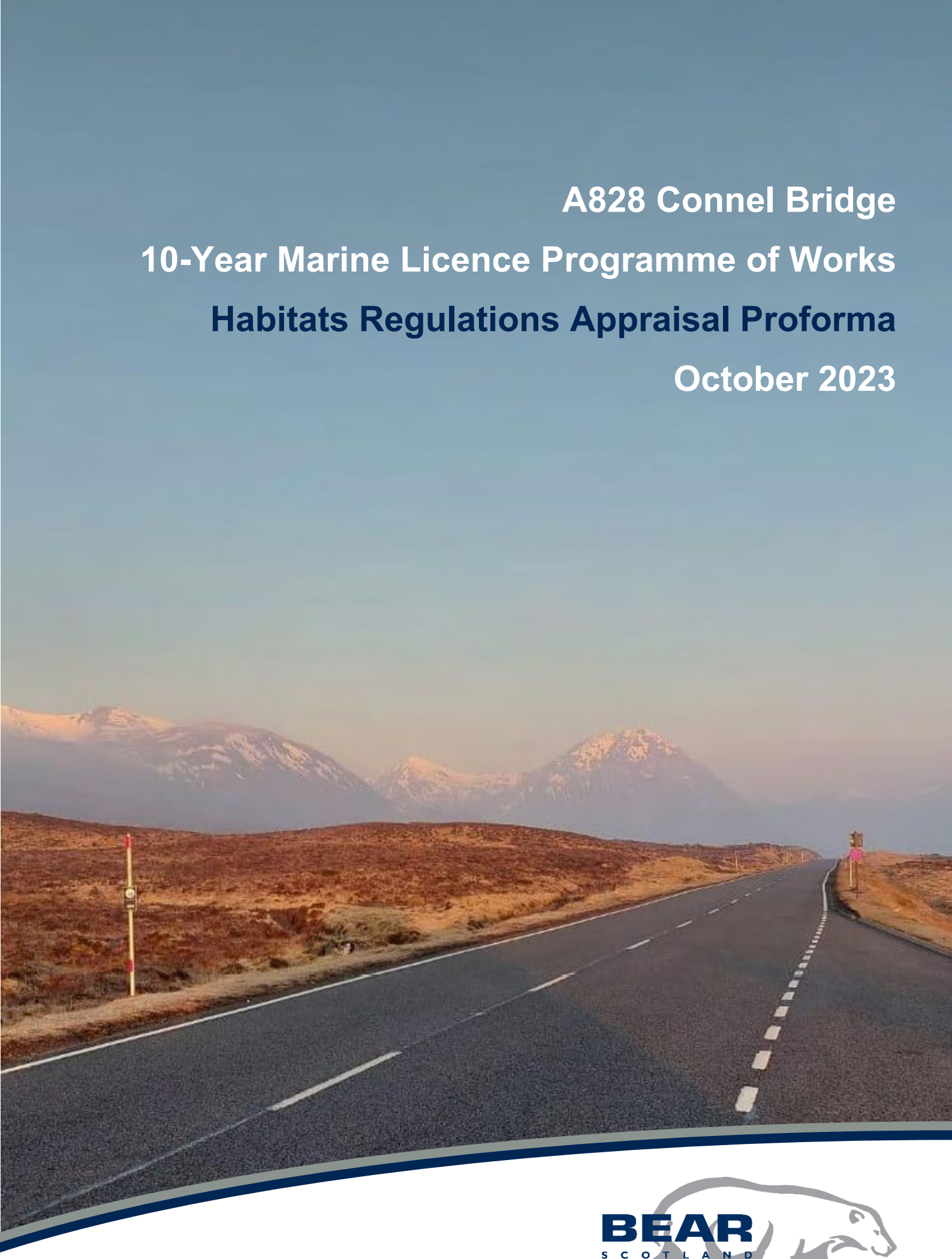
A828 Connel Bridge

10-Year Marine Licence Programme of Works

Habitats Regulations Appraisal Proforma

October 2023



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Document Control Sheet

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Appraisal in relation to regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (Habitats Regulations Appraisal

(Or, where relevant, under regulation 61 of The Conservation of Habitats and Species Regulations 2010 as amended, or regulation 25 of The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 as amended)

European Site Details

Name of European Site(s) Potentially Affected

Loch Etive Woods Special Area of Conservation (SAC) is located approximately 2.5km inland (southeast) of the bridge at its closest point and has connectivity with the proposed works.

Inner Hebrides and the Minches SAC is located 5.6km west of the bridge, within the Firth of Lorn coastal waterbody, and has connectivity with the proposed works.

In addition, although not a European Site, Loch Sunart to the Sound of Jura Marine Protected Area for Nature Conservation (MPA) is located 5.6km west of the bridge and has been considered as part of this assessment, as it has connectivity with the area of works.

Name of Component SSSI, if Relevant

Clais Dhearg Site of Special Scientific Interest (SSSI) partially overlaps with Loch Etive Woods SAC and is located 2.1km southeast of the bridge at the nearest point. It is designated for the following qualifying features (SiteLink (nature.scot)):

- Dragonfly assemblage
- Marsh fritillary butterfly (*Euphydryas aurinia*)
- Oligotrophic loch
- Open water transition fen
- Upland oak woodland

European Site(s) Qualifying Interest(s) and Whether Priority or Non-Priority

Details of qualifying features, conservation status, and negative pressures are listed for each of the European Sites noted above and were accessed on 02/10/2023 from NatureScot's SiteLink. Priority qualifying features are noted by (*) below.

Loch Etive Woods SAC (SiteLink (nature.scot)):

- Alder woodland on floodplains*
  - Condition: Unfavourable Recovering (2001)
  - Negative pressures: Over grazing
- Mixed woodland on base-rich soils associated with rocky slopes*
  - Condition: Favourable Declining (2019)
  - Negative pressures: Invasive species, over grazing
- Otter (*Lutra lutra*)
  - Condition: Favourable Maintained (2016)
  - Negative pressures: Forestry operations
- Western acidic oak woodland
  - Condition: Unfavourable Recovering (2001)
  - Negative pressures: Over grazing

Inner Hebrides and the Minches SAC (SiteLink (nature.scot)):

- Harbour porpoise (*Phocoena phocoena*)
  - Condition: Favourable Maintained (2016)
  - No negative pressures noted

Loch Sunart to the Sound of Jura MPA

- Flapper skate (*Dipturus intermedius*)
  - Statutory Interest: Protected feature
- Quaternary of Scotland
  - Statutory Interest: Protected feature

Conservation Objectives for Qualifying Species

Loch Etive Woods SAC

Conservation Objectives for all habitat features:

1. To ensure that the qualifying features of Loch Etive Woods SAC are in favourable condition and make an appropriate contribution to achieving favourable conservation status.
2. To ensure that the integrity of Loch Etive Woods SAC is restored by meeting objectives 2a, 2b and 2c for each qualifying feature;

   2a. Maintain the extent and distribution of the habitat within the site

   2b. Maintain/restore the structure, function and supporting processes of the habitat

   2c. Maintain the distribution and viability of typical species of the habitat

Conservation Objectives for Otters:

1. To ensure that the qualifying features of Loch Etive Woods SAC are in favourable condition and make an appropriate contribution to achieving favourable conservation status
2. To ensure that the integrity of Loch Etive Woods SAC is restored by meeting objectives 2a, 2b and 2c for the qualifying feature;

   2a. Maintain the population of the species as a viable component of the site

   2b. Maintain the distribution of the species throughout the site

   2c. Maintain the habitats supporting the species within the site and availability of food

Inner Hebrides and the Minches SAC

1. To ensure that the Inner Hebrides and the Minches SAC continues to make an appropriate contribution to harbour porpoise remaining at favourable conservation status.
2. To ensure for harbour porpoise within the context of environmental changes, that the integrity of the Inner Hebrides and the Minches SAC is maintained through 2a, 2b and 2c:

   2a. Harbour porpoise within the SAC are not at significant risk from injury or killing.

   2b. The distribution of harbour porpoise throughout the site is maintained by avoiding significant disturbance.

   2c. The condition of supporting habitats and the availability of prey for harbour porpoise are maintained.

Loch Sunart to the Sound of Jura NC MPA

Although Loch Sunart to the Sound of Jura MPA is not a European Site, it has been included in the assessment for completeness. Conservation objectives for the MPA are to conserve the qualifying features of the MPA in order to make a long-lasting contribution to the MPA network.

As specific details on conservation objectives for its qualifying features are not provided, the conservation objectives for Inner Hebrides and the Minches SAC have been adopted and applied to the features of the MPA for the assessment of this site.

Stage 1: What is the Plan or Project?

Proposal Title

BEAR Scotland – North West Trunk Road Unit – A828 Connel Bridge: Schemes and Maintenance Activities (10 Year Programme of Works)

Name of Competent Authority

Transport Scotland

Name of Consultee

NatureScot

Details of Proposal (Including Location, Timing and Methods)

General Information

This Habitat Regulations Appraisal (HRA) aims to cover various 'Schemes' and 'Maintenance Activities' programmed over the next ten years on the A828 Connel Bridge, which has connectivity with the above European Sites.

The proposed maintenance activities are broken down into '**scheme**' and '**cyclic maintenance**' works. Schemes are specific projects that will be required at some point over the next 10 years, whilst cyclic maintenance works are carried out regularly and may be required at any time (likely more than once) over the next 10 years.

A summary of the proposed maintenance works (schemes and cyclic maintenance activities) is given below:

Schemes:

- Deck Replacement
- Overhead Bracing Modification
- Bridge Painting
- Scour Repair
- Structural Health Monitoring System Installation or Maintenance
- Repair/Removal of Existing Gantry or Rails
- Volute Spring Repair/Replacement

Cyclic Maintenance:

- Steel repairs
- Navigation Light repair/replacement
- Bridge deck repairs
- Bridge lighting repair or maintenance
- Drainage Cleaning
- Bird Guano Removal
- Expansion joint maintenance or replacement
- Resurfacing operations
- Parapet Renewal or repair
- Minor Concrete Repairs
- Masonry Repairs
- Ancillary Highway item repair
- Inspections

Further information on each can be viewed in the supporting document '**A828 10 Connel Bridge 10 Year Programme of Works'**, which provides a detailed description of all the proposed maintenance works, including mitigation measures and access requirements where relevant. Although some larger schemes may have a duration of several months, most smaller schemes and cyclic maintenance works would have much shorter durations. All maintenance works on the bridge would be temporary and it should be noted that large schemes would not be carried

out concurrently. Most works would be completed from the bridge deck, although some (e.g., scour repairs) would include some in-water works and/or access below the bridge.

The majority of works would be carried out following measures outlined below and in the attached Programme of Works document. However, please note that this HRA is not intended to cover the proposed activities if the scope of works is beyond what has been described below for each activity. Similarly, this HRA is not intended to cover the proposed activities if standard otter surveys (carried out to comply with other relevant legislation, as detailed below) identify resting places that could be directly affected by proposed works, as these may be used by otters associated with Loch Etive Woods SAC. In these cases, additional consultation with NS will be carried out, a separate HRA will be completed, and a Statement to Inform Appropriate Assessment (SIAA) will be produced (if required) specific to those works. Examples where this situation may occur could include, but are not limited to:

- Direct and permanent loss of otter habitat is anticipated as a result of proposed works.
- Site-specific mitigation measures are identified to be required, additional to the standard working practices listed below.
- Destruction of an otter resting place and/or disturbance of a breeding otter holt may occur due to proposed works.
- The scope of works is beyond that described in the proposed maintenance activities listed in this document (e.g., replacement of large-scale structures such as bridges).

This is an iterative document and will be subject to periodic review or when there are any relevant changes to the method of works or qualifying features of any of the designated sites. Any changes or updates will be documented in the Document Control section on the cover page of this document.

This document does not negate the need to consult with the Marine Directorate, and any subsequent licence conditions will be adhered to throughout construction. This document does not negate the requirement to consult with other statutory consultees such as Local Fisheries Boards/Trusts. Any subsequent advice will be followed during works.

Standard working practices for works in or near water

Works will be undertaken within the Marine Environment and as such are not subject to CAR authorisation. However, BEAR Scotland follow good practice guidance (including but not limited to the below list) as standard for works in or near water to reduce the risk of water pollution as much as possible:

- Engineering in the Water Environment Good Practice Guide. Temporary Construction Methods (SEPA, 2009);
- Engineering in the Water Environment Good Practice Guide. River Crossings (SEPA, 2010);
- SEPA Guidance for Pollution Prevention (GPP) 1: Understanding your environmental responsibilities – good environmental practices (NetRegs, 2021);
- SEPA GPP 5: Works and maintenance near water (NetRegs, 2021);
- SEPA GPP 21: Pollution incident response plans (NetRegs 2021);
- SEPA GBR 6: Construction and maintenance of a minor bridge over a river, burn or ditch (SEPA, 2022);
- SEPA GBR 9: Operating any vehicle, plant or other equipment (machinery) in or near any surface water or wetland for the purpose of undertaking any other GBR activity or for the purpose of maintaining an existing man-made structure in or near any surface water or wetland (SEPA, 2022); and
- SEPA GBR 10(b): The discharge of water run-off from a surface water drainage system to the water environment from buildings, roads other than waterbound roads, yards, or any other built development constructed on or after 1 April 2007, with the exception of motorways and trunk roads where any one outfall serves a length of road greater than 1 km (SEPA, 2022).

Specific working practices outlined in the aforementioned guidance that must be adhered to include, but are not limited to:

- All reasonable steps must be taken to prevent silt from entering the watercourse (GPP 5);
- Plant and wheel washing to be carried out in a designated area of hardstanding at least 10m away from any watercourse or surface water drain. Where possible, washing will take place prior to moving

vehicles/equipment to a different water bodies to reduce the risk of transporting invasive aquatic plants or other species (GPP 5 and GBR 9);
- Refuelling must take place at least 10m away from any surface water. Appropriate containment measures (e.g., drip trays, funnels, plant nappies, bunding) must be in place to reduce the risk of spills (GPP 5, GBR 9);
- Biodegradable hydraulic oils should be used for vehicles and plant where possible (GPP 5);
- Dust, debris and contaminated water will be appropriately contained to reduce the risk of pollution (GPP 5);
- Development of a pollution incidence response plan (GPP 21);
- The works must not prevent the free passage of migratory fish (GBR 6);
- All reasonable steps must be taken to ensure that the discharge does not result in pollution of the water environment (GBR 10(b)).

These measures will ensure that any potential pollutants, including fine sediments and materials required for works in or near water, will not enter the water environment during works. In addition, these measures will reduce the risk of transporting invasive aquatic species such as Himalayan balsam (*Impatiens glandulifera*) which may be found on the shoreline, and carpet sea squirt (*Didemnum vexillum*) within the marine environment. These measures and working practices would be in place regardless of the presence of nearby designated sites and are therefore not considered to be mitigation. All relevant pollution controls and other good practice measures will be detailed in the Site Environmental Management Plan (SEMP) for each scheme and adhered to on site.

Standard measures where the European Protected Species (EPS) otter may be present

Otters are an EPS which are known to be present in the areas covered by the above designated site and may be encountered during trunk road maintenance works in these areas. Consequently, there is potential for works to result in disturbance to local otters or nearby otter resting places and compliance with the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) is required. To comply with this legislation, it must be ensured that the works will not result in deliberate or reckless injury, death, or disturbance to otters or damage, destruction, or obstruction of otter resting places. To this end, otter surveys to 200m upstream and downstream of proposed works are carried out as standard ahead of any works that may result in disturbance to local otters or their resting places. The objective of these surveys is to identify any field signs of otters (e.g., spraint, footprints, feeding remains) and any active or potential otter resting places within accepted disturbance buffers of works following NS guidance (NS, 2020). The results of the surveys inform the need for any licencing requirements.

BEAR Scotland holds an Organisational Otter Licence (240771) issued by NS to permit disturbance to non-breeding otter resting places in the vicinity of works, if any are discovered during pre-construction surveys. The Species Protection Plan that supports the licence details measures to be put in place for various scenarios, including (i) the identification of otter field signs but no resting places, (ii) identification of non-breeding resting places within disturbance buffers, and (iii) identification of natal holts within disturbance buffers. The Organisational Otter Licence does not permit disturbance to natal holts or destruction or obstruction of any otter resting places (including natal holts), which would require a separate derogation licence (for non-natal resting places) or re-programming of the works until all cubs have left the natal holt. As noted above, these cases are not intended to be covered by this HRA and would instead be assessed in a separate, scheme-specific HRA in consultation with NS, and any required licences would be sought prior to works. For any schemes where the potential for otters has been identified or where otter resting places have been recorded, a pre-construction otter survey will be carried out approximately two to four weeks prior to works commencing to check the status of any known resting places and to identify any new resting places within 200m of the works. If use of the Organisation Otter Licence is required, all conditions of the licence will be adhered to. In addition, the following good practice measures will be adhered to on site. These measures are followed as standard by BEAR Scotland when there is potential to encounter otters to comply with EPS legislation and would be in place regardless of the presence of any designated sites. Therefore, these measures are not considered to be mitigation.

- The ‘Working with Otters’ Toolbox Talk will be included in the SEMP and provided to all site staff prior to works commencing.
- The working area and any machinery stored on site will be checked at the start of each shift for the presence of resting otters. A soft start will be implemented to ensure a gradual increase in noise and activity.

- Any excavations, entrances to pipes/drains, or areas where an animal could be trapped (e.g., storage containers) will be covered over when not in use, at the end of each shift, and following completion of the works to avoid otters becoming trapped.
- If excavations (e.g., trenches) cannot be covered, escape ramps must be installed to allow trapped otters to escape.
- If fencing is used at any point during works, a gap of 200mm from ground level will be provided, allowing free passage for otters and preventing entrapment.
- If artificial lighting is required, it must be directed away from watercourses and suitable bankside habitat as far as is safe and reasonably practicable.
- Passage for otter under bridges and along watercourses must be maintained for the duration of works where possible.
- If otters or fresh signs of otters are discovered during works, work will stop and the site supervisor will be informed. Works will not recommence until the BEAR Scotland NW Environment team can provide further advice.
- All good practice pollution prevention measures described above will be adhered to.

Additional standard working practices

In addition to the standard working practices and measures described above, the following good practice and management measures will be adopted by the successful contractor for each of the above activities:

- Where required, relevant ecological surveys will be carried out prior to works, particularly for proposed in-water works or bridge maintenance works. If surveys identify the requirement for protected species licencing, additional consultation with NS will be carried out and licences sought where required.
- The site supervisor will give appropriate toolbox talks (e.g., silt and breeding birds) prior to work commencing. These talks will highlight any sensitive features, including the designated sites and their qualifying features.
- The contractor will be required to produce a contingency plan for dealing with spills or environmental incidents on site. Spill kits must be present on site, quickly accessible, and all staff trained in their use.
- All spills must be logged and reported. In the event of any spills into the water environment, all works must stop and the incident be reported to the project manager and the BEAR Scotland Environmental Team. SEPA (and where required, the Marine Directorate) must be informed of any such incident as soon as possible, and within 24 hours at the latest. The local DSFB must also be informed of any incidents as soon as possible.
- Any waste generated will be removed from site and either recycled or disposed of in compliance with Waste Management Regulations.
- The best practice means, as defined in Section 72 of the Control of Pollution Act 1974 and BS5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites will always be employed to reduce noise produced during works as much as possible.
- Plant, machinery and equipment fitted with effective silencers where available will be utilised for the works. Where fitted, and where permitted under Health and Safety requirements, white noise reversing alarms should be utilised during construction.
- Where possible, inherently quiet plant should be selected for construction works. Where appropriate, pumps and generators will be sound-reduced models with fitted, lined, and sealed acoustic covers.
- All plant will be operated in such a way that minimises noise emissions and be switched off when not in use.
- All ancillary plant such as generators will be positioned so as to cause minimum noise disturbance. Where deemed necessary, acoustic screens will be utilised.
- Where possible, works will be programmed for daylight hours. If artificial lighting is required, it should be used for as short a duration as possible and directed on the immediate area of works. Artificial lighting (including lights from the site compound and other infrastructure) should avoid being directed onto nearby watercourses or habitats as far as is safe and reasonably practicable.

Activity-specific methods

Details on methods and specific working practices for each of the above maintenance activities is provided in the supporting document '**A828 10 Connel Bridge 10 Year Programme of Works'**.

All activities are highly localised and will take place within the immediate vicinity of the trunk road and trunk road bridge. All maintenance works are considered temporary and are unlikely to be carried out simultaneously with any other maintenance works due to traffic management restrictions.

Various access requirements may be required to facilitate the above activities. Some activities will take place from the bridge deck only, but some activities may require access beneath the bridge deck or access at height to the bridge parapets, abutments, or piers. Access at height may be provided via a lorry-mounted mobile elevated moving platform (MEWP) with underbridge capabilities (underbridge unit) or via a fixed platform such as scaffolding, which may be suspended from the bridge or footed on the ground (or in the watercourse) below. In line with health and safety requirements, any work being carried out beneath the bridge will require an adequate working platform and railing to prevent any workers from falling. In line with good practice, this platform and railing containment will be achieved by the attachment of either debris netting or thickened sheets to prevent materials falling from the platform. Any in-water works (e.g., scour repairs) carried out would require access via jack-up barges beneath the bridge. In line with good practice, strict containment measures will be in place on any barges to prevent pollution incidents in the marine environment.

In addition to the standard working practices and measures listed above, the following measures will be in place during the construction phase for activities at higher risk of pollution:

Hydro demolition

Larger concrete repair works will likely require the use of hydro-demolition whereas smaller repairs will likely be done using hand tools. Where works are required beneath the bridge, they will be facilitated by an underbridge unit/ MEWP or scaffolding. In line with health and safety requirements, any work being carried out beneath bridges will require an adequate working platform and railing to prevent any workers from falling. Containment of the access platform/working area will be achieved by the attachment of either debris netting or thickened sheets (for hydro-demolition). If hydro-demolition is being carried out, the floor of the platform will be layered with materials (e.g., Terram and Visquine layers) to fully contain the water and debris. Concrete fragments that land on the access system floor during large or small repair works will be collected, taken to the surface of the bridge, and removed from site by licensed waste carriers.

For works on the deck of the bridge, debris netting or sheeting will be applied around the working area to prevent materials and/or hydro-demolition water from entering the water environment. Material will be collected in the same manner as described above and removed from the site by licensed waste carriers.

For hydro-demolition works, it is the responsibility of the construction contractor to devise a method to appropriately capture, treat (to remove suspended solids to an acceptable level and neutralise the high pH), and/or dispose of the wastewater; and to have appropriate consenting in place if required. Wastewater generated during hydro-demolition works from hydro-demolition works is considered a trade effluent and will be collected and removed off-site for disposal under appropriate permits/authorisation (which the sub-contractor is responsible for obtaining) unless alternative methods of treatment and disposal are agreed between the construction contractor and the relevant authorisation body.

Scour Repair

Specific working methods and mitigation measures are yet to be confirmed, however it is anticipated that the scour repair activity will encompass works on the pier bases and will require use of jack-up barges. Excavators utilising the jack-up barges will place scour protection (usually large rocks/rock armour loose or bagged) around the pier pile caps.

Where required, a geotextile membrane may be placed prior to siting of rock armour. To ensure no contaminants are brought into contact with the marine environment, all rock armour and equipment will be washed and cleaned prior to immersion in any water bodies to ensure that no contaminants or INNS are introduced to the water environment.

Stage 2: Is the Plan or Project Directly Connected with or Necessary to Site Management for Nature Conservation?

Connection to Site Management

This test is to identify and remove from further assessment those proposals which are clearly necessary to, or of value to, or inevitable as part of, management of the site for its qualifying interests. For the majority of proposals competent authorities deal with the answer to stage 2 will be 'no'. However, where it is thought this could be applicable the following points should be considered:

I. Has the effect on all qualifying interests been considered?
II. Is the proposal part of a fully assessed and agreed management plan? If not, then further consideration or supporting information will be required.
III. Is there a clear rationale to justify the connection with the conservation objectives?
IV. If there is a clear connection with the conservation objectives will any benefits arising from the proposal outweigh any negative effects?
V. Have any alternative methods of implementing the proposal been explored, including building in any relevant mitigation, to demonstrate that this is the least damaging option?
VI. Give a Yes / No conclusion in terms of whether the plan or project is considered directly connected with or necessary to site management for nature conservation.

If Yes for all elements of a plan or project, for all the European site qualifying interests (preferably as part of a fully assessed and agreed management plan), then consent can be issued. The rationale should be detailed below, and no further appraisal is required (no need to proceed to stage 3 or 4).

If No for one or more European site qualifying interests then proceed to stage 3.

If a plan has multiple elements (e.g., a range of policies or management objectives), elements of the plan considered directly connected with or necessary to site management for nature conservation should be discussed below and a rationale given for this conclusion. No further appraisal is then required for those elements. All other elements of the plan must proceed to stage 3.

None of the activities covered by this document are directly connected with, or necessary to, the site management for nature conservation.

Stage 3: Is the Plan or Project (Either Alone or in Combination with Other Plans or Projects) Likely to Have a Significant Effect on the Site?

Assessment for LSE

The test of Likely Significant Effect (LSE) is a simple screening stage to determine whether or not an appropriate assessment is required. Each qualifying interest must be considered in relation to their conservation objectives. The following points should be considered:

I. Briefly indicate which qualifying interest could be affected by the proposal and how; if none, provide a brief justification for this decision, and then proceed to v), otherwise continue:
II. consider whether there is connectivity between the proposal and each of the qualifying interests i.e. are there processes or pathways by which the proposal may influence the site's interests? Conclude no LSE only if there is no connection, or it is obvious that the proposal will not undermine the conservation objectives despite a connection. The potential for negative effects on the qualifying interests may be immediately obvious, in which case conclude likely significant effect and move straight to the next step.
III. consider the nature, scale, location, longevity, and reversibility of effects.
IV. consider whether the proposal contributes to cumulative or incremental impacts in combination with other plans or projects completed, underway or proposed.
V. Where the impacts of a proposal are the same for different qualifying interests these can be considered together however a clear conclusion should be given for each interest.
VI. give Yes / No conclusion for each interest.

If Yes, or in cases of doubt, continue to stage 4.

If No for all features, a consent can be given and recorded below. There is no need to then proceed to stage 4.

Remember if mitigation is required to prevent there being an effect on qualifying interests, then LSE must be concluded, and an appropriate assessment (stage 4) must be conducted. Further guidance on the handling of mitigation can be found as part of the European site Casework Guidance.

Below is an assessment of the potential for Likely Significant Effects (LSE) of the maintenance activities on the qualifying features of the following designated sites:

- Loch Etive Woods SAC
- Inner Hebrides and the Minches SAC
- Loch Sunart to the Sound of Jura MPA

If the scope of works is beyond what has been detailed in Stage 1 for each activity and/or ecological surveys identify otter resting places that could be directly affected by the proposed works, additional consultation with NS will be carried out, a separate HRA/Appropriate Assessment will be completed, and an SIAA will be produced (if required) specific to those works. Examples where this situation may occur could include, but are not limited to:

- Direct and permanent loss of otter habitat is anticipated as a result of proposed works.
- Site-specific mitigation measures are identified to be required, additional to the standard working practices listed above.
- Destruction of an otter resting place and/or disturbance of a breeding otter holt may occur due to proposed works.
- The scope of works is beyond that described in the proposed maintenance activities listed in this document (e.g., replacement of large-scale structures such as bridges).

Assessment of the potential effects of the proposed maintenance activities has been carried out below. Qualifying features for each site have been grouped where possible for brevity.

1. Loch Etive Woods SAC

Loch Etive Woods SAC features various non-mobile woodland features and supports populations of otter. Connel Bridge is located 2.5km from the boundary of this SAC, and spans the transitional waterbody Loch Etive. As Clais Dhearg SSSI partially overlaps with Loch Etive Woods SAC, it has been included in the assessment of Loch Etive Woods SAC for completeness, although it is not subject to HRA. The qualifying invertebrates and habitats of the SSSI are likely to be typical species or habitats associated with and/or supported by the qualifying habitats of the SAC. Therefore, any potential effects of the proposed maintenance activities on the habitats of the SAC would likely affect these features as well, and potential effects of the proposed maintenance activities for these features are included in the assessment below for the qualifying habitats of the SAC.

Assessment against the conservation objectives for woodland features

Loch Etive Woods supports a variety of woodland habitats. None of the proposed maintenance activities would entail works within, or within close proximity of, the boundary of the SAC. Works would be highly localised to the structure and/or road and adjacent verges and the waterbody spanned by the A828. Therefore, no direct effects (e.g., habitat loss, mortality of typical species) on the qualifying habitats or their typical species within the SAC would result from the proposed maintenance activities. . Similarly, no likely negative changes on the qualifying features of Clais Dhearg SSSI have been identified as a result of the proposed maintenance activities.

Assessment against the conservation objectives for otter

With the exception of scour works, most of the proposed maintenance activities would be restricted to made ground within the trunk road boundary and would not entail works within the SAC boundary. Otters associated with the SAC are likely to be present in the area and may cross the trunk road within the scheme extent; however, the standard good practice measures listed in Stage 1 (e.g., checking vehicles/equipment for otters, soft start of works) reduce the risk that otters would be injured or killed as a result of construction vehicles during works. Therefore, no direct effects (e.g., mortality due to construction vehicles, habitat loss) on otters or their supporting habitats and food resources (i.e., prey species) would result from these works.

In-water scour repair works have the potential to result in direct effects on otters, their supporting habitats, and food resources through destruction of resting places, loss of foraging habitat, and effects on prey species (e.g., fish). However, the standard good practice measures listed in Stage 1 (e.g., checking vehicles/equipment for otters, soft start of works) reduce the risk that otters would be injured or killed as a result of construction vehicles during works. Furthermore, the measures described in Stage 1 provide a framework to follow in the event that otter survey results (carried out as standard practice to comply with EPS legislation) identify the potential for direct effects on otter resting places (e.g., destruction of couches, disturbance of natal holt); therefore, these situations should not be considered in this assessment, as a separate HRA/Appropriate Assessment would be carried out in these cases. Although in-water works may result in temporary disturbance to or access through otter foraging habitat along the shoreline, these works are generally minor, of short duration, and highly localised to small areas. In addition, suitable passage for otter will be maintained under bridges during scour works. For in-water works where otter surveys have not identified the need for a separate HRA/Appropriate Assessment, no significant direct effects on otters within the SAC, their supporting habitats, or prey species have been identified as a result of the proposed maintenance activities.

For all of the proposed maintenance activities, there is potential for indirect effects on otters associated with the SAC, their supporting habitats, and prey species as a result of disturbance from construction activities. Works may result in minor, temporary, and highly localised disturbance to otters that may forage or commute in the vicinity of works. Otters within the vicinity of the bridge are likely to be habituated to existing levels of noise and activity due to traffic, and the proposed maintenance activities are unlikely to result in significantly higher levels of noise than baseline levels. Additionally, as noted above, the measures described in Stage 1 provide a framework to follow in the event that otter survey results identify the potential for disturbance of otters or their resting places in line with legislation protecting otter as an EPS. The Organisational Otter Licence held by BEAR Scotland does not permit destruction of resting places or disturbance of breeding holts, but does permit disturbance of non-breeding otter resting places within 30m of works. If otter surveys identify non-breeding resting places within 30m of works, use of the Organisational Otter Licence held by BEAR Scotland would be required and all conditions of the licence and associated Species Protection Plan would be adhered to. In this circumstance, the licence conditions and Species Protection Plan ensure that any effects on non-breeding otter resting places are temporary, very small in scale, and would not result in a measurable effect on the local otter population. Therefore, no significant effects as a result of disturbance to otters associated with the SAC have been identified. This conclusion contributes to meeting the conservation objectives to maintain the population (2a) and distribution (2b) of otters within the SAC.

For all of the proposed maintenance activities, there is potential for indirect effects on otters, their supporting habitats, and prey species as a result of pollution from construction activities. However, the standard working practices listed in Stage 1 include robust containment measures to prevent pollution events for both in-water and terrestrial works. With these, the additional good practice measures, and the measures for protected species listed in Stage 1 in place during works, the risk of indirect effects on otters and their supporting habitats and prey species as a result of pollution is limited. Therefore, no LSE on otters associated with the SAC, their supporting habitats and prey species has been identified as a result of the proposed maintenance activities and the conservation objectives to maintain otter population, distribution, supporting habitats, and food availability within the site will be met.

Cumulative and in-combination effects

The proposed maintenance activities will be localised to the A828 trunk road and Connel Bridge. Considering the scale and 10-year duration of the proposed maintenance activities, it is not feasible to search the full area for other plans or projects that may have cumulative or in-combination effects until individual maintenance schemes are designed and submitted for environmental assessment. However, as part of the environmental assessment for each scheme, a search will be undertaken for other plans and projects that could have cumulative or in-combination effects in the vicinity of the proposed maintenance works. If there is potential for these effects, additional consultation will be carried out with NS. However, it should be noted that large schemes would not be carried out concurrently due to budget constraints and network access restrictions. Considering the nature and scale of each of the maintenance activities, there is likely to be limited potential for significant cumulative or in-combination effects due to other plans or projects. In addition, BEAR Scotland programme all proposed works in line with appropriate guidance and contractual requirements to take into account existing and future planned works on the trunk roads with a view to limiting any cumulative effects relating to traffic management. As a result of this approach, disturbance in localised areas due to construction noise and activities is also limited. Overall, due to the nature and scale of the proposed activities and the limited potential for overlap of any activities in localised areas, it is unlikely that any of the proposed maintenance activities would result in significant cumulative or in-combination effects on the qualifying features of the Loch Etive Woods SAC.

Conclusion

Taking the above into account, no LSE, either alone or in combination with other projects, are expected on any of the qualifying species of the Loch Etive SAC as a result of any of the proposed maintenance activities. No likely negative changes on the qualifying features of Clais Dhearg SSSI have been identified as a result of the proposed maintenance activities.

2. Inner Hebrides and the Minches SAC

The Inner Hebrides and the Minches SAC is located 5.6km east of the bridge, within the Firth of Lorn coastal waterbody, and supports harbour porpoise.

Assessment against the conservation objectives for harbour porpoise

None of the proposed maintenance activities would entail works within the boundary of the SAC, however potential hydrological connectivity exists due to location of the SAC and works within the waterbody, and lack of physical barriers. The works would be highly localised to the structure and/or road and adjacent verges and piers within the watercourse spanned by the A828. Therefore, no direct effects (e.g., mortality or habitat loss) on harbour porpoise within the SAC or their supporting habitats and food availability would result from the proposed maintenance activities.

The majority of proposed works will take place on the existing bridge structure, with mitigation methods included to minimise entry of materials into the marine environment. Where works take place close to water level, in the case of potential scour repairs, any hydro-demolition works will be fully contained, with wastewater and debris collected and removed off site, unless otherwise agreed and appropriately consented by relevant regulators. The acoustic impacts of above-water hydro-demolition and/or underwater rock armour placement are not considered significant in the context of harbour porpoise disturbance. Any impacts are expected to be localised and time-limited if applicable.

Therefore, no LSE on harbour porpoise, their supporting habitats and prey species has been identified as a result of the proposed maintenance activities and the conservation objectives to maintain harbour porpoise population, distribution, supporting habitats, and food availability within the site will be met.

Cumulative and in-combination effects

As above, the proposed maintenance activities will be localised to the A828 trunk road and Connel Bridge. As such, the assessment of cumulative and in-combination effects for Inner Hebrides and the Minches SAC is the same for Loch Etive SAC, and it is unlikely that any of the proposed maintenance activities would result in significant cumulative or in-combination effects on the qualifying features of the Hebrides and the Minches SAC.

Conclusion
Taking the above into account, no LSE, either alone or in combination with other projects, are expected on the qualifying species of the Inner Hebrides and the Minches SAC as a result of any of the proposed maintenance activities.

3. Loch Sunart to the Sound of Jura MPA

Loch Sunart to the Sound of Jura MPA partially encompasses the same area as Inner Hebrides and the Minches SAC, the boundary of which is 5.6km west of Connel Bridge. This MPA is designated for flapper skate and the geological feature 'Quaternary of Scotland'.

Assessment against the conservation objectives for flapper skate
None of the proposed maintenance activities would entail works within the boundary of the MPA, however potential hydrological connectivity exists due to location of the MPA and works within the waterbody, and lack of physical barriers. The works would be highly localised to the structure and/or road and adjacent verges and piers within the watercourse spanned by the A828. Therefore, no direct effects (e.g., mortality or habitat loss) on flapper skate within the MPA or their supporting habitats and food availability would result from the proposed maintenance activities.

The majority of proposed works will take place on the existing bridge structure, with mitigation methods included to minimise entry of materials into the marine environment. Any hydro-demolition works will be fully contained, with wastewater and debris collected and removed off site, unless otherwise agreed and appropriately consented by relevant regulators. Additional works such as placement of rock armour would take place at a shallow depth unlikely to conflict with habitat use by flapper skate. As such, no direct disturbance or significant sedimentation/pollution is anticipated which could impact the flapper skate population.

Therefore, no LSE on flapper skate, their supporting habitats, or food provision has been identified as a result of the proposed maintenance activities. The conservation objectives to conserve population of this species (including distribution, supporting habitats, and food availability within the site) will be met.

Assessment against the conservation objectives for Quaternary of Scotland
Works will not operate within the boundary of the MPA. Due to location, method of works, and sufficient distancing, no potential for alteration or impact to this geological feature will arise during any of the proposed maintenance activities.

Cumulative and in-combination effects
As above, the proposed maintenance activities will be localised to the A828 trunk road and Connel Bridge. The above measures as noted in the assessment for Loch Etive Woods SAC will be undertaken. As such, it is unlikely that any of the proposed maintenance activities would result in significant cumulative or in-combination effects on the qualifying features of the Loch Sunart to the Sound of Jura MPA.

Conclusion
Taking the above into account, no LSE, either alone or in combination with other projects, are expected on the qualifying species of the Loch Sunart to the Sound of Jura MPA as a result of any of the proposed maintenance activities.

Stage 4: Undertake an Appropriate Assessment of the Implications for the Site in View of its Conservation Objectives

Appropriate Assessment

It is the responsibility of the competent authority to carry out the appropriate assessment. The competent authority must consult SNH (NatureScot) on the appropriate assessment. NatureScot can provide advice on what issues should be considered in the appropriate assessment, what information is required to carry out the assessment, in some circumstances carry out an appraisal to inform an appropriate assessment and/or provide comments on an assessment carried out.

An 'appropriate assessment' consists of two parts: a scientific, reasoned appraisal (stage 4) and a conclusion (stage 5). Consider the proposed plan/project, its impact on the qualifying interests assessed against their conservation objectives and take account of any possible in combination effects with other plans or projects.

The following points should be considered:

I. Describe for each qualifying interest the potential impacts of the proposal detailing which aspects or effects of the proposal could impact upon them and their conservation objectives.
II. Evaluate the potential impacts, e.g., whether short/long term, reversible or irreversible, and in relation to the proportion/importance of the interest affected, and the overall effect on the site's conservation objectives. This should be in sufficient detail to ensure all impacts have been considered and sufficiently appraised. Record if additional survey information or specialist advice has been obtained.
III. Each conservation objective should be considered, and a decision reached as to whether the proposal will affect achievement of this objective i.e., whether the conservation objective will be undermined if the proposal is consented to. Restore objectives may have been set where qualifying features of a site are in an unfavourable condition. In such cases the appropriate assessment should consider whether the plan or project would prevent the qualifying feature from being able to be restored.

Not identified as required, as activities covered within this document have all been assessed as having no LSE.

Stage 5: Can it be Ascertained that the Proposal Will Not Adversely Affect the Integrity of the Site?

Assessment for AESI
In the light of the appraisal, ascertain whether the proposal will not adversely affect the integrity of the site. Conclusions should be reached beyond reasonable scientific doubt. If more than one SAC and/or SPA is involved, give separate conclusions. If mitigation or modifications are required, detail these below.

The proposed maintenance activities have limited potential to affect the integrity of the above designated sites, either alone or in combination with other plans or projects.

With the proper application of the standard working practices and measures described in Stage 1, it is concluded that the proposed maintenance activities would not result in LSE and therefore would also not result in adverse effects on site integrity (AESI) on any of the qualifying features of the following sites:

- Loch Etive Woods SAC
- Inner Hebrides and the Minches SAC
- Loch Sunart to the Sound of Jura MPA

Modifications Required to Ensure Adverse Effects are Avoided and Reasons for These

Required Modifications
Only list those modifications (i.e., further mitigation) that have been identified as being required to prevent there being an adverse effect on site integrity. Do not include mitigation that has already been planned in the plan/project or best practice that is already being followed unless you believe these should be added as conditions to the permission given.

N/A

Advice Sought

Consultation
Include here details of, or clear reference to, any advice sought. If an appropriate assessment has been carried out NatureScot must be consulted.

Due to potential connectivity, advice on assessment for Inner Hebrides and the Minches SAC was sought from NatureScot.

Laura Dunn of NatureScot provided comment via email (received 27/09/2023) on the proposed scheme and cyclic maintenance works for the A828 Connel bridge, and potential for impacts from these on the SAC.

It was concluded that it is unlikely that the proposal will have a significant effect on any qualifying interests of the Inner Hebrides and the Minches SAC either directly or indirectly. An appropriate assessment is therefore not required.

A copy of this consultation is available in Appendix A.

Conclusion in Relation to Plan or Project

Conclusion
In view of the appraisal above select the appropriate response position and whether the plan or project can be consented/approved/undertaken. Note: this conclusion is just in relation to effects on a European site. There may be impacts to other natural heritage interests that also need to be considered.

This HRA has been undertaken to assess the potential effects of various trunk road and bridge maintenance activities (described in Stage 1) on the qualifying features of the below European Sites, and has **concluded that the proposed activities will not result in LSE on any of the qualifying features of the following sites**:

- **Loch Etive Woods SAC**
- **Inner Hebrides and Minches SAC**
- **Loch Sunart to the Sound of Jura MPA**

The assessment has considered standard working practices and standard measures for protected species to comply with relevant legislation (as described in Stage 1 above) in its conclusion that the proposed works will not result in LSE on the above designated sites. While these standard working practices will benefit the qualifying features of the above sites, these working practices and measures are not being undertaken specifically for the qualifying interests. Instead, these working practices are required to comply with The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended), the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), and the Wildlife and Countryside Act 1981 (as amended), which apply regardless of nature conservation designations.

This HRA is not intended to apply in certain circumstances that are described above and which may include but are not limited to:

- Direct and permanent loss of otter habitat is anticipated as a result of proposed works.

- Destruction of an otter resting place and/or disturbance of a breeding otter holt may occur due to proposed works.
- Site-specific mitigation measures are identified to be required, additional to the standard working practices described in Stage 1 of this HRA.
- The scope of works is beyond that described in Stage 1 of this HRA.

In these cases, additional consultation with NS will be carried out, and a separate HRA will be completed specific to those proposed works.

References

NatureScot (2014). Assessment against the MPA Selection Guidelines – Loch Sunart to the Sound of Jura Nature Conservation MPA. Available from: NatureSot Sitelink (Site 10418). [Accessed 04/10/2023]

NatureScot (2020). Conservation and Management Advice – Inner Hebrides and the Minches SAC. Available from: NatureScot Sitelink (Site 10508). [Accessed 03/10/2023]

NatureScot (2020). Loch Etive Woods SAC – Conservation Advice Package. Available from: NatureScot Sitelink (Site 8295). [Accessed 03/10/2023]

Scottish Sea Angling Conservation Networks (SSACN) Loch Sunart to the Sound of Jura Marine Protected Area - MPA Site Summary (2014). Available from: NatureScot Sitelink (Site 10418). [Accessed 04/10/2023]

Appendix A – NatureScot Consultation Response

Lara Currie

From: Laura Dunn <Laura.Dunn@nature.scot>
Sent: 27 September 2023 09:36
To: Lara Currie
Subject: BEAR Scotland proposed works A828 Connel Bridge - NatureScot advice

Follow Up Flag: Follow up
Flag Status: Flagged

BEAR Scotland proposed works A828 Connel Bridge

Thank you for consulting us on the proposed scheme and cyclic maintenance works for the Connel bridge.

The Site Environment Management Plan (SEMP) must ensure all necessary measures to prevent impacts to the environment including pollution prevention and protected species mitigation are implemented. Mortar for ancillary works should be specified as marine suitable to mitigate against pollution.

Inner Hebrides and the Minches Special Area of Conservation (SAC)

The proposal is within 6km of the Inner Hebrides and the Minches Special Area of Conservation (SAC) protected for its harbour porpoise (*Phocoena phocoena*).

The site's status means that the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the 'Habitats Regulations') apply or, for reserved matters, The Conservation of Habitats and Species Regulations 2017. Consequently, Marine Scotland is required to consider the effect of the proposal on the SAC before it can be consented (commonly known as Habitats Regulations Appraisal). The NatureScot website has a summary of the legislative requirements (https://www.NatureScot.scot/professional-advice/safeguarding-protected-areas-and-species/protected-species/legal-framework/habitats-directive-and-habitats-regulations).

Our advice is that it is unlikely that the proposal will have a significant effect on any qualifying interests of the Inner Hebrides and the Minches SAC either directly or indirectly. An appropriate assessment is therefore not required.

It is noted that the majority of proposed works will take place on the existing bridge structure, with mitigation methods included to minimise entry of materials into the marine environment. Where works take place close to water level, in the case of potential scour repairs, it was confirmed that any hydro-demolition works will be undertaken on the top of the structure only (not in or within direct proximity to the watercourse), and will be fully contained, with wastewater and debris collected and removed off site. The acoustic impacts of above-water hydro-demolition and/or underwater rock armour placement are not considered significant in the context of harbour porpoise disturbance. Any impacts are expected to be localised and time-limited if applicable.

Loch Sunart to the Sound of Jura Nature Conservation Marine Protected Area (NC MPA)

The proposal is within 6km of the Loch Sunart to the Sound of Jura Nature Conservation Marine Protected Area (NC MPA), selected for its flapper skate (*Dipturus intermedius*) population and geodiversity features (underwater channels, troughs).

The site's status means that the requirements of the Marine (Scotland) Act 2010 apply. Consequently, Marine Scotland is required to consider the effect of the proposal on the NC MPA before it can be consented.

Our advice is that the proposal is not capable of affecting the protected features of Loch Sunart to the Sound of Jura NC MPA either directly or indirectly. Further assessment is therefore not required.

It is noted that the majority of proposed works will take place on the existing bridge structure, with mitigation methods included to minimise entry of materials into the marine environment. Where works take place close to water level, in the case of potential scour repairs, it was confirmed that any hydro-demolition works will be undertaken on the top of the structure only (not in or within direct proximity to the watercourse), and will be fully contained, with wastewater and debris collected and removed off site. Additional works such as placement of rock armour would take place at a shallow depth unlikely to conflict with habitat use by flapper skate. As such, no direct disturbance or significant sedimentation/pollution is anticipated which could impact the flapper skate population.

All works are located 5.6km east of the Inner Hebrides and the Minches Special Area of Conservation (SAC) and Loch Sunart to the Sound of Jura Nature Conservation Marine Protected Area (NC MPA).

Priority Marine Features

The Connel Bridge crosses the Falls of Lora which contains tide swept algal communities, a Priority Marine Feature (PMF). Whilst some localised disturbance or damage could potentially occur during scour repairs (e.g. during jack-up barge use), this is not anticipated to impact the PMF over a significant area or duration that would negatively affect its national status.

Protected Species

With regards to activities taking place close to water level, checks should be made for protected species before any works proceed. If found onsite, more thorough surveys may be required to prevent disturbance, and mitigation measures agreed. European Protected Species may be present; particular consideration should be given to otter (Lutra lutra), as otter field signs have previously been recorded on lochside habitat adjacent to the bridge on both north and south aspects (Environmental Summary Report, 2018).

Further information on protected species and legislation can be found on the NatureScot website at https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/protectedspecies

Kind regards,

Laura Dunn | Operations Officer - West | m: [Redacted]
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