



Northern
Lighthouse
Board

EUROPEAN PROTECTED SPECIES APPLICATION – SUPPORTING INFORMATION

Northern Lighthouse Board Oban Pier Timber Replacement – Phase 2



84 George Street
Edinburgh EH2 3DA

Tel: 0131 473 3100

Website: www.nlb.org.uk
Email: enquiries@nlb.org.uk

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1. Introduction

The Northern Lighthouse Board (NLB) have prepared this risk assessment in support of a European Protected Species (EPS) licence application submission to Marine Directorate Licensing and Operations Team (MD-LOT), for refurbishment of the NLB Oban base pier, involving replacement of timber piles and fenders, and metalwork stairs and ladders (hereafter referred to as the 'proposed development').

In advance of submitting the EPS licence applications to MD-LOT, NLB completed a review of existing information and sought advice from NatureScot with regards to the potential impacts of the proposed construction works on protected species. As part of this, key mitigation needs were discussed with NatureScot, which are included in the EPS licence application.

EPS are animals and plants (species listed in Annex IV of the Habitats Directive) that are afforded protection under The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) and the Conservation of Offshore Marine Habitats and Species Regulations 2017. All cetacean species (whales, dolphins and porpoise) are EPS. If any activity is likely to cause disturbance or injury to an EPS, a licence is required to undertake the activity legally. The licensing of Marine EPS in Scotland is shared between several regulators depending on the purpose and location of the activity in question. For activities taking place within 12 nautical miles of the coast (the Scottish Territorial Sea), EPS are protected under the 1994 Regulations. For commercial activities, including geophysical or seismic surveys (including those related to oil and gas), port and harbour developments and the installation of renewable energy devices, Marine Scotland (on behalf of the Scottish Ministers) is the licensing authority under the 1994 Regulations: Regulation 39 (1) (a). For activities relating to scientific research or conservation, NatureScot is the licensing authority. A licence may be granted to undertake such activities if certain strict criteria are met:

- There is a licensable purpose.
- There are no satisfactory alternatives.
- The actions authorised will not be detrimental to the maintenance of the population of the species concerned at favourable conservation status⁷ in their natural range.

The flowchart in Figure 1 below shows the decision-making process for licensing, taken from the Marine Scotland guidance.

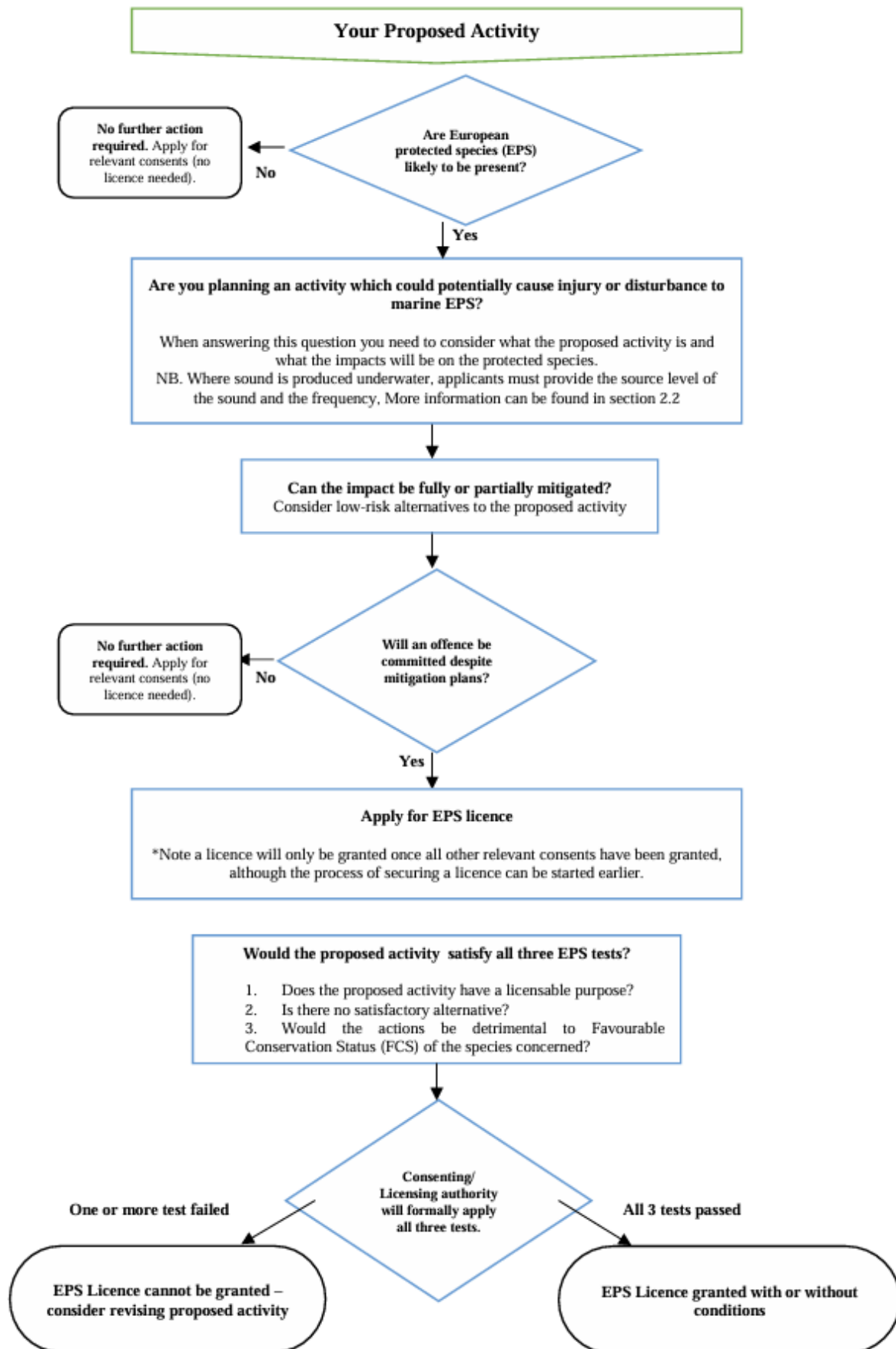


Figure 1: EPS decision making flow-chart (from Marine Directorate guidance).

2. Description of the Project

We currently operate and maintain 206 lighthouses and 170 buoys as well as providing radio aids to navigation (AtoN). We are also responsible for ensuring other AtoN providers in our area, such as port authorities, are conforming to international standards. We operate two ships NLV PHAROS and NLV POLE STAR. The ships carry out buoy work, deliver stores and supplies to lighthouses and inspect navigation aids on oil and gas rigs in the Scottish sector. They are both based at NLB Oban, and use the pier there as a berth.

The central section of the pier consists of a T-shape extension to the original pier added in the 1950's. This provided a front edge of approximately 49m and allowed for berthing in deeper water. This was then extended in the early 2000's to provide NLB with a larger operational surface area, extending the central section by approximately 10m and creating new eastern and western sections to the pier. All seaward faces have timber fender piles, though only the central section is currently used for berthing.

Based upon visual assessment of the timber elements, it was concluded that a number of repairs are required to bring the structure up to a satisfactory standard. The condition of the timbers is generally poorest at the lowest sections. Repairs were identified for the most critical elements, in terms of the importance of their function and the severity of the defects. These were successfully actioned in 2022, under Marine License MS-00009646. The report also highlighted less urgent repairs, which are the works that are to be covered by this project.

The pier is situated partly below Mean High Water Springs (MHWS) and therefore a marine licence is required for its maintenance.

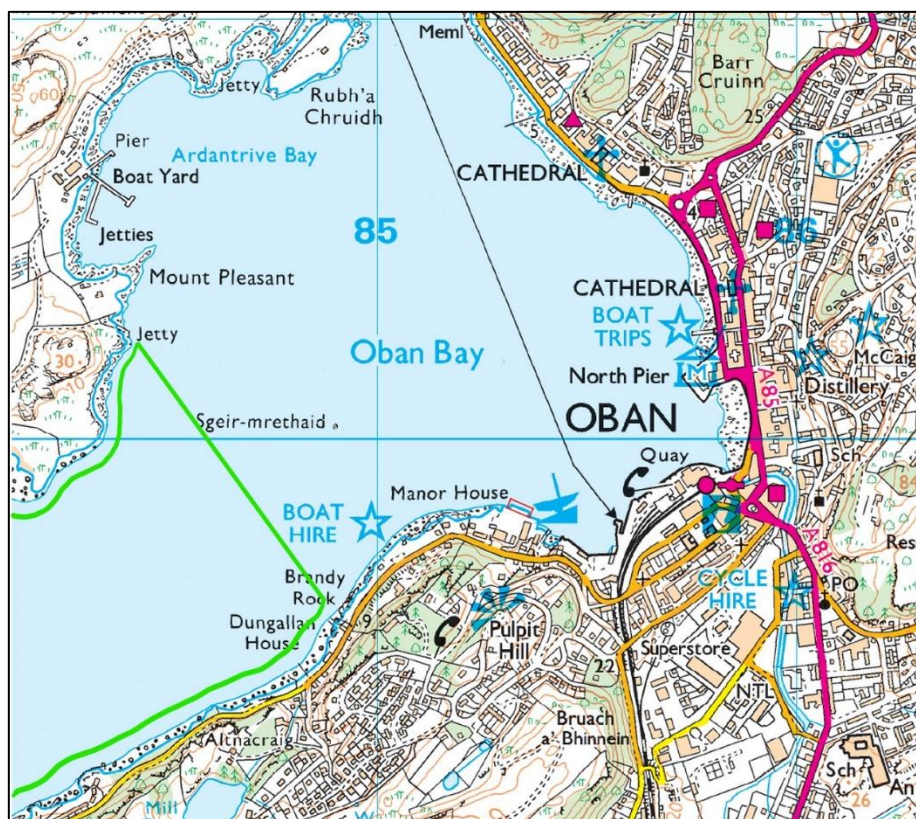
There is a clear economic need to have the works carried out – the services which NLB carry out are essential to the mariner, and as the Scottish economy is largely driven by imports and exports by sea, our work can be seen to directly support the economy. Being unable to use the pier at our main base at Oban for any length of time due to unplanned maintenance would be detrimental to our operations, and therefore detrimental to the local and national economy.



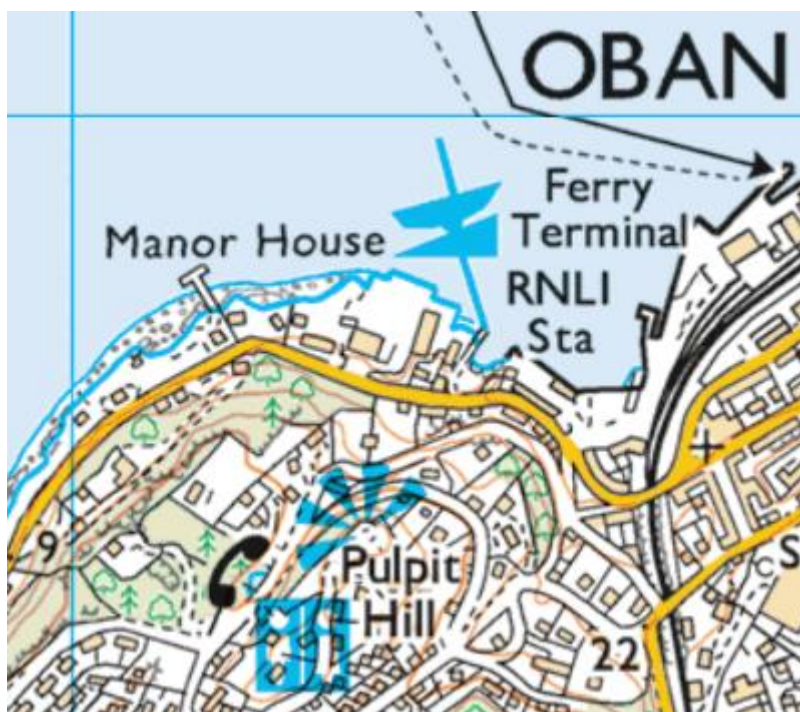
Photo 1: NLB Oban and it's associated pier.



Photo 2: Close-up photo showing timber piles to be replaced like for like.



1000m



500m

Licence site shown in red
 MLWS and MHWS shown in blue
 Loch Sunart to the Sound of Jura MPA/ Hebrides and Minches SAC shown in green

3. Requirement for an EPS License

As the project requires replacement of existing timber piles, these works could potentially be damaging to any harbour porpoise within the immediate vicinity of the site. As all cetaceans are protected species, an EPS license is required. This follows consultation (via an earlier Marine License application process) with NatureScot, the Marine Directorate and Argyll & Bute Council.



Figure 2: Harbour porpoise, *Phocoena phocoena* (image from HWDT).

4. Baseline Information

Harbour porpoise, *Phocoena phocoena*, exist within the marine environment around Scotland at all times of the year (Regional baselines for marine mammal knowledge across the North Sea and Atlantic areas of Scottish waters, Hague et al). They are the most prevalent cetacean in Scottish waters.

It was previously estimated that in the waters around Oban, the density of harbour porpoise was relatively low compared to eastern areas of Scotland, at around 0.1 to 0.3 animals per km² (Hammond & Lacey short note, Appendix 3: SCANS surveys). This density of harbour porpoise is known to be at the lowest in winter months, and highest during summer (Waggitt et al, 2020).

However more recent survey data has suggested a higher density of harbour porpoise in the inner hebrides, and analysis by Hainanen and Skov (2015) led to designations of the the Inner Hebrides and Minches SAC, with harbour porpoise being an Annex II species (i.e. one of the main reasons for the designation). The data used in this analysis suggests harbour porpoise densities in the area to be in the region of 5 to 10 animals per km². This is the population density considered in further analysis.

5. Sensitive Receptors

NLB Oban base is not located within the Hebrides and Minches SAC, however, it is approximately 0.7km air and water distance from the area (NatureScot site code: 10508; EU site code: UK0030393).

Harbour porpoise are considered highly mobile within not just the SAC but the surrounding waters, and so there is a potential for them to be affected by the development through disturbance from underwater noise.

Additionally, the work site is approximately 0.7km air and water distance from the Loch Sunart to the Sound of Jura MPA (NatureScot site code: 10418; EU site code: 555560466). However, this MPA covers control of fishing or related activities directly within the boundaries and so the proposed development will not affect this.

It should be pointed out that there are other designated areas within the zones of influence noted above, but for clarity are outwith the marine environment so will not be affected by the proposal.

Further, from use of the Hebridean Whale and Dolphin Trusts sighting data, the only European Protected Species known to occur within the zone of influence for underwater noise propagation from the development are Harbour Porpoise.

6. Construction Works

All works will be carried out in compliance with the pollution control information on SEPA's website: <https://www.sepa.org.uk/regulations/water/pollution-control/>

The works to replace the existing cope beam will be undertaken from the existing pier, with the section of cope beam being replaced concurrently with the corresponding marine element of works, ensuring that the pier side remains operational throughout.

The physical works within each phase vary dependant on the repairs required. However, the general sequence of the works within each phase will be as follows:

- Remove existing lower waling beam
- Remove existing intercostals either side of pile
- Remove/ extract existing pile (10 no.)
- Drive (vibro) and fix into position new pile
- Install and fix into position new waler beam
- Install and fix into position new intercostals

It is expected that the timbers will be slung out of and into position by a landbased crane, and the associated metalwork and fixings will be removed and installed working from a pontoon platform with support from crane and man basket. This element of work will require the appropriate tide levels to provide access to the bolts, and no aspect of this work will be carried out underwater.

Piles will be removed and new piles installed by crane, and driven by a small hydraulic vibro hammer to achieve a nominal embedment in the seabed material (within existing pile holes).

In addition to the crane and vibro hammer, supporting plant will comprise compressor and air operated hand tools (saw, grinder, auger, impact wrench), weld set & oxy acetylene burning gear and safety boat. All fuelled plant will have appropriate oil drip trays under and spill kits in attendance.

Removing existing timbers that are being replaced will require these timbers to have temporary supports in the form of chains and slings in order that bolts and fixings can be removed by grinder, impact wrench, spanners or burning gear, with fire safety equipment in attendance. On removal of fixings, timbers can then be slung by crane, temporary chains & slings removed, and timbers hoisted to the pier deck.

Installing new timbers will require piles to be in position, brackets presented to the appropriate piles, the piles marked at bracket bolt locations and the timber piles drilled. Brackets can then be bolted to piles and walings lifted in by crane and presented to brackets, walings marked for bolt locations and waling returned to pier deck for drilling. Walings will then be lifted back to the brackets and bolted in position. A similar process will be carried out for all other elements.

The programme of works on site is short, with 5 weeks set aside for the entire project. Each of the 10 piles to be replaced, which will be the only source of underwater noise, will take approximately 10 minutes to remove using a vibro hammer, and 10 minutes to replace with a vibro hammer. Works will take place during low tides to minimise the amount of underwater work required.

7. Potential Impacts From Works

The impact on the marine environment from the project, particularly on the protected species expected to be encountered, is limited to noise generation from vibro piling.

From the available literature, and a study of similar EPS license applications for other similar projects, the noise generated from the vibro piling at Oban pier will be continuous rather than impulsive.

At this stage, we expect that for each of the 10 no. piles to be replaced, the length of time that vibro piling will take place will be up to 10 minutes per pile for extraction, and similarly up to 10 minutes for re-siting the new piles in existing holes. This duration is short as the depth required to be extracted/ driven is shallow.

A review of similar EPS license applications suggests that this vibro piling could induce Permanent Threshold Shift (PTS – hearing injury) in VHF receptors at an average distance of 60m, and a maximum distance up to 130m from the noise source. Temporary Threshold Shift (TTS – recoverable hearing loss) occurs at an average distance of 170m, and a maximum distance of 530m from the noise source.

Using the figures above, it can be seen that the maximum distance from noise source for TTS in sensitive receptors is less than the distance from site to the Hebrides and Minches SAC. However, as harbour porpoise are transient in behaviour, it should be conservatively considered that the works may disturb populations based within this statutory designated area.

Using the figures above for maximum TTS, the area in which behavioural changes would occur within the local population of harbour porpoise would be 0.56km². Using the figures above in Section 4 for expected peak densities, this equates to disturbance of potentially 6 animals per vibro piling operation.

These figures for PTS and TTS distances consider a static animal, and would be much lower for a fleeing animal – it would be expected that a healthy harbour porpoise would flee any source of damaging noise. It should also be stated that these figures were for driving an entirely new line of sheet-metal piling. At Oban pier, we are driving timber piles into existing holes – the noise levels and frequencies are expected to be much lower. It should further be noted that Oban bay area in general is a busy sea port, with multiple vessel movements per day. This will generate quite a high level of background noise, at various frequencies, which will reduce the effects of a 'step-up' in noise created by the proposed works.

8. Mitigation

It is clear that the proposed works may impact on local populations of harbour porpoise, and so there are a number of embedded mitigation measures, and good practice mitigation measures that will be adopted.

Firstly, the main embedded mitigation measure is design related avoidance of impacting sensitive receptors. The proposed development is for replacement of structural elements of the pier. This is required for the future longevity of the pier, and therefore the continued service of NLB to the mariner. By replacing like-for-like instead of constructing a new pier, this can be seen to minimise the impact on sensitive receptors as much as possible.

Additionally, carbon emissions will be minimised as much as possible through careful material selection and construction methodologies. Transportation will be minimised by utilising local contractors and suppliers as much as possible, which lessens the usage of fossil fuels and impact on flora and fauna by vehicles on the road or in the water.

In terms of good practice mitigation, the main method employed will be to follow JNCC guidance for minimising the risk of injury to marine mammals from piling noise (JNCC, 2010). This methodology is summarised below:

- Each pile will be installed through a double height gate.
- Once the gate is in location, the pile will be pitched by the attending crane.
- The pile will be plumbed and lined prior to driving.
- The pile will be driven using an 5t vibro hammer or similar that exerts 860kN force.

Each pile install will follow the below protocol as outlined in the marine licence and JNCC guidelines.

- Marine piling is only expected between the hours of 0700 and 1800 Monday to Friday. It is expected that there will be no marine piling on a Saturday or Sunday.
- As well as the time restrictions, vibro piling is only expected for 2 hours within a 24 hour day.
- Prior to any impact piling commencing, Marine Mammal Observation (MMO) trained operatives will carry out observations within the 530m mitigation zone, Figure 2 below for a minimum of 30 minutes. If the weather is adverse and the 530m mitigation zone cannot be seen, no piling can commence. Piling can only commence once the MMO gives the go ahead.
- If any marine mammals are spotted during this 30 minute pre piling phase. No piling can commence for at least 20 mins or until the MMO is satisfied the marine mammal has left the mitigation zone.
- The next phase is to adopt the soft start procedure. This is where the marine piling commences slowly over a minimum of 20 minutes.
- The marine piling will increase power over the 20 minute period where the piling will hit full power no less than 20 minutes from starting. As a rule of thumb, the power should be increased by 20% every 5 minutes.
- If a marine mammal enters the mitigation zone within the 20 minute soft start process, the piling can continue at the same power as when the marine mammal entered the mitigation zone. The power can only continue to increase following instruction from the MMO.
- If a marine mammal enters the mitigation zone when the hammer is on full power, the marine piling operations will not cease as the marine mammal has entered "voluntarily."

- If there is a break for 10 minutes or more in the marine piling operations, a soft start procedure must start again. During marine piling operations, the MMO will be on watch duty for the full duration therefore a pre pile search is not required again following the break.
- MMO reports will be collated for each impact piling operation and will be submitted at the end of the marine piling activity.

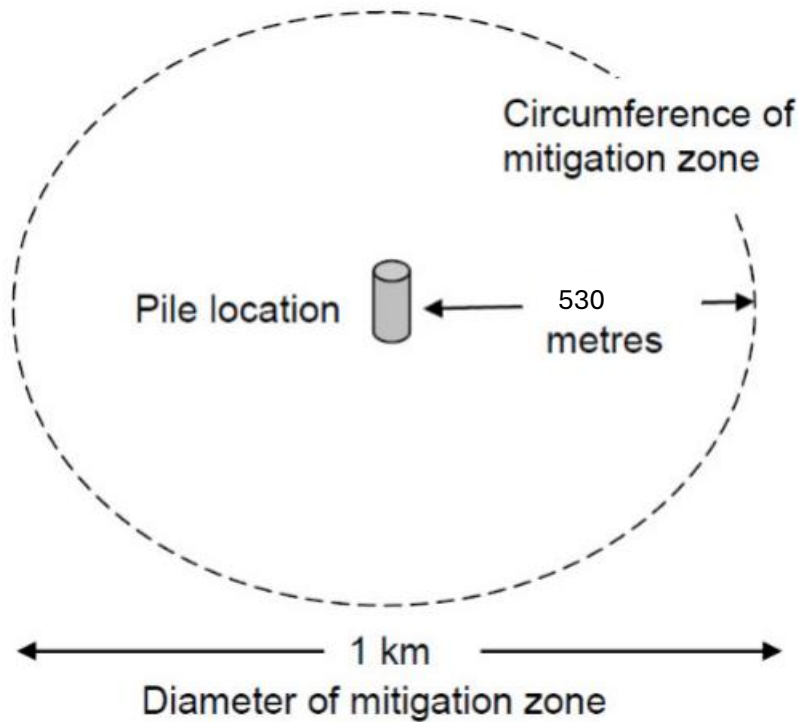


Figure 3: Mitigation zone using JNCC piling protocol.

Pollution prevention measures that will avoid pollution/run-off of materials into the harbour and the surrounding habitats, for example:

- designation of impermeable areas for concrete handling/mixing and for washing and cleaning at least 10m from surface drainage systems, flood risk areas, local waterbodies and marine environment
- collection of foul effluent and removed from site by licensed waste disposal companies as controlled waste
- good housekeeping for fuels, oils and chemicals including the use of drip trays
- toolbox talks on pollution prevention.

All site staff will receive toolbox talks on the potential risks of contamination and the potential threats this can pose to the environment including designated features and supporting habitats. All staff will be required to report any observations of deceased or visibly affected marine life (including designated species and their prey sources) to the site manager. Should any instance of this occur it will be communicated with the environmental lead for the scheme who can investigate. If it is deemed that the release of contamination is having adverse effects on the environment, then associated works will need to be paused whilst a solution is determined.

A Site waste management plan will be provided to prevent contamination of the habitats surrounding the site from any hazardous waste arising from construction.

A Biosecurity Management Plan will be developed and certain biosecurity protocols will be adhered to. These include the following: Pre-construction walkover surveys will be undertaken to search for the presence of invasive non-native species (INNS) across accessible areas of the proposed development prior to any works taking place. If INNS are identified, these will be cordoned off and avoided / dealt with appropriately.

Toolbox talks will be held with site workers to raise the awareness of how to avoid, deal with and identify INNS (if present).

- If INNS are spotted on site, work will be stopped, and the site manager will be contacted immediately with advice sought from environmental specialists.
- Management measures such as the use of Virkon (a disinfectant), and deep cleaning of plant and machinery before arriving at the site and changing sites, along with adhering to a Clean-Check-Dry procedure will be implemented.
- A stringent system of vehicle maintenance and cleanliness will be implemented during construction works, including frequent vehicle washing between road and beach access. Where it is necessary to move anything on or off site and where plant machinery is to be moved from one part of the site to another, biosecurity measures will be applied in line with 'Check-Clean-Dry' recommendations from the Non-Native Species Secretariat (NNSS). This would involve washing down, visual inspection, disinfection and / or thorough drying.
- Boot washing as well as equipment cleaning facilities (with a biocide such as Virkon) will be provided and carried out when entering and exiting site.
- Production of a marine biosecurity plan according to guidance¹¹ which will include measures to reduce/eliminate the risk of introducing or spreading INNS on site. The Contractor will update and maintain a site-specific marine biosecurity plan. Measures include the following: Sections of the plant that would come into direct contact with the intertidal area (track/wheels), if any, will be thoroughly cleaned before and after use to avoid the spread of any INNS (e.g. wheel washing facilities should be provided).

Where possible, existing material will be reclaimed, therefore lowering the risk of the introduction of invasive species. Any imported material will be bespoke. If this is not possible, it will be ensured that imported material has not been utilised in the marine environment previously. Again, if this is not possible, imported material will be screened for INNS ahead of its use on site.

Vessels will comply with relevant ballast water management requirements including where travelling to the site from outwith UK waters the IMO Ballast Water Management (BWM) Convention 2004, which establishes standards and procedures for the management and control of ships' ballast water and sediments. Measures within the ballast water management plan will include detail of vessel specific measures, require vessels to complete a ballast water record book, conduct regular inspection, and where necessary hold an international ballast water management certificate.

All vessels will also comply with the Merchant Shipping (Anti-fouling Systems) Regulations 2009, which prohibit the use of harmful organotin compounds in anti-fouling paints used on ships and establish a mechanism to prevent the potential future use of other harmful substances in anti-fouling systems and places into UK law Regulation (EC) 782/2003 on the prohibition of organotin compounds on ships – this would prevent marine water pollution arising from the use of construction vessels.

Prior to construction, an appropriate level of pre-works ecological checking surveys will be undertaken, which should be timed accordingly based on phases of the construction works. Given the level of mobility of some species such as otters, there is always potential for new places of shelter to be established within the Zol of the planned works. Equally, if there is a significant delay to the commencement of works and/or sequence of works, an update to the ecological baseline may be required.

Toolbox Talks should be completed for all site staff to highlight awareness and mitigation with regard to protected species. Species specific mitigation should be detailed within the CEMP / Construction Method Statement.

- If construction works are planned to be start during the bird breeding season (1 April–31 July inclusive), a checking survey will be conducted within the works corridor and 10 m buffer for active bird nests prior to commencement of works. Where nests are found a minimum 10m radius demarcation zone will be implemented while the nest is active.
- Sensitive artificial lighting techniques, such as directional and hooded lighting, will be adopted to reduce any disturbance to bats, birds, marine mammals and fish during hours of darkness. Especially if illumination is required on the foreshore, light spilling into the wider water will be minimised/reduced.

Where practicable the control measures set out in BS 5228:2009+A1:2014 Part 1 and 2, Sections 8 will be implemented. Best Practicable Means (BPM) that will be adopted to ensure airborne noise and vibration is kept to a minimum that will also contribute to minimise underwater noise include (but are not limited to):

- control of working hours;
- employing only modern, quiet and well-maintained equipment (all equipment will comply with EC Directive 2000/14/EC, UK Statutory Instrument 2001/1701 and BS 5228)
- any plant, equipment, or items fitted with noise control equipment found to be defective will not be operated until repaired
- where reasonably practicable, fixed items of construction plant will be electrically powered from the mains supply in preference to being diesel or petrol driven
- avoidance of unnecessary noise (such as engines idling between operations, excessive revving of engines, dropping items when handling materials, constant banging when erecting or striking scaffolds) by effective site management
- indirect method of controlling noise: application of quieter alternative construction methodology to achieve the objective (e.g. vibratory piling techniques or hydro-demolition as opposed to more conventional but noisier techniques) and selection of quieter tools/machines
- best practice will be applied to all construction works and will follow the general guidance contained within BS 5228, which will be set out in the Construction Environmental Management Plan (CEMP). Best practice will be reviewed and updated throughout the works, also in response to control of noise via contract specification of limits, monitoring results and any complaints received

- careful planning of the sequence of work in order to minimise the transfer of noise/vibration in the water environment and limit the use of machines in contact with it.

For good practice, during construction, the contractor should record daily log of and EPS sightings and report them.

All vessels will ensure compliance with standard marine vessel policies, such as:

- Convention for the Prevention of Collisions at Sea (COLREGs) (International Maritime Organisation (IMO), 1972) – this would prevent construction vessels from travelling at high speed and reduce risk of vessel strike
- International Convention for the Prevention of Pollution from Ships (MARPOL)(IMO, 1997), and the Convention of the Prevention of Marine Pollution by Dumping of Wastes and other matter (IMO, 1996) – these would prevent pollution events arising from construction and operational vessels.

Vessels in transit and manoeuvring in coastal waters during construction will be within speeds outlined by Maritime and Coastguard Agency's (MCAs) legislation and guidance.

The Scottish Marine Wildlife Watching Code and the Guide to Best Practice for Watching Marine Wildlife will be adhered to during any vessel-based operations. Relevant measures include:

- All vessel engines and propellers will be kept well maintained to minimise noise.

Should a marine mammal, or other receptors be encountered whilst underway outside of noise emitting operations, the vessel shall avoid sudden unpredictable changes in speed, direction and engine noise. Vessels should not cut off an animal or group of animals by moving across their path. Vessel movements should give seal haul-out sites a wide berth. Vessel routes should avoid entering the sea adjacent to designated seal haul-out sites.

The use of a suitable Code of Conduct, such as the WiSe Scheme, primarily for wildlife watching however, outlines measures for vessel operation around marine wildlife and will be used as avoidance measure for any collision risk posed to marine mammals during construction works and transit.

9. License Assessment Justifications

Each EPS License application is assessed against three tests; there is a licensable purpose, there are no satisfactory alternatives, and the actions authorised will not be detrimental to the maintenance of the population of the species concerned at favourable conservation status in their natural range. The below seeks to demonstrate how each of these three tests is passed for the proposed development.

Test 1: There is a licensable purpose

For a licence to be issued, the project must define how it relates to one of the purposes referred to in Regulation 44 (2) of (The Conservation (Natural Habitats, &c.) Regulations 1994 (As Amended)). The project is intended to:

- Allow for the safe operation of Northern Lighthouse Board vessels, which carry out safety critical work in terms of maintaining adequate provision of Aids to Navigation within Scottish waters.
- There is a secondary purpose that the proposed development supports the continued safe operation of commercial vessels which rent berthing space from the NLB Oban base.

As such it is considered that these intentions meet an imperative reason of overriding public interest (IROPI) from an economic and social nature with some benefit to the environment.

Test 2: There are no satisfactory alternatives

The works are like-for-like replacement of life-expired critical structural elements, which would require a full cessation of operations at the pier if they were to fail. Due to nature of how these elements work structurally, they require to be supported off the seabed.

Essentially, as we are only replacing a small number of the piles which comprise the pier, it makes most sense from a constructability point of view to replace them like for like. To install timber piles, there are only two methods commonly used - drop hammers or vibro hammers. Vibro piling is commonly recognised (including by JNCC) as being less disruptive to receptors compared to drop hammer piling.

Other methods of supporting the existing pier exist, such as sheet piling, bored piles etc. These were explored at an early stage, but it was found that they would then result in a pier that had two primary methods of construction, rather than one. This would then lead to more complicated maintenance schedules, which may then lead to oversights in the pier condition and a shortened lifespan. Further, introducing a new method of construction would require careful consideration to ensure the berthing face was kept uniform and therefore useable. It would require a lot more physical works on site, which would be more disruptive to the local environment.

Timings wise, we will aim to utilise low tides for driving piles. This will limit the area underwater affected by the operation at the time of driving, and therefore reduce the impact of the operation. From the previous phase of works, the effort required to redrive the new timber piles in to the sockets left by the old piles was extremely low, and the whole driving operation for each pile was done very quickly. Unfortunately, I do not have specific data from the previous phase, but it's worth stressing that we are putting like-for-like piles into old holes. We aren't going to be driving into virgin seabed.

There are no other satisfactory alternatives for providing suitable upgrades, other than construction of an entirely new pier structure in another location. This would obviously cause much more disturbance to local flora and fauna and the local community, as well as proving much more costly.

Test 3: Maintenance of species at favourable conservation status

It was shown above that during any one vibro piling event, up to 6 animals may be disturbed. There is a strong likelihood that once the noise starts, they will move away. However, there will be a break in underwater noise between removal of an existing pile, and placing of the new replacement pile, which conservatively may mean that all of these animals return to the area. Considering the fact that harbour porpoise are transient in behaviour, it's likely that the animals in the vicinity during one day are replaced by different animals the following day. This, in conjunction with the fact that the piling works which produce underwater noise should take no more than 2.5 days in total, means that up to 18 animals may be disturbed.

The mitigation measures, particularly soft starts for piling, and use of a MMO, should mean that the works do not injure harbour porpoise, and so the local population can be considered to be at no risk from reduced numbers as a result of the proposed development.

10. Conclusion

The works to replace the timber pier members at the NLB's Oban base will support continued operation of our vessels, which in turn supports continued operation of Aids to Navigation, thus greatly improving the safety of the mariner, and marine life, in Scottish waters. Therefore, there is a licensable purpose to the project.

The works have been identified, through consultation with the Marine Directorate, NatureScot and Argyll & Bute Council, as potentially being a cause of disturbance to harbour porpoise, through underwater noise generated by vibro piling. As harbour porpoise are a listed European Protected Species, an EPS license is required.

This risk has been shown to be mitigated greatly by the fact that the JNCC piling protocol will be adopted. Further, the scale of works is minor, with underwater noise producing activities expected to take place over a total of 2.5 days, producing up to 10 minutes of noise every 2 hours, equating to up to 80 minutes of noise per day. As the existing pile sockets will be reused, the force required to drive new piles is expected to be minimal (as experienced at phase one of the project in 2022). It is expected that up to 18 harbour porpoise may be disturbed by the works, but that any healthy animals will be able to swim away from the source of noise. There is not expected to be any incidences of physical harm to animals coming into direct contact with the works, through use of a marine mammal observer, following JNCC best practice.