A87 Carrich Bridge: Five Year Marine Licence

Record of Determination

	Name	Organisation	Signature	Date
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Checked By				17/05/18
Client:	Transport Scotland			

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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 Carrich Bridge Five-Year Marine Licence	**Location:** The Carrich Bridge at Kyle Akin carries the A87 trunk road between Kyle of Lochalsh and the Isle of Skye.

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. Carrich Bridge, together with Skye Carrich Bridge, carries the A87 across Loch Alsh between Kyle of Lochalsh on the mainland and Kyleakin on the Isle of Skye. The Carrich Bridge on the A87 trunk road is shown in Figure 1.

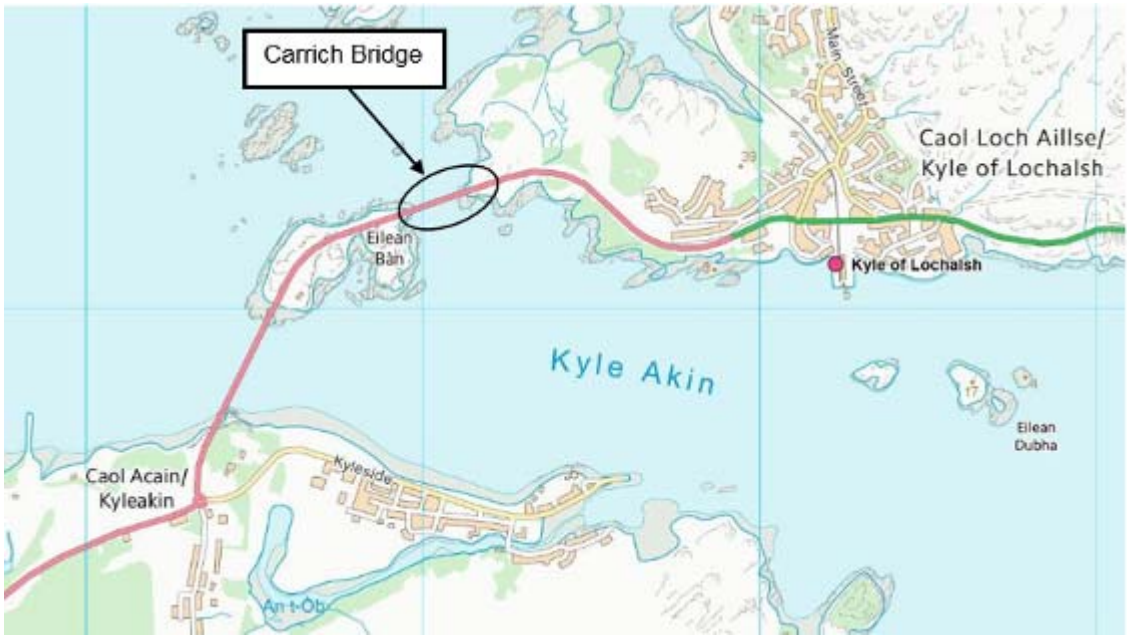


Figure 1: Carrich Bridge Location

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

- Drainage cleaning
- Bird guano removal
- Joint renewal
- Carriageway and footpath resurfacing
- Waterproofing
- Parapet renewal
- Concrete repairs
- Minor bridge maintenance
- Use of static and mobile underbridge unit for access, inspections and minor maintenance.

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

Project Procurement:

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

Description of Local Environment:

The following baseline descriptons have been sequenced to follow the apporpirate Design Manual for Roads and Bridges (DMRB) chapters for environmental assessment and do not reflect a ranking of sensitivity.

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

AIR AND CLIMATE:

There is no Air Quality Management Area (AQMA) or monitoring site within the vicinity of the works (DEFRA Website, accessed April 2018). Due to the rural locality of the works, air quality is likely to be reasonable with the main influence being vehicle emissions from the traffic using the A87. For further information regarding traffic volumes on the A87, refer to the Population and Human Health section.

There are two potential air quality receptors within proximity to the bridge; namely the Gavin Maxwell Museum (NG 74612 27167) located approximately 330m south west and a wildlife watching hide located approximately 300m west of the bridge. The Gavin Maxwell Museum is owned by the Eilean Bán Trust and also offers self-catering accommodation on the island for up to four people.

The nearest residential property is located within the village of Kyle of Lochalsh which is situated approximately 480m east of Carrich Bridge.

The coastal environments of the Isle of Skye and Kyle of Lochalsh have a mild, wet and windy climate, influenced by the Atlantic Ocean and Gulf Stream to the west.

Refer to the Figure B1 and Table B1 in Appendix B for air and climate receptors.

CULTURAL HERITAGE AND MATERIAL ASSETS:

There are no designated cultural assets within the study area of 300m of the proposed works. The closest designation is Kyleakin Lighthouse (HES ID LB6994) which is a Category B listed building located on the island of Eilean Bán, comprising of a lighthouse and two adjoining former keepers' cottages. These are located approximately 470m and 330m south west, respectively.

There are no Scheduled Monuments or other designated cultural assets located within 300m of the proposed works extents.

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

BIODIVERSITY:

Designated Sites

Carrich Bridge is located wholly within the Lochs Duich, Long and Alsh designated Marine Protected Area (MPA). The MPA was designated in 2014, to protect the flame shell bed and areas of burrowed mud habitats with fireworks anemones. Covering an area of at least of 0.93km^2, the flame shell bed is one of the largest in the world, with an estimated 100 million flame shells, and extends under the Skye Bridge and into the Inner Sound. Flame shell beds stabilise the sea bed creating habitat for other animals such as peacock worms, anemones and sponges. These in turn encourage other predatory animals such as whelks, crabs and fish into the area.

The MPA supports the Lochs Duich, Long and Alsh Special Area of Conservation (SAC) which is located directly south of the bridge (<5m) and is designated for extensive tide-swept reefs, extremely sheltered rocky

reefs, and horse mussel beds (*Modiolus modiolus)*. Horse mussel have been identified within the study area including a bed approximately 500m south east of Carrich bridge.

Skye Bridge is also encompassed by the Inner Hebrides and the Minches candidate SAC (cSAC) 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.

The Kinloch & Kyleakin Hills (Monadh Chaol Acainn is Cheann Loch) Site of Special Scientific Interest (SSSI) and Kinloch & Kyleakin Hills SAC are located on the Isle of Skye approximately 2.1km south of the proposed works. Some of the qualifying features of these designated sites include blanket bog, old upland sessile oak woodland, European dry heaths, Northern Atlantic wet heaths and otter.

Terrestrial and aquatic ecological field surveys were carried out within the study area in 2016 by BEAR Scotland Environment team and in February 2018 by Jacobs UK Ltd. These surveys identified key environmental parameters required to support protected species, as outlined below. The results of these surveys have been used to characterise the environment and are supplemented by the baseline ecological data provided in the Kyleakin Fish Feed Plant Environmental Statement (2017). The natural environment within proximity to the works can be described as predominantly coastal with wild islands and islets.

Terrestrial Habitat

There is no ancient or native woodland found within 1km of the proposed works. The coastal environment generally provides little woodland however there are individual trees and shrubs located within the study area. A small copse of mature trees is located on Eilean Bán within 300m of the proposed works.

Terrestrial habitat on the eastern aspect of the bridge, near Plock of Kyle, is comprised predominantly of dense gorse (*Ulex europaeus*) and rocky shore.

The terrestrial habitat at the western aspect of the bridge, on Eilean Bán, is mostly gorse scrub near to the masonry wall with heathland and rocky shore occupying the rest of the island. Common heather (*Calluna vulgaris*) and cross-leaved heath (*Erica tetralix*) are present here.

There is a lack of vegetation on the existing Carrich Bridge footpaths, therefore there is no habitat present that could support protected species.

Intertidal Habitats

The tidal environment surrounding Carrich Bridge, namely Kyle Akin, is relatively complex due to the large volume of water that is forced in and out of Loch Alsh during each tidal cycle.

Intertidal habitats on the eastern aspect of the bridge are dominated by rock armour under and adjacent to the bridge itself. In the embayment north of the eastern aspect of the bridge the amount of rock armour decreases and is replaced by natural boulder and bedrock. The bedrock and boulders are covered by typical rocky shore communities; fucoids, red seaweeds, eggwrack (*Ascophyllum nodosum*) and a thin band of kelp (*Saccharina latissima*) which extends from the bedrock and boulder onto the coarse sand.

The intertidal habitats on the northern side of the western aspect of the bridge comprises steep, barnacle covered bedrock with sparse fucoids leading down to mixed kelp communities at the infralittoral fringe. The habitat on the southern side of the western aspect of the bridge comprises a mixture of steep barnacle covered bedrock and edimentary shores covered in sparse fucoids. Mixed kelp communities are present along the infralittoral fringe.

At the infralittoral fringe, where algae communties exist, these are considered to be component biotopes of the Scottish Priority Marine Feature (PMF) ‘tide-swept algal communities’.

Otter

Otters are known to be present within the study area, based on surveys carried out by BEAR Scotland in 2016 and also during walkovers of the area in March 2018. Otters are a European protected species under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). The coastal environment provides plenty of habitat with potential to harbour and shelter otter including large areas of gorse, rock armour and rocky shores.

During the 2016 surveys otter field signs were recorded within the study area including a possible natal otter holt located on the southern side of Eilean Bán and several otter couches. The 2018 surveys found further evidence of otters (three old spraint and a mammal path) on the eastern aspect of the bridge at the base of the

rock armour and gorse embankment. During the same surveys three otters, an adult and two juveniles, were sighted in the mouth of Loch Alsh, directly underneath the eastern aspect of the bridge.

Birds

The 2018 surveys discovered evidence of breeding bird habitat within the gorse at the eastern and western aspects of Carrich bridge. No Schedule 1 protected birds were identified during the 2018 surveys.

Bats

The coastal environment within the study area generally provides poor bat roosting and foraging potential due to the dominance of open heath habitat. There is a small copse of mature trees with low bat roost potential including an over mature alder with cavities located on Eilean Bán. The buildings on Eilean Bán are considered to have negligible bat roosting potential. No signs of bat presence were recorded.

Marine mammals

The bridge lies within the Inner Hebrides and the Minches cSAC for harbour porpoise, which is the only qualifying feature of this cSAC. Harbour porpoise and bottlenose dolphin are regularly sighted in this area.

Harbour seals and grey seals are both recorded from the area with sightings of harbour seals notably higher. However, during the 2018 field survey a grey seal (*Halichoerus grypus*) was recorded in the open water less than 100m north of the bridge.

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 (*Anguila anguila*). River lamprey (*Lampetra fluviatilis*) may also be present in the wider area. All four species are listed as a Priority Marine Feature (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)

No invasive non-native species were recorded in the survey area during the 2018 surveys.

Appendix D displays protected species and INNS that have been recorded within proximity to the works using the National Biodiversity Network (NBN) Atlas under a CC-BY licence.

Refer to Figure D2 of Appendix D for photographs of otters and ecological habitats.

LANDSCAPE:

The landscape surrounding Carrich Bridge can be considered a picturesque coastal environment, and is characterised by islands, islets, rocky shores, shrub and heath covered hills and mountains. The Inner Sound can be seen to the north and west and Kyle Akin feeding Loch Alsh to the south and east. The mountains of the Isle of Skye dominate the west and south horizon and more gentle hills are seen to the north and east.

There are no landscape designations, including National Scenic Areas (NSA), within 200m of the works. There are no visual receptors, such as residential properties, with a prominant view to the bridge within the study area.

LAND:

The land use within the study area is predominantly wild coastal environment with islands, islets and rocky shores covered in gorse and heath. The villages of Kyle of Lochalsh and Kyleakin are situated approximately 480m east and 900m south respectively, where the land use is predominantly residential and commercial.

NOISE:

The predominant noise and vibration levels at Carrich Bridge are influenced by the existing A87; the only road which provides public, commercial and tourist traffic, access to and from the Isle of Skye. When traffic levels

are low there is no other artificial noise pollution in the immediate vicinity.

Sensitive receptors to noise and vibration include protected species, cultural assets and residential / commercial properties. Refer to the 'Air and Climate', 'Cultural Heritage and Material Assets' and 'Biodiversity' sections for details of receptors.

The bridge provides no natural or artificial noise screening such as fencing or trees.

POPULATION AND HUMAN HEALTH:

The Carrich Bridge carries the A87 west over Kyle Akin and is a critical connection for commercial, domestic and tourist traffic. The Carrich Bridge, and the connected Skye Bridge, provide the only road from mainland Scotland to the Isle of Skye, replacing the requirement for ferry transport.

A traffic count recording Annual Average Daily Flow (AADF) has been calculated by Transport Scotland on the A87 between Kyleakin roundabout and Stoney Road in Kyle of Lochalsh which includes the stretch of road associated with the proposed works. AADF was recorded on the Department for Transport interative map in 2016 as 5155, an increase of 2110 vehicles since 2014. Traffic volumes are significantly higher during the summer months which is high season for tourists in the Highlands.

There are no designated core paths or cycle routes within the study area. The concrete footpaths which run adjacent to the road either side of the bridge and connect Kyle of Lochalsh to Isle of Skye are regularly used by pedestrians. Eilean Bán is accessed by pedestrians directly from the pavement on the western approach to the bridge, where a network of dirt tracks traverses throughout the island.

The Plock Kyle's Community Parkland is an area of land (~100 acres) providing a path network, viewpoint, picnic area and golf course for the local and surrounding community of Kyle of Lochalsh. The car park and a vacant building for this community facility is located approximately 290m east of the proposed works.

There are no bus stops are located within the study area.

WATER:

Kyle Akin is relatively narrow navigable strait directly underneath the Carrich Bridge, connecting the Inner Sound from the west to Loch Alsh in the east. The Inner Sound separates mainland Scotland and the Inner Hebridean islands of Skye, Raasay and Rona, and was classified by Scottish Environmental Protection Agency (SEPA) on the Water Classification Hub in 2016 as having High Overall Status, Overall Ecology, Physico-Chemical Condition and Hydromorphology. Loch Alsh is a sea loch between mainland Scotland and the Isle of Skye and was classified by SEPA in 2016 as having Good Overall Status, Overall Ecology and High Hydromorphology.

The Inner Sound and Loch Alsh are important economic drivers which facilitate a wide range of commercial activities including transport, fishing, industry, leisure and tourism. Both Kyleakin and Kyle of Lochalsh have harbours allowing for a range of commerce including daily wildlife-spotting boat trips. The largest area of industry within proximity to the proposed works is the Kyleakin fish feed plant situated on the coast approximately 1.2km west of the works. The plant is currently under construction and due to open in autumn 2018.

The SEPA Flood Maps show that the Inner Sound foreshore on the mainland and Isle of Skye, and the whole of Loch Alsh, are susceptible to high levels of coastal flooding at the 10% Annual Exceedance Probability (AEP) (10-year) event.

Road drainage at the bridge consists of kerb and gullies the length of the bridge, filter drains on the eastern approach and 'over the edge' direct runoff on the western approach.

SOILS AND GEOLOGY:

The bedrock geology underlying the proposed works at Eilean Bán and Plock of Kyle comprises sandstone of the Applecross Formation. Superficial deposits are found on the eastern aspect of the bridge and comprise of marine beach deposits such as gravel, sand and silt. The soil cover at either side of the bridge, on Eilean Bán and Plock of Kyle, consist predominantly of peaty gleys derived from Torridonian sandstone drifts.

There are no designated geological sites within the study area. The closest geological sites are the Kinloch & Kyleakin Hills (Monadh Chaol Acainn is Cheann Loch) SSSI and Kinloch & Kyleakin Hills SAC located approximately 2.1km south and are designated in part because of the Torridonian sandstone deposits, blanket bogs, and dry and wet heaths.

The Ob Lusa to Ardnish Coast Geological Conservation Review (GCR) is a Lower Jurassic site with coral limestone beds located on the Isle of Skye approximately 5km west of the proposed works and is also designated as an SSSI.

WASTE, MATERIALS AND USE OF NATURAL RESOURCES:

Materials and resources used for the cyclic maintenance will comprise concrete, two new bridge joints, new parapet, road and footway surfacing. Waste materials will comprise of excavated road planings, broken out footways, waterproofing materials, gully and drainage debris, waste water from hydro-demolition (which will contain broken concrete), bird guano, old parapets and old bridge joints.

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:

During the construction phase, 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.

With the following good practices and management measures in place impacts on air quality are not anticipated to be significant.

Good practice:

- 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 vehicles are idle;
- Large material stockpiles will not be required and drop heights will be minimised to avoid excessive dust generation;
- In prolonged periods of dry conditions, work areas will be dampened down where necessary. The contractor will implement this measure with care to avoid mobilisation of dust and debris as runoff and polluting the local environment;
- Any skips holding waste on site will be covered to prevent dust movement;
- Any loose materials will be covered during transportation to and/or from site.

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

considered to be significant.

The proposed works are not expected to affect air quality during the operational stage, since it will not result in change in traffic levels or dynamics.

CULTURAL HERITAGE AND MATERIAL ASSETS:

Due to the nature and location of the works there are no significant impacts anticipated on cultural heritage.

BIODIVERSITY:

Aquatic

As outlined in the 'Biodiversity' baseline section, the maintenance works are located within the Loch Duich, Long and Alsh MPA, the Inner Hebrides and the Minches cSAC and are adjacent to the Lochs Duich, Long and Alsh SAC. Following consultation with SNH in April 2018, they advised that with implementation of good practice and management measures, the proposed maintenance activities would not lead to a significant effect on any Natura 2000 site, MPA or SSSI, and thus their qualifying features. 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;
- Carrying out waterproofing from within protective shelters;
- Carrying out waterproofing during periods of good weather;
- Remove debris from gullies and drains using vaccum truck;
- Double bag guano;
- Contain the underbidge working platform with either debris netting or thickened sheets (if hydrodemolition);
- Layering floor of working platform to prevent any material or water going through (if hydrodemolition);
- Remove all waste concrete from site;
- Adherence to relevant PPGs and GPPs including GPP5 (works and maintenance in or near water);
- Edge protection and toerails to prevent any materials dropping into water.

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 effects on the benthic receptors beneath and adjacent to the bridge, including PMFs.

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

Terrestrial

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

Otter

Otters are known to be present within the study area and field signs have been recorded in the 2016 and 2018 surveys including a holt and several couches. The maintenance activities have the potential to disrupt otters in the study area including a disruption to normal foraging and commuting routes, and resting sites. Therefore, an otter disturbance licence is required.

An organisational otter licence (Number 118944 valid from 10 April 2018) obtained by BEAR Scotland NW Unit and Species Protection Plan will be followed during the main works until 31 December 2019 to reduce

disturbance to otter; these are included in 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.

Further otter surveys, consisting of remote monitoring using infra-red trail cameras and site visits, will be required to monitor use of the known otter shelter on Eilean Bán and the location/use of other possible shelter sites.

The following mitigation is also proposed:

- Setting up of an exclusion zone, distance to be determined following monitoring results.
- 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' to works shall be implemented whereby machinery shall be switched on and before being used, machinery will be checked for the presence of otters;
- Any excavations created will be covered over at the end of each shift and following completion of the works to avoid entrapment of otters; failing that, a ramp shall be provided within the excavations;
- Any entrances to pipes/drains that are in the process of being constructed will be suitably protected to prevent otter access; and
- Any lighting required to carry out the works to be directed away from the Eilean Bán and Kyle Akin, as far as reasonably practicable.

Birds

The proposed works are confined to the bridge, however there is potential disturbance to any nesting birds during the construction phase if works are conducted during the birds breeding season (March to August, inclusive). If works are required during this timeframe, pre-maintenance breeding bird checks may 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.

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

Bats

The bridge and surrounding area is considered to offer low to negligible potential for roosting bats, therefore any impact on bats is not anticipated to be significant.

LANDSCAPE:

During the construction phase 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 good practice in place impacts on landscape are not anticipated to be significant.

Good practice:

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

The proposed work is not expected to affect the local landscape during the operational stage, since it will not

result in a major change in loss of vegetation, change in land use, increase in traffic flows, or change in structure / design.

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 construction phase to the protected species mentioned in the 'Biodiversity' baseline section. Even though the Gavin Maxwell Museum and wildlife hide on Eilean Bán are situated outwith the study area it is deemed good practice to consider them within the assessment as they are also situated within close proximity to the proposed works at Skye Bridge. The construction phase 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; and
- demolition of expansion joints.

Currently, the works are programmed to take place entirely during daytime hours to reduce potential impact from noise and vibration. If this changes, the The Highland Council Environmental Health Officer will be consulted and this will be included as an addendum to the Record of Determination.

With the implementation of the following good practice and management measures, noise and vibration impacts are not anticipated to be significant.

Good practice:

- Eilean Bán Trust, owner of Gavin Maxwell Museum and the wildlife hide, will be informed of the works at least 14 days in advance of the works;
- Consultation will be carried out ahead of the works with residential and commercial properties to inform them of the proposals. A 24-hour contact number will be provided;
- Temporary staff toilets/site compound will be located as far as is practicable from sensitive receptors;
- 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;
- 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;
- Night works may be required for the 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 site personnel will be fully briefed in advance of works regarding the need to minimise noise during any night-time period and of the site specific sensitivities; and
- Mitigation measures described in the 'Air and Climate' section will be adhered to.

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

POPULATION AND HUMAN HEALTH:

Traffic management will be implemented to alleviate disruption to vehicle travellers throughout the construction

periods. Traffic management will be required periodically and the duration of which will depend on the works required at the time. 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 good practice and management measures, impacts on vehicle travellers are not anticipated to be significant.

Good practice:

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

There is a potential for disruption of NMUs during the construction phase. Although there are no recognised cycle routes, both pedestrians and cyclists are considered likely to be impacted during the period of maintenance works and the whilst traffic management measures remain in place. Equestrians are unlikely to use this section of the A87 and Carrich Bridge due to the high speed and volume of traffic.

With the implementation of the following good practice, impacts on NMUs are not anticipated to be significant.

Good practice proposed:

- The needs of NMU traffic will be considered within the design of the Traffic Management Plan; and
- NMU access between mainland Scotland and the Isle of Skye, via the Carrich Bridge, will be maintained during the maintenance works.

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 non-vehicular uses (NMUs) and vehicle users.

WATER:

There is potential for impacts on water quality as a result of the refurbishment works for potential discharge of silt, fuels, soils and waterproofing chemicals into the Kyle Akin, and subsequently, the Inner Sound and Loch Alsh. Hydro-demolition works may be required and would result in the production of large amounts of solids in solution which is likely to be mildly alkaline.

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

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

With the implementation of the following good practice, management measures and mitigation, impacts on the water environment are not anticipated to be significant.

Mitigation proposed:

- 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 Kyle Akin and the conditions of the licence will be complied with throughout the course of the works;
- Waste water generated from hydro-demolition will be contained and treated before disposal or discharge into Kyle Akin. The water parameters must meet a pH requirement of between 4 – 10 and also a Suspended Solids limit of 100mg/l;
- Relevant Construction Industry Research and Information Association (CIRIA) guidance and SEPA's Pollution Prevention Guidelines (PPGs) and Guidance for Pollution Prevention (PPGs) will be followed including PPG 1, 6, 7, 8, 13, 18, 21 and 22. Particular attention will be paid to GPP 5: Works and

maintenance in or near water, PPG 6: Working at construction and demolition sites and PPG 21: Pollution incident response planning;

- In the event of a pollution incident occurring, SEPA and BEAR Environment Team will be notified within 24 hours of the event;
- Hydro-demolition works will be encapsulated in a double-skinned membrane to filter hydro-demolition water. Solid waste captured will be bagged and removed from site to a licenced landfill site by licenced waste carriers;
- Containment will be in place and a sump pit used to prevent untreated water being released into the marine environment;
- Fresh concrete will be poured in such a manner that no concrete is lost or can enter the marine environment;
- Removing material through milling will be carried out during suitable periods of weather to ensure that waste material is not blown or washed into the marine environment;
- Debris netting or thickened sheets will be installed around milling working areas, including around working platforms under the bridge, and a process will be in place to retrieve any dropped items;
- Waterproofing will be carried out within protective shelters and during periods of good weather, ensuring that all overspray is enclosed and does not enter marine environment;
- Edge protection will be installed around the bridge to ensure materials cannot be knocked over the edge into Kyle Akin;
- Sediment traps and sedimentation mats will be used where required during construction to prevent spillages and chemicals entering the water environment;
- All re-fuelling will take place at a designated refuelling site, away from Kyle Akin and any road drains;
- Oils, fuels and chemicals will be stored in bunded areas off the bridge at the best practice requirement of 110% of containment capacity of the volume stored. Drip trays will be used and maintained when dispensing;
- Spill trays will be fitted to all stationary construction plant;
- Waste will be stored in designated areas, isolated from surface drains and any other area that discharges into the environment. All skips will be covered or enclosed;
- 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 materials will be stored on appropriately bunded surfaces to prevent run-off of any materials into Kyle Akin;
- Prevention or containing of drainage and surface water run-off from site compound and storage areas during clearance, construction and post-construction to ensure there is no water pollution; and
- A contingency plan will be put in place to minimise risk of pollution incidents or accidental spillages and all necessary containment equipment will be available on site and staff trained in their use.

The proposed works are not 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:

No sensitive receptors have been identified within the study area in relation to geology and soils. The works to the bridge will have no impact on geological resources. There is no connectivity between Ob Lusa to Ardnish Coast GCR / SSSI and the proposed works.

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

WASTE, MATERIALS AND USE OF NATURAL RESOURCES:

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

demolition must be disposed of legally under the conditions of an agreed CAR licence.

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

Good practice proposed:

- The sub-contractor will adhere to waste management legislation and ensure they comply with their Duty of Care;
- The sub-contractor will provide all information on quantities of waste (including recycled and re-use) and transportation of materials required by the Operating Company;
- Re-use and recycling of waste is encouraged and the sub-contractor will be required to fully outline their plans and provide documentary evidence for waste arising from the works (e.g. waste carriers licence transfer notes and waste exemption certificates) as well as filling in the sub-contractor's waste return spreadsheet; and
- Mitigation measures described in the 'Water' section will be adhered to.

RISK OF MAJOR ACCIDENTS OR DISASTERS:

During the construction phase, with the implementation of appropriate signage and traffic management road 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.

Skye Bridge is adjacent and linked to Carrich Bridge via the A87, approximately 300m south-west of the proposed works and connects Eilean Ban to the Isle of Skye. The nature of the maintenance works at Skye Bridge are comparable to those at Carrich Bridge and much of the study area overlaps.

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

- **Is located wholly within and in close proximity to sensitive areas. The proposed works are located within the Lochs Duich, Long and Alsh MPA and Inner Hebrides and the Minches cSAC, and adjacent to Lochs Duich, Long and Alsh 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:

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

Location of the scheme:

- The works will take place entirely within the footprint of Carrich Bridge and iti s anticipated that there will be 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:

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

File references of supporting documentation: N/A

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

SIGNATURE: …… (Transport Scotland Environmental Advisor)

PRINT NAME:……

DATE: ……

Authorisation to publish Notice of Determination

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

PRINT NAME:……..

DATE: …….

TABLE 1: ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION: SUMMARY

Issue	Baseline Conditions	Impact	Mitigation
Air and Climate	Due to the rural locality of the works, air quality is likely to be reasonable with the main influence being vehicle emissions from the traffic using the A87. There are two potential air quality receptors within proximity to the bridge; the Gavin Maxwell Museum located approximately 330m south west and a wildlife watching hide located approximately 300m west of the bridge. The coastal environments of the Isle of Skye and Kyle of Lochalsh have a mild, wet and windy climate, influenced by the Atlantic Ocean and Gulf Stream to the west.	During the construction phase, 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. With good practices and management measures in place impacts on air quality are not anticipated to be significant. The proposed works are not expected to affect air quality during the operational stage, since it will not result in change in traffic levels or dynamics.	▪ Plant, machinery and vehicles associated with the works will have engines switched off when not in use in order to minimise emissions; ▪ Machinery and vehicles will have been serviced regularly; ▪ A traffic management plan will be in place to control the length of time that vehicles are idle; ▪ Large material stockpiles will not be required and drop heights will be minimised to avoid excessive dust generation; ▪ In prolonged periods of dry conditions, work areas will be dampened down where necessary. The contractor will implement this measure with care to avoid mobilisation of dust and debris as runoff and polluting the local environment; ▪ Any skips holding waste on site will be covered to prevent dust movement; ▪ Any loose materials will be covered during transportation to and/or from site.
Cultural Heritage and Material Assets	There are no designated cultural assets within the study area of 300m of the proposed works.	Due to the nature and location of the works there are no significant impacts anticipated on cultural heritage.	-
Biodiversity	<u>Designated Sites</u> Carrich Bridge is located wholly within the Lochs Duich, Long and Alsh designated Marine Protected Area (MPA). The MPA supports the Lochs Duich, Long and Alsh Special Area of Conservation (SAC) located directly south of the bridge and is designated for extensive tide-swept reefs, extremely sheltered rocky reefs, and horse mussel beds (Modiolus modiolus). Skye Bridge is also encompassed by the Inner Hebrides and the Minches candidate SAC (cSAC) designated for harbour porpoise (Phocoena phocoena). The Kinloch & Kyleakin Hills (Monadh Chaol Acainn is Cheann Loch) Site of Special Scientific Interest (SSSI) and Kinloch & Kyleakin Hills SAC are located on the Isle of Skye approximately 2.1km south of the proposed works. Qualifying features of these designated sites include blanket bog, old upland sessile oak woodland, European dry heaths, Northern Atlantic wet heaths and otter. Terrestrial and aquatic ecological habitat field surveys were undertaken within the study area in 2016 by BEAR Scotland Environment team and follow up surveys were then undertaken in February 2018 by Jacobs UK Ltd. During the 2016 surveys otter field signs were recorded within the study area including a possible natal otter holt located on the southern side of Eilean Bán and several otter couches. The 2018 surveys found further evidence of otters (three old spraint and a mammal path) and three otters were sighted in the mouth of Loch Alsh. The 2018 surveys found evidence of breeding bird habitat. No Schedule 1 protected birds were identified during the 2018 surveys. The coastal environment within the study area generally provides poor bat roosting and foraging potential. During the 2018 surveys no signs of bat presence were recorded. Harbour seals and grey seals are both recorded from the area with sightings of harbour seals notably higher. However, during the 2018 field	Without mitigation, there is the potential to disturb disturb receptors, including species and habitats, as listed in the 'Biodiversity' baseline section as a result of maintenance works. Activities that have the potential to cause disturbance can include the use of machinery, vehicles and plant, floodlighting, removal of vegetation and increased human activity. Following consultation with SNH in April 2018, they advised that with implementation of good practice and management measures, the proposed maintenance activities would not lead to a significant effect on any Natura 2000 site, MPA or SSSI, and thus their qualifying features. Adherence to the good practice and management measures, as listed above and in the 'Water' section, will result in no significant effects on the benthic receptors beneath and adjacent to the bridge, including PMFs. There is limited pathway to effect for fish and marine mammals from the proposed works at Carrich Bridge and these marine features are not considered further. The works have the potential to disturb otters in the study area including a disruption to normal foraging and commuting routes, and resting sites. With mitigation measures in place, impacts on otter are not predicted to be significant. There is potential disturbance for disruption to any nesting birds during the construction phase if works are conducted during the birds breeding season (March to August, inclusive). With mitigation measures in place, impacts on breeding birds are not predicted to be significant. The bridge and surrounding area is considered to offer low potential for roosting bats, therefore any impact on bats is not anticipated to be significant.	▪ Good practice measures to be followed including implementation of debris netting, protective shelters, containment and sumps, depending on the activity. An extensive list of good practice and management measures are listed in the 'Water' section. ▪ 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 effects on the benthic receptors beneath and adjacent to the bridge, including PMFs. ▪ An organisational otter licence (Number 118944 valid from 10 April 2018) obtained by BEAR Scotland NW Unit and Species Protection Plan will be followed during the main works until 31 December 2019 to reduce disturbance to otter; these are included in Appendix F. Conditions outlined in the licence will be followed by way of mitigation. ▪ Further otter surveys, consisting of remote monitoring using infra-red trail cameras and site visits, will be required to monitor use of the known otter shelter on Eilean Bán and the location/use of other possible shelter sites. The following mitigation is also proposed: o Setting up of an exclusion zone, distance to be determined following monitoring results. o 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; o The Otter Toolbox talk will be included in the Site Environmental Management Plan (SEMP) and delivered to site personnel prior to commencement of works; o A 'soft start' to works shall be implemented whereby machinery shall be switched on and before being used, machinery will be checked for the presence of otters; o Any excavations created will be covered over at the end of each shift and following completion of the works to avoid entrapment of otters; failing that, a ramp shall be provided within the excavations; o Any entrances to pipes/drains that are in the process of being constructed will be suitably protected to prevent otter access; and o Any lighting required to carry out the works to be directed away from the Eilean Bán and Kyle Akin, as far as reasonably practicable.

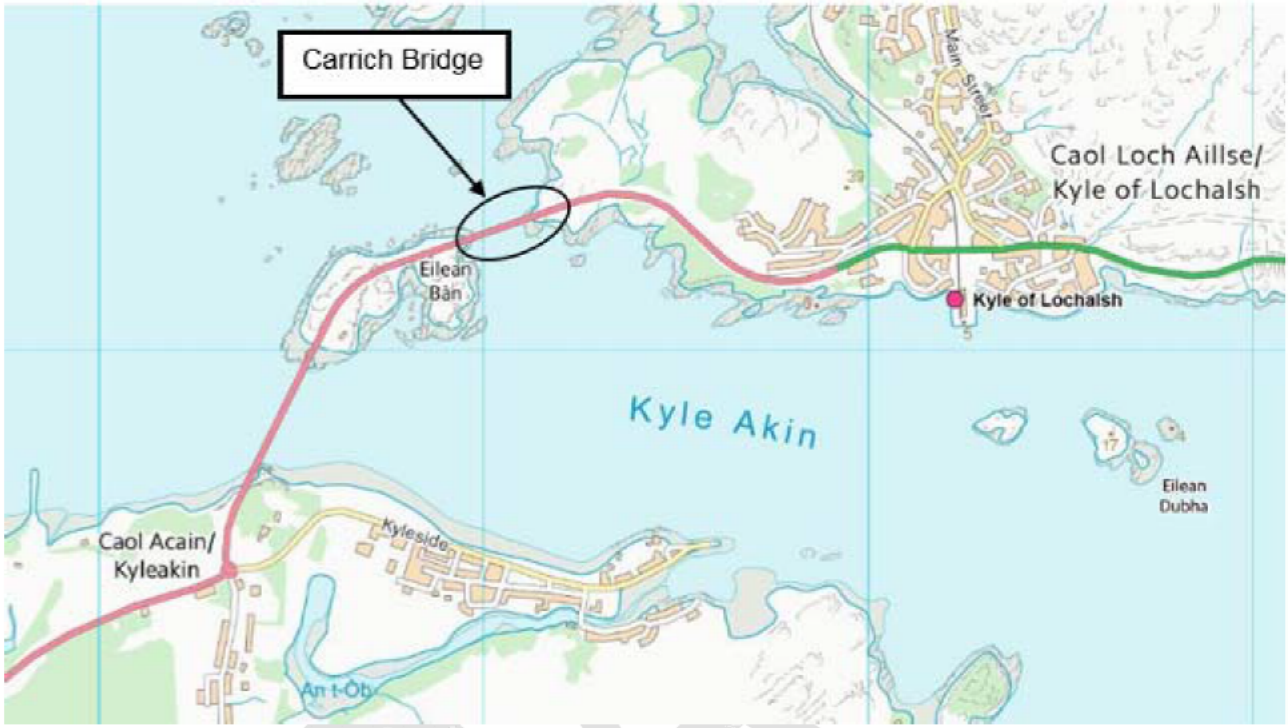
	survey a grey seal (Halichoerus grypus) was recorded in the open water less than 100m north of the bridge. Three diadromous fish species are known to be present in the area: Atlantic salmon (Salmo salar), anadromous brown trout (sea trout) (Salmo trutta) and European eel (Anguila anguila). River lamprey (Lampetra fluviatilis) may also be present in the wider area. All four species are listed as a Priority Marine Feature (PMF) and the Scottish Biodiversity List (BDL).		▪ If works are required during March to August, pre-maintenance breeding bird checks may be required. ▪ On site, staff will remain vigilant for breeding birds and nests in the gorse immediately adjacent to the proposed works (up to 10m from the carriageway). Should evidence of nests or breeding birds be seen, works will stop and the site supervisor will be informed who will then seek advice from the BEAR Environment Team. ▪ The good practice and management measures mentioned in the 'Air and Climate' and 'Noise' sections will ensure disturbance is adequately mitigated so that no likely significant impacts are expected.
Landscape	The landscape surrounding Carrich Bridge is a picturesque coastal environment, characterised by islands, islets, rocky shores, shrub and heath covered hills and mountains. The Inner Sound can be seen to the north and west and Kyle Akin feeding Loch Alsh to the south and east. The mountains of the Isle of Skye dominate the west and south horizon, and more gentle hills are seen to the north and east.	During the construction phase 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.. With good practice in place construction impacts on landscape are not anticipated to be significant. The proposed work is not expected to affect the local landscape during the operational stage, since it will not result in a major change in loss of vegetation, change in land use, increase in traffic flows, or change in structure / design.	▪ Land required for building the compound area will be confined to the minimum required area. It is likely that the compound will be located on the bridge deck as a self-contained welfare unit; ▪ The site will be kept clean and tidy during and following maintenance works; ▪ All waste will be removed from site, with a preference for recycling, otherwise disposal at a licensed waste facility in compliance with Waste Management Regulations; and ▪ Vehicles and large machinery/equipment will be kept as clean as possible.
Land	Land use within the study area is predominantly wild coastal environment with islands, islets and rocky shores covered in gorse and heath. The villages of Kyle of Lochalsh and Kyleakin are approximately 480m east and 900m south respectively.	It is anticipated that no land take will occur and no change in land use is expected.	
Noise	The predominant noise and vibration levels at Carrich Bridge are influenced by the existing A87; the only road which provides public, commercial and tourist traffic, access to and from the Isle of Skye. The bridge provides no natural or artificial noise screening such as fencing or trees.	There is a potential for disruption of sensitive receptors during the construction phase to the protected species mentioned in the 'Biodiversity' baseline section. Currently, the works are programmed to take place entirely during daytime hours to reduce potential impact from noise and vibration. If this changes, the The Highland Council Environmental Health Officer will be consulted and this will be included as an addendum to the ROD. With the implementation of the following good practice and management measures, noise and vibration impacts are not anticipated to be significant. The proposed works are not expected to affect noise and vibration during the operational phase since it will not result in a change in traffic levels or dynamics.	▪ Eilean Bán Trust, owner of Gavin Maxwell Museum and the wildlife hide, will be informed of the works at least 14 days in advance of the works; ▪ Consultation will be carried out ahead of the works with residential and commercial properties to inform them of the proposals. A 24-hour contact number will be provided; ▪ Temporary staff toilets/site compound will be located as far as is practicable from sensitive receptors; ▪ 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; ▪ 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; ▪ 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 site personnel will be fully briefed in advance of works regarding the need to minimise noise during any night-time period and of the site specific sensitivities; and ▪ Mitigation measures described in the 'Air and Climate' section will be adhered to.
Population and Human Health	AADF was recorded on the Department for Transport interative map in 2016 as 5155, an increase of 2110 vehicles between Kyleakin roundabout and Stoney Road in Kyle of Lochalsh since 2014 . There are no designated core paths or cycle routes within the study area,	Traffic management will be implemented to alleviate disruption to vehicle travellers throughout the construction periods. With the implementation of good practice and management measures, impacts on vehicle travellers are not anticipated to be	▪ 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 Carrich Bridge during the construction phase; and ▪ Motorists will be informed of works and likely delays via the Traffic Scotland

	however the footpaths which run adjacent to the road either side of the bridge and connect Kyle of Lochalsh to Isle of Skye are regularly used by pedestrians. The Plock Kyle's Community Parkland is an area of land (~100 acres) providing a path network, viewpoint, picnic area and golf course for the local and surrounding community of Kyle of Lochalsh, located approximately 290m east of the proposed works.	significant. NMUs are considered likely to be impacted during the period of maintenance works and whilst traffic management measures remain in place. With the implementation of good practice, impacts on NMUs are not anticipated to be significant. 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.	website, media releases and by variable message and fixed signs. ▪ The needs of NMU traffic will be considered within the design of the Traffic Management Plan; and ▪ NMU access between mainland Scotland and the Isle of Skye, via the Carrich Bridge, will be maintained during and following the maintenance works.
Water	Kyle Akin is a relatively narrow navigable strait directly underneath the Carrich Bridge, connecting the Inner Sound from the west to Loch Alsh in the east. The Inner Sound separates mainland Scotland and the Inner Hebridean islands of Skye, Raasay and Rona, and was classified by Scottish Environmental Protection Agency (SEPA) on the Water Classification Hub in 2016 as having High Overall Status, Overall Ecology, Physico-Chemical Condition and Hydromorphology. Loch Alsh is a sea loch between mainland Scotland and the Isle of Skye and was classified by SEPA in 2016 as having Good Overall Status, Overall Ecology and High Hydromorphology. The SEPA Flood Maps show that the Inner Sound foreshore on the mainland and Isle of Skye, and the whole of Loch Alsh, are susceptible to high levels of coastal flooding at the 10% Annual Exceedance Probability (AEP) (10-year) event. Road drainage at the bridge consists of kerb and gullies the length of the bridge, filter drains on the eastern approach and 'over the edge' direct runoff on the western approach.	There is potential for impacts on water quality as a result of the refurbishment works for potential discharge of silt, fuels, soils and waterproofing chemicals into the Kyle Akin, and subsequently, the Inner Sound and Loch Alsh. Hydro-demolition works may be required and would result in the production of large amounts of solids in solution which is likely to be mildly alkaline. Any waste water generated from hydro-demolition must be contained and either disposed of under a licence or treated before being discharged into Kyle Akin. With the implementation of good practice, management measures and mitigation, impacts on the water environment are not anticipated to be significant. The proposed works are not expected to affect water quality during the operational phase since it will not result in a change in road drainage patterns or traffic levels.	▪ A marine licence will be secured and all conditions will be adhered to; ▪ If required, all conditions of SEPA CAR licence will be complied with throughout the course of the works; ▪ Waste water generated from hydro-demolition will be contained and treated before disposal or discharge into Kyle Akin. The water parameters must meet a pH requirement of between 4 – 10 and also a Suspended Solids limit of 100mg/l; ▪ Relevant Construction Industry Research and Information Association (CIRIA) guidance and SEPA's Pollution Prevention Guidelines (PPGs) and Guidance for Pollution Prevention (PPGs) will be followed including PPG 1, 6, 7, 8, 13, 18, 21 and 22. Particular attention will be paid to GPP 5: Works and maintenance in or near water, PPG 6: Working at construction and demolition sites and PPG 21: Pollution incident response planning; ▪ In the event of a pollution incident occurring, SEPA and BEAR Environment Team will be notified within 24 hours of the event; ▪ Hydro-demolition works will be encapsulated in a double-skinned membrane to filter hydro-demolition water. Solid waste captured will be bagged and removed from site to a licenced landfill site by licenced waste carriers; ▪ Containment will be in place and a sump pit used to prevent untreated water being released into the marine environment; ▪ Fresh concrete will be poured in such a manner that no concrete is lost or can enter the marine environment; ▪ Removing material through milling will be carried out during suitable periods of weather to ensure that waste material is not blown or washed into the marine environment; ▪ Debris netting or thickened sheets will be installed around milling working areas, including around working platforms under the bridge, and a process will be in place to retrieve any dropped items; ▪ Waterproofing will be carried out within protective shelters and during periods of good weather, ensuring that all overspray is enclosed and does not enter marine environment; ▪ Edge protection will be installed around the bridge to ensure materials cannot be knocked over the edge into Kyle Akin; ▪ Sediment traps and sedimentation mats will be used where required during construction to prevent spillages and chemicals entering the water environment; ▪ All re-fuelling will take place at a designated refuelling site, away from Kyle Akin and any road drains; ▪ Oils, fuels and chemicals will be stored in bunded areas off the bridge at the best practice requirement of 110% of containment capacity of the volume stored. Drip trays will be used and maintained when dispensing; ▪ Spill trays will be fitted to all stationary construction plant; ▪ Waste will be stored in designated areas, isolated from surface drains and any other area that discharges into the environment. All skips will be covered or enclosed; ▪ 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 materials will be stored on appropriately bunded surfaces to prevent run-off of any materials into Kyle Akin; ▪ Prevention or containing of drainage and surface water run-off from site compound and storage areas during clearance, construction and post-construction to ensure there is no water pollution; and ▪ A contingency plan will be put in place to minimise risk of pollution incidents or

			accidental spillages and all necessary containment equipment will be available on site and staff trained in their use. ▪
Soils and Geology	There are no designated geological sites within the scheme study area.	No sensitive receptors have been identified within the study area in relation to geology and soils. The works to the bridge will have no impact on geological resources.	▪ 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	-	With the implementation of good practice, impacts relating to materials and waste are not anticipated to be significant.	▪ The sub-contractor will adhere to waste management legislation and ensure they comply with their Duty of Care; ▪ The sub-contractor will provide all information on quantities of waste (including recycled and re-use) and transportation of materials required by the Operating Company; ▪ All waste will be removed from site and disposed of safely and legally, preferably by recycling or re-use. Planings will be disposed of under a paragraph 13(a) exemption (as described in Schedule 3 of the Waste Management Licensing Regulations 1994); ▪ All temporary traffic management equipment, including signs and cones, will be removed from site on completion of works. ▪ Re-use and recycling of waste is encouraged and the sub-contractor will be required to fully outline their plans and provide documentary evidence for waste arising from the works (e.g. waste carriers licence transfer notes and waste exemption certificates) as well as filling in the sub-contractor's waste return spreadsheet; and ▪ Mitigation measures described in the 'Water' section will be adhered to.
Risk of Major Accidents or Disasters	The proposed works are situated within an area SEPA have classified as having a High risk to coastal flooding.	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 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.	N/A
Cumulative Effects	N/A	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 Dornie Bridge. However, no significant adverse effects were predicted at either Skye or Dornie bridge as outlined in the respective RODs for each bridge, and hence there would be no in-combination effects with Carrich Bridge. Appropriate programme planning will be undertaken, including scheduling the works as to avoid simultaneous traffic management at Skye and Dornie where practicable.	▪ Mitigation detailed in the RoD and SEMP will be adhered to. ▪ Appropriate programme planning will be given including scheduling the works as to avoid simultaneous traffic management at Skye and Carrich, wherever practicable.

APPENDIX A: SCHEME LOCATION AND EXTENTS

Figure A1: Location of proposed works



APPENDIX B: AIR AND CLIMATE

Figure B1: Receptors within 400 m of scheme

Table B1: Receptors within 400m of the proposed works

Receptor	Distance from Works
Wildlife watching hide (Eilean Bán Trust)	300m west
Gavin Maxwell Museum (Eilean Bán Trust)	330m west

APPENDIX C: CULTURAL HERITAGE AND MATERIAL ASSETS

Figure C1: Sites of designted cultural heritage assets recorded within 500m of scheme. Source: HES PastMap

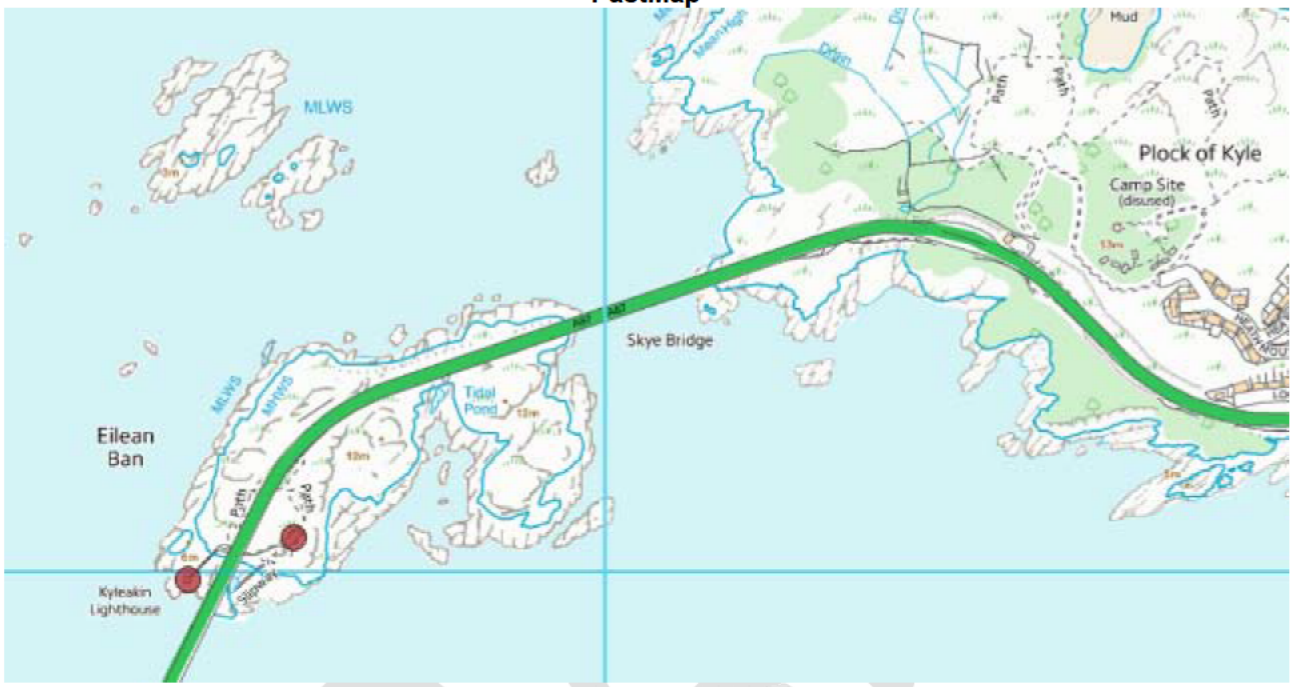


Table C1: Sites of designated cultural heritage assets recorded within 500m of scheme. Source: HES PastMap

Dataset UID	Name	OS NGR	Classification
LB6994	Eilean Bán, Kyleakin Lighthouse	NG 74508 26990	Listed Building Category B

APPENDIX D: BIODIVERSITY

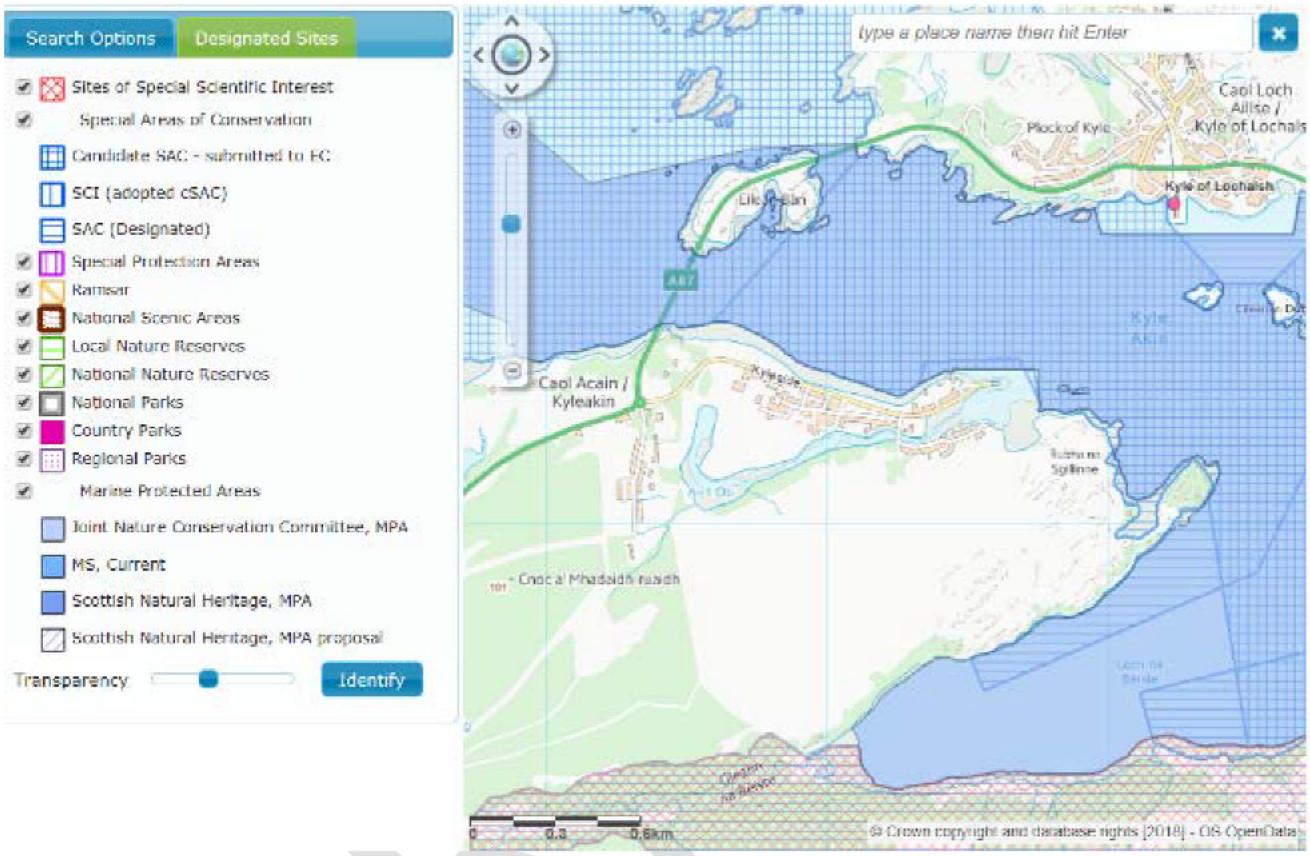


Figure D1: SNH Sitelink search results

Table D2: Designated sites within proximity to works

Name of Site	Designation	Distance from Works
Lochs Duich, Long and Alsh	Marine Protection Area (MPA)	<1m
Inner Sound and the Minches	Candidate SAC (cSAC)	<1m
Lochs Duich, Long and Alsh	Special Area of Conservation (SAC)	<5m
The Kinloch & Kyleakin Hills (Monadh Chaol Acainn is Cheann Loch)	Site of Special Scientific Interest (SSSI)	2.1km
The Kinloch & Kyleakin Hills	SAC	2.1km
Ob Lusa to Ardnish Coast	Geological Conservation Review (GCR) and SSSI	5km

Table D2: NBN Atlas search results within 5 km of the scheme (obtained under a CC-BY licence)

Taxon Name	Common Name	Taxon Group	Collector
Phocoena phocoena	Common Porpoise	Aquatic mammal	[Redacted]
Phoca vitulina	Common Seal	Aquatic mammal	
Tursiops truncates	Bottle-nosed dolphin	Aquatic mammal	
Bucephala clangula	Goldeneye	Bird	
Falco columbarius	Merlin	Bird	
Gavia stellate	Red-throated Diver	Bird	
Tringa nebularia	Greenshank	Bird	
Turdus iliacus	Redwing	Bird	
Haliaeetus albicilla	White-Tailed Eagle	Bird	
Turdus pilaris	Fieldfare	Bird	
Lutra lutra	Otter	Terrestrial mammal	
Martes martes	Pine Marten	Terrestrial mammal	
Sciurus vulgaris	Red squirrel	Terrestrial mammal	

Table D3: Invasive non-native species recorded on the NBN Atlas within 5 km of the scheme (obtained under a CC-BY licence)

Taxon Name	Common Name	Taxon Group	Collector
Neovision vison	American Mink	Terrestrial mammal	[Redacted]
Branta canadensis	Cananda Goose	Bird	
Fallopia japnica	Japanese Knotweed	Plant	

Figure D2: Ecological Photographs

Image 1: Three otters (likely one mother, two juvenile) underneath Carrich Bridge

Image 2: Potential breeding bird habitat (gorse) on eastern aspect

Image 3: Carrich Bridge and habitat on Eilean Bán and the mainland

Image 4: Rock armour and intertidal habitat on eastern aspect

APPENDIX E: CONSULTATION

Summary of Consultation

Consultee	Consultee Response	Addressing Concerns
SEPA	Engineering activities in coastal and transitional waters are not regulated by SEPA under CAR, but by Marine Scotland. SEPA expect a robust construction method statement. There may be additional site specific mitigation measures that require to be incorporated into working methods. There should be continuing supervision of construction operations and ongoing review of the effectiveness of any mitigation measures employed.	As already stipulated in the management measures, a sump pit will catch run off water and then waste concrete collected would be removed from the site. Discharge back into the marine environment would be regulated by MS-LOT and therefore be part of the Marine Licence application.
SNH	No likely significant effect on SAC. Possibility of affecting the features of MPA but not significantly.	Mitigation measure must be properly implemented.
WRFT	No further data to provide on fish in the vinicinty of the works when consulted.	

Consultation with SEPA:

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

Hi

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

Many thanks

[Redacted]

[Redacted]

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

Hi [Redacted]

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

As I understand your email, the potential to discharge such water in to the marine environment would actually be regulated by MS-LOT. As already stipulated in the management measures, a sump pit will catch run off water and then

waste concrete collected would be removed from the site. We then go on to suggest that a CAR licence would be obtained if we intend to discharge back into the marine environment; however, as I now understand this would actually be regulated by MS-LOT and therefore be part of the Marine Licence application.

Many thanks

[Redacted]

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

[Redacted]

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

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

Dear[Redacted]

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

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

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

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

If you have any further queries, let me know.

Kind Regards,
[Redacted]

Consultation with Scottish Natural Heritage (SNH):

Transport Scotland
Trunk Road and Bus Operations

Document: RECORD OF DETERMINATION (DRAFT)

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

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

[Redacted] thank you for consulting us requesting our pre application advice on the bridge maintenance work . Our opinion on these works is set out below. Please note that we have not included Connel Bridge as this will be dealt with colleagues in Argyll.

Dornie Bridge 17NW1203/40
Based on the information you've provided regarding scour the repair for the bridge, we agree with your conclusion of **Likely Significant Effect for the Lochs Duich, Long and Alsh SAC**. We also agree with your conclusion of **No Likely Significant Effect for the SAC** and that for the MPA these proposals are **capable of affecting the features but insignificantly** on all other aspects of the maintenance programme (assuming the mitigation measures proposed are properly implemented).

We agree with your conclusion that there will not be significant impacts on the special qualities of Kintail NSA.

Skye Bridge 17NW1203/049, Carrich Bridge 17NW1203/039
Based on the information you've provided and, assuming the mitigation measures proposed are properly implemented, we agree with your conclusion that there will be **no likely significant effect on the SAC** and that for the MPA these proposals are **capable of affecting the features but insignificantly**.

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

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

Regards

[Redacted]

Dualchas Nàdair na h-Alba | Tòrr Lunndaidh | An Gearasdann | Siorrachad Inbhir Nis | PH33 6SW
nature.scot – Connecting People and Nature in Scotland – @nature_scot

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

Hi both

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

I look forward to hearing from you in due course.

Kind regards

[Redacted]

[Redacted]

From: MS.MarineLicensing@gov.scot [mailto:MS.MarineLicensing@gov.scot]
Sent: 29 March 2018 08:58
To: [Redacted]
Subject: [EXTERNAL] RE: Marine Licence Applications for 5 year maintenance programme_BEAR Scotland

Hi [Redacted]

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

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

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

Kind Regards
[Redacted]

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

Subject: Marine Licence Applications for 5 year maintenance programme_BEAR Scotland

Dear Sir/Madam

Please find attached a covering letter and relevant supplementary documentation.

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

Regards

[Redacted]

Consultation with WRFT:

From: Wester Ross Fisheries Trust [Redacted]
Sent: 17 April 2018 15:48
To: [Redacted]
Subject: [EXTERNAL] RE: Diadromous fish data for Loch Alsh

Hi [Redacted]

Thanks for that – I don't have more info that I can easily pass on; could you remind me what you need the info for?

Best wishes,

[Redacted]

From: [Redacted]
Sent: 17 April 2018 14:39
To: Wester Ross Fisheries Trust
Subject: RE: Diadromous fish data for Loch Alsh

Hi [Redacted]

How are you? I wonder if you could once again assist me. I am after the most up to date info on the utilisation of R. Ling and Elchaig by diadromous fish. I came across the WRFT Review 2018 (February) but just wonder if there is anything else you might be able to add?

Once again, thanks for all your help!

[Redacted]

APPENDIX F: OTTER DISTURBANCE LICENCE

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

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

Animal Licence		
Licence Number: 118944	**Valid from :10-APR-18**	**Valid to :31-DEC-19**
This Licence has been amended from Licence Number : 92624		
Licence Holder : [Redacted]		
Address:	**Inveralmond Road** **Inveralmond Industrial Estate** **Perth** **PH1 3TW**	
Additional Persons		
Name	**Role**	**Additional Conditions**
BEAR Scotland North West Unit Staff	Agent	
This Licence is Granted under the following Legislation:		
The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended): Regulation 44 (2) (e)		
Project Details		
This licence permits the disturbance of otter for the purpose of preserving public health and safety in North West Scotland in areas covered by the North West Unit of BEAR Scotland. All works must be carried out in accordance with the document entitled: "BEAR Scotland NW Trunk Roads Operations and Otters: An Otter Species Protection Plan" by Julie Bhatti and subsequent correspondence agreed in writing between SNH Licensing Team and the licence holder, but subject to modifications or amendments imposed by the conditions of this licence.		
Activities, species and locations covered by this licence are listed in Annex 1		
Conditions		
1	All working methods, mitigation and compensation measures must be carried out in accordance with those set out in the licence application and supporting documents as listed in the project details of this licence, and any subsequent correspondence agreed in writing between SNH Licensing Team and the licence holder, but subject to any modifications or amendments imposed by this licence.	
2	All workers must be briefed about the likelihood of otters being found on site, the terms of this licence, and what to do if otter are	

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

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

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

Licence no:118944

Authorised on behalf of Scottish Natural Heritage by: Kieren Jones Date: 10-APR-2018

Licence no:118944

Annex 1: Permitted activites

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

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

Licence no:118944

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

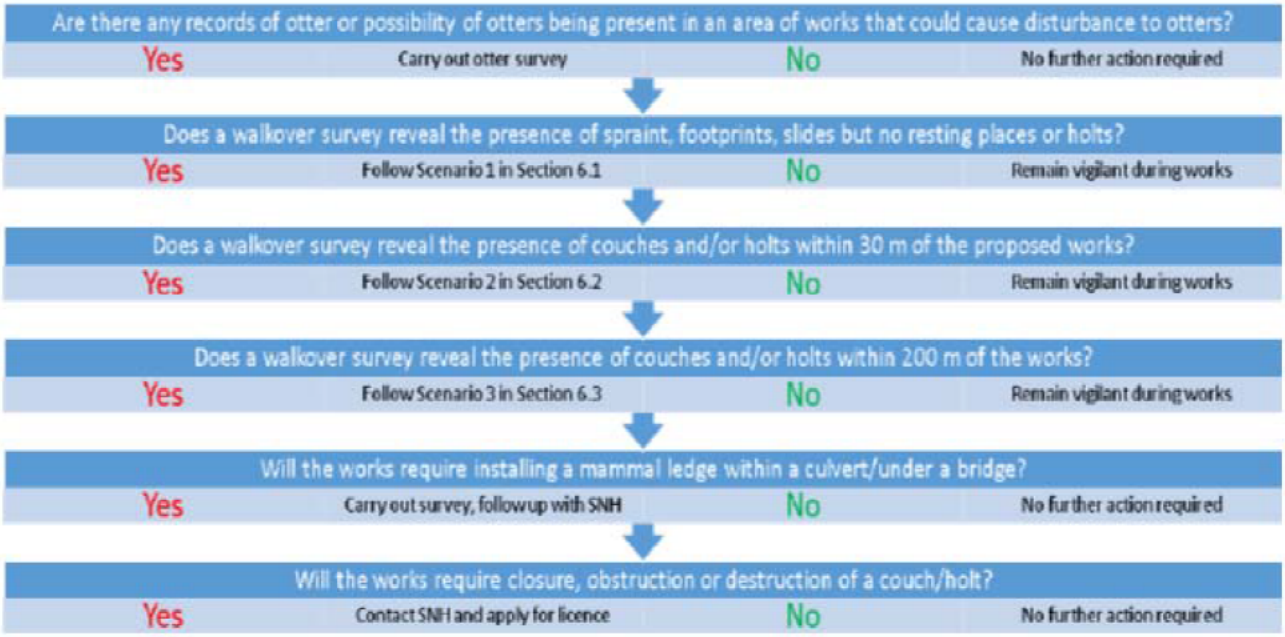
BEAR SCOTLAND	Transport Scotland North West Unit Otter Species Protection Plan	TRANSPORT SCOTLAND

BEAR Scotland NW Trunk Roads Operations and Otters:

An Otter Species Protection Plan

Contents

Flow Diagram Showing Decision Process



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

1 Introduction

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

1.1 Otters in Scotland

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

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

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

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

1.2 Otters and the Law

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

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

- Deliberately or recklessly capture, kill or injure otters;

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

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

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

1.3 BEAR Scotland

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

Under the contract, BEAR Scotland are responsible for:

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

2 Context

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

2.1 What the organisational licence will cover

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

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

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

2.2 Trunk road operations that may disturb otters or resting sites

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

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

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

3 Environment Team Capabilities and Survey Licences

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

Staff member	Qualifications	Survey licence number
Julie Bhatti, Environmental Manager	BSc.(Hons) MSc. MCIEEM, CEnv	62278
Sarah Rauch-Lynch	BSc. (Hons), HND with Distinction	57786
Steven Melvin	BSc. (Hons) MRes, Associate Member IFM, Pending Associate Member CIEEM	Agent on 62278
Stuart Anderson	BSc. (Hons) MSc. Pending Graduate Member CIEEM	Agent on 62278

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

4 Survey and Site Assessment

4.1 Desk-based Assessment

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

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

4.2 Survey Methods

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

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

4.3 Survey Results

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

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

Figure 4.1 Spraint on rock near Onich

Figure 4.2 Otter footprints in wet sand

Figure 4.3 Active otter couch/holt near Skye Bridge

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

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

5 Evaluating Impacts on Otters

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

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

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

6 Management Approaches

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

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

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

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

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

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

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

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

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

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

7 General enhancement measures for otters

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

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

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

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

8 What the licence will not cover

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

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

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

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

9 Annual licence returns

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

10 References

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APPENDIX G: BEAR 5YRML SUPPORTING INFORMATION, CARRICH BRIDGE

A87 280 Carrich Bridge
Scheme Number: 17NW1203/039
5 Year Marine Licence Application

March 2018

Produced for

BEAR Scotland

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Contents

1 Introduction

The A87 280 Carrich Bridge crossing comprises eight continuous simply-supported spans, six at 26 metres and the two end spans at 20.8 metres, linking the mainland to the island of Eilean Ban.

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

The Carrich Viaduct Bridge at Loch Alsh is the secondary structure in the crossing which links the Isle of Skye to the mainland at Kyle of Lochalsh on the A87 trunk road as shown in Figure 1.

Figure 1: Carrich Bridge Location

2 Background and Objectives

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

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

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

3 Programme of works

3.1 Schemes

3.1.1 Waterproofing/Resurfacing Renewal

Construction period: 2018/19 Construction Value: £250,000

The waterproofing on the bridge deck is reaching the end of its operational life and requires renewal. This activity will take approximately between 4 and 6 weeks to complete.

Outline Method Statement

1. Establish lane closure and traffic management
2. Plane/mill out existing surfacing
3. Break out footpath
4. Remove existing waterproofing with hand tools
5. Spray apply waterproofing
6. Restore kerbing and footpaths
7. Lay and compact new surfacing
8. Reinstate white lining
9. Demobilise from site

These works will be carried out above the MHWS.

Mitigation Measures

In order to prevent the materials entering the marine environment, the following measures will be taken.

1. Ensure that all milling works are carried out during suitable periods of weather to ensure that waste material is not blown or washed in the water.
2. Debris netting is to be installed around the area being milled.
3. Waterproofing will be carried out within protective shelters, ensuring that all overspray is enclosed.
4. Waterproofing will be carried out during periods of good weather (Tolerances specified by material supplier) to ensure no material is carried over the side of the bridge.

3.2 Cyclic Maintenance

3.2.1 Drainage cleaning

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

Outline Method Statement

1. Establish traffic management as required

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

3.2.2 Bird Guano Removal

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

Outline Method Statement
1. Establish traffic management as required 2. Establish underbridge access unit (lorry mounted or fixed) 3. Clean bearing shelves using hand tools
These works will be carried out above the MHWS.
Mitigation Measures
In order to prevent the materials entering the marine environment, the following measures will be taken. 1. Bird guano will need to be double bagged to prevent spillage. 2. Guano will be taken to a licenced facility.

3.2.3 Expansion Joint Renewal

The expansion joints will require periodic renewal. Carrich Bridge has 2 no joints, both of which are cast in situ. This activity will take up to 2 months to complete.

Outline Method Statement
1. Establish traffic management 2. Hydro Demolition of expansion joint and surrounding concrete. 3. Remove existing expansion joint. 4. Install new expansion joint. 5. Concrete in expansion joint 6. Demobilise from site
These works will be carried out above the MHWS.
Mitigation Measures
In order to prevent the materials entering the marine environment, the following measures will be taken. There are different measures to be taken with regards to the different types of joints being installed. 1. Hydro demolition will require containment and a sump pit to catch off run water.

2. Water will either be pumped into a storage tank and disposed of under licence, or discharged into Kyle Akin. A CAR licence will obtained for all discharges.
3. All waste concrete will be removed from site by licenced waste carriers.
4. Fresh concrete will be poured in such a manner that no concrete is lost or can enter the marine environment.

3.2.4 Parapet Renewal

The parapet at Carrick Bridge requires periodic renewal. This activity will take up to 4 months to complete.

Outline Method Statement

1. Establish traffic management
2. Install safety barrier
3. Remove existing parapet
4. Install new parapet
10. Remove safety barrier
11. Demobilise from site

These works will be carried out above the MHWS.

Mitigation Measures

In order to prevent the materials entering the marine environment, the following measures will be taken.

1. Edge protection to be installed to ensure materials can't be knocked over the edge of the bridge.
2. Debris netting to be used to stop waste and small items falling over the side.

3.2.5 Minor Concrete Repairs

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

Outline Method Statement

Large repair	Small repair
1. Establish traffic management.	1. Establish traffic management.
2. Hammer survey area	2. Hammer survey area
3. Hydro Demolition of damaged concrete.	3. Break out damaged concrete.
4. Clean steelwork and prepare surface.	4. Clean steelwork and prepare surface.
5. Install new concrete.	5. Install new concrete.
6. Demobilise from site.	6. Demobilise from site.

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

3.2.6 Minor M&E Maintenance
Lightning and Generators require periodic maintenance. These works will not create the potential for materials entering the marine environment. This activity will take up to 1 week to complete.

3.2.7 Use of underbridge units (static and mobile)
Inspections and works may require underbridge mobile platforms. This will either be lorry mounted or bespoke static platforms established underneath the bridge. These works will not create the potential for materials entering the marine environment.

3.3 Inspections

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

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

4 Early Screening Assumptions

4.1 Designated Sites

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

Designated Sites		
Site Name	Qualifying Features	Distance from Carrick Bridge
Lochs Duich, Long and Alsh MPA	• Burrowed mud • Flame shell beds	0km
Inner Hebrides and the Minches candidate cSAC	• Harbour porpoise (*Phocoena phocoena*)	0km
Lochs Duich, Long and Alsh SAC	• Reefs	0.05km
Kinloch and Kyleakin Hills (Meall an Chapl Acainn is Cheann Loch) SSSI	• Otter (*Lutra lutra*) • Alpine heath • Blanket bog • Bryophyte assemblage • Lichen assemblage • Subalpine dry heath • Subalpine wet heath • Torridonian • Upland oak woodland	2.1km
Kinloch and Kyleakin Hills SAC	• Northern Atlantic wet heaths with *Erica tetralix* • European dry heaths • Alpine and Boreal heaths • Blanket bogs • *Taxo-Aceripo* forests of slopes, screes and ravines • Otter (*Lutra lutra*)	2.1km

4.2 Screening Assumptions

The proposed maintenance works, as detailed above, are highly localised and confined to the immediate vicinity of the bridge. Likely durations of the activities will in some cases be dependent on the results of the inspections, but in all cases activity duration would be less than 4 months and in most cases less than a few weeks. The proposed maintenance works are therefore considered temporary.

With the exception of the activities 'bird guano removal' and 'minor concrete repairs', all maintenance works will be carried out from the surface of the bridge.

Screening of all proposed maintenance activities

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

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

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

The duration of 'minor concrete repairs' will not be known until inspections have been carried out, these repairs are anticipated to be a maximum of 2-3 weeks in duration. It is anticipated that 'bird guano removal' will take approximately 2 days to complete.

The repair works at Carrick Bridge will overlap with Lochs Duich, Long and Alsh MPA and Inner Hebrides and the Minches cSAC, and are within 100 m from the Lochs Duich, Long and Alsh SAC.

The MPA is designated for burrowed mud and flame shell beds. There are no records of burrowed mud features in the vicinity of the bridge and therefore it is unlikely that proposed activities could affect this feature, there being no reasonable pathway of effect. There is a flame shell bed through the mouth of Loch Alsh, under the nearby Skye Bridge and into the Inner Sound. This flame shell bed is known to extend to within 300m south of Carrick Bridge and therefore there is potential for the proposed maintenance activities to affect this feature. However, given the adoption of mitigation and good practice measures (as outlined above), the highly localised nature of the works and the short duration of all activities, it is our conclusion that any effects on the flame shell bed would be insignificant and not hinder the conservation objectives of the MPA.

The cSAC qualifying feature is harbour porpoise. None of the proposed activities will be carried out in the subtidal environment and there is no requirement for any waterborne maintenance activities. Hence, noise generated from the works will be limited to airborne noise. Given the adoption of mitigation and good practice management measures (as outlined above), the highly localised nature of the works, the short duration of all activities and the absence of a reasonable pathway to affect this feature, it is our conclusion that there would be no significant effect on harbour porpoise populations and therefore no likely significant effect on the cSAC.

The proposal is just beyond the boundary of the Lochs Duich, Long and Alsh SAC. The SAC is designated for its Annex I habitat 'reefs' and the SAC includes both rocky reefs and biogenic reefs. However, given the adoption of mitigation and good practice measures (as outlined above), the highly localised nature of the works and the short duration of all activities, it is our conclusion that that there would be no significant effect on the reefs and therefore no likely significant effect on the SAC.

The proposal is more than 2km from the boundary of Kinloch & Kyleakin Hills (Monadh Chaol Acainn is Cheann Loch) SSSI and Kinloch and Kyleakin Hills SAC. Otter are the only mobile qualifying feature of these sites (as outlined above). Given the adoption of the outlined mitigation (section 3) and good practice management measures (see above), the highly localised nature of the works, the short duration of all activities and that all works, except minor concrete repairs and bird guano removal, would be restricted to the surface of the bridge; it is our conclusion that there would be no significant effect on the qualifying features of the SAC or SSSI, including otter. Therefore, there would be no likely significant effect on the SAC

We are aware that there is a holt and couch on Eilean Bàn, whilst further couches and suitable habitat exist along the coast of Skye, adjacent to the bridge. Therefore, an application for a European Protected Species licence will be submitted in due course, outlining specific mitigation measures to reduce the potential for disturbance to this species.