

## NOTICE OF DETERMINATION

**A87 DORNIE BRIDGE  
ENVIRONMENTAL IMPACT ASSESSMENT  
DETERMINATION BY THE SCOTTISH MINISTERS UNDER SECTIONS 20A AND  
55A OF THE ROADS (SCOTLAND) ACT 1984**

The Scottish Ministers hereby give notice that they have determined that their proposal to carry out works on the A87 Dornie Bridge is –

(a) not a project which falls within Annex I of Council Directive No. 85/337/EEC on the assessment of the effects of certain public and private projects on the environment as amended by Council Directive No. 97/11/EC and Council Directive No. 2003/35/EC of the European Parliament and Council;

(b) a relevant project within the meaning of Sections 20A(9) and 55A(7) of the Roads (Scotland) Act 1984, and falls within Annex II of the said Directive but that having regard to the selection criteria contained in Annex III of the Directive it should not be made subject to an environmental impact assessment in accordance with the Directive,


and accordingly the project does not require the publication of an Environmental Statement.

[Redacted]

**A member of staff of the Scottish Ministers**

Transport Scotland  
Buchanan House  
58 Port Dundas Road  
Glasgow  
G4 0HF  
06 November 2018



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|---------------------------|-------------------------|--|
| Document: Form 113        | Record of Determination |  |
| Issue: 1                  |                         |  |
| Related to: All Contracts |                         |  |
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## A87 Dornie Bridge: Five Year Marine Licence

### Record of Determination

|             | Name               | Organisation | Signature  | Date       |
|-------------|--------------------|--------------|------------|------------|
| Prepared By | [Redacted]         | Jacobs       | [Redacted] | 15/05/2018 |
| Checked By  | [Redacted]         | Jacobs       | [Redacted] | 28/05/2018 |
| Client:     | Transport Scotland |              |            |            |

| Distribution       |            |        |
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| Organisation       | Contact    | Copies |
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| Transport Scotland | [Redacted] | 1      |

Document: RECORD OF DETERMINATION

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

ROADS (SCOTLAND) ACT 1984 (as amended)

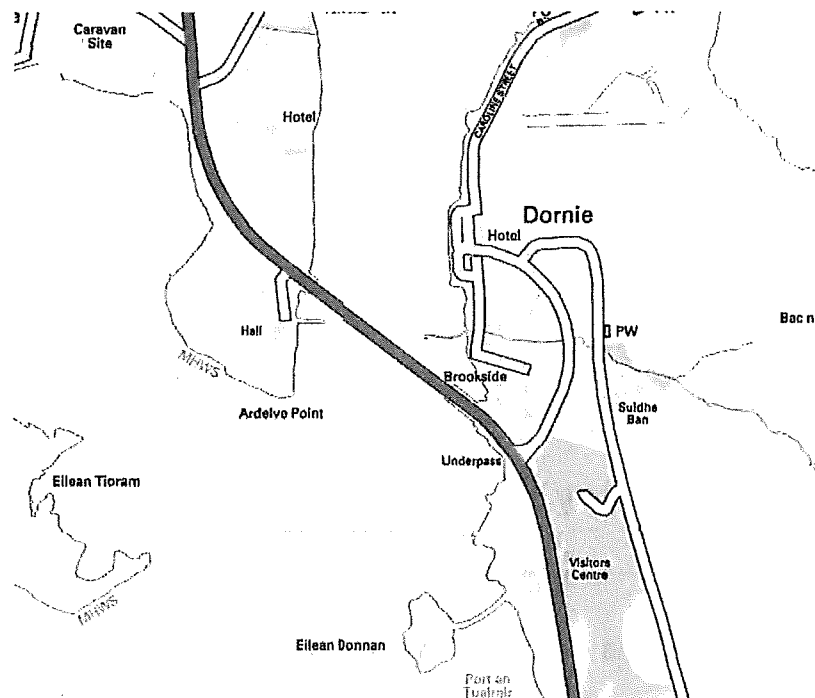
THE ROADS (SCOTLAND) ACT 1984 (ENVIRONMENTAL IMPACT ASSESSMENT)  
REGULATIONS 2017

**Name of Project:** A87 Dornie Bridge  
Five-Year Marine Licence

**Location:** The Dornie Bridge at Loch Long carries the A87 trunk road between Kyle of Lochalsh and Invergarry.

**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 Dornie Bridge at Loch Long carries the A87 trunk road between Kyle of Lochalsh and Invergarry over Loch Long as shown in Figure 1.



**Figure 1: Dornie Bridge Location**

BEAR Scotland has requested that Jacobs prepare Marine Licence Applications (MLAs) for five-year maintenance programmes for five bridges in the North-West Unit, including Dornie Bridge. The MLAs will ensure that maintenance works with short lead in times are delivered on programme.

The following maintenance works at Dornie Bridge will be covered by the five-year marine licence:

- Scour repairs
- Carriageway and footpath resurfacing
- Concrete repairs
- Gulley and drainage cleaning
- Parapet replacement
- Joint renewal
- Minor bridge maintenance

- Minor M&E works
- Bird Guano removal
- Static and mobile underbridge access units for inspections and minor maintenance.

**Project Procurement:**

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

**Description of Local Environment:****AIR AND CLIMATE:**

The works is not located in an Air Quality Management Area (AQMA) or monitoring site within the vicinity of the works (DEFRA Website, accessed April 2018). Existing local air quality in the general vicinity of the works is likely to be good due to its rural setting, however air quality will be influenced by traffic using the A87. For further information regarding traffic volumes on the A87, refer to the Population and Human Health section.

There are approximately 23 residential properties located within 200m of Dornie Bridge, directly north of the eastern aspect of the bridge (NG 88209 26253). Located within Dornie, within approximately 100m from the eastern aspect of the bridge is also Graham House retirement home, Donan House B&B and Bramble Bank accommodation. Located within 100m to 200m of the eastern aspect of the bridge is The Clachan pub and Dornie Hotel.

Located between 50m to 100m of the western aspect of the bridge is Dornie and District Community Hall, All The Goodness café and one residential building.

The lochs and the surrounding area has a temperate climate, and an annual rainfall of around 2.3 metres per year.

Refer to Appendix B for air and climate receptor locations.

**CULTURAL HERITAGE AND MATERIAL ASSETS:**

Category B listed Ardelve Slipway (LB6998) (NG 87947 26308) is located directly south of the bridge on the western aspect, within 30m. This early 19<sup>th</sup> century rubble slipway is designated as it served the former ferry across Loch Long from Ardelve to Dornie.

Category A Listed Building Eilean Donan Castle (LB7209) (NG 88127 25836) is located approximately 350m south of the bridge on the eastern aspect. The castle was destroyed in 1719 and was a stronghold of Kintail Mackenzies in the 15<sup>th</sup> and 16<sup>th</sup> centuries. It was rebuilt between 1912 and 1932 in a later medieval manner, incorporating some remains of the keep and enclosing walls.

Eilean Donan, Remains Associated with Castle Donan (SM7575) (NG 88130 25853) is a Scheduled Monument located approximately 290m south of the bridge on the eastern aspect. This Scheduled Monument is a prehistoric domestic and defensive fort, consisting of the remains associated with the medieval castle of Eilean Donan and its predecessors.

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

**BIODIVERSITY:**Designated Sites

The works location is within the Loch Duich, Long and Alsh MPA, home to one of Scotland's largest known flame shell beds. This MPA was designated in 2014, to protect the flame shell bed and areas of burrowed mud habitats with fireworks anemones. Covering an area of 0.93km<sup>2</sup>, the flame shell bed is one of the largest in the world, with an estimated 100 million flame shells, and extends through the mouth of Loch Alsh, under the Skye Bridge and into the Inner Sound (SNH, 2017: <https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/protected-areas/national-designations/marine-protected-areas/nature->

conservation-7 [Accessed 25/05/2018]). Seasearch data (via National Biodiversity Network Atlas) under a CC-BY licence has recorded flame shells within 1km south of the Dornie Bridge. Records of burrowed mud are approximately 600m south of the Dornie Bridge. The conservation objectives of the MPA are as follows:

'...the protected features –

- a) So far as already in favourable condition, remain in such condition; and
- b) So far as not already in favourable condition, be brought into such condition, and remain in such condition.'

Dornie Bridge lies within the Lochs Duich, Long and Alsh SAC, selected on account of its Annex I habitat 'reefs', the SAC includes both rocky reefs and biogenic reefs. The feature category of the Natura 2000 site is Marine (including marine mammals) and the latest assessed condition was Unfavourable Declining with the Summary Condition recorded as Unfavourable.

The SAC is designated for extensive areas of tide-swept reefs, extremely sheltered rocky reefs and horse mussel beds. Horse mussel (*Modiolus modiolus*) reefs have been recorded approximately 850m north of the bridge and 600m and 950m south of the bridge. The site of the works is also designated for marine mammals. Norway lobsters and fireworks anemones inhabit the sea bed, particularly within Loch Duich south of the bridge, where this animal is recorded in large numbers.

The boundary of the Inner Hebrides and the Minches candidate SAC (cSAC) is approximately 4.75km to the east of the Dornie Bridge, for which harbour porpoise (*Phocoena phocoena*) is the only qualifying feature. The cSAC proposals are currently out to consultation, during which time the area has policy protection to the same degree as a confirmed SAC.

Ancient woodland (of semi-natural origin) as listed on the Ancient Woodland Inventory is located approximately 1km to the southeast of the works area. There is also an area of Native Woodland 100m east of the works. Immediately to the south and east of the works is Kintail National Scenic Area (NSA), and a small section of the eastern aspect of the bridge itself is included in this NSA.

Terrestrial and aquatic ecological field surveys were carried out within the study area in February 2018 by Jacobs UK Ltd. These surveys identified key environmental parameters required to support protected species and inform the baseline as described below.

#### Otter

The site visit undertaken on 28 February 2018 recorded potential habitat for otter (*Lutra lutra*), a European protected species under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). A concrete shelf was seen underneath the eastern aspect of the bridge with fresh otter spraint, and could potentially be used as a couch. Otter field signs (spraint of varying ages) were recorded around the embankments on both the eastern and western aspects.

#### Birds

The site visit revealed the presence of protected species in the vicinity of the works. An adult white-tailed eagle (*Haliaeetus albicilla*) was sighted 300m south of the bridge. The white-tailed eagle is listed in Schedule 1, 1A and A1 of the Wildlife and Countryside Act (1981), Annex 1 of the Birds Directive, and is a European Protected Species, though does not appear on the NBN Atlas search (results are presented in Table D2.)

#### Bats

There is mixed woodland on the eastern aspect of bridge approximately 155m east, which is considered to provide low bat roosting potential. No signs of bat presence were recorded during the 2018 surveys.

#### Intertidal Habitats

The intertidal habitats around the bridge consisted of dense egg wrack (*Ascophyllum nodosum*) on boulders and mixed sediment. A small freshwater channel (Allt Mor na Dornie) was identified on the north shore of the eastern aspect (NG 88173 26289). Along the length of this channel small amounts of horned wrack (*Fucus ceranoides*) were recorded. On the east shore at the eastern aspect of the bridge, between Dornie Bridge and Eilean Donan Castle, a patch of sea loch eggwrack (*Ascophyllum nodosum* ecad *mackaii*) approximately 10m x 10m was observed (NG 88190 26028); however, due to the small area of coverage this would not be considered a good example of this biotope. Beds of sea loch egg wrack are scattered further upstream on the

shores of Loch Long, the closest one being 350m north of Dornie Bridge on the east shore. Sea loch egg wrack (*Ascophyllum nodosum* ecad *mackaii*) beds are a Scottish Priority Marine Feature (PMF) and the species is on the Scottish Biodiversity List.

The PMF 'blue mussel (*Mytilus edulis*) beds on reduced salinity infralittoral rock' is located approximately 200m north of Dornie Bridge, whilst 'Mytilus edulis beds on littoral sediments' and horse mussel beds are also found further afield in Lochs Long, Duich and Alsh.

#### Subtidal habitats

Mixed kelp was observed under the bridge, more obvious on the eastern aspect. The kelp extended in a thin band along the lower shore. A kelp bed (*Laminaria hyperborea* on tide-swept, infralittoral mixed substrata), which is a PMF, is located less than 50m north of the western aspect of Dornie Bridge. The component biotope 'kelp and seaweed communities in tide-swept sheltered conditions' which is also a PMF is located less than 100m north of the bridge. Both of these PMFs are also present further upstream in Loch Long.

#### Fish

Kyle Akin and Loch Alsh encompass spawning and nursery grounds for a variety of fish and shellfish species, all of which have extensive spawning or nursery grounds across the UK.

Three diadromous fish species are known to be present in the area: Atlantic salmon (*Salmo salar*), anadromous brown trout (sea trout) (*Salmo trutta*) and European eel (*Anguilla anguilla*). River lamprey (*Lampetra fluviatilis*) may also be present in the wider area. All four species are listed on PMF and the Scottish Biodiversity List (SBL). Atlantic salmon and lamprey are also listed on Annex II of the Habitats Directive, whilst European eel are considered Critically Endangered and are on the International Union for Conservation of Nature (IUCN) Red List.

#### Invasive Non-Native Species (INNS)

During the site visit, rhododendron was recorded directly adjacent to the bridge on the south-western embankment (NG 87937 26350).

#### **LANDSCAPE:**

The landscape surrounding Dornie Bridge is characterised by mountainous views to the east and views of the lochs to the north, south and west. The countryside is predominantly moorland or pasture, with some lowland areas of deciduous woodland. The Kintail NSA can be viewed from the eastern aspect of the bridge, and extends 16,070ha south-east.

The residential town of Dornie can be seen to the east of the bridge, and to the west of the bridge there are several commercial and industrial buildings, leading to the village of Ardelve further inland. Eilean Donan castle (NG 88119 25838) forms part of the landscape and can be viewed from the bridge when facing south.

#### **LAND:**

The predominant land use in the vicinity of Dornie Bridge is residential. Additional land uses include coastal environment, community facilities and commercial property.

#### **NOISE:**

Noise and vibration levels on Dornie Bridge are predominantly influenced by the A87 which carries commercial and public traffic and is a popular tourist route as it acts as the only road which connects mainland Scotland to the Isle of Skye. For receptors sensitive to noise and vibration, refer to the Air and Climate section above.

#### **POPULATION AND HUMAN HEALTH:**

The works lie within 200m of Dornie, a small former fishing village in the Kintail district in the western Ross-shire Highlands of Scotland with a population of 360.

There are no formally recognised cycle or equestrian facilities crossing the bridge. No core paths are present within the vicinity of the bridge, but pedestrian footpaths are located on either side of the bridge, connecting Dornie and Ardelve.

Two bus stops are located at approximately 200m south of the bridge. The Citylink bus service numbers 915, 916, 917, and the MacRae Kintail service 712 operate services via Dornie.

**WATER:**

The bridge crosses Loch Long, a sea loch tidal area, and lies between three sea lochs in total: Loch Long to the north-east, Loch Alsh to the south-west, and Loch Duich to the south-east. The three lochs make up the designated sites Loch Duich, Alsh and Long MPA and SAC, as described in the Biodiversity section.

Loch Alsh is a sea inlet surrounded by hills and moorland. It runs inland around 12km from Kyle of Lochalsh to Ardelve, and from there becomes Loch Duich which continues south-east towards Shiel Bridge for another 10km. Loch Long spreads north-east from Dornie Bridge towards the mountains. The lochs and the surrounding area is popular with tourists and has a temperate climate, and an annual rainfall of around 2.3 metres per year.

The SEPA Flood Map indicates that there is a High likelihood of coastal flooding in the vicinity of the three lochs. According to the SEPA Water Classification Hub Website [Accessed April 2018], in 2016 Loch Long, Loch Alsh and Loch Duich all had an Overall Status of Good, Overall Ecology of Good and High level of Hydromorphology.

During the site visit in February 2018, Allt Mor na Dornie was noted, a small watercourse approximately 1.5m wide and 10cm deep at the time of survey. The channel flows down the cobble and pebble shore approximately 60m north of the bridge.

**SOILS AND GEOLOGY:**

The bedrock geology underlying the scheme on both sides of the bridge comprises metamorphic Orthogneiss rocks of the Lewisian complex. On both the western and eastern aspects of the bridge, superficial deposits comprise marine deposits from the Holocene Age, of gravel, sand and silt are present. The soil type surrounding the bridge is predominantly fluvioglacial and raised beach sands, and gravels derived from acid rocks.

**WASTE, MATERIALS AND USE OF NATURAL RESOURCES:**

Materials and resources used for the cyclic maintenance will comprise concrete, two new bridge joints, new parapet, and road and footway surfacing. Rock armour and geotextile will be required for scour repairs. Waste materials will comprise of excavated road planings, waste from bridge piers excavation, gully and drainage debris, waste water from hydro-demolition (which will contain broken concrete), bird guano, old parapets and old bridge joints.

As an upper case, the scour repair activity will require the removal of up to 650m<sup>3</sup> of material from around the bridge piers. The material will be removed by an excavator mounted on a jack-up barge; with work taking place within a 5m radius around 8 of the 9 piers. The substrata will largely comprise coarse sandy gravel with a mixture of cobbles and pebbles. The shallow environment (<5m Below Chart Datum) and strong flows under the bridge allow remobilisation of any fine or granular sediments (silt, mud and sand), consequently this fraction of the removed material will be minimal.

It is the intention to side-cast the excavated material, therefore the material will be redistributed in a similar location on the seabed during the activity. Following excavation, rock armour will be placed around the pier pile caps. Rock armour will then be placed around the pier pile caps with backfill of voids between armour achieved by infilling of granular material (sand and gravel). The scour repair activity will take place at sequential piers across the bridge; therefore, the activity of scour repair will be limited to the immediate area around each pier at any one time.

**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 direction from the centre of the road.

### **AIR AND CLIMATE:**

There is potential for a short-term minor decrease in air quality during the construction phase due to activities associated with the works including:

- Emissions from construction vehicles, plant and machinery;
- Resuspension of dust by haulage vehicles, other construction vehicles and from plant.

Impacts on air quality during construction are anticipated to be negligible, with no significant effects, provided 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.

During construction, there will be no significant effects in terms of heat and radiation emissions. The construction activities, for example, emissions from construction vehicles and plant will result in the release of 'greenhouse' gases for a short-term period. However, due to the short-term nature of the construction works, this effect 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 change in traffic levels or dynamics.

### **CULTURAL HERITAGE AND MATERIAL ASSETS:**

Category B listed Ardelve Slipway lies within 30m of the bridge. The works will take place entirely within the footprint of the bridge and the compound area, with the site compound located sufficiently far from the slipway so it is not damaged by maintenance activities. 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:

- Ensure that the Category B Listed Building status of Ardelve Slipway is understood by BEAR;
- If there are proposals to use the slipway for any reason then contact The Highland Council's Historic Environment Team for advice;
- If the slipway is proposed for use to enter the water/tie-up vessels alongside/track vehicles over then the surface is properly protected using medium duty HDPE ground mats (c12mm thick) or similar across the whole surface of the slipway. The Highland Council's Historic Environment Team will provide advice;
- Do not place any compound on the slipway.

Category A Listed Building Eilean Donan Castle is located approximately 350m south of the bridge, and Scheduled Monument Eilean Donan, Remains Associated with Castle Donan is located approximately 290m south of the bridge on the southern aspect. As these are sufficiently far from the site of the works, these cultural heritage features are not predicted to be impacted.

No impacts on cultural heritage assets are predicted during the operational phase.

**BIODIVERSITY:**Designated Sites

As outlined in the Biodiversity baseline section, the works are located within the Lochs Duich, Long and Alsh MPA, designated for flame shell bed and burrowed mud habitat, and the Lochs Duich, Long and Alsh SAC, designated for its reefs. Following consultation with SNH in April 2018, they advised that with implementation of the outlined good practice and management measures, the proposed maintenance activities would not lead to a significant effect on any designated conservation site. The scour repair activity required at Dornie Bridge is an exception to this which, SNH advised, could lead to a likely significant effect for the Lochs Duich, Long and Alsh Reefs SAC. Accordingly, a Statement to Inform an Appropriate Assessment (SIAA) is being carried out and will form supporting documentation for the Marine Licence Application along with this document and the SEMP.

The proposed maintenance works 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. It is anticipated that the various maintenance activities will not take place simultaneously.

With the exception of the activities 'bird guano removal', 'minor concrete repairs' and 'scour repairs', all maintenance works will be carried out from the upper surface of the bridge. Of these activities, only scour repair requires work to be carried out within the subtidal environment.

Potential direct and indirect impacts on the Lochs Duich, Long and Alsh SAC from the works are outlined below.

Direct impacts

Direct damage to the reef is considered in relation to the removal of overlying cobbles and coarse sandy gravel around the base of the piers and the corresponding communities that are attached to this material.

The excavated material will not be removed from the site but re-located to areas adjacent to each pier. Even should the kelp, seaweed and epifauna be removed from the cobbles during the excavation process, the dominant and characterising species (i.e. kelp, coralline crusts and, in shallower waters, *Ascophyllum nodosum*) will recolonise the cobbles in less than a year (short-term). The subtidal and intertidal benthos at the bridge are representative of commonly occurring floral reef communities. The energetic nature of the environment and mobile substrata resulting in a dynamic community that is tolerant of frequent disturbance.

Clean rock armour material will be placed at the base of the piers. This material will also be colonised by epifauna and characteristic flora in less than a year (short-term). The feet of the jack-up barge will abrade cobbles and therefore remove reef communities (kelp, other seaweed and epifauna). These communities will recolonise the surfaces of abraded cobbles and boulders within the short-term.

Given that reef material will not be removed from the general location but re-located, the communities present are adapted to the dynamic environment and recolonization of abraded or new surfaces would occur within the short-term; it is concluded that there would be no net loss of reef and thus extent of the SAC and its qualifying feature would be maintained. Consequently, there would be no significant effects on the structure or function of the reef feature nor its overall distribution. Similarly, component species of the reef communities would not experience any disturbance beyond the short-term, even then, only within a highly localised area. The placement of rock material at the base of the piers would not have any effect on the processes affecting the reef feature. It is therefore concluded that all conservation objectives would be maintained and that the direct impacts would not affect these conservation objectives.

### *Indirect impacts*

Indirect impacts on the qualifying feature (reefs) are considered in relation to pollution, sedimentation and the potential introduction of invasive non-native species.

A number of good practice management measures will be incorporated within the Site Environmental Management Plan (SEMP). These measures will be adhered to throughout the scour repair activity and 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 good practice and management measures for each activity.
- Following 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.
- All rock armour will be washed and cleaned prior to installation
- All equipment/machinery will be washed down and cleaned prior to immersion

During the scour repair works there is the potential for an increase in sedimentation; however, the volume of material removed is relatively small and as the area has moderately strong currents any disturbed fine sediment will disperse rapidly and over a wider area.

To reduce the risk from introduction of non-native species the following good practice measures will be adopted:

- Adherence to the Code of Practice on Non Native Species (NNS) (approved by Scottish Parliament 28 June 2012) and adoption of a precautionary approach.
- Production and implementation of a Biosecurity Management Plan (appended to the SEMP) during the construction phase.
- Training of relevant staff prior and during the construction process in NNS identification and ensuring these staff receive a copy of the biosecurity management plan.
- Recognition of guidance produced by SNH for the prevention of introduction of non-native species (Payne *et al.*, 2014).

Given the above the risk of pollution is considered unlikely, while the effects of sedimentation would be minimal and unlikely to effect the reefs or their component communities. The good practice measures outlined above would reduce the risk from the introduction of non-native species. It is therefore concluded that indirect effects from the proposal would not affect the conservation objectives of the Lochs Duich, Long and Alsh SAC.

### Aquatic

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 underbridge 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 toe rails to prevent any materials dropping into water.
- Rock armour will be washed and cleaned prior to placement
- Equipment used for scour repair works will be cleaned prior to immersion

If required, a CAR licence will be obtained for discharges into the marine environment. 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 pollution effects on the benthic receptors beneath and adjacent to the bridge, including PMFs.

With the exception of the scour repair, no direct loss of habitat is envisaged from the maintenance works. The scour repair will require the removal of highly localised superficial material, cobbles and gravel, around the base of the piers. The water under the bridge is shallow and the communities here comprise a mixture of kelp and tide swept algae on both rock and sediments.

The removed material will be side-cast and thus relocated in approximately the same area as the excavation. The seaweed communities that will be affected by the scour repair are ubiquitous throughout the local and wider region and there would therefore be no effect on the general structure and function of these communities from such a highly localised loss of the algae feature. It is also anticipated that both the material relocated and the new rock armour placed at the piers, would be colonised rapidly (within one year) by a similar assemblage of organisms. Hence, there would no loss of extent of this feature in the medium term.

The coarse nature of the substrata around the bridge and the strong flows means that any sediment plume generated would be minimal and rapidly dispersed. Hence, no effects from remobilised sediment on the marine features are envisaged.

Disturbance effects on marine receptors is limited to the scour repair activity. This has potential to generate underwater noise and also a physical barrier. However, underwater noise from scour repair will be limited to the tasks of excavation and localised rock placement and are thus considered to be highly temporary. The scour repair work will take place at consecutive localised points along the piers and therefore will not create a barrier across the water. Migratory fish species (see baseline section) passage through the water around the bridge. Darkness is a known contributing factor to influencing migration of fish species. As stated above, under normal working operations there would be no scour repairs and thus no subtidal maintenance activity, taking place during the hours of darkness. Given the highly localised temporary nature and scope of the scour repair activity it is concluded that there would be no significant effect on fish populations including migratory species.

Given the scope of the works there would be no effect on marine mammals from the proposed activities.

#### Otter

There is the potential to impact 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 cause disruption to normal foraging routes. A potential otter couch was recorded under the eastern aspect of the bridge during the site walkover and so an organisational licence will be required. BEAR currently hold an organisational licence that permits disturbance of otter for the purpose of preserving public health and safety.

An organisational otter licence (Number 118944 valid from 10 April 2018 to 31 December 2019) obtained by BEAR Scotland NW Unit and its accompanying Species Protection Plan (SPP) will be followed during the main works to reduce disturbance to otter; the licence and SPP 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 the potential otter couch under the eastern aspect of the bridge. Cameras will be deployed for a period of 14 days to monitor the activity of otters using the potential 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.

The following mitigation is also proposed:

- Following the monitoring surveys, SNH will be provided with the survey data and consulted on the need for a site-specific licence and appropriate mitigation;
- 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;
- 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; and
- 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.

#### 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), between the months of March and August inclusive. between the months of March and August inclusive. If works are required during this timeframe, pre-maintenance breeding bird checks will be required. 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. Should evidence of nests or breeding birds be seen at any time, 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:**

Following consultation with SNH in April 2018, they advised that the proposed maintenance activities would not lead to a significant effect on the Kintail NSA.

During the maintenance works there will be a temporary visual impact as a result of works on the bridge, provision of fencing, traffic management, situation of vehicles and machinery, and use of the site compound. Due to the nature of the works and location of the site there is minimal vegetation removal expected as a result of the works. With the following mitigation in place impacts on landscape are not anticipated to be significant.

#### Mitigation proposed:

- Land required for building the compound area will be confined to the minimum required area, and the contractor will agree the location of the compound if it is outwith the traffic management 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;
- Vehicles and large machinery/equipment will be kept as clean as possible and switched off when not in use;
- Mitigation detailed in the Waste, Materials and Use of Resources and Water sections will be strictly adhered to.

#### **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 of sensitive receptors during the maintenance works to the protected species outlined in the Biodiversity section, as well as the residential / commercial properties described in the baseline.

The maintenance works noise may be derived from the following activities:

- construction plant including vacuum trucks, concrete mixers and underbridge access units etc.;
- haulage of materials and movement of vehicles;
- road planing;
- spraying of waterproof materials;
- excavation, sidecasting and installation of new rock armour; and
- demolition of expansion joints.

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

Mitigation proposed:

- The owners and occupiers of the residential/commercial properties located within 200m of Dornie 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;
- Scour repair work will not take place at night during normal operations;
- Night works may be required for the cyclical maintenance works 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 practicable, the successful contractor will try and ensure the most disruptive activities (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;
- 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:**

There is a potential for disruption of Non-Motorised Users during the maintenance works. Although there are no recognised cycle routes or core paths, both pedestrians and cyclists access to the bridge will likely be impacted during the period of maintenance works, whilst traffic management measures remain in place. Equestrians are unlikely to use this section of the A87 and Dornie Bridge due to the high speed and volume of traffic. With the employment of mitigation measures, the impact on NMUs is predicted to be low and not significant. Mitigation proposed is as follows:

- The needs of NMU traffic will be considered within the design of the Traffic Management Plan; and
- NMU access between Dornie and Ardelve will be maintained during and following the maintenance works as far as is practicable;
- Mitigation measures outlined in the Air Quality and Climate and Noise sections will be strictly adhered to.

There will be a temporary impact on vehicle travellers during construction due to traffic management.

Traffic management will be implemented to alleviate disruption to vehicle travellers throughout the maintenance periods. Traffic management will be required periodically and the duration of which will depend on the works

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required at the time. Lane closures and traffic lights will be set out in accordance with the Traffic Signs Manual Chapter 8 and Safety at Street Works and Road Works: A Code of Practice will likely be required for most of the works. Speed limits will be reduced from 60mph to 30mph throughout the works area, which is expected to result in minor delays and a slight increase in travel times along the A87. Emergency vehicles will have access through the works at all times.

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

**Mitigation proposed:**

- A Traffic Management Plan will be developed to minimise disruption to vehicle traveller;
- Traffic will be controlled by temporary traffic lights, allowing vehicles to continue to use one lane of Dornie Bridge 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; and
- Mitigation measures outlined in the Air and Climate and Noise sections will be strictly adhered to.

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

**WATER:**

Hydro-demolition works result in the production of large amounts of solids in solution which is likely to be mildly alkaline. This has potential to cause deterioration of habitats and have adverse impacts on aquatic species should this be discharged into Loch Long.

Any waste water generated from hydro-demolition must be contained and either disposed of under a licence or treated before being discharged into Loch Long. 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.

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

**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;
- If required, an appropriate SEPA CAR licence will be obtained for all discharges into Loch Long and the conditions of the 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 (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;
- 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 Long 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 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;
- 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.

In addition to the above, mitigation specific to scour repair works will be adopted, which is as follows:

- All armour rock will be washed and cleaned prior to installation to ensure that no contaminants are brought into contact with the marine environment; and
- All equipment to be washed down and clean prior to use for installing materials.

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.

#### **SOILS AND GEOLOGY:**

Within the 200m study area there are no sensitive receptors identified in relation to geology and soils, and no impact is predicted from the works during construction or 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. All temporary traffic signs and road 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 CAR registration or simple licence.

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-used) 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.

No impacts on waste, materials, or natural resources are predicted during the operational stage.

#### **RISK OF MAJOR ACCIDENTS OR DISASTERS:**

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 presence of traffic lights.. No significant impact on road safety is expected during the construction phase.

The works 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 is will be no change in traffic levels or alignment.



### **CUMULATIVE EFFECTS:**

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.

At this time the only other relevant developments proposed in the general area are the planned maintenance works at Skye Bridge and Carrich Bridge. However, no significant adverse effects were predicted at either Skye or Carrich bridge as outlined in the respective RODs for each bridge, and hence there would be no in-combination effects with Dornie Bridge.

Appropriate programme planning will be undertaken, including scheduling the works as to avoid simultaneous traffic management at Skye and Carrich where practicable.

### **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 nature conservation and water parameters 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 Loch Duich, Long and Alsh MPA and SAC

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:*

- Scour repair works along with cyclic maintenance activities which will include drainage cleaning, bird guano removal, expansion joint renewal, resurfacing operations, parapet renewal and minor concrete repairs;
- All works will be confined to Dornie Bridge, with no change in the structure's footprint;
- Works will improve the integrity of the existing structure;
- The area of works will not exceed 1ha.

#### *Location of the scheme:*



- The works will take place entirely within the footprint of the bridge and the compound area, with no requirement for further land take;
- Adherence to relevant good practice and management measures (i.e. SEMP), appropriate mitigation, and the conditions of the marine licence and CAR registration or simple licence, will occur throughout the duration of the works. This will ensure protection of the environmental features and designated conservation sites.

*Characteristics of potential impacts of the scheme:*

- No significant adverse environmental impacts are predicted;
- Potential impacts during construction on the environmental disciplines discussed will be minimised through robust mitigation measures, good practice, management measures and compliance with licences e.g. Marine Licence.
- Operation of the bridge will not differ from existing baseline, therefore there would be no impacts on environmental receptors during the operation.

**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.

[Redacted]

SIGNATURE:

(Transport Scotland Environmental Advisor)

PRINT NAME:

DATE: ..... 23 October 2018 .....

Authorisation to publish Notice of Determination  
[Redacted]

SIGNATURE:

..... (Director, Roads)

PRINT NAME:

DATE: ..... 2.11.2018 .....