on-site as well as dust as a result of maintenance activites. Impacts on air quality are not anticipated to be significant, provided the the Site Environmental Management Plan (SEMP) is adhered to and the following mitigation is in place:

- Plant, machinery and vehicles associated with the works will have engines switched off when not in use in order to minimise emissions;
- Machinery and vehicles will have been serviced regularly;
- A traffic management plan will be in place to control the length of time that traffic needs to idle;
- Dust generated from construction activities will be minimised as far as possible via wetting down;
- Large material stockpiles will not be required and drop heights will be minimised to avoid excessive dust generation;
- Any skips holding waste on site will be covered to prevent dust movement; and
- Any loose materials will be covered during transportation to and/or from site.

The construction activities, for example, emissions from construction vehicles and plant will result in release of greenhouse gases for a short-term period. However, due to the short-term nature of the work this is not considered to be significant.

The proposed work is not expected to affect air quality or heat or radiation during the operational stage, since it will not result in changes to traffic levels or dynamics.

CULTURAL HERITAGE AND MATERIAL ASSETS:

The proposed works will be confined to the existing footprint of the bridge structure. The closest cultural heritage asset is The Ballachulish Hotel Category B listed building, 80m south-west of the scheme.

The works will take place entirely within the footprint of the bridge and the compound area. It is likely that the compound will be located on the bridge deck as self contained welfare units, however the location of the compound is a decision for the contractor and by agreement with landowners. Mitigation measures are as follows:

- Confine work related activities to the existing footprint of the scheme and prohibit access to the grounds surrounding the Ballachulish Hotel.

As the assets of cultural heritage interest are located at sufficiently far away distances from the proposed works, no impacts are anticipated during the construction works.

No impacts on cultural heritage assets of interest are anticipated during the operational phase.

BIODIVERSITY:

<u>Designated sites</u>

Onich to North Ballachulish Woods and Shore SSSI is located 1km north of the scheme. Given the localised and temporary nature of the works, and the absence of a reasonable pathway to affect the features and the adherence to mitigation measures and the SEMP, significant impacts are not anticipated to the SSSI during the construction works as confirmed through consultation with SNH on 06/04/2018 shown in Appendix E (Consultation)..

Onich to North Ballachulish Woods SAC is located 1km north of the scheme. Given the localised and temporary nature of the works, and the absence of a reasonable pathway to affect the features and the adherence of mitigation measures and the SEMP, significant impacts are not ancitipated to the SAC during the construction works as confirmed through consultation with SNH on 06/04/2018 shown in Appendix E (Consultation).

The Glen Etive and Glen Fyne SPA is located 900m south-east of the scheme at its closest point. Given the localised and temporary nature of the works, and the absence of a reasonable pathway to affect the features and the adherence of mitigation measures and the SEMP, significant impacts to the SPA are not ancitipated during the construction works as confirmed through consultation with SNH on 06/04/2018 shown in Appendix E

(Consultation).

St John's Church SSSI is located 1.5km south-east of the scheme. Given the localised and temporary nature of the works, and the absence of a reasonable pathway to affect the features and the adherence of mitigation measures within the SEMP, significant impacts to the SSSI are not anticipated during the construction works as confirmed through consultation with SNH on 06/04/2018 shown in Appendix E (Consultation).

Aquatic habitats

The maintenance works are not located adjacent to or within a designated (or candidate) marine conservation area. In order to prevent materials entering the marine environment, from any of the proposed activities on or under the bridge, good practice measures will include:

- Implementation of debris netting, protective shelters, containment; and sumps;
- Ensure that all milling works are carried out during suitable periods of weather;
- Remove debris from gullies and drains using vacuum truck;
- Double bag guano;
- Contain the underbidge working platform with either debris netting or thickened sheets (if hydro-demolition);
- Layering floor of working platform to prevent any material or water going through (if hydro-demolition);
- Remove all waste concrete from site;
- Adherence to relevant PPGs and GPPs including GPP5 (works and maintenance in or near water);
- Edge protection and toerails to prevent any materials dropping into water; and
- Rock armour will be washed and cleaned prior to placement.

Should any discharge into the marine environment be intended then a CAR licence will be obtained. Adherence to the good practice and management measures, as listed above and in the Water section later on in this document, will result in no significant effects on the benthic receptors beneath and adjacent to the bridge, including PMFs.

There is limited pathway to effect for fish and marine mammals from the proposed works at Ballachulish Bridge and these marine features are not considered further.

Given the nature of the works and adherence to the mitigation measures as set out in the 'Water' and 'Waste Material and Use of Natural Resources' sections, significant impacts upon biodiversity are not anticipated as a result of the scheme.

Given the scope of the works there would be no effect on marine mammals as a result of the proposed construction works

Terrestrial

Without mitigation, there is the potential to disturb receptors, including birds and otters as listed in the Biodiversity baseline section as a result of maintenance works. Activities that have the potential to cause disturbance include the use of machinery, vehicles and plant, floodlighting, removal of vegetation and increased human activity. The good practice methods mentioned in the Air and Climate and Noise sections will ensure disturbance is adequately mitigated so that no likely significant impacts are expected. Mitigation mentioned in the Water and Waste Materials and Use of Natural Resources sections will adequately mitigate pollution of ecological habitat, therefore no likely significant impacts are expected.

Otter

A well used otter spraint site was recorded along the shoreline to the south-east of the bridge during the site walkover. An organisational otter licence (Number 118944 valid from 10 April 2018 to 31st December 2019) obtained by BEAR Scotland NW Unit and the supporting Species Protection Plan (SPP) will be followed during the main works (Appendix F). The contractor must obtain an updated or extended organisational licence, or obtain a project-specific one if the organisational license is not updated after 31st December 2019. Conditions outlined in the licence and SPP will be followed by way of mitigation.

Otter monitoring surveys will be required if works are conducted that could impact the potential otter habitat. Cameras will be deployed for a period of 14 days to monitor the activity of otter. The requirement of these surveys will be dependent on the maintenance work in question and should be taken under the advisement of the BEAR environmental team.

The following mitigation is also proposed:

- Setting up of an exclusion zone of 30m around any potential otter couch;
- Site supervisor will brief all persons on site as part of the induction process to ensure everyone is aware of the presence of otter, the mitigation measures and their legal obligations;
- Otter toolbox talk will be given to site personnel prior to commencement of works;
- Before being used, machinery will be checked for the presence of resting otters;
- Any lighting required to carry out the works as far as reasonably practicable to be directed away from the lochs;
- Pollution prevention measures will be strictly enforced on site and the relevant SEPA Pollution Prevention Guidelines (PPGs) and Guidance for in particular PPG 5 'Works and maintenance in or near water' will be strictly adhered to.

Pre-maintenance otter surveys may be required if works are conducted that could impact any potential otter couch. The requirement of these surveys will be dependent on the maintenance work in question and should be taken under advisement of the BEAR Environmental Team.

Birds

Staff will remain vigilant for breeding birds and nests in the treelines immediately adjacent to the proposed works (up to 10m from the carriageway). Should evidence of nests or breeding birds be seen, works will stop and the site supervisor will be informed who will then seek advice from the BEAR Environment Team;

Bats

The bridge and surrounding area is assessed as being of low potential for roosting bats. It is considered that the woodland with potential to support roosting bats is at a sufficient distance so as to not be significantly impacted by the proposed works.

LANDSCAPE:

During the construction phase, visual impacts are expected as a result of the erection of a temporary access platform and containment structure on the bridge. Due to the temporary nature and scale of the works not resulting in a permanent change to the local landscape character and adhering to the mitigation measures listed below and in the SEMP, significant impacts on landscape are not anticipated during the construction phase.

Mitigation proposed:

- Land required for building the compound area will be confined to the minimum required area., it is likely that the compound will be located on the bridge deck as a self-contained welfare unit;
- The site will be kept clean and tidy during and following maintenance works;
- All waste will be removed from site, with a preference for recycling, otherwise disposal at a licensed waste facility in compliance with Waste Management Regulations; and
- Vehicles and large machinery/equipment will be kept as clean as possible.

LAND:

It is anticipated that the site compound will be located on the bridge deck. It is anticipated that no land take will occur and no change in land use is expected. No residential or commercial properties, community facilities or agricultural land will be affected by the works and so the impact on land use is not anticipated to be significant.

NOISE:

There is a potential for disruption during the construction phase to the protected species stated in the Biodiversity section, as well as the residential and commercial properties and The Ballachulish Hotel as

described in the baseline section. The construction phase noise may originate from the following activities:

- construction plant including vacuum trucks, concrete mixers and underbridge access units etc.;
- grit-blasting of the structure;
- haulage of materials and movement of vehicles;
- road planing;
- spraying of waterproof materials; and
- demolition of expansion joints.

With the implementation of the following mitigation, noise impacts are not anticipated to be significant.

Good practice:

- The owners and occupiers of the residential/commercial properties located within 200m of Ballachulish Bridge will be informed of the works at least 14 days in advance of the works;
- All plant and machinery will be switched off when not in use;
- The Being a Good Neighbour toolbox talk will be included in the SEMP and delivered to site personnel prior to works.
- 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;
- Night works are not expected to be required but this will depend on design requirements and the contractor's programme and method of works. If required, the Highland Council Environmental Health Officer will be consulted prior to the works and evening and night-time working will be completed as quickly and efficiently as practicable;
- Where night works are unavoidable, where practicable the successful contractor will try abd ensure that the most disruptive activites (e.g. milling, planning) are carried out within daylight hours;
- All plant will be operated in a mode that minimises noise emissions and will have been maintained regularly to comply with relevant national and international legislation;
- Where fitted and Health and Safety requirements allow, white noise reversing alarms will be used on plant to reduce noise impact;
- All site personnel will be fully briefed in advance of works regarding the need to minimise noise during the night-time period and of the site specific sensitivities;
- Consultation will be carried out ahead of the works with affected residents to inform them of the proposals;
- Residents will be provided with a 24-hour contact number within the consultation letter;
- Temporary staff toilets/site compound will be located as far as is practicable from sensitive receptors; and
- If generators are required, these will be located as far away from residences as reasonably practicable.

The proposed works are not expected to affect noise levels during the operational phase since it will not result in a change in traffic levels or dynamics.

POPULATION AND HUMAN HEALTH:

Traffic management will be implemented to alleviate disruption to vehicle travellers throughout the construction periods. Traffic management will be required periodically and the duration of which will depend on the works required at the time. For example, drainage cleaning may require approximately two days of traffic management whereas waterproofing of the bridge may require approximately three weeks. The bridge will be single-way working, traffic light controlled and with a speed restriction of 30mph. This is expected to result in minor delays and a slight increase in travel time between North and South Ballachulish.

With the implementation of the following mitigation, impacts on vehicle travellers are not anticipated to be significant during the construction phase.

Mitigation proposed:

- A Traffic Management Plan will be developed to minimise disruption to vehicle traveller;
- Traffic will be controlled by temporary traffic lights, maintaining continuity of vehicle movement during the construction phase; and

- Motorists will be informed of works and likely delays via the Traffic Scotland website, media releases and by variable message and fixed signs.

There is a potential for disruption of NMUs using the Ballachulish Bridge during the construction phase. Cyclists using NCN Route 78 across the bridge and pedestrians are likely to be impacted during the construction phase whilst traffic management measures remain in place. Core Path LO19.02 is not anticipated to be impacted by the proposed works.

With the implementation of the following mitigation, impacts on NMUs are not anticipated to be significant during the construction phase.

Mitigation proposed:

- The needs of NMU traffic will be considered within the design of the Traffic Management Plan; and
- NMU access between North and South Ballachulish will be maintained during and following the maintenance works.

The proposed works will not affect the surrounding local population or human health during the operational phase as the works will not result in a change in access. This includes both NMUs and vehicles.

WATER:

There is potential for impacts on water quality as a result of the refurbishment works from potential discharge of silt, fuels, paint fragments, soil and waterproofing chemicals into Loch Leven. Hydro-demolition works will result in the production of large amounts of solids in solution which is likely to be mildly alkaline. This would have potential to cause deterioration of habitats and have adverse impacts on aquatic species should this be discharged into Loch Leven.

The grit blasting of the superstructure will result in significant quantites of paint fragments being removed which could cause negative impacts on the water quality if not contained by the containment structure around the bridge.

Marine Scotland have been consulted regarding the requirement for licensing and a licence will be secured before any works can take place. All conditions set out within the licence will be strictly adhered to.

Waste water generated from hydro-demolition must be contained and either disposed of under a licence or treated before being discharged into Loch Leven. Before any water can be discharged the water parameters must meet a pH requirement of between 4 – 10 and also a Suspended Solids limit of 100mg/l. Depending on the volume of water discharged daily, a Registration (volume <10m^3/day) or Simple Licence (volume >10m^3/day - <100m^3/day) under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR) must be obtained from SEPA.

With the implementation of the following mitigation, impacts on water environment are not anticipated to be significant during the construction phase.

Mitigation proposed:

- A marine licence will be secured and all conditions will be adhered to;
- An appropriate SEPA CAR licence will be complied with throughout the course of the works;
- Waste water generated from hydro-demolition will be contained and treated before disposal or discharge into Loch Leven. The water parameters must meet a pH requirement of between 4 – 10 and also a Suspended Solids limit of 100mg/l;
- Relevant Construction Industry Research and Information Association (CIRIA) guidance and SEPA's Pollution Prevention Guidelines (PPGs) and Guidance for Pollution Prevention (GPPs) will be followed including PPG 1, 6, 7, 8, 13, 18, 21 and 22. Particular attention will be paid to GPP 5: Works and maintenance in or near water, PPG 6: Working at construction and demolition sites and PPG 21: Pollution incident response planning;
- In the event of a pollution incident occurring, SEPA and BEAR Environment Team will be notified within 24 hours of the event;
- Hydro-demolition works will be encapsulated in a double-skinned membrane to filter hydro-demolition water. Solid waste captured will be bagged and removed from site to a licenced landfill site by licenced waste carriers;
- Containment will be in place and a sump pit used to prevent untreated water being released into the

marine environment;

- Fresh concrete will be poured in such a manner that no concrete is lost or can enter the marine environment;
- A containment structure will be installed during grit blasting to prevent paint particles being released ito the environment;
- Removing material through milling will be carried out during suitable periods of weather to ensure that waste material is not blown or washed into the marine environment;
- Debris netting or thickened sheets will be installed around milling working areas, including around working platforms under the bridge, and a process will be in place to retrieve any dropped items;
- Waterproofing will be carried out within protective shelters and during periods of good weather, ensuring that all overspray is enclosed and does not enter marine environment;
- Edge protection will be installed around the bridge to ensure materials can't be knocked over the edge into Loch Leven;
- Sediment traps and sedimentation mats will be used where required during construction to prevent spillages and chemicals entering the water environment;
- All re-fuelling will take place at a designated refuelling site, away from Loch Leven and any road drains;
- Oils, fuels and chemicals will be stored in bunded areas off the bridge at the best practice requirement of 110% of containment capacity of the volume stored. Drip trays will be used and maintained when dispensing;
- Spill trays will be fitted to all stationary construction plant;
- Waste will be stored in designated areas, isolated from surface drains and any other area that discharges into the environment. All skips will be covered or enclosed;
- All materials will be stored on appropriately bunded surfaces to prevent run-off of any materials into Loch Leven;
- Prevention or containment of drainage and surface water run-off from the site compound and storage areas during clearance, construction and post-construction to ensure there is no water pollution; and
- A contingency plan will be put in place to minimise risk of pollution incidents or accidental spillages and all necessary containment equipment will be available on site and staff trained in their use.

The proposed works are not anticipated to affect water quality during the operational phase as it will not result in a change in road drainage patterns of traffic levels.

SOILS AND GEOLOGY:

No sensitive receptors have been identified within the study area in relation to geology and soils. The works to the bridge will have no impact on geological resources during construction and operation.

Mitigation detailed within the 'Water' section will minimise the risk of potential contamination of soils and geology through spillages.

WASTE, MATERIALS AND USE OF NATURAL RESOURCES:

All waste will be removed from site and disposed of safely and legally, preferably by recycling or re-use. Planings will be disposed of under a paragraph 13(a) exemption (as described in Schedule 3 of the Waste Management Licensing Regulations 1994). All temporary traffic management equipment, including signs and cones, will be removed from site on completion of works. Waste water generated from hydro-demolition must be disposed of legally under the conditions of the agreed CAR licence.

With the implementation of the following mitigation, impacts relating to materials and waste are not anticipated to be significant.

Mitigation proposed:

- The sub-contractor will adhere to waste management legislation and ensure they comply with their Duty of Care;
- The sub-contractor will provide all information on quantities of waste (including recycled and re-use)

and transportation of materials required by the Operating Company;

- Re-use and recycling of waste is encouraged and the sub-contractor will be required to fully outline their plans and provide documentary evidence for waste arising from the works (e.g. waste carriers licence transfer notes and waste exemption certificates) as well as filling in the sub-contractor's waste return spreadsheet; and
- Mitigation measures described in the 'Water' section will be adhered to.

RISK OF MAJOR ACCIDENTS OR DISASTERS:

During the construction phase, with the implementation of appropriate signage and traffic management road, and NMUs will be made aware of lane and footpath closures and the presence of traffic lights. No significant impact on road safety is expected during the construction phase.

The scheme will not result in a change to the alignment or width of the road. The maintenance works are necessary to ensure the longevity of the bridge and operational reliability. The proposed works are not anticipated to result in a greater risk of major accidents during operation as there will be no change in traffic levels or alignment

CUMULATIVE EFFECTS:

The maintenance works on the Ballachulish Bridge are part of a maintenance programme which includes improvements for five bridges in the BEAR North-West Unit.

At this time there are no other relevant developments proposed in the general area of the planned maintenance works to Ballachulish Bridge. With the good practice, management and appropriate mitigation measures in place, as described in each section, potential impacts are not considered significant. Therefore, there is no potential for significant cumulative effects

Extent of EIA work undertaken and details of consultation:

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

- Air and Climate
- Cultural Heritage and Material Assets
- Biodiversity
- Landscape
- Land
- Noise
- Population and Human Health
- Water
- Soils and Geology
- Waste, Materials and Use of Natural Resources
- Risk of Major Accidents or Disasters
- Cumulative Effects

Consultation with statutory consultees was deemed necessary because there are potential impacts on biodiversity and the water environment which could be affected during the works. Appendix E provides a list of consultees and a synopsis of their comments.

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

This is a relevant project falling within Annex II that:

- Lies within the Ben Nevis and Glen Coe NSA

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. Screening using Annex III criteria, reference to consultations undertaken and review of available information has not identified the need for a full EIA.

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

Characteristics of the scheme:

- Waterproofing / resurfacing renewal, painting, drainage clearing, bird guano removal, expansion joint renewal, parapet renewal and minor concrete repairs and maintenance;
- All works will be confined to the Ballachulish Bridge, with no change to the structure's footprint; and
- Works will improve the integrity of the existing structure

Location of the scheme:

- The proposed works will take place entirely within the footprint of the existing Ballachulish Bridge superstructure;

Characteristics of potential impacts of the scheme:

- No significant adverse environmental impacts are predicted;
- No operational increase in traffic volume is anticipated as a result of the scheme; and
- Potential construction impacts on biodiversity, water, air, noise and road users will be kept to the minimum practicable through appropriate mitigation and good working practice.

File references of supporting documentation: N/A

I have determined, following discussions with the Project Manager, that an EIA Report is not required for this project.

SIGNATURE: ..... (Transport Scotland Environmental Advisor)

PRINT NAME:.....

DATE: .....

Authorisation to publish Notice of Determination

SIGNATURE: ..... (Director, Trunk Road and Bus Operations)

PRINT NAME:.....

DATE: .....

ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION: SUMMARY

Issue	Baseline Conditions	Impact	Mitigation
Air and Climate	There are approximately eight residential properties north-east of the scheme within 200m and five residential properties witin 200m south of the scheme. There is a small industrial estate with four commercial properties north-east of the scheme within 200m of the scheme.	During the construction phase air quality impacts are likely to stem from construction vehicles and plant on-site as well dust as a result of maintenance activites., impacts on air quality are not anticipated to be significant, provided the the Site Environmental Management Plan (SEMP) is adhered to and mitigation is followed. Due to the short-term nature of the works, GHG emissions from the scheme are not considered to be significant. The proposed work is not expected to affect air quality during the operational stage, as it will not result in change in traffic levels or dynamics.	• Plant, machinery and vehicles associated with the works will have engines switched off when not in use in order to minimise emissions: • Machinery and vehicles will have been serviced regularly; • A traffic management plan will be in place to control the length of time that traffic needs to idle; • Large material stockpiles will be avoided and drop heights will be minimised to reduce dust; and • In the event of prolonged periods of dry conditions, work areas will will be dampened down where appropriate. The contractor will will implement this measure with care to aboid mobilisation of dust that would impact the local air quality.
Cultural Heritage and Material Assets	The Ballachulish Hotel is a category B listed building, located approximately 80m south-west of the scheme. There are three scheduled monuments within the vicinity of the scheme. The Rubha Mor Cairn is within 200m to the north-west; the Ballachulish Prehistoric Ritual Site is within 200m to the north-east; and the Ballachulish Home Farm Burial Mound is approximately 250m south-west of the scheme.	The proposed works will be confined to the existing footprint of the bridge structure and access to the Ballachulish Hotel grounds will be prohibited. Significant impacts on cultural heritage and material assets are not anticipated during construction or operation.	▪ Mitigation as detailed in the Noise and Landscape sections will be adhered to.
Biodiversity	Onich to North Ballachulish Woods Special Area of Conservation (SAC) is located 1km north of the scheme. The Glen Etive and Glen Fyne SPA is 900m to the south-east at its closest location. The SPA is designated for breeding golden eagle. The nesting, breeding and optimal foraging habitat for the golden eagle are found away from roads and on higher elevations. St John's Church SSSI is located 1.5km south-east of the scheme and is designated for its geology. Terrestrial and aquatic ecology sruveys ecological habitat field surveys were undertaken within the study area in 2016 by BEAR Scotland Environmental team and follow-up surveys were undertaken in March 2018. The surveys recorded the presence of otter spraints on the shoreline to the south-east of the bridge. The 2018 surveys identified breeding bird habitat in the woodland to the south of the bridge but evidence of prior human disturbance was observed. Potential roosting and foraging opportunities for bats were identified in the woodland to the south of the bridge. No suitable features to support bats were identified on the bridge superstructure. The following PMFs have been recorded in the	Without mitigation, there is the potential to disturb birds and otters. Activities that have the potential to cause disturbance can include the use of machinery, vehicles and plant, floodlighting, removal of vegetation and increased human activity. Given the localised and temporary nature of the works, and the absence of a reasonable pathway to affect the features and the adherence to mitigation measures and the SEMP, significant impacts are not anticipated to the Onich to North Ballachulish Woods and Shore SSSI or SAC; the Glen Etive and Glen Fyne SPA or St John's Church SSSI as a result of the proposed maintenance works as confirmed following consultation win SNH in April 2018 (Shown in Appendix F). There were PMFs recorded in the vicinity of the scheme as noted in the 'Description of the Local Environment' section. There is potential for negative impacts on these species in the absence of mitigation measures. Given the nature of the works and adherence to the mitigation measures as set out in the 'Water' and 'Waste Material and Use of Natural Resources' sections, significant impacts upon biodiversity are not anticipated as a result of the maintenance works. There is the potential of impact to otters using the area during the construction phase as a result of pollution and disturbance caused by the presence of plant and machinery, vehicles, floodlighting and increased human activity. This could disruption to normal foraging routes. A well-used otter spraint was recorded on the shoreline to the south-east of the bridge during the site walkover. Therefore, a disturbance licence will be required. Should any discharge into the marine environment be intended then a CAR licence will be obtained. Adherence to the good	The following good practice measures will be adhered to during the maintenance works: • Implementation of debris netting, protective shelters, containment; and sumps; • Ensure that all milling works are carried out during suitable periods of weather; • Remove debris from gullies and drains using vacuum truck; • Double bag guano; • Contain the underbidge working platform with either debris netting or thickened sheets (if hydro-demolition); • Layering floor of working platform to prevent any material or water going through (if hydro-demolition); • Remove all waste concrete from site; • Adherence to relevant PPGs and GPPs including GPP5 (works and maintenance in or near water); • Edge protection and toerails to prevent any materials dropping into water. • Rock armour will be washed and cleaned prior to placement. An organisational otter licence (Number 118944 valid from 10 April 2018) obtained by BEAR Scotland NW Unit and Species Protection Plan will be followed during the main works until 31 December 2019 to reduce disturbance to otter; these are included as Appendix F. The contractor must obtain a copy of an updated or extended organisational licence, or obtain a project-specific one if the organisational one is not updated, for any works affecting otters after 31 December 2019. Conditions outlined in the licence will be followed by way of mitigation. Otter monitoring surveys will be required if works are conducted that could impact any potential otter couch. Cameras will be deployed for a period of 14 days to monitor the activity of otter. The requirement of these surveys will be dependent on the maintenance work in question and should be taken under the advisement of

	vicinity of the Ballachulish Bridge: ▪ Kelp and seaweed communities on sublittoral sediment (under the bridge); ▪ Tide-swept algal communities (Laminaria hyperborea on tide-swept infralittoral mixed substrata) on the east and west sides of the bridge (approximately 200m away) and further upstream in Loch Leven; ▪ Horse mussel beds approximately 400m east of the bridge; and ▪ Sea loch eggwrack beds in Bishops Bay, approximately 800m north-east of the bridge. A small watercourse flows down the shore at NN 05033 59687. This area contains the seaweed species Fucus ceranoides, specific to areas of freshwater input.	practice and management measures, as listed here and in the Water section in this table, will result in no significant effects on the benthic receptors beneath and adjacent to the bridge, including PMFs during the construction and operational phases.	the BEAR environmental team. The following mitigation is also proposed: • Setting up of an exclusion zone of 30m around any potential otter couch; • Site supervisor will brief all persons on site as part of the induction process to ensure everyone is aware of the presence of otter, the mitigation measures and their legal obligations; • The Otter Toolbox talk will be included in the Site Environmental Management Plan (SEMP) and delivered to site personnel prior to commencement of works; • A “soft start” will be implemented on the works each day. This will involve checking under/around vehicles and the immediate work area and then switching on vehicles prior to works commencing, with the aim of ensuring no otters or other species, are in the vicinity of works before vehicular movement and there is a gradual increase in noise; • Staff will remain vigilant for breeding birds and nests in the treelines immediately adjacent to the proposed works (up to 10m from the carriageway). Should evidence of nests or breeding birds be seen, works will stop and the site supervisor will be informed who will then seek advice from the BEAR Environment Team; • Any excavations, entrances to pipes/drains or areas where an animal could be trapped will be covered over at the end of each shift and following completion of the works to avoid animals falling into them and becoming trapped; • If lighting is required during the hours of darkness during the active season it be as focused as far as is possible on the works. • Refer to and follow above mitigation regarding adherence to PPGs and GPPs. Further mitigation measures to prevent materials from entering the marine environment are detailed in the Water section. Mitigation measures to prevent noise disturbance to terrestrial and marine species is outlined in the Noise section.
Landscape	The scheme is located within the Ben Nevis and Glen Coe National Scenic Areas (NSA). The landscape around the Ballachulish bridge is characterised by rolling valleys including the Ben Nevis mountain Range. There are views of Loch Leven and Glen Coe to the east and Loch Linnhe and the Garbh Bheimm peak to the West.	During the construction phase, visual impacts are expected as a result of the erection of a temporary access platform and containment structure on the bridge. Due to the temporary nature and scale of the works not resulting in a permanent change to the local landscape character and adherence to the mitigation measures and the SEMP, significant impacts on landscape are not anticipated during the construction and operational phases.	▪ Land required for building the compound area will be confined to the minimum require area; ▪ The site will be kept clean and tidy during and following maintenance works; ▪ All waste will be removed from site, with a preference for recycling, otherwise disposal at a licensed waste facility in compliance with Waste Management Regulations; and ▪ Vehicles and large machinery/equipment will be kept as clean as possible and switched off when not in use; ▪
Land	Land use to the south of the scheme is comprised mainly of forestry land and Dragon’s Tooth Golf Course occupies a large section of land south-west of the scheme. There are a small number of residential and commercial properties within the vicinity of the scheme (refer to Air and Climate). Land use to the north of the scheme is comprised of open grassland, forestry and a small number of commercial and residential properties (refer to Air and Climate).	Other than that required for building the site compound, no land take will occur and no change in land use is expected. No residential or commercial properties, community facilities or agricultural land will be affected by the works and so the impact on land use is not anticipated to be significant during the construction and operational phases.	
Noise	Noise and vibrations levels in the vicinity of the scheme are predominantly influenced by the traffic using the A87. There are approximately eight residential properties north-east of the scheme within 200m and five residential properties within 200m south of the	There is a potential for disruption during the construction phase to the protected species identified in the Biodiversity section and The Ballachulish Hotel due to its close-proximity to the proposed works. Currently, the works are programmed to take place entirely during daytime hours to reduce potential impacts from noise and	▪ The owners and occupiers of the residential/commercial properties located within 200m of the Ballachulish Bridge will be informed of the works at least 14 days in advance of the works; ▪ All plant and machinery will be switched off when not in use; ▪ The Being a Good Neighbour toolbox talk will be included in the Site Environmental Management Plan (SEMP) and delivered to site personnel prior to works;

	scheme. There is a small industrial estate with four commercial properties north-east of the scheme within 200m. Further detail is provided in the Air and Climate section.	vibration. If this changes, The Highland Council Environmental Health Officer will be consulted and this will be included as an addendum to the ROD. With the implementation of mitigation measures, noise impacts are not anticipated to be significant during the construction phase. The proposed works are not anticipated to affect noise levels during the operational phase as it will not result in a change in traffic levels or dynamics.	▪ 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; ▪ Night works are not expected to be required but this will depend on design requirements and the contractor's programme and method of works. If required, the Highland Council Environmental Health Officer will be consulted prior to the works; ▪ All plant will be operated in a mode that minimises noise emissions and will have been maintained regularly to comply with relevant national and international legislation; ▪ ▪ Consultation will be carried out ahead of the works with affected residents to inform them of the proposals; ▪ Residents will be provided with a 24-hour contact number within the consultation letter; ▪ Temporary staff toilets/site compound will be located as far as is practicable from sensitive receptors; ▪ If generators are required, these will be located as far away from residences as reasonably practicable.
Population and Human Health	The scheme carries the National Cycle Network (NCN) Route 78 'The Caledonia Way' which runs from Oban to Campletown. There is a stepped-up pavement adjacent to each carriageway on the bridge. Core path LO19.02 is located approximately 170m east of the northern extent of the bridge. There are three bus stops in the vicinity of the scheme. The nearest bus stop is approximately 60m east of the southern extent of the bridge on the A828. Two additional stops are located on the A828 adjacent to The Ballachulish Hotel, approximately 180m west of the southern extents of the scheme	Traffic management will be implemented to alleviate disruption to vehicle travellers throughout the construction periods. With the implementation of good practice and management measures, impacts on vehicle travellers are not anticipated to be significant. NMUs using the Ballachulish Bridge are likely to be impacted during the construction phase and whilst traffic management measures are in place. With the implementation of good practice, impacts on NMUs are not anticipated to be significant. Core Path LO19.02 is not anticipated to be impacted during the proposed works. The proposed works will no affect on the surrounding local population or human health during the operational phase as the works will not result in a change in access. This includes both NMUs and vehicle users.	▪ A Traffic Management Plan will be developed to minimise disruption to vehicle travellers; ▪ Traffic will be controlled by temporary traffic lights, maintaining continuity of vehicle movement during the construction phase; ▪ Motorists will be informed of works and likely delays via the Traffic Scotland website, media releases and by variable message and fixed signs; ▪ The needs of NMU traffic will be considered within the design of the Traffic Management Plan; and ▪ NMU access between North and South Ballachulish will be maintained during and following the maintenance works.
Water	There are two waterbodies located within the vicinity of the scheme. Loch Leven is crossed by the scheme and is a water body of 8.5km^2. Loch Linnhe (south) is a coastal waterbody of 149km^2 and is located west of the scheme. The SEPA flood map indicates that there is a high likelihood of coastal flooding in North Ballachulish. It also indicates a Medium likelihood of coastal flooding on the A828 road which runs below the southern approach to the bridge. The Bridge is not located wholly within a SEPA surface water drinking area but there is a surface drinking water protected area 400m south-west of the scheme. is the scheme os located within a ground-water drinking protected area.	There is potential for impacts on water quality as a result of the refurbishment works from potential discharge of silt, fuels, paint fragments, soil and waterproofing chemicals into Loch Leven. Hydro-demolition works will result in the production of large amounts of solids in solution which is likely to be mildly alkaline. This would have potential to cause deterioration of habitats and have adverse impacts on aquatic species should this be discharged into Loch Leven. The grit blasting of the superstructure will result in significant quantites of paint fragments created which could cause negative impacts on the water quality if not contained by the containment structure around the bridge. Waste water generated from hydro-demolition must be contained and either disposed of under a licence or treated before being discharged into Loch LevenWith the implementation of good practice, management measures and mitigation, impacts on the water environment are not anticipated to be significant. The proposed works are not expected to affect water quality during the operational phase since it will not result in a change in road drainage patterns or traffic levels.	Waste water generated from hydro-demolition must be contained and either disposed of under a licence or treated before being discharged into Loch Leven. Before any water can be discharged, the water parameters must meet a pH requirement of between 4 – 10 and also a Suspended Solids limit of 100mg/l. Depending on the amount of water discharged daily, a registration or simple licence under the Controlled Activities Regulations (CAR) must be obtained from SEPA. Mitigation proposed with regards to the cyclical maintenance works are as follows: ▪ A marine licence will be secured and all conditions will be adhered to; ▪ All SEPA Controlled Activities Regulations (CAR) licence will be obtained for all discharges into Loch Leven and the conditions of SEPA CAR licence will be complied with throughout the course of the works; ▪ Relevant Construction Industry Research and Information Association (CIRIA) guidance and SEPA's Pollution Prevention Guidelines (PPGs) and Guidance for Pollution Prevention (PPGs) will be followed including PPG 1, 6, 7, 8, 13, 18, 21 and 22. Particular attention will be paid to GPP 5: Works and maintenance in or near water, PPG 6: Working at construction and demolition sites and PPG 21: Pollution incident response planning; ▪ In the event of a pollution incident occurring, SEPA and BEAR Environment Team will be notified within 24 hours of the event; ▪ A contingency plan will be put in place to minimise the risk from pollution incidents or accidental spillages and all necessary containment equipment will be available on site and staff trained in its use;

			▪ Sediment traps and sedimentation mats will be used where required during construction to prevent sediments and chemicals entering the water environment; ▪ All re-fuelling will take place at a designated re-fuelling site, away from Loch Leven and any road drains within the area of works; ▪ Oils, fuels and chemicals will be stored in bunded areas off the bridge at the best practice requirement of 110% of containment capacity of the volume stored. Drip trays will be used and maintained when dispensing; ▪ Spill trays will be fitted to all stationary construction plants; ▪ Waste will be stored in designated areas, isolated from surface water drains and any area that discharges into the water environment; ▪ All skips will be covered or enclosed and waste materials will be removed from site by licenced waste carriers; ▪ Works will be encapsulated in a double-skinned membrane to filter hydro-demolition water. Solid waste captured will be bagged and removed from site to a licenced landfill site by licenced waste carriers; ▪ Containment will be in place for hydro-demolition and a sump pit will be used to catch run-off water; ▪ Fresh concrete will be poured in such a manner that no concrete is lost or can enter the marine environment and debris netting will be installed around the area being broken out; ▪ Gully cleaning vehicles are to be used which will vacuum water and debris from the gullies, and vacuum trucks will be emptied at licenced facilities; ▪ Bird Guano will need to be double bagged to prevent spillage and will be taken to a licenced facility; ▪ All milling works will be carried out during suitable periods of weather to ensure that waste material is not blown or washed in the water. ▪ Debris netting is to be installed around the area being milled as required; and ▪ Edge protection and debris netting to be installed to ensure materials can't be knocked over the edge of the bridge during construction of the new parapet.
Soils and Geology	There are no designated geological sites within the study area.	The works to the bridge will have no impact on geological resources.	▪ Mitigation detailed within the 'Water' section will minimise the risk of potential contamination of soils and geology through spillages.
Waste, Materials and Use of Natural Resources	Materials to be used for the maintenance programme will include but not be limited to: Paint; Replacement bearings; Replacement expansion joints; New road surface; Concrete; and Replacement parapets. Waste material will include old paint flakes that have been grit-blasted off the structure, bird guano, and the redundant fixtures and fittings of the bridge that are to be replaced.	With the implementation of mitigation, impacts relating to materials and waste are not anticipated to be significant.	▪ The sub-contractor will adhere to waste management legislation and ensure they comply with their Duty of Care; ▪ The sub-contractor will provide all information on quantities of waste (including recycled and re-used) and transportation of materials required by the Operating Company; ▪ All waste will be removed from site and disposed of safely and legally, preferably by recycling or re-use. Planings will be disposed of under a paragraph 13(a) exemption (as described in Schedule 3 of the Waste Management Licensing Regulations 1994): ▪ All temporary traffic management equipment, including signs and cones, will be removed from site upon completion of the works: ▪ Re-use and recycling of waste is encouraged and the sub-contractor will be required to fully outline their plans and provide documentary evidence for waste arising from the works (e.g. waste carriers licence, transfer notes and waste exemption certificates) as well as filling in the sub-contractor's waste return spreadsheet; and ▪ Mitigation measures regarding materials and waste are outlined in the Water section will be adhered to.
Risk of Major Accidents or Disasters	The scheme will not result in a change to the alignment or width of the road. The maintenance works are necessary to ensure the longevity of the	During the construction phase, with the implementation of appropriate signage and traffic management, road users and NMUs will be made aware of lane and footpath closures and the	▪ The maintenance works are necessary to ensure the longevity of the bridge and operational reliability.

	bridge and operational reliability. For example, drainage clearing as part of the maintenance works will ensure Ballachulish Bridge is more resilient to flooding.	presence of traffic lights. No significant impact on road safety is expected during the construction phase. The proposed works are not anticipated to result in a greater risk of major accidents during operation as there is will be no change in traffic levels or alignment.	
Cumulative Effects	At this time there are no other relevant developments proposed in the vicinity of Ballachulish Bridge.	The maintenance works on the Ballachulish Bridge are part of a maintenance programme which includes improvements for five bridges in the North-West Unit. Due to the short-term nature of the works, the absence of other bridge maintenance programmes within the vicinity of the Ballachulish Bridge and the appropriate mitigation listed herein and in the SEMP, cumulative impacts on receptors including the MPA and SAC are not considered to be significant.	▪ Mitigation detailed in the ROD and SEMP will be adhered to.

References

- Air Quality in Scotland (AQIS) (2018). National Air Quality checker. Available at: http://www.scottishairquality.co.uk/

- Scottish National Heritage (SNH) (2018). Sitelink: Designated site finder. Available at: http://gateway.snh.gov.uk/sitelink/searchmap.jsp

APPENDIX A: SCHEME LOCATION AND EXTENTS

Figure A1: Location of scheme

APPENDIX B: AIR AND CLIMATE

Figure B1: Receptors within 300 m of scheme

APPENDIX C: CULTURAL HERITAGE AND MATERIAL ASSETS

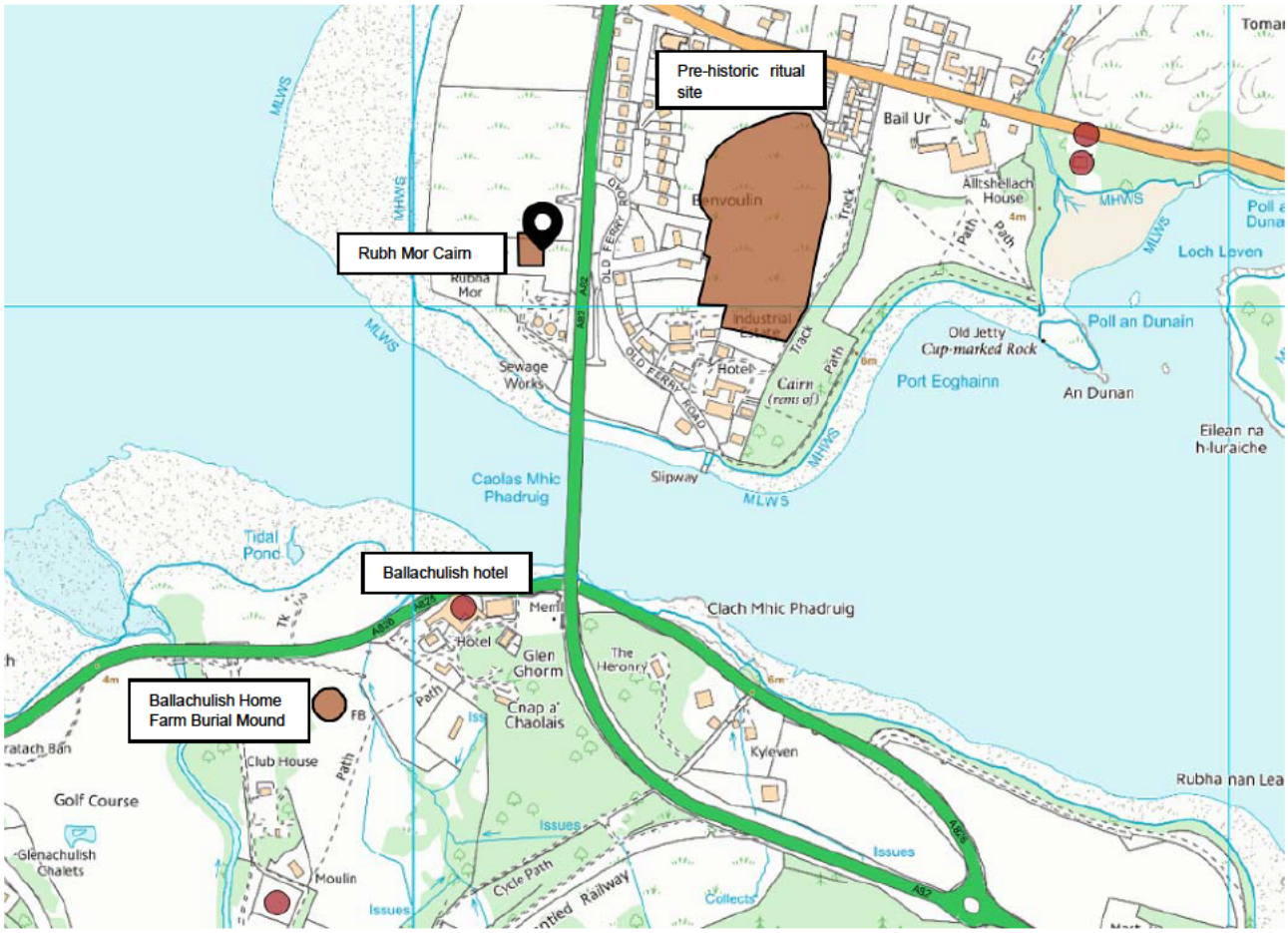

Figure C1: Sites of cultural heritage interest recorded within 300 m of scheme. Source: HES PastMap

Dataset	Dataset UID	Name	OS NGR	Classification
Pastmap	LB6881	Ballachulish Hotel	NN 05061 59632	Listed Building
Pastmap	SM3289	Rubha Mor Cairn	NN 05144 60070	Scheduled Monument
Pastmap	SM7849	Ballachulish Prehistoric Ritual Site	NN 05431 60101	Scheduled Monument
Pastmap	SM4166	Ballachulish Home Farm Burial Mound	NN 04897 59513	Scheduled Monument

APPENDIX D: BIODIVERSITY

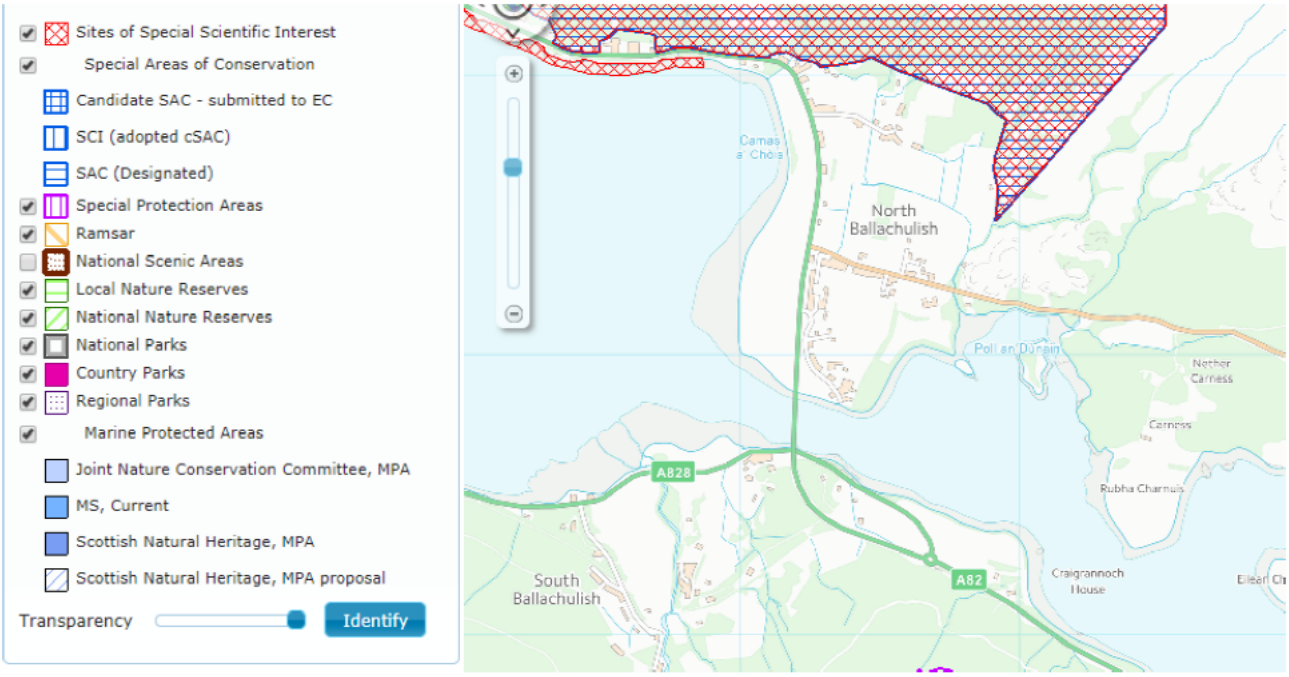

Figure D1: SNH Sitelink search results

Name of Site	Designation	Distance from Works
Onich to North Ballachulish Woods and Shores	Sites of Special Scientific Interest (SSSI)	1km north
Onich to North Ballachulish Woods	Special Area of Conservation (SAC)	1km north
Gkeb Etive and Glen Fyne	Special Protection Area (SPA)	900m south-east
St John;s Church	SSI	1.5km south-east

The following protected species have been recorded within a 5km radius of the scheme in the last 10 years using the OGL and CC0 Licence on NBN Atlas (Located at https://nbnatlas.org/; Accessed on 12 February 2018):

Table D1: NBN Atlas search results within 5 km of the scheme

Common Name	Species Name	Taxon Group
- Common pipistrelle	*Pipistrellus pipistrellus*	Don Matthews
- Pygmy pipistrelle	*Pipistrellus pygmaeus*	Don Matthews
- Badger	*Meles meles*	Jon Mercer
- Blackbird	*Turdus merula*	Unknown
- Bluebell	*Hyacinthoides non-scripta*	C Irvine, K Cunningham & L Hollingworth
- Bullfinch	*Pyrrhula pyrrhula*	Unknown
- Canada goose	*Branta canadensis*	Carl Farmer, Chris Irvine and Marion Moir
- Chaffinch	*Fringilla coelebs*	Unknown
- Common frog	*Rana temporaria*	Sallie Jack
- Common lizard	*Zootoca vivipara*	Robert Raynor
- Common porpoise	*Phocoena phocoena*	Jon Mercer
- Common toad	*Bufo bufo*	Dee Normington
- Dunnock	*Prunella modularis*	Unknown
- Goldeneye	*Bucephala clangula*	Jon Mercer
- Goldfinch	*Carduelis carduelis*	Unknown
- Northern diver	*Gavia immer*	Sallie Jack
- Greylag goose	*Anser anser*	C Farmer, S Jack, C Irvine, M Moir
- Jackdaw	*Corvus monedula*	Unknown
- Otter	*Lutra lutra*	Jon Mercer
- Pine marten	*Martes martes*	Jim White
- Red squirrel	*Sciurus vulgaris*	Janice Brough
- Red-throated diver	*Gavia stellata*	Jon Mercer
- Reed bunting	*Emberiza schoeniclus*	Jon Mercer
- Song thrush	*Turdus philomelos*	Unknown
- Starling	*Sturnus vulgaris*	Unknown
- Woodpigeon	*Columba palumbus*	Unknown

Table D2: Invasive non-native species recorded on the NBN Atlas within 5 km of the scheme

Taxon Name	Common Name	Taxon Group
Fallopia japnica	Japanese Knotweed	Plant

APPENDIX E: CONSULTATION

Summary of Consultation

Consultee	Consultee Response	Addressing Concerns
SNH	The engineers are confident that all of the materials used and waste generated can be completely contained and disposed of off-site. Agreed that there will be no significant impacts on the special qualities of the Ben Nevis and Glen Coe NSA.	Additional information to address uncertainties regarding the concrete repairs. Marine license pre-application advice
SEPA	Engineering activities in coastal and transitional waters are not regulated by SEPA under CAR, but by Marine Scotland. SEPA expect a robust construction method statement. There should be continuing supervision of construction operations and ongoing review of the effectiveness of any mitigation measures employed. Any abstraction for the purpose of concrete repairs to the bridge substructures do not require authorisation under CAR providing returned water does not cause pollution. Any removed material that has no further use and is to be placed upon the shore, this material is considered a waste and will need to go to a site authorised to receive waste or one that is exempt from the waste regulations. It will also need to be transported with a transfer note and by a waste carrier.	For the hydrodemolition works the contractor will use freshwater (contained within a lorry) and spray the concrete, therefore there would be no abstraction required. The contractor will likely intend to discharge this water in to the marine environment (adjacent to the bridge). A sump pit will catch run off water and then waste concrete collected would be removed from the site.
WFRT	WFRT had no further comment to provide on the scheme when consulted	

Consultation with SEPA:

From: [Redacted
Sent: 21 May 2018 15:05
To: [Redacted]
Subject: FW: BEAR Bridges Maintenance Programme

Hi

I realise[Redacted is now out of the office until 30th May. In her absence I would be most grateful if someone could respond to my query below.

Many thanks

[Redacted]

[Redacted]

From: [Redacted]
Sent: 14 May 2018 11:43
To: [Redacted]
Subject: RE: BEAR Bridges Maintenance Programme

Hi [Redacted]

Thanks for your response. For the hydrodemolition works the contractor will use freshwater (contained within a lorry) and spray the concrete, therefore there would be no abstraction required. The contractor will likely intend to discharge this water in to the marine environment (adjacent to the bridge).

As I understand your email, the potential to discharge such water in to the marine environment would actually be regulated by MS-LOT. As already stipulated in the management measures, a sump pit will catch run off water and then waste concrete collected would be removed from the site. We then go on to suggest that a CAR licence would be obtained if we intend to discharge back into the marine environment; however, as I now understand this would actually be regulated by MS-LOT and therefore be part of the Marine Licence application.

Many thanks

[Redacted]

In order to prevent the materials entering the marine environment, the following measures will be taken.	
Large repair 1. Hydro demolition will require containment and a sump pit to catch run off water. 2. Water will either be pumped into a storage tank and disposed of under licence, or discharged into the adjacent marine environment. A CAR licence will be obtained for all discharges. 3. All waste concrete will be removed from site by licensed waste carriers. 4. Fresh concrete will be poured in such a manner that no concrete is lost or can enter the marine environment.	Smaller repair 1. Debris netting is to be installed around the area being broken out. 2. Containment be installed to prevent concrete falling into the marine environment. 3. All waste concrete will be removed from site by licensed waste carriers. 4. Fresh concrete will be poured in such a manner that no concrete is lost or can enter the marine environment.

[Redacted]

Transport Scotland
Trunk Road and Bus Operations

Document:

From: [Redacted]
Sent: 14 May 2018 10:18
To: [Redacted]
Subject: [EXTERNAL] BEAR Bridges Maintenance Programme

The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended)
The Waste Management Licensing (Scotland) Regulations 2011 (as amended)

Dear [Redacted]

Thank you for your time on the telephone last week to discuss the proposed bridge maintenance at A87 280 Carrich Bridge, A87 245 Dornie Bridge and A87 290 Skye Bridge. And apologies for my delay in response.

To confirm, engineering activities in coastal and transitional waters are not regulated by SEPA under CAR, but by Marine Scotland of which you have already sought consultation with. SEPA would however expect a robust construction method statement. The construction method statement should not however been seen as exhaustive and as work develops there may be additional site specific mitigation measures that require to be incorporated into working methods. There should additionally be continuing supervision of construction operations and ongoing review of the effectiveness of any mitigation measures employed.

Abstraction activities from coastal and transitional waters are CAR Regulated, however you do not require authorisation for the temporary abstraction of water to enable working within a river. River working within the 'CAR A Practical Guide' eludes to being more specific to inland surface water abstractions, we would in this particular case be content to take a local regulatory position that any abstraction for the purpose of concrete repairs to the bridge substructures do not require authorisation under CAR providing returned water does not cause pollution.

Please note that any removed material that has no further use and is to be placed upon the shore, this material is considered a waste and will need to go to a site authorised to receive waste or one that is exempt from the waste regulations. It will also need to be transported with a transfer note and by a waste carrier.

If you have any further queries, let me know.

Kind Regards,
[Redacted]

[Redacted]

SEPA, Carr's Corner, Lochybridge, Fort William, PH33 6TL
[Redacted]

Consultation with SNH:

From: [Redacted]
Sent: 06 April 2018 10:35
To: [Redacted]
Cc: [Redacted]

Subject: RE: [EXTERNAL] RE: Marine Licence Applications for 5 year maintenance programme_BEAR Scotland

Transport Scotland
Trunk Road and Bus Operations

Document:

[Redacted] thank you for consulting us requesting our pre application advice on the bridge maintenance work . Our opinion on these works is set out below.

Ballachulish Bridge 17NW1203/050
We agree with your conclusion that there will not be significant impacts on the special qualities of Ben Nevis and Glen Coe NSA.

Please let us know if there are any material changes to the works.

Regards

From: [Redacted]
Sent: 29 March 2018 09:28
To: [Redacted]
Subject: FW: [EXTERNAL] RE: Marine Licence Applications for 5 year maintenance programme_BEAR Scotland

Hi both

I have just received this reply from MS-LOT. At this stage it would still be our intention to have two separate applications for Dornie. One MLA to cover scour repair and the other MLA to cover all remaining maintenance activities.

I look forward to hearing from you in due course.

Kind regards

[Redacted]

[Redacted]

From: [Redacted]
Sent: 29 March 2018 08:58
To: [Redacted]
Subject: [EXTERNAL] RE: Marine Licence Applications for 5 year maintenance programme_BEAR Scotland

Hi [Redacted]

Thank you for taking my call yesterday, it was helpful to discuss the proposal.

I would suggest that a separate application is submitted for each of the bridges. The question regarding separate applications being submitted for scour repairs at Dornie and Connel, would be for the applicant to decide. If separate applications are submitted, the other on-going works should be considered in the application.

From my initial review of the documentation, I would not consider any of the works to require PAC.

Transport Scotland
Trunk Road and Bus Operations

Document:

Kind Regards
[Redacted]

From: [Redacted]
Sent: 23 March 2018 12:16
To: [Redacted]
Cc: [Redacted]
Subject: RE: Additional information regarding minor concrete repairs below MHWS on Skye, Carrick, Dornie and Ballachullish Bridges

Hi [Redacted]

In relation to the specific detail you sought on the proposed minor concrete repair activity at Skye, Carrich, Dornie, Connel and Ballachulish.

The documents submitted last week contained the following detail on methodology and mitigation:

Minor concrete repairs to both the superstructure and substructure may be required if defects are found during inspections. This will include works on the piers which has the potential to be done under the high tide level. Works will likely entail the use of hydro demolition for large repairs and hand tools for smaller repairs. The duration of these works will vary depending on the extent of the repairs, which will be identified during the inspection. However, the maximum duration of the repairs is anticipated to be 2 to 3 weeks.

Outline Method Statement	
Large repair 1. Establish traffic management. 2. Hammer survey area 3. Hydro demolition of damaged concrete. 4. Clean steelwork and prepare surface. 5. Install new concrete. 6. Demobilise from site.	Small repair 1. Establish traffic management. 2. Hammer survey area 3. Break out damaged concrete. 4. Clean steelwork and prepare surface. 5. Install new concrete. 6. Demobilise from site.
These works will likely be carried out both above and below the MHWS.	
Mitigation Measures	
In order to prevent the materials entering the marine environment, the following measures will be taken.	
Large repair 5. Hydro demolition will require containment and a sump pit to catch run off water. 6. Water will either be pumped into a storage tank and disposed of under licence, or discharged into Kyle Akin. A CAR licence will be obtained for all discharges. 7. All waste concrete will be removed from	Smaller repair 5. Debris netting is to be installed around the area being broken out. 6. Containment be installed to prevent concrete falling into the marine environment. 7. All waste concrete will be removed from site by licensed waste carriers.

site by licensed waste carriers. 8. Fresh concrete will be poured in such a manner that no concrete is lost or can enter the marine environment.	8. Fresh concrete will be poured in such a manner that no concrete is lost or can enter the marine environment.

We can confirm that there is likely to be a combination of both hydrodemolition work and small repairs (using hand tools) required. It is assumed that the activity could take place both above and below the bridge.

Below the bridge

As a consequence of Health and Safety requirements – specifically working from heights and working near water – any work being carried out beneath the bridge will require an adequate working platform and railing to prevent any workers from falling. Around this platform and railing, containment will be achieved by the attachment of either debris netting (if small repairs only) or thickened sheets (if hydrodemolition). Furthermore, should hydrodemolition be required then the platform floor materials will be layered in such a way to prevent any material or water from going through the floor - for example at Cromarty Bridge - 1 x layer of Terram, 1 x layer of Visquine and finally an additional layer of Terram was used for the flooring (see attached picture).

The concrete fragments that land on the access system floor, during large or small repair works are then cleaned up, taken to the surface of the bridge and removed from site by licensed waste carriers. The water is pumped back up to the bridge deck, collected and removed from site by licensed waste carriers. If the intention is to discharge the water in to the environment a CAR licence will be obtained. At Cromarty Bridge water was pumped from the platform below, up to a 'Siltbuster' to be filtered and pH reduced before discharging into the environment (see attached picture).

As noted, there may be a requirement to access areas of the bridge that lie between MHWS and MLWS, specifically on the piers. This will be facilitated by either a fixed platform, that at certain states of the tide will be immersed or, more likely, and as done at Cromarty Bridge, by a platform that is raised/lowered accordingly (see attached picture). If a fixed platform is used then workers will ensure that all debris, material, work water is removed from the platform before immersion and then removed from the site by licensed waste carriers.

Above the bridge

Debris netting or sheeting will be applied around the working area to prevent materials and/or works water (hydrodemolition) from entering the marine environment. Material will be collected in the same manner as described above and removed from the site by licensed waste carriers or, in the case of water, potentially discharged into the marine environment if a CAR licence is obtained for this process.

I hope this provides the clarification you were seeking; however, please feel free to contact myself to discuss further if required.

Should there be any other clarifications in relation to the documents submitted last week, please don't hesitate to contact me.

Kind regards

[Redacted]

[Redacted]

From: [Redacted]
Sent: 22 March 2018 13:05
To: [Redacted]
Cc: [Redacted]
Subject: [EXTERNAL] Additional information regarding minor concrete repairs below MHWS on Skye, Carrick, Dornie and Ballachullish Bridges

[Redacted]

Thanks for your phone call. We discussed uncertainties regarding methodologies for the minor concrete repairs, and in particular work on sections of the bridge that are close to or below MHWS. The engineers are confident that all of the material used for, and generated by, such works can be completely contained and disposed of off-site. You are going back to the engineers to get detail on how this would be achieved and will send that on to Corrina for consideration as part of your earlier pre-app enquiry. You hope to get that to us by the end of this week.

[Redacted]

[Redacted]
Scottish Natural Heritage | King's House | The Green | Portree | Isle of Skye | IV51 9BS | [Redacted]
[Redacted]
Dualchas Nàdair na h-Alba | Taigh an Rìgh| An Grianan | Port Rìgh |An t-Eilean Sgitheanach | IV51 9BS
nature.scot – Connecting People and Nature in Scotland – @nature_scot

From: [Redacted]
Sent: 16 March 2018 16:09
To: MS Marine Licensing
Cc: [Redacted]

Subject: Marine Licence Applications for 5 year maintenance programme_BEAR Scotland

Dear Sir/Madam

Please find attached a covering letter and relevant supplementary documentation.

Should you have any queries, please feel free to contact me either by email or phone.

Regards

[Redacted]

[Redacted]

Dear Sir/Madam
As part of a proposed bridge maintenance programme, BEAR Scotland, on behalf of Transport Scotland, intend to carry out maintenance and repair work at a number of bridges across Scotland. Jacobs UK Ltd, working on behalf of BEAR Scotland, have been commissioned to prepare and manage the Marine Licence Applications for five bridges:

- A87 Carrich Bridge (approach to Skye Bridge)
- A87 Skye Bridge
- A87 Dornie Bridge
- A82 Ballachulish Bridge
- A828 Connel Bridge

It is intended that the proposed maintenance programmes for each of the five bridges are covered under separate 5-year Marine Licences. This will allow maintenance works to be carried out, when required, during this 5-year period. Therefore, in due course we will be submitting separate Marine Licence Applications, under the Marine Scotland (Act) 2010 Part 4, to cover the proposed maintenance programmes for each of the bridges listed above. A summary of the maintenance works for each bridge is provided within the table below. A detailed description of all the proposed maintenance works for each bridge, including mitigation measures, is provided in the attached documents.
We would welcome any comments from MS-LOT on the intended approach, specifically if MS-LOT could advise whether additional, and therefore, separate Marine Licence Applications, would be required (or advised) at Dornie Bridge and/or Connel Bridge to cover the subtidal scour repair activity. To assist MS-LOT in this regard, we have provided detail on the works and designated sites in the vicinity of each bridge.
The proposed maintenance activities are broken down to ‘scheme’ and ‘cyclic maintenance’ works. Scheme represents those works that will be required over the next 5 years, whilst cyclic represents those works which may be required over the same timeframe.
All the bridge maintenance programmes require a limited degree of works to be carried out within the intertidal (between MHWS and MLWS) and/or underneath the bridge. Of the five bridge maintenance programmes, only the proposed scour repair at Dornie Bridge and Connel Bridge will require work below MLWS, in the subtidal environment.
Jacobs will be carrying out a site walkover and otter survey at each bridge which will contribute towards a Site Investigation Note. An Environmental Screening Report and Site Environmental Management Plan for each site will also be produced in due course. These activities will assist in understanding whether EPS licences will be required at each site, with further consultation being sought in the near future once more information is available. However, recognising the localised and minimal scope of the proposed maintenance activities, we have made some early assumptions regarding the potential to effect designated sites within the vicinity of the bridges.
As Transport Scotland (TS) are the competent authority for roads projects, if it is deemed that there would be a likely significant effect on any of the qualifying interests at the bridges then TS will carry out their own Appropriate Assessment.

Ballachulish Bridge
It is unlikely that the proposal would have any significant effect (direct or indirect) on the qualifying features of the Onich to North Ballachulish woods SAC (woods, forests and otter) or Glen Etive and Glen Fyne SPA (golden eagle).
It is unlikely that the proposal would have any significant effect (direct or indirect) on the features of St Johns Church SSSI (geology) or Onich to North Ballachulish woods SSSI (woodlands, upland habitats and geology).
The proposed works would not affect the important views of the Ben Nevis and Glen Coe National Scenic Area (NSA).

[Redacted]

	Maintenance Activity									
	Scour Repair	**Painting**	**Bearing Replacement**	**Drainage Cleaning**	**Bird Guano Removal**	**Joint Renewal**	**Resurfacing**	**Parapet Renewal**	**Minor Concrete Repairs**	**Minor Mechanical and Electrical Maintenance**
Carrich	N	N	N	Y	Y#	Y	Y (and waterproofing)	Y	Y$	Y
Skye	N	N	N	Y	Y#	Y	Y (and waterproofing)	Y	Y$	Y
Dornie	Y*	N	N	Y	Y#	Y	Y	Y	Y$	N
Ballachulish	N	Y#	Y#	Y	Y#	Y	Y	Y	Y$	N
Connel	Y*	Y#	N	Y	Y#	Y	Y	Y	Y$	N

* subtidal works required

underbridge working required for activity

$ intertidal access required

	SAC	**MPA**	**SPA**	**Ramsar**	**SSSI**
Carrich	Overlap with Inner Hebrides and Minches cSAC; <50m from Lochs Duich, Long and Alsh SAC	Overlap with Lochs Duich, Long and Alsh MPA	N	N	N
Skye	Overlap with Inner Hebrides and Minches cSAC; <200 m from Lochs Duich, Long and Alsh SAC	Overlap with Lochs Duich, Long and Alsh MPA	N	N	N
Dornie	Overlap with Lochs Duich, Long and Alsh SAC; ~4.5 km from Inner Hebrides and Minches cSAC	Overlap with Lochs Duich, Long and Alsh MPA	N	N	N
Ballachulish	Onich to North Ballachulish woods SAC <1km	N	Glen Etive and Glen Fyne SPA <1km	N	St Johns Church SSSI <1.6km; Onich to North Ballachulish woods SSSI <1km
Connel	Loch Etive woods SAC <3km	N	N	N	Clais Dhearg SSSI <3km

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Appendix F: OTTER DISTURBANCE & SPECIES PROTECTION PLAN

Scottish Natural Heritage
Dualchas Nàdair na h-Alba
All of nature for all of Scotland
Nàdar air fad airson Alba air fad

Scottish Natural Heritage
Species Licensing
Great Glen House
Leachkin Road
Inverness
IV3 8NW
01463 725364
e-mail: licensing@snh.gov.uk

Animal Licence		
Licence Number: 118944	**Valid from :10-APR-18**	**Valid to :31-DEC-19**
This Licence has been amended from Licence Number : 92624		
Licence Holder :[Redacted]		
Address:	[Redacted]	
Additional Persons		
Name	**Role**	**Additional Conditions**
BEAR Scotland North West Unit Staff	Agent	
This Licence is Granted under the following Legislation:		
The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended): Regulation 44 (2) (e)		
Project Details		
This licence permits the disturbance of otter for the purpose of preserving public health and safety in North West Scotland in areas covered by the North West Unit of BEAR Scotland. All works must be carried out in accordance with the document entitled: "BEAR Scotland NW Trunk Roads Operations and Otters: An Otter Species Protection Plan" by Julie Bhatti and subsequent correspondence agreed in writing between SNH Licensing Team and the licence holder, but subject to modifications or amendments imposed by the conditions of this licence.		
Activities, species and locations covered by this licence are listed in Annex 1		
Conditions		
1	All working methods, mitigation and compensation measures must be carried out in accordance with those set out in the licence application and supporting documents as listed in the project details of this licence, and any subsequent correspondence agreed in writing between SNH Licensing Team and the licence holder, but subject to any modifications or amendments imposed by this licence.	
2	All workers must be briefed about the likelihood of otters being found on site, the terms of this licence, and what to do if otter are	

	found at any time.
3	This licence does not permit damage or destruction or obstruction of access to any otter shelter.
4	If evidence of breeding or young is found within 200m of the development site at any time, no further works must be carried out until all cubs can be shown to be sufficiently mobile to make use of alternative holts, unless agreed by an SNH licensing officer. (The SNH website provides more guidance under Otters and Development - Click Here).
5	Protection zones as defined in the licence application and supporting documents listed in the project details of this licence, must be clearly marked out on the ground prior to any works commencing on site.
6	All vegetation clearance and/or tree felling works within protection zones must be carried out by hand (including the use of chainsaws and hand-held power tools), or if harvesting machines are being used they must be operated from outside protection zones. All trees must be felled away from holt entrances, and all timber must be lifted out, processed and stacked, outwith protection zones.
7	The licence holder may employ agents or assistants to work under the terms of this licence.
8	While engaged in work authorised by this licence, the licence holder and agents must be able to produce a copy of this licence to any Police Officer, authorised person, or official of SNH on demand.
9	The licence holder must provide SNH licensing team with annual licence returns due one year from the start date of the licence and detailing any action carried out under this licence. The final return must be submitted within one month of the expiry of this licence. Please send this information by email (including your licence number in the subject line of the email) to: licensing@snh.gov.uk. using the form found here: Click Here.
Notes	
Licence holders or any other persons covered by this licence should note the following;	
1	This licence is granted subject to compliance with the conditions as specified. Anything done otherwise than in accordance with the terms of the licence may constitute an offence.
2	Agents may work independently of the licence holder. It is the responsibility of the licence holder to ensure that agents have the appropriate training and experience and that they understand the terms and conditions of this licence.
3	Assistants must work under the personal supervision of the licence holder or agents. The number of assistants that can be appropriately supervised is at the discretion of the licence holder or agent.
4	Nothing in this licence shall confer any right of entry on to land or property.
5	This licence may be modified or revoked at any time by SNH.

6	This licence only exempts any legal provision contained in the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended).

This licence is granted subject to compliance with the terms and conditions specified

Licence no:118944

Authorised on behalf of Scottish Natural Heritage by: [Redacted] **Date: 10-APR-2018**

Licence no:118944

Annex 1: Permitted activites

Action	Purpose	Species	Location	Grid Reference	Method
Disturb	Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.	Otter	North West Scotland in areas covered by the North West Unit of BEAR Scotland	-	N/A

This licence is granted subject to compliance with the terms and conditions specified

Licence no:118944

Authorised on behalf of Scottish Natural Heritage by: [Redacted] **Date: 10-APR-2018**

BEAR SCOTLAND	Transport Scotland North West Unit Otter Species Protection Plan	TRANSPORT SCOTLAND

BEAR Scotland NW Trunk Roads Operations and Otters:

An Otter Species Protection Plan

Contents

Flow Diagram Showing Decision Process

Question	Yes	No
Are there any records of otter or possibility of otters being present in an area of works that could cause disturbance to otters?	Carry out otter survey	No further action required
Does a walkover survey reveal the presence of spraint, footprints, slides but no resting places or holts?	Follow Scenario 1 in Section 6.1	Remain vigilant during works
Does a walkover survey reveal the presence of couches and/or holts within 30 m of the proposed works?	Follow Scenario 2 in Section 6.2	Remain vigilant during works
Does a walkover survey reveal the presence of couches and/or holts within 200 m of the works?	Follow Scenario 3 in Section 6.3	Remain vigilant during works
Will the works require installing a mammal ledge within a culvert/under a bridge?	Carry out survey, follow up with SNH	No further action required
Will the works require closure, obstruction or destruction of a couch/holt?	Contact SNH and apply for licence	No further action required

BEAR Scotland NW Trunk Roads Operations and Otters: An Otter Species Protection Plan 4

1 Introduction

This species protection plan has been prepared by BEAR Scotland and SNH. It is intended to support an application for an organisational otter licence to cover those trunk road operations which have the potential to affect Eurasian otter (*Lutra lutra*).

1.1 Otters in Scotland

Scotland has an internationally important population of otters and they are also listed on the Scottish Biodiversity List as a species of importance for the purpose of conservation of biodiversity in Scotland[1].

Almost any watercourse or water body is likely to be used by otters at some point in time. The Scottish population makes use of two distinct types of habitat: freshwater habitats, including lochs and rivers, and coastal habitats mainly along the west and north coast of Scotland and the Western Isles and Shetland. There is considerable variation amongst populations in both habitat types and like any animal, otters change their range and habitat use in response to changing environmental conditions.

In the freshwater environment, otters are largely nocturnal and occur at very low population densities. For a female, the typical home range is around 20 km of river, stream and loch-shore with males covering up to 39 km (Kruuk, 2006). The sexes tend to live apart for most of the time but in both types of environment, the otter is territorial and ranges may overlap, especially those of females (SNH, Kruuk, 2006).

A high proportion of the Scottish otter population, 50% or more, are coastal-dwelling. This has often led to them being incorrectly referred to as 'sea otters', a North American species of otter. They are exactly the same species as those found further inland, but take advantage of the productive coastal waters to feed on bottom-dwelling fish and crustaceans (SNH). The productive waters are also key to allowing a higher density of otters to be sustained. Coastal otters are more active during daylight hours than their freshwater counterparts. Home ranges also tend to be smaller in the coastal environment often being as small as 4 to 5 km of coastline. As in the freshwater environment, sexes tend to live apart but male territories can overlap those of several females in coastal areas.

1.2 Otters and the Law

The otter is a European protected species, listed in Annexes II and IV of the EC Habitats Directive. It is fully protected in the UK under the Conservation (Natural Habitats, &c.) Regulations 1994, as amended. Where otters are qualifying features of a Special Area of Conservation, designated under the EC Habitats Directive, their habitats are also protected. They are also legally protected under Appendix II of the Bern Convention 1979.

In summary, under this legislation, it is illegal to:

- Deliberately or recklessly capture, kill or injure otters;

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[1] The UK Biodiversity Action Plan was succeeded by the UK Post-2010 Biodiversity Framework in July 2012.

- Deliberately or recklessly harass or, in certain circumstances, disturb otters;
- Damage or destroy a breeding site or resting place for otters.

A person is not guilty of the above offences if they are carried out in accordance with a derogation licence, which can only be issued under strict conditions.

1.3 BEAR Scotland

BEAR Scotland Ltd. is appointed as the Agent to Transport Scotland for the Term Contract for Management and Maintenance of the Scottish Trunk Road Network for the North West Unit. The North West 4G contract between BEAR Scotland and Transport Scotland commenced in April 2013 and currently extends to 2020. The vast majority of maintenance operations and construction undertaken by BEAR Scotland falls under Permitted Development under the Roads (Scotland) Act 1984.

Under the contract, BEAR Scotland are responsible for:

- Planned maintenance/design (e.g. resurfacing, earthworks, traffic signs, safety barriers, bridge maintenance and replacements);
- Network management (e.g. community and local authority liaison, 24/7 365 days/year control room);
- Emergency and incident response (e.g. specially trained operatives available 24/7, remove hazards from carriageway, reduce congestion caused by incidents);
- Routine and cyclic operations (e.g. gully cleaning and drainage repairs, grass cutting and weed spraying, inspection);
- Winter service (e.g. salting of trunk roads, snow ploughs).

2 Context

BEAR Scotland is a regular holder of otter derogation licences, with more than 20 applications granted in 2016. SNH Species Licensing have agreed with BEAR Scotland that a more appropriate approach would be to secure an otter derogation licence that covers activities on the NW Unit.

2.1 What the organisational licence will cover

This licence will cover all works on the **BEAR Scotland North West Unit** that are likely to:

- Disturb otters whilst they are using resting/breeding sites.

The licence will **not** cover the obstruction or destruction of otter resting places, holts or natal holts. Where obstruction or destruction of otter resting places is required, SNH will be consulted and a separate derogation licence will be applied for.

2.2 Trunk road operations that may disturb otters or resting sites

Various trunk road operations have the potential to disturb otters using breeding/resting sites along the NW network. Disturbance of otter resting places or breeding sites is the most frequent risk to be considered by the BEAR Scotland Environment Team. These structures are still protected even when otters are not present.

The main types of trunk road operations that may disturb otters using resting/breeding sites are listed as follows (not exhaustive):

- Road resurfacing;
- Installation of vehicle restraint systems and barriers;
- Repair of carriageway defects, including retaining walls;
- Road drainage repairs;
- Bridge/culvert replacement;
- Bridge/culvert scour repairs;
- Bridge expansion joint replacement;
- Bridge parapet replacement.

3 Environment Team Capabilities and Survey Licences

The NW BEAR Scotland Environment Team have qualified and appropriately licensed ecologists who carry out otter surveys, as well as agents named on specific survey licences who are allowed to work independently. They are:

Staff member	Qualifications	Survey licence number

[Redacted]

This list of licensed members of staff will be subject to change over time. The list is correct as of April 4th 2018.

4 Survey and Site Assessment

4.1 Desk-based Assessment

Before any trunk road project can go ahead, an Environmental Assessment Request detailing the proposed works is submitted to the Environment Team by the BEAR Scotland Design Engineer. This is then subject to a screening process, including a desk-based assessment. Based on information gained from this assessment, the Environment Team determine carry out surveys to establish whether otters are present in habitat surrounding the proposed working area. This is necessary to assess the potential impacts of the proposed works on the otter population in the area and to develop mitigation measures.

Where the proposed works are within, or have connectivity with, a Special Area of Conservation where otters are a qualifying feature of the site, the Environment Team will consult SNH.

4.2 Survey Methods

Field surveys are undertaken by experienced ecologists based on methodology contained in Volume 10, Section 4 of the Design Manual for Roads and Bridges (DMRB) and in '*Monitoring the Otter Lutra lutra*' (Chanin, 2003). Surveys involve searching a minimum of 200 m beyond the working area for signs of otter, including the presence of holts, lying-up sites or couches, spraint and footprints. The locations of all otter signs found within the study area are recorded using a hand-held GPS.

Where possible, surveys are not undertaken during or following periods of heavy rainfall.

4.3 Survey Results

Signs normally encountered in the field on the North West trunk road network, include:

- Field signs, including spraint, footprints and feeding remains;
- Otter slides;
- Sightings;
- Couches (un-covered resting places above ground);
- Non-breeding holts (underground resting places with at least one chamber);
- Natal holts.

Figure 4.1 Spraint on rock near Onich

Figure 4.2 Otter footprints in wet sand

Figure 4.3 Active otter couch/holt near Skye Bridge

If a holt is identified, a wildlife camera may be set-up by a licensed otter surveyor to monitor use of the holt. Suspected natal holts will also be monitored using a wildlife camera to determine usage. If evidence of breeding or young is found within 200 m of the construction site, SNH will be consulted prior to any works being carried out.

Figure 4.4 Otter leaving holt on Skye, camera trapped under licence 62278

5 Evaluating Impacts on Otters

The main potential impact on the otter population in the vicinity of works will arise from the visual and noise disturbance due to increased human activity and the presence of machinery and vehicles. Generally, the affected resting places are adjacent to the trunk roads which have a high level of disturbance and background noise all year round. Therefore it is likely that the level of impact will be less than that which would occur at an isolated site.

Any pollution from, for example, silt, fuel or oil could have an impact on water quality, potentially having an effect on otters and their prey.

Resting places will not be damaged or obstructed by the works, however, otters making use of these areas may be disturbed as a result of construction. With mitigation in place, the level of impact arising from these works will be reduced and it is considered unlikely that a significant effect at a national or international level will occur.

6 Management Approaches

In relation to otters and trunk road operations, there are a number of different scenarios that are commonly encountered during maintenance works across the NW network. They range from finding signs (i.e. spraint and footprints) to actual sightings of otters. The appropriate management approach must be identified for each type of scenario. These scenarios are set out in the following section, along with mitigation measures to minimise the risk to otters in each case.

6.1 Scenario 1: Spraint, footprints and/or feeding remains identified but no resting places/holts found

- 'Working with Otters' Toolbox Talk to be provided to all site personnel prior to commencement of construction. This will be included in a Site Environmental Management Plan to be kept on site;
- The work area will be checked at the start of each shift for the presence of resting otters. In addition, before being used, machinery will be checked at the start of each shift for the presence of resting otters;
- Should otters or fresh signs of otters be discovered during works, work will be immediately stopped in the vicinity and the supervisor informed. Advice will be sought from the BEAR Scotland Environment Team;
- Pollution prevention measures will be strictly enforced on site and the Scottish Environment Protection Agency (SEPA) Pollution Prevention Guidelines (PPGs), and Guidance for Pollution Prevention (GPPs) in particular GPP 5 "Works and maintenance in or near water" will be strictly adhered to;
- Suitable emergency spill kit(s) will be provided on site, staff trained in their use and a contingency plan will be put in place to deal with environmental incidents;
- Refuelling and material storage areas, where required, must be fully bunded and secure and be located, if space is available, at least 10 m from watercourses, lochs, canals and drainage entry points, in order to comply with SEPA GPP 5 and minimise pollution risk;
- No wash water (or any other substance) to be discharged into watercourses, lochs, canals, transitional waters, coastal waters or road drainage system;
- Any excavations created will be covered over at the end of each shift and following completion of the works to avoid otters falling into them and becoming trapped;
- Any entrances to pipes/drains that are in the process of being constructed will be suitably protected to prevent otter access;
- All waste will be removed from site either for re-use, recycling or disposal in accordance with waste management regulations.

6.2 Scenario 2: Couches and/or holts identified within 30 m of the works

In addition to the measures in 6.1, the following mitigation will be adhered to where resting places and/or holts are found within 30 m of the works:

- Black infra-red camera trapping will be carried out under licence to determine the status of the holt i.e. if non-breeding or breeding. The use of infra-red minimises disturbance to otters;
- If a breeding holt is identified, SNH will be consulted as soon as practicably possible for further advice on how to proceed;

- No works will be carried out until the status of the holt has been established and it has been determined that all young, if present, are independently able to move to another holt;
- All conditions/advice given by Species Licensing will be complied with during the course of the works;
- If the structure is found to be used for non-breeding purposes, all conditions of the organisational otter licence will be complied with during the course of the works and a copy of the licence will be kept on site for inspection at any time;
- The site supervisor will brief all persons on site as part of the induction process to ensure that everyone is aware of the presence of otter, the mitigation measures, their legal obligations and the licensing conditions imposed on them;
- Where work on bridges is required, the thoroughfare for otters passing underneath the bridge will be maintained at all times;
- An exclusion zone will be marked out around the shelter prior to work commencing consisting of orange semi-rigid barrier fencing or high visibility tape. This will be 30m where possible but if the works are closer than this distance, the exclusion zone will be as near as possible to a minumum of 30 m. The fencing will be fixed in place allowing for as large a buffer as possible between the works and the resting places. This 'red zone' will be clearly marked as out of bounds to personnel throughout the course of the works and will be removed on completion of the works;
- A copy of the Site Environmental Management Plan, detailing mitigation measures required will be kept on site;
- Works will be carried out mainly during daylight hours but there may be cases where night-time working is required due to safety reasons;
- If night-time working is required, any lighting required will be directed away from water bodies and resting places as far as reasonably practicable;
- In such cases, works may be carried out under the direct supervision of an experienced ecologist if necessary;
- Staff to remain vigilant for sightings of otter during the course of the works;
- If otter are encountered during night-time working, works will cease in the immediate vicinity until the Environment Team can give advice;
- If the works are expected to take place over a prolonged period of time, repeat otter surveys will be carried out every 3 months.

6.3 Scenario 3: Couches/holts identified within 200 m of the works

In addition to the measures in 6.1, the following measures will be adhered to where resting places and/or holts are found within 200 m but more than 30 m from the works:

- Black infra-red camera trapping will be carried out under licence to determine the status of the holt i.e. if non-breeding or breeding. The use of infra-red minimises disturbance to otters;
- If a breeding holt is identified, SNH will be consulted as soon as practicably possible for further advice on how to proceed;
- No works will be carried out until the status of the holt has been established and it has been determined that all young, if present, are independently able to move to another holt;
- All conditions/advice given by Species Licensing will be complied with during the course of the works;
- A copy of the Site Environmental Management Plan, detailing mitigation measures required will be kept on site;
- Works will be carried out mainly during daylight hours but there may be cases where night-time working is required due to safety reasons;
- If night-time working is required, any lighting required will be directed away from water bodies and resting places as far as reasonably practicable;
- In such cases, works may be carried out under the direct supervision of an experienced ecologist if necessary;
- Staff to remain vigilant for sightings of otter during the course of the works;
- If otter are encountered during night-time working, works will cease in the immediate vicinity until the Environment Team can give advice;
- If the works are expected to take place over a prolonged period of time, repeat otter surveys will be carried out every 3 months.

7 General enhancement measures for otters

Roads can pose a particular problem for otters and can lead to significant numbers of casualties and mortalities. Road deaths are more likely when rivers are in spate and instead of being able to safely follow the watercourse through culverts or under bridges, otters cross over roads. BEAR Scotland collect data on otter road deaths to identify hotspots where further measures could prevent/reduce road mortalities. There are a couple of simple measures that BEAR Scotland use to do this.

Mammal ledges have also been installed at culverts and bridges where otter deaths had been previously recorded and where it was possible to do so. Where possible, these ledges should be fitted in conjunction with a dry otter tunnel so that otters have safe access across the road when watercourses are in spate.

Before these measures can be installed, the BEAR Scotland Environment Team carry out thorough otter surveys and in the case of installing mammal ledges at culverts, liaise with SEPA regarding Controlled Activities Regulations (CAR) requirements. Installation of mammal ledges is usually classed as an environmental service under CAR.

These activities may be covered under the organisational otter licence but if the main scope of works do not fall within the scenarios in section 6, SNH will be consulted for advice before any works are carried out.

8 What the licence will not cover

The organisational licence will only cover the scenarios set out in section 6. The licence will not cover incidences where:

- Couches/holts are obstructed;
- Couches/resting places need to be closed to enable works to go ahead;
- A holt needs to be destroyed to enable works to go ahead.

In these exceptional cases, SNH Species Licensing will be contacted and an application for a specific otter derogation licence will be made.

The organisational licence will only cover activities and operations on the NW Unit. **It does not extend to the BEAR Scotland North East Unit.**

9 Annual licence returns

Annual licence returns for the NW Unit will be made to SNH as a condition of the organisational otter licence. The submission date will be agreed with SNH.

10 References

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The Highways Agency (2001a) *Nature Conservation Advice in relation to otters.* DMRB, Volume 10 Environmental Design and Management, Section 4 Nature Conservation, Part 4 HA 81/99. The Highways Agency .

Document:

Appendix G: BEAR 5YRMLA SUPPORTING INFORMATION, BALLACHULISH BRIDGE

A82 870 Ballachulish Bridge
Scheme Number: 17NW1203/050
5 Marine Licence Application Year

March 2018

Produced for

BEAR Scotland

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17NW1203-050
A82 870 Ballachulish Bridge
5 Year Marine Licence Application

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17NW1203-050
A82 870 Ballachulish Bridge
5 Year Marine Licence Application

Contents

1 Introduction

The bridge was opened in 1975 replacing the Ballachulish ferry. It is a two-lane road bridge of through steel truss construction with fabricated box chords. It was designed by W.A. Fairhurst and Partners of Newcastle upon Tyne.

As part of the 4G NW contract with Transport Scotland for the management and maintenance of the Scottish trunk road network, BEAR Scotland (NW Unit) are responsible for maintenance and improvement schemes on the bridge.

The Ballachulish Bridge at Loch Leven carries the A82 trunk road between Fort William and Kinlochleven as shown in Figure 1.

Figure 1: Ballachulish Bridge Location

2 Background and Objectives

To ensure maintenance schemes with short lead in times are delivered on programme, a 5 year marine licence has been proposed.

This document aims to outline the schemes, cyclic maintenance and inspections planned within the 5 year licence period. Mitigation measures for all maintenance activities are also provided.

In addition, this document details the justifications used for the initial screening of all Natura 2000 sites (Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)), Marine Protected Areas (MPAs), Sites of Special Scientific Interest (SSSIs) and National Scenic Areas (NSAs) in the vicinity of the proposed works.

3 Programme of works

3.1 Schemes

3.1.1 Painting

Construction period: 2018 to 2020 Construction Value: £2,500,000

The paint on the bridge has reached the end of its working life and is to be replaced. In order to do this, the bridge superstructure is to be grit blasted and repainted. This activity will take between 3 and 6 months to complete.

Outline Method Statement
1. Install temporary access platform underneath the bridge 2. Install containment on the platform 3. Grit blast the superstructure 4. Paint superstructure 5. Move access platform and repeat steps 2, 3 and 4. The superstructure above deck will also be completed, and fixed scaffolds will be utilised for access.
These works will be carried out above the MHWS. However, due the design of the bridge, some painting works will be carried out from a scaffold slung under the bridge. This may impact on the clearance between the bridge and MHWS while the works are ongoing.
Mitigation Measures
In order to prevent the materials entering the marine environment, the following measures will be taken. 1. All painting/grit blasting will be carried out within protective shelters, ensuring that all overspray is enclosed. 2. All grit will be recycled and either re-used or disposed of off-site by licenced waste carriers. 3. Should additional measures be required these will be confirmed with the contractor prior to works commencing.

3.1.2 Bearing Replacement

Construction period: 2018 to 2020 Construction Value: £1,000,000

The bearings on the bridge have reached the end of their working life and are to be replaced. In order to do this, the bridge superstructure is to be jacked up and new bearings fitted. This activity will take between 3 and 6 months to complete.

Outline Method Statement
1. Install temporary access platform underneath the bridge around piers 2. Install temporary works/jacks around pier 3. Jack up section of pier 4. Replace bearing 5. Lower bridge 6. Move access platform and repeat steps 2, 3, 4 and 5.
These works will be carried out above the MHWS. The works will be carried out from an access platform slung around the bridge piers. This may impact on the clearance between the bridge and MHWS while the works are ongoing.
Mitigation Measures
In order to prevent the materials entering the marine environment, the following measures will be taken. It should be noted that additional measures may be needed. These will be confirmed with the contractor prior to works commencing. 1. Platforms will have toeboards and edge protection to ensure that no materials can be knocked over the side. 2. Debris netting to be used to stop waste and small items falling over the side.

3.2 Cyclic Maintenance

3.2.1 Drainage cleaning

The drainage gullies and pipes on bridge require periodic maintenance to ensure they are effective for draining water from the carriageway. This activity will take up to 2 days to complete.

Outline Method Statement
1. Establish traffic management as required 2. Open kerb gully 3. Clean debris from gulley using vacuum truck or hand tools
These works will be carried out above the MHWS.
Mitigation Measures
In order to prevent the materials entering the marine environment, the following measures will be taken. 1. Gully cleaning vehicles will be used to vacuum water and debris from the gullies. 2. Vacuum trucks are emptied at licenced facilities.

3.2.2 Bird Guano Removal

Bird guano on the bearing shelves and horizontal steelwork requires periodic cleaning and removal to prevent build up. This activity will take up to 2 days to complete.

Outline Method Statement
1. Establish traffic management as required 2. Establish underbridge access unit (lorry mounted or fixed)

3. Clean bearing shelves using hand tools
These works will be carried out above the MHWS.
Mitigation Measures
In order to prevent the materials entering the marine environment, the following measures will be taken. 1. Bird guano will need to be double bagged to prevent spillage. 2. Guano will be taken to a licenced facility.

3.2.3 Expansion Joint Renewal

The expansion joints will require periodic renewal. Ballachulish Bridge has 2 types of joints: One cast in situ joint and one plug joint. This activity will take up to 2 months to complete.

Outline Method Statement	
Cast in Situ Joint 1. Establish traffic management. 2. Hammer survey area 3. Hydro Demolition of damaged concrete. 4. Clean steelwork and prepare surface. 5. Install new concrete. 6. Demobilise from site.	Plug Joint 1. Establish traffic management. 2. Mill out plug joint 3. Replace plug joint 4. Reinstate surfacing around joint 5. Demobilise from site.
These works will likely be carried out above the MHWS.	
Mitigation Measures	
In order to prevent the materials entering the marine environment, the following measures will be taken.	
Cast in Situ Joint 1. Hydro demolition will require containment and a sump pit to catch off run water. 2. Water will either be pumped into a storage tank and disposed of under licence, or discharged into Loch Leven. A CAR licence will obtained for all discharges. 3. All waste concrete will be removed from site by licenced waste carriers. 4. Fresh concrete will be poured in such a manner that no concrete is lost or can enter the marine environment.	Plug Joint 1. Ensure that all milling works are carried out during suitable periods of weather to ensure that waste material is not blown or washed in the water. 2. Debris netting is to be installed around the area being milled as required.

3.2.4 Resurfacing Operations

Footpath and road resurfacing requires periodic maintenance and renewal. This activity will take approximately 1 week to complete.

Outline Method Statement
1. Establish traffic management 2. Plane/mill out existing surfacing 3. Lay and compact new surfacing 4. Demobilise from site
These works will be carried out above the MHWS.
Mitigation Measures
In order to prevent the materials entering the marine environment, the following measures will be taken. 1. Ensure that all milling works are carried out during suitable periods of weather to ensure that waste material is not blown or washed in the water. 2. Debris netting is to be installed around the area being milled as required.

3.2.5 Parapet Renewal

The parapet will require periodic renewal. This activity will take up to 4 months to complete.

Outline Method Statement
1. Establish traffic management 2. Install safety barrier 3. Remove existing parapet 4. Install new parapet 5. Remove safety barrier 6. Demobilise from site
These works will be carried out above the MHWS.
Mitigation Measures
In order to prevent the materials entering the marine environment, the following measures will be taken. 1. Edge protection to be installed to ensure materials can't be knocked over the edge of the bridge. 2. Debris netting to be used to stop waste and small items falling over the side.

3.2.6 Minor Concrete Repairs

Minor concrete repairs to both the superstructure and substructure may be required if defects are found during inspections. This will include works on the piers which has the potential to be done under the High tide level. Works will likely entail the use of hydro demolition for large repairs and hand tools for smaller repairs. The duration of these works will vary depending on the extent of the repairs, which will be identified during the inspection. However, the maximum duration of the repairs is anticipated to be 2 to 3 weeks.

Outline Method Statement	
Large repair 7. Establish traffic management. 8. Hammer survey area 9. Hydro Demolition of damaged concrete. 10. Clean steelwork and prepare surface. 11. Install new concrete. 12. Demobilise from site.	Small repair 6. Establish traffic management. 7. Hammer survey area 8. Break out damaged concrete. 9. Clean steelwork and prepare surface. 10. Install new concrete. 11. Demobilise from site.
These works will likely be carried out both above and below the MHWS.	
Mitigation Measures	
In order to prevent the materials entering the marine environment, the following measures will be taken.	
Large repair 5. Hydro demolition will require containment and a sump pit to catch off run water. 6. Water will either be pumped into a storage tank and disposed of under licence, or discharged into Loch Leven. A CAR licence will be obtained for all discharges. 7. All waste concrete will be removed from site by licenced waste carriers. 8. Fresh concrete will be poured in such a manner that no concrete is lost or can enter the marine environment.	Smaller repair 3. Debris netting is to be installed around the area being broken out. 4. Containment be installed to prevent concrete falling into the marine environment. 5. All waste concrete will be removed from site by licenced waste carriers. 6. Fresh concrete will be poured in such a manner that no concrete is lost or can enter the marine environment.

3.3 Inspections

3.3.1 Inspections
General and principal inspections are completed periodically. These works will not create the potential for materials entering the marine environment.

3.3.2 Point Cloud Survey
A point cloud survey will be undertaken above and below mean high water springs over the entire bridge. These works will not create the potential for materials entering the marine environment.

4 Early Screening Assumptions

4.1 Designated Sites

The table below provides details on European and nationally designated conservation sites that are in the vicinity (within 5km) of Ballachulish Bridge.

Designated Sites		
Site Name	Qualifying Features (SSSI, SPA and SAC) or Special Qualities (NSA)	Distance from Ballachulish
Ben Nevis and Glen Coe NSA	• Important views including mountain ranges and waterbodies.	0km
Onich to North Ballachulish Woods and Shore SSSI	• Alkaline fen • Dalradian rocks • Upland mixed ash woodland • Upland oak woodland	1km
Onich to North Ballachulish Woods SAC	• Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles • Alkaline fens • *Tilio-Acerion* forests of slopes, screes and ravines	1km
Glen Etive and Glen Fyne SPA	• Golden eagle *(Aquila chrysaetos)*	1.1km

4.2 Screening Assumptions

The proposed maintenance works, as detailed above, are highly localised and confined to the immediate vicinity of the bridge. Likely durations of the activities will in some cases be dependent on the results of the inspections, but in all cases activity duration would be less than 6 months and in most cases less than a few weeks. The proposed maintenance works are therefore considered temporary.

The activities 'painting', 'bearing replacement', 'bird guano removal' and 'minor concrete repairs' will require a degree of underbridge access. The remaining maintenance works will all be carried out from the surface of the bridge.

Screening of all proposed maintenance activities

Where there is potential for a specific activity to result in material being released in to the wider environment, including the marine environment, compliance with the proposed mitigation measures (as outlined in section 3) will reduce the likelihood of any pollutants or debris from entering the environment.

These measures include the incorporation of debris netting, protective shelters, sumps and containment.

The duration of 'minor concrete repairs' and 'resurfacing works' will not be known until inspections have been carried out, these repairs are anticipated to be a maximum of 2-3 weeks and 1 week respectively, in duration. It is anticipated that 'bird guano removal' will take approximately 2 days to complete. Both the 'painting' works and the 'bearing replacement' are anticipated to take between 3 and 6 months to complete.

Although the Site Environmental Management Plan (SEMP) has not been finalised for the proposed maintenance activities at this bridge, a number of management measures will be incorporated which will contribute to reducing the potential for effects on the designated sites. These will include:

- The site supervisor will give toolbox talks prior to work commencing. These talks will highlight any sensitive features, including the designated sites, and the importance of adopting the relevant mitigation measures for each activity.
- In line with good practice, the contractor will follow the updated and relevant Guidance for Pollution Prevention (GPPs) including GPP 5 (Works and maintenance in or near water). Pollution Prevention Guidance (PPGs) will be followed if no corresponding GPP is available.
- Oils, fuels and chemicals will be stored in fully bunded areas.
- Spill kits will be available on site and workers trained in their use.
- The contractor will produce a contingency plan for dealing with spills or environmental incidents.
- Any waste generated will be removed from site and either recycled or disposed.

The repair works at Ballachulish Bridge will overlap with Ben Nevis and Glen Coe NSA, which is designated for its 'impressive' views. Given the highly localised nature of the works, restricted to the vicinity of the bridge, and the short duration of all activities, it is our conclusion that the proposed works would not significantly affect the views within the NSA.

The proposal is more than 1 km away from the boundary of the Onich to North Ballachulish Woods and Shore SSSI, Onich to North Ballachulish WoodsSAC and Glen Etive and Glen Fyne SPA.

The SAC is designated for its forests, woods and fens. Given the adoption of mitigation and good practice management measures (as outlined in section 3), the localised nature of the works, the temporary nature of the activity and the absence of a reasonable pathway to affect the features, it is

our conclusion that there would be no significant effect on the qualifying features of the SAC and therefore no likely significant effect on the SAC

The SSSI is designated for its geological and botanical features (see above). Given the adoption of mitigation (see section 3) and good practice management measures (see above), the localised nature of the works, the temporary nature of the activity and the absence of a reasonable pathway to affect the features, it is our conclusion that there would be no significant effect on the features from the proposed maintenance activities. Therefore, we conclude that there would be no significant effect on the SSSI.

The SPA is designated for breeding golden eagle. The nesting, breeding and optimal foraging habitat for the golden eagle are found away from roads and on higher elevations. Given the highly localised nature of the works and the distance between the works and the SPA, the adoption of mitigation and good practice management measures (as outlined above), the short duration of all activities, and breeding and foraging habitat preferences of the golden eagle, it is our conclusion that there would be no significant effect on the qualifying feature and therefore no likely significant effect on the SPA.