



**Staffin Community Harbour Development  
Environmental Impact Assessment Report  
Volume 1: Non-Technical Summary  
September 2021**





## Non-Technical Summary

# Staffin Community Harbour Development



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## Document Control

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## 1 Introduction

The Staffin Slipway has a long history of supporting the Staffin Community since its construction in the 1900's, however, the current facilities lack safe berthing and onshore amenities and infrastructure to meet modern requirements. The Staffin Community Trust (SCT) is proposing to upgrade the Slipway in Staffin in order create a Community Harbour which can provide a functional multi-user facility.

The purpose of the proposed Staffin Community Harbour (SCH) is to provide a facility with the necessary infrastructure on and offshore, to support existing commercial, non-commercial and recreational users, and to facilitate new uses of the area.

The construction of the SCH will require stone and aggregate. The reopening of the Lealt quarry for use as a Borrow Pit for the proposed SCH development is therefore being proposed.

A marine licence for the construction of the SCH works located below mean high water springs (MHWS) is required from Marine Scotland. Planning Permission is sought from The Highland Council for the works above mean low water springs (MLWS).

Due to the scale of the development and its potential to have a significant effect on the environment, an EIAR is required to support the marine licence and the planning consent processes. SCT has commissioned Affric Limited and Dalglish Associates Ltd to produce this Environmental Impact Assessment Report (EIAR) on its behalf.

This Non-Technical Summary summaries the main findings of the EIAR. The EIAR is made up of four volumes:

- Volume 1: Non-Technical Summary
- Volume 2: Main Assessment
- Volume 3: Appendices
- Volume 4: Drawings

Electronic copies of the documents submitted to support the marine licence and planning consent applications can be downloaded from the SCT website: <https://skyeecomuseum.com/latest>. A CD containing all the application documents can be obtained by contacting Affric Limited on 01808 521498 or by emailing [constultation@affriclimited.co.uk](mailto:constultation@affriclimited.co.uk).

If you would like to provide feedback with regard to the marine licence or the planning application, then this should be given directly to Marine Scotland or The Highland Council as per the advertised routes.





## 2 Project Description

### 2.1 Project Need

The slipway is currently used by members of the local community to launch boats during the summer months. Throughout the year the slipway is used by a commercial fish farm operator to access sea sites located south of Òb nan Ron and by local commercial fishermen to tenders to get to their boats which are moored in the lee of Staffin Island. launch creel fishing boats.

The creation of an attractive multi-user facility will ensure that the growing need for a safe harbour for the local leisure boat users is met, providing infrastructure to accommodate visiting vessels and provide the necessary infrastructure to support existing commercial users and attract new marine businesses to Staffin.

The current slipway lacks shelter and depth of water at low tide, so it can only be used for temporary berthing. Launching of boats is dependent on the tides, therefore limiting the functionality of the existing harbour. Currently boats that are not removed from the water daily are moored in the bay between the slipway and Staffin Island. A small tender is used to ferry people from the slipway to their boats and back daily. However, when the sea is too rough, the tender cannot leave the slipway area, preventing fisherman and staff of the surrounding fish farms from accessing their boats.

### 2.2 Consideration of Alternatives

The consideration of alternatives has been an iterative process completed as part of the design development. Consideration of alternatives took into account the following factors as appropriate:

- Constructability;
- Operability;
- Public Safety;
- Physical constraints / restrictions;
- Environmental effects;
- Wave climate and coastal processes;
- Stakeholders / publics input; and
- Cost.

During the early stages of the design process, a Pre-Application Consultation (PAC) event was held attendees were encouraged to provide input on various design options, which was taken forward and considered in the final design (see the PAC Report for further details).

### 2.3 Location

#### 2.3.1 Harbour Development

The proposed development is located at the Staffin Slipway in Òb nan Ron, Garafad, Staffin in the north of Skye and has a grid reference of NG494 681. Access to the slipway is via a minor single tracked road off the A855. The road passes the public parking area for An Corran Beach, located approximately 500m north from the existing slipway. The area below the steep rocky cliffs, surrounding the slipway to the northwest, west and south, is common grazing land,





before meeting the MHWS and transitioning into the rocky foreshore area. The SCH Development falls within the administrative area of The Highland Council.

### **2.3.2 Borrow Pit**

Lealt is a previously worked quarry, lying between the A855 road and the east coast of the Trotternish Peninsula, it is to the north of Lealt Gorge, grid reference NG 51879 60595. The land falls steeply away to the south of the quarry access, into Lealt Gorge and to the east, and the south-east, to the bay at Inver Tote.

## **2.4 Project Components**

One of the main aims of the project is create sheltered berthing, which requires the construction of a new breakwater to provide a larger sheltered area. It is therefore proposed that the existing breakwater is removed, and the rock be used along with that from the Borrow Pit to building a new breakwater east of the existing slipway. The breakwater has been designed to allow for vehicle access to a new slipway and pedestrian access to pontoons. Pontoons will be installed into the newly created sheltered area provided by the breakwater. The pontoons will be able to accommodate 15 boats of up to 12m length overall (LOA) with provision for an additional 15 small boats on the rear side of the berth. Access to the pontoons will be along the top of the breakwater and down a pontoon bridge.

A new concrete slipway, with a gradient of 1 in 9, 10m wide and 70m in length, ending below MLWS will allow for boat launching and hauling activities during all tide states. The existing slipway will remain in place but will be modified, including extending the northern end of the slipway and making the east side suitable for temporary berthing.

In order to increase the area available for development, the existing hardstanding at the top of the slipway will be extended by reclaiming land from the foreshore to the east of the existing slipway. The intention is to separate this hardstanding area into two separate sections, the harbour users area and the public area. This will ensure safe use of the harbour facilities. The harbour users area, to the east of the existing hardstanding will be include 14 standard car parking spaces, six spaces for cars with boat trailers, one disabled parking space and seven storage sheds. The storage sheds will be used for onshore storage of boats, equipment and other maritime related items. The public area on the west side of the hardstanding will include 10 standard parking spaces, one disabled parking space, a Harbour Managers office (WC's and shower facilities).

The buildings have been visually inspired by local and maritime vernacular to ensure that it fits with the character of the area. Solar panels will be installed on the roof of the office and WC building.

Services will be installed, water and electricity will be supplied to the buildings and pontoons. The foul drainage from the WC's and showers will be routed to a septic tank which will discharge to sea.

Two 15,000L fuel storage tanks will be installed, with fuel being piped down to the pontoon to allow boats to refuel.

Access to the proposed SCH development will be via the existing single-track access road. Prior to construction minor road repairs comprising edge repairs and hole filling will be done in places where the road is in poor condition. In addition, 15 passing places have been





identified for widened and/or lengthened works. The upgrades will improve safety along the access road during construction but will be a long-term benefit of the project.

Finally, six daymarks to aid navigation from Staffin Bay into the Òb nan Ron will be installed. The cone and can style buoys will demarcate the deeper water which provides the safety route, reducing risk of grounding.

To obtain the additional rock and aggregate required for the construction of the proposed SCH development, it is proposed that the establish, but currently not operational, quarry at Lealt be re-opened as a Borrow Pit.

## **2.5 Construction**

### **2.5.1 Proposed SCH Development**

Generally, construction at the proposed SCH development will be undertaken between 7am to 7pm Monday to Saturday. However, work outwith these hours maybe required for activities dependent on specific tidal states.

Prior to construction works on the proposed SCH development commencing, enabling works including the road improvements and the electricity connection will be completed. The edge repairs to the road require the excavation of the edge road and verge, placing suitable granular fill down and compacting it. Tarmac is then laid onto the compacted area. Patching of the holes involves the laying of tarmac into the hole to fill it. Passing place works will require an excavator / digger to remove portions of the verge surrounding the passing place. Suitable granular fill will be backfilled and compacted, and then overlaid with tarmac. Passing place signs will be installed along with signage prohibiting parking.

The extension of the hardstanding will be achieved by placing rockfill, sourced from the Borrow Pit, against the existing hardstanding and moving out towards the sea until the desired area has been reclaimed. Rock armour will then be placed along the seaward edge to protect the rockfill from being washed away. The surface of the newly reclaimed area will then be compacted and utilised as a storage area for material for the remainder of the construction phase of the project.

Before the existing breakwater can be removed, the steel berthing structure at the end of the breakwater and the concrete ledge that runs from the end of the slipway to the berthing structure need to be dismantled. The rock from the existing breakwater can be removed and stockpiled for use as the relevant rock size is required for the new breakwater. The new breakwater will be constructed by placing rock infill directly on the seabed to form the base of the breakwater. Rock armour will then be placed over the rockfill.

A tarmac surface will be laid along the top of the breakwater to create the 5m wide access track to the slipway. The primary rock armouring will extend up higher than the access track to provide a degree of wave protection. Between the slipway and pontoons, a tarmac footpath will be laid allowing pedestrians to access the pontoons.

The new concrete slipway will be created by casting a 500mm thick reinforced concrete wall along the northern side of the slipway during low tide. Rockfill will be placed on the seabed to the south of the concrete reinforced wall to create the base for the slipway. Rock armour will then be placed along the southern side of the rock infill. The slipway surfacing will either be





formed through the placement of pre-cast reinforced concrete slabs or the placing of rebar over the rockfill and undertaking in-situ pouring of pre-mixed concrete over the rebar to create a reinforced concrete surface. The concrete works associated with the modifications to the existing slipway are likely to be undertaken by pouring pre-mixed concrete during low tide.

The new pontoons will be brought to site in sections. Each section will be craned into the water from the new slipway and manoeuvred into place utilising a boat. The sections of pontoon will be bolted together using rubber bushes. The bridge, connecting the pontoons to the breakwater, will be attached to the breakwater by a hinge and run free on a dedicated section of pontoon. The boat used to tow the pontoon sections will be equipped with a crane, which will lift the bridge into place onto the breakwater. Once the pontoons are in place, the fuel and electrical services (power bollards) will be fitted.

In order to construct the WCs and Harbour Manager's office, the foundation will be dug and pre-mixed concrete will be poured to create the concrete foundation. The walls will be constructed by laying concrete blocks with a sinusoidal metal profiled roof cladding. Solar panels will then be fastened onto the sinusoidal metal roof cladding. The storage sheds will be constructed using steel profile frames clad in sinusoidal metal profile attached for the walls and roof.

In order to get water from the spring to the proposed SCH development, the existing old plastic pipe, which is in poor condition will be replaced. The vegetation layer will be removed intact as possible (turfed) and set to the side. The soil will then be excavated and stockpiled alongside the trench. The pipeline will be laid from the proposed SCH development to the spring. The trench will be back filled using the stockpiled material, and turfs placed back. A stock proof spring catchment chamber will be constructed over the spring. A storage tank and pump set will be installed to distribute water to the buildings.

A section of the hardstanding will be excavated so that the septic tank can be installed underground. In addition, excavations within the existing hard surfacing will be required to install the pipeline which will connect the WCs with the septic tank and the septic tank to the outfall pipeline, installed under the breakwater. The material excavated will be stockpiled and used for back filling.

The outfall pipeline will be laid under the surfacing, along the line of the breakwater, before being turning east and being routed through the rock armour. The pipeline will be routed through the lower point in the seabed rock for approximately 45m in an easterly direction to just below MLWS. The pipeline will be laid and encased within concrete. Rocks will be placed on top to cover the encased pipeline.

The fuel storage tanks will be delivered to site, installed and secured on a concrete slab, in accordance with the manufacturer's instructions.

### **2.5.2 Borrow Pit**

Prior to the commencement of rock extraction activities at the Borrow Pit, the site boundaries will be secured and site preparation for soil stripping activities will be undertaken.

As detailed above, the proposed SCH development needs both rock armour and smaller fill material for use as fill material. Rock is extracted through drilling and blasting of the rock face. In order to extract the required volume of rock needed for construction of the SCH





development, there are anticipated to be between 12 to 20 blasts. Following each blast, the larger rock in the blast pile, suitable for use as rock armour, will be extracted by an excavator and moved to the armour stone stockpile on the southern site boundary until required at the proposed SCH development. Within the remaining blast pile there may be rock which is too large for processing and will be broken down using an excavator mounted hydraulic breaker. The remaining rock will then be moved to the processing and storage area until enough material has been accumulated. The rock will then be processed using a mobile crusher to obtain the correct aggregate size needed within the proposed SCH development.

The Borrow Pit operations are likely to only amount to 2 to 3 months of active operations, however due to limited storage at the proposed SCH development, the extraction activities are likely to be staggered over the construction period of the harbour.

The activities associated with the extraction of rock within the Borrow Pit will be undertaken in three phases.

Phase 1: will entail moving the soil and overburden mounds to the west and north of the site to allow for the existing upper faces to be worked.

Phase 2: the access haul ramp to the lower quarry floor on the northern end will be developed, which will allow the Borrow Pit to be worked to the north and west.

Phase 3: the excavation will be developed to the south.

Once all required material for the proposed SCH development has been extracted and delivered to the harbour development. Any remaining material will be retained onsite, gorse will be planted to help restrict access to quarry faces in the long term.

## 2.6 Operations

The improved infrastructure, better onshore amenities and parking will provide an attractive space for both boat users and the public. The safe berthing and improved launching facilities will support commercial sectors such as fishing, fish farming and marine tourism.

A Harbour Manager will be appointed, collecting any berthing fees and ensuring maintenance is undertaken when required. Maintenance activities during the lifetime of the proposed SCH development include, but are not limited to:

- Removing marine growth from pontoons, repairing floats and replacing fenders;
- Emptying the oil interceptor;
- Emptying sludge from the septic tank;
- Removing marine growth from the slipways;
- General building maintenance; and
- Replacing mooring rises every 10 years.





## 3 Methodology

### 3.1 Assessment Methodology

One of the main purposes of the Environmental Impact Assessment (EIA) process is to influence and improve design through iteration. Environmental impacts have been considered throughout the project, from the development of the option stage through design stages of the project. Where possible, environmental considerations have been incorporated into the design. The siting and design of the upgrade has been influenced by aspects identified through the EIA process, including stakeholder input, possible visual and palaeontological impacts, and the potential for disturbance of the local fauna associated with the development.

An environmental specialist has been involved throughout the design process and, where necessary, appropriate topic experts have been consulted to inform the design. The project design therefore has avoided and minimised impacts wherever possible and, as such, there are embedded 'primary mitigation measures' to avoid or reduce negative effects. These have been incorporated within the assessment of effects.

A methodical and robust assessment of environmental impacts has been used across all chapters of the EIAR, with topic-specific variations incorporated as required. The methodology considers a receptor's value or sensitivities, the magnitude and likelihood of the impact, and through a matrix-based approach, the effect level. Effects of moderate or above are classed as significant in EIA terms.

Additional mitigation is then identified to reduce adverse impacts or to enhance beneficial impacts. Significant adverse effects are reassessed taking account of the additional mitigation to identify the residual effects level.

### 3.2 Consultation

Consultation has been a key part of the design development and EIA process. There has been dialogue with the local community through public exhibitions as part of the Pre-Application Consultation (PAC) process. Full details are provided in the PAC Report.

### 3.3 Cumulative Impacts

A review of planned onshore and offshore developments was conducted to identify projects where there are potential cumulative impacts with the SCH development and the Borrow Pit. The following five projects were taken forward for cumulative assessment as there could be cumulative impacts on fish ecology, marine mammals, landscape, seascape and visual, socioeconomics, and traffic and access:

- Farm shop – Garafad, Staffin;
- Deep Water Port – Glumaig Bay, Stornoway;
- Lochmaddy Ferry Terminal Development;
- Uig Ferry Terminal Development - Uig, Isle of Skye; and
- Agricultural shed – Lower Tote, Lealt.





## 4 Statutory Context and Policy

There are a number of statutory requirements for the proposed development that require consideration, as well as national, regional, and local planning policies that may apply to the determination of the marine licence and planning applications.

### 4.1 Legislative Framework

A marine licence for the construction of the proposed SCH development works located below MHWS will be sought under the Marine (Scotland) Act 2010. Due to the scale of the development and its potential to have a significant effect on the environment, an EIAR is required to support the Marine Licence application, under the Marine Works (Environmental Impact Assessment (EIA)) (Scotland) Regulations 2017.

Under the Town and Country Planning (Scotland) Act 1997, any type of development, i.e. carrying out of building, engineering, mining or other operations in, on over or under land, or the making of any material change in the use of any building or other land above MLWS will require planning consent from The Highland Council.

The Marine Licensing (Pre-application Consultation (PAC)) (Scotland) Regulations 2013 prescribe the marine licensable activities that are subject to pre-application consultation and, in combination with the Marine (Scotland) Act 2010, set out the nature of the PAC process. The SCH development falls within these regulations as it covers an area larger than 0.1 hectare.

The PAC process completed and reported in the Staffin Community Harbour - Pre-Application Consultation Report (Affric Limited, 2021) ensured compliance with the marine legislation.

Compliance with the relevant environmental and ecological legislation such as the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) has also been ensured.

### 4.2 Policy Context

As the project is partly below the MHWS and within 12 nautical miles of the Scottish Coastline it falls within the remit of the Marine (Scotland) Act 2010. The 2015 Scottish National Marine Plan (NMP), covering inshore waters is a requirement of the Act. The NMP lays out the Scottish Ministers' policies for the sustainable development of Scotland's seas and provides General Planning Principles (GENs), most of which apply to the proposed development. In addition, the NMP lays out sector specific objectives and policies, for Shipping, Ports, Harbours and Ferries, as well as Recreation and Tourism and Aquaculture. The relevant policies have been reviewed and it has been identified that the SCH development meets the GEN requirements and contributes towards the achieving of relevant sector specific policies and objectives.

The onshore development planning system in Scotland which provides the framework for considering planning applications is made up of four main documents:

- The National Planning Framework (NPF);
- Scottish Planning Policy (SPP);
- Strategic Development Plans (SDPs) produced for the Scotland's four largest cities; and
- Local Development Plans (LDPs) produced for each council area.





The Scottish Government provides advice and technical planning information in the form of Planning Advice Notes (PANs), to support the implementation of the policy.

The NPF is a requirement of the Planning (Scotland) Act 2006 and sets out the strategy for long-term development within Scotland. The third NPF (NPF3), was published in 2014 and sets out the strategy for development for the next 20 to 30 years. While the NPF3 does not identify any national developments within the Staffin area, section 4.29 states:

*"the environment of our coastal areas, on land and at sea, is an outstanding, internationally important resource. These natural assets support quality of life and underpin important economic sectors like tourism, outdoor recreation and food and drink."*

It specifically recognises in Section 4.32. that *"outdoor recreation is important throughout the coastal and marine area, with the West Highlands being a particular asset. Sailing is worth around £100 million to the Scottish economy and is a growing sector. The west coast and the Hebridean islands are a main focus for development, but there is also potential in the north and on the east coast."*

SPP identified policy principles that the planning system should support patterns of development which:

- *"In all rural and island areas promote a pattern of development that is appropriate to the character of the particular rural area and the challenges it faces;*
- *Encourage rural development that supports prosperous and sustainable communities and businesses whilst protecting and enhancing environmental quality; and*
- *Support an integrated approach to coastal planning."*

The proposed SCH development will be constructed within an area already utilised for launching boats and other harbour activities. The development aims to support the growing demand for sheltered berthing and associated infrastructure not only for commercial use but tourism and recreation.

The proposal makes provision for the extraction of aggregates, to serve a specific local project, by extending an pre-existing quarry, thereby removing the requirement for longer distance Heavy Goods Vehicle (HGV) movements.

Relevant PANs for the SCH development were used to support the EIAR production.

The West Highlands and Islands Local Development Plan (WestPlan) has been reviewed in detail to ensure that the project aligns with all relevant policies. Chapter 3.6 of the Westplan sets out the priorities of the placemaking Priorities for Staffin. The Priorities include:

- Protect the traditional crofting landscape and special qualities of the village and Trotternish National Scenic Area (NSA), through securing high standards of siting and design;
- Protect and promote the natural and built heritage of the area, including its archaeological remains;
- Support improvements to harbour facilities, including the slipway and breakwater to provide greater depth and protection for harbour users.

The Project is directly aligned to the placement priorities for the Staffin Settlement.





## 5 Air Quality

As the operations at the Borrow Pit involve blasting and the processing of rock material, dust is likely to arise. The process by which dust becomes airborne is referred to as 'dust emission'.

Dust effects are assessed, taking into account mitigation measures. The assessment is conducted by evaluating existing conditions and the potential dust sources and mitigation measures. The potential dust-sensitive receptors are then identified, and an assessment of the potential dust emissions associated with the Borrow Pit at these locations is undertaken.

The nuisance effects of dust are usually measured with reference to dust deposition or soiling, whereas the effects on health, centre on the effects of inhalation and respiration of fine airborne dust particles, especially the smaller size fractions e.g. Particulate Matter (PM<sub>10</sub>) and PM<sub>2.5</sub> (small particles, 10 and 2.5 microns respectively).

The potential sources of dust emissions from the Borrow Pit are:

- Soil/drift stripping and storage;
- Drilling and blasting of rock faces;
- Rock crushing and screening;
- Site vehicle movements;
- Temporary rock storage;
- Transportation of rock off site; and
- Restoration.

The source dust levels taking account of mitigation were all classed as small, this reflects the scale and temporary nature of the Borrow Pit.

The closest potential receptors to the Borrow Pit operations were identified as:

- Lealt Falls House and No.2 Tote – residential properties 460m south of the Borrow Pit;
- No.10 Culnacnock – residential property 650m north of the Borrow Pit;
- No.2 Lealt – residential property 970m west of the Borrow Pit;
- Lealt car park and picnic area – recreational facility immediately east of the Borrow Pit.

No sensitive ecological receptors were identified.

Residential receptors are considered to have high sensitivity to dust. Dust impacts will occur mainly within 400m of the operation (Institute for Air Quality Management, 2016), all residential receptors listed above are further than 400m from the site. However, the assessment of dust has taken a very conservative approach by classing them in the distance band of 'distant' which normally covers receptors 200m-400m from the source of dust. Even with a conservative approach being taken no significant effects resulting from dust were predicted at any of the residential receptors.

The car park and picnic area have the potential to be affected by dust due to the proximity to the Borrow Pit, however, the footpaths and picnic areas are considered to have low sensitivity, as people are only there for short periods of time. In addition, the picnic area is not in the





direct line of the prevailing wind. Coupled with the small source of dust present, no significant effect on the recreational area resulting from dust are anticipated.

The potential elevation in the levels of PM<sub>10</sub> and PM<sub>2.5</sub> in the air were also considered, even with conservative assumptions the concentrations in air are well within all relevant air quality standards. Hence, no impacts on air quality associated with particulates were predicted.

While no significant effects from dust are anticipated during the operation of the Borrow Pit, a Site Dust Management Plan will be developed to minimise dust levels on the site.

## 6 Archaeological and Cultural Heritage

An Archaeological and Cultural Heritage assessment was completed as part of the EIAR process in order to identify and mitigate any effects of the proposed SCH development on the historic and cultural environment.

A review of historic maps and relevant literature followed by a site visit identified three known heritage assets within the footprint of the proposed SCH development. These included the existing slipway, the boat nausts and a drystone – built culvert. Within 1km of the proposed SCH development, there are seven designated heritage assets (five Scheduled Monuments and two Listed Buildings of Category B status).

At the Borrow Pit, the baseline information and site walkover identified six known assets within the Borrow Pit boundary, namely degraded remains of four walls, a turf bank and two displaced concrete blocks, none of which are designated. Some 100m to the south of the Borrow Pit is the tramway associated with the Diatomite works.

An assessment was undertaken to determine the importance and sensitivity of the historic assets and whether physical change to the assets, as a result of construction, will have a significant effect. Of the three assets within the development footprint of the proposed SCH development only the boat nausts will be directly affected. The nausts will be removed to make space for the planned office and WC building. Boat nausts that date to the late post-medieval period, are a relatively common heritage asset within Scotland, as such they are only considered to have a local level of importance. The boat nausts will be appropriately recorded prior to their removal and an archaeologist will be present onsite during works in the vicinity to look for articles of interest.

Of the seven designated assets three have intervisibility with the proposed SCH development, hence, they were subject to assessment of setting effects. As the Òb nan Ron area has been utilised as a harbour to some degree for over a century, the continued use as a harbour is appropriate and in keeping, hence setting effects were found to be non-significant.

There are records of six vessels being wrecked in the vicinity of Staffin Bay and Òb nan Ron, but no direct evidence that there are any present within the footprint of the development. There is a low potential for finds or remains from these wrecks being discovered during the construction works. A protocol for archaeological discoveries will be put in place, detailing the actions to be taken in event of any maritime assets being found.

None of the heritage assets identified at the Borrow pit will be removed and hence, they will not be directly impacted upon. However, there is potential that activities such as soil stripping may uncover unrecorded buried heritage assets. As such, during any soil stripping within the



immediate vicinity of the known assets an archaeologist will be present onsite to look for articles of interest.

## 7 Benthic Ecology

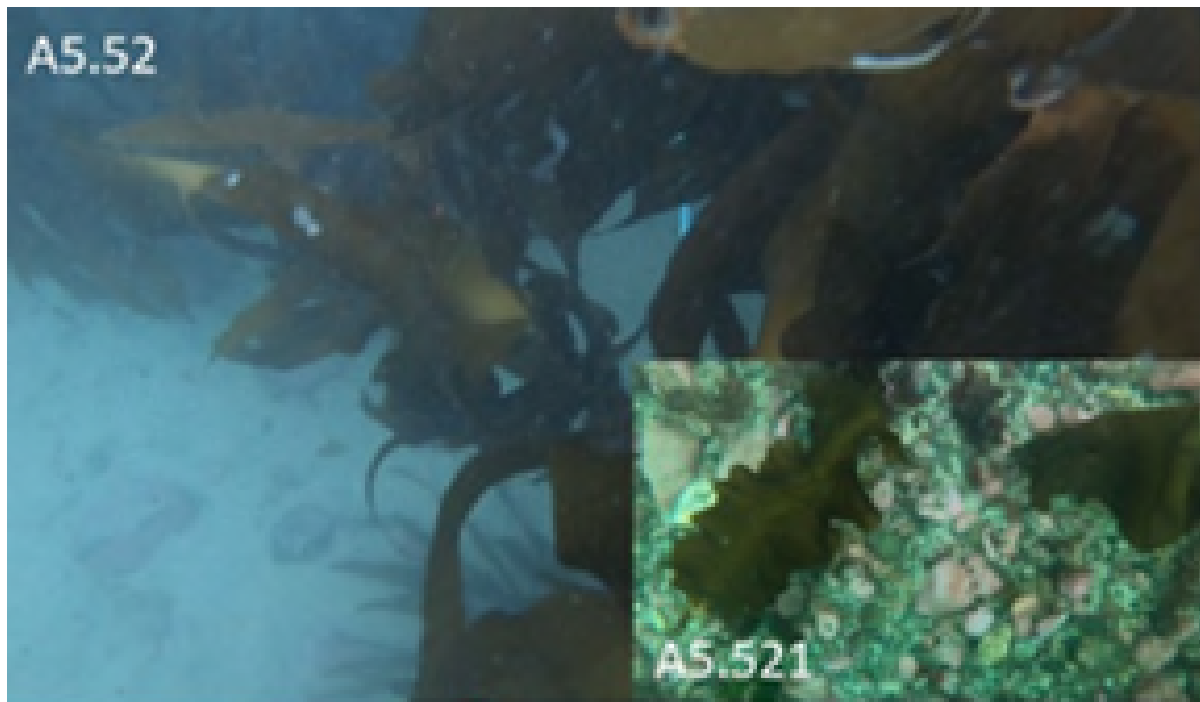
In order to appropriately assess the potential effects on organisms on the seafloor (benthic ecology) from the proposed SCH development, the baseline condition had to be understood. This was achieved through an extensive literature review and field surveys. The survey operations consisted of divers carrying out video transects and the use of an Unmanned Aerial Vehicle (UAV) to cover the intertidal portion of the proposed SCH development.

Analysis of the video footage from survey was used to identify the relevant biotopes found within the proposed SCH development footprint. The most frequently observed biotope noted across the survey site was *Laminaria hyperborea* and foliose red seaweeds on moderately exposed infralittoral rock (Figure 7.1), with Kelp and seaweed communities on sublittoral sediment (Figure 7.2) being the second most frequently observed biotope. A patch of *Laminaria saccharina* and red seaweeds on infralittoral sediments (Figure 7.2) were observed within the middle of the survey area. All three of these are classed as Priority Marine Feature (PMF) in Scottish Terrestrial Waters. Inclusion in the PMF list does not provide any additional legal protection, however, these are considered sensitive species and/or habitats for the purpose of the impact assessment.



**Figure 7.1: Laminaria hyperborea and Foliose Red seaweeds on Moderately Exposed Infralittoral Rock**





**Figure 7.2: Still image of kelp and seaweed communities on sublittoral sediment (A5.52) and *Laminaria saccharina* and red seaweeds on infralittoral sediments (A5.521)**

The construction stage of the proposed SCH development may impact on benthic ecology of the site through habitat loss, physical disturbance especially from the removal and placement of rock, accidental spillage of hazardous substances, and introduction of non-native marine species.

There will be a permanent loss of intertidal benthic flora, fauna, and habitat within the footprint of the land reclamation, proposed breakwater and new slipway, the marine consenting boundary covers 40,300m<sup>2</sup>, 11,100m<sup>2</sup> of this includes PMF's kelps and seaweed communities. However, the actual construction footprint is less than 10,000m<sup>2</sup> much of which being in the intertidal area which do not include PMF's. Hence, only 5% of the consenting area is covered by kelp habitats which could be subject to habitat loss by the construction activities (approximately 2,000m<sup>2</sup>) Kelp beds and kelp on sediments are a common and widespread habitat in the wider region. Additionally, the new breakwater rock armour will provide a new substrate which could potentially aid recolonisation of the area by kelp (and other organisms) after construction. Therefore, the loss of these biotopes within the proposed SCH development will be limited and will not have a significant effect.

Disturbance of the seabed could be caused by activities such as rock placement on the seabed. The seabed within the proposed SCH development is characterised by cobbles, pebbles and hard rock substrate, with limited fine sand sediment. Therefore, any sediment disturbance is unlikely to cause sedimentation issues, or settlement of sands on the adjacent kelp habitats. The effect on PMF's resulting from increased sediment loading is not deemed to be significant.

Spills of hazardous substances into the sea can lead to a reduction of water quality as a result of pollution. The source of any spill is expected to be localised and the relatively small volumes. Therefore, no significant effects on PMF's are anticipated as a result of a spill. Mitigation identified in Section 6.2 will reduce the likelihood of a spill occurring.





The impacts resulting from the potential introduction of non-native marine species were assessed. There is the potential that species from other regions could be transported to the SCH development site via sediment trapped in equipment previously used at different locations. However, it is deemed extremely unlikely that construction works could lead to the introduction of non-native marine species.

During the operation of the proposed SCH development, potential impacts may arise from release of hazardous materials from the oil storage tanks and litter into the marine environment, as well as the introduction of non-native marine species. However, with the implementation of the mitigation considered within Section 6.2, impacts on water quality from accidental releases or litter and the introduction of non-native marine species are not deemed significant.

## 8 Fish Ecology

A desk-based review identified basking sharks and three diadromous fish species (fish with the ability to migrate between fresh and saltwater environments): Atlantic salmon, sea trout, and European eel, as being potentially present in the marine environment near the proposed SCH development. Salmon and eel are of international value, whilst sea trout are considered to be of national value. The Sea of the Hebrides Marine Protection Area (MPA), designated for basking sharks, and Red Rocks and Longay urgent MPA, designated for flapper skate, were included in the assessment, but no designated sites for diadromous fish were considered, due to the lack of ecological connectivity to any sites designated for those species.

The literature review identified migratory routes and timings and habitat preferences for diadromous fish. This found that Atlantic salmon, sea trout, and European eel are likely to be present in coastal areas close to where their respective riverine habitats meet the marine environment. Most notably, two rivers Stenscholl River, located 1.1km north-west of the proposed SCH development and River Brogaig, located approximately 1.8km north-west along the coastline from the proposed SCH development. Both are known spawning sites for salmon and sea trout. It is also possible that migrating diadromous fish will transit through the SCH development area from watercourses to the south of the site such as the River Lealt, and hence be present in the waters in the vicinity of the proposed construction works.

Although not expected to be present in very high numbers, basking sharks utilise the habitats of the Minch to the north and the Sound of Raasay and Inner Sound to the east of Skye. The relatively shallow waters around the proposed SCH development do not provide ideal habitat for the species, and it is considered unlikely that basking shark will be present in the immediate vicinity of the proposed SCH development.

A potential effect on diadromous fish as a result of the construction activities associated with the proposed SCH development was identified due to the new breakwater causing a potential obstruction to migratory pathways. Juvenile fish were considered particularly sensitive, as they generally utilise shallower waters than adults during migration. However, it was deemed to be non-significant due to the topography of the coastline around the SCH development and the fact the development will be largely constructed on a shallow rocky outcrop that is unlikely to form the principal route for fish migrating through the area. If any fish should enter the harbour area, the energetic cost of navigating around and out of its mouth was deemed to be low. The relatively undeveloped nature of the coastline around the proposed SCH





development means it will not be adding to any existing pressures or obstructions to the migration pathways of diadromous fish species.

Due to their international value, the likely effect of water quality issues resulting from the accidental release of hazardous substances on Atlantic salmon and European eel will be significant. When utilising the matrix approach to impact assessment the effect on sea trout of national value was deemed non-significant. Taking account of the mitigation identified to minimise the likelihood of a pollution event covering and to mitigate the effects if an incident does occur, see Section 16.2, the effect significance level becomes non-significant for all species. The preference of basking shark and flapper skate for deeper waters mean they are too far from the development to be significantly affected by a pollution incident.

The only potential effect arising from the operation of the proposed SCH development is water quality issues resulting from the accidental release of hazardous substances. As with the construction phase, the effect of pollution incident associated with loss of containment of oil from the storage tanks is considered to have significant effects on salmon and eels, with non-significant effects on other fish species. Once pollution prevention mitigation as discussed in Section 16.2, is considered, the likelihood of a spill occurring is reduced and the effect is deemed non-significant on all fish species.

As discussed in Section 3.3, cumulative effects on fish species were considered for three offshore projects, namely the Stornoway Deep Water Port, Lochmaddy Ferry Terminal and the Uig Ferry Terminal Development. There is potential that the construction phases of each of these projects may overlap with the construction of the proposed SCH development. Diadromous fish species in the marine environment around the proposed SCH development are not anticipated to utilise the stretches of coastline around any of the other developments during their migrations. There will be a slight increase in the risk of pollution incidents impacting fish receptors during the construction phases of each of the projects. Any potential impacts associated with the proposed SCH development are expected to be very localised, and due to the large distances between the projects it is very unlikely the same fish receptors would be impacted by water quality issues arising from another development. Therefore, no significant cumulative effects are anticipated.

## 9 Marine Mammals

A desk-based review identified a variety of marine mammals as being potentially present in the marine environment near the proposed SCH development. This included several species of whales, dolphins and seals. A review of protected areas which include marine mammals within their designation was also carried out to identify those which were within the range of the designate species and hence could be affected by the development. The relevant designated sites considered are the:

- Inner Hebrides & the Minches Special Area of Conservation (SAC) which the proposed development overlaps with and is protected for harbour porpoise;
- Ascrib, Isay, & Dunvegan SAC located 28km west of the proposed development and is protected for common seal;
- Sea of the Hebrides Marine Protected Area (MPA) located 46km southwest of the proposed development and is protected for minke whale;





- North East Lewis MPA located 52km north of the proposed development and is protected for Risso's dolphin; and
- Monach Islands SAC located 102km west of the proposed development and is protected for grey seal.

Impacts to marine mammals as a result of the construction activities are associated with water quality issues arising from the accidental release of hazardous substances and litter, and physical injury and disturbance associated with moving equipment and rock placement. Once the proposed SCH development becomes operational, impacts are only likely to arise from water quality issues due to pollution incidents.

Cetaceans (harbour porpoise, dolphins, killer whales and minke whales) inhabit deeper water than those around the proposed development so it is unlikely that they will be impacted by a spill during the construction or operational phase of the project, as pollution effects will be localised. The impact is therefore deemed non-significant, and risks reduce even further once the pollution prevention mitigation discussed in Section 16.2 is considered.

Cetaceans will not be in the immediate vicinity of the construction site due to the shallow water depths. It is therefore highly unlikely they will be injured or disturbed through interaction with construction activities and equipment.

Pinnipeds (common and grey seals) are more likely to be present within the shallow waters surrounding the proposed SCH development and are therefore more likely to be impacted as a result of an oil or chemical spill during construction or operation of the proposed SCH development. Due to their international value the likely effect on seals will be significant. However, once the mitigation discussed in Section 16.2 is considered, it will be reduced to a non-significant effect.

Seals could be in the vicinity of the construction works, hence there is a potential for them to be physically injured through the removal and placement of rock or the movement of equipment onsite. However, the increased levels of human activity and plant movement in the vicinity of construction will cause a level of disturbance which will reduce the chance that a seal would enter an area where it is at risk of being injured. The impact of physical harm to seals was therefore assessed as being non-significant. To further minimise the risk, site operatives will be instructed to stop works if a seal approaches closer than 50m, and to not resume until such a time that the seal has moved further than 50m away.

With regards to disturbance, the area is not designated as a seal haul-out site (i.e. location on land where seals come ashore to rest, moult, breed or have pups). The increased human activity at the proposed SCH development site may result in seals avoiding the site, however, this is unlikely to cause any noticeable long-term effects. Therefore, no significant effects on seals due to construction disturbance are anticipated.

Cumulative effects on marine mammals were considered for three offshore projects, namely the Stornoway Deep Water Port, Lochmaddy Ferry Terminal and the Uig Ferry Terminal Development. There is potential that the construction phases of each of these projects may overlap with the construction of the proposed SCH development. There will be a slight increase in the risk of pollution incidents impacting marine mammals during the construction phases of each of the projects. Any potential impacts associated with the proposed SCH development are expected to be very localised, and due to the large distances between the projects it is very





unlikely the same marine mammal receptors would be impacted by water quality issues arising from another development. Therefore, no significant cumulative effects are anticipated.

## 10 Terrestrial Ecology

As the Borrow Pit is located on land and there are aspects of the proposed SCH development taking place onshore, the potential for effects on terrestrial ecology have been given due consideration, namely for vegetation and habitats, otters and birds. Baseline information was collected for each of the ecology receptors through site visits and surveys. It should be noted that there are no statutory designated sites protected for their terrestrial ecology features that are expected to have connectivity with the SCH development or the Borrow Pit.

The vegetation and habitats within and surrounding the SCH development and Borrow Pit sites were recorded and mapped by a suitably experienced ecologist using the Phase 1 Habitat Survey methodology. This involves recording broad habitat types by their characteristic vegetation and making descriptive target notes of features of ecological interest. The survey found that marsh/marshy grassland is the dominant terrestrial habitat within the boundary of the proposed SCH development. Continuous bracken and unimproved acid grassland are also dominant in the wider surveyed area. The vegetation around some of the laybys subject to widening and lengthening works along the access road was not covered during the Phase 1 habitat survey. However, it is most likely that these areas support heavily grazed, semi-improved grassland communities that are acidic or neutral in nature with a low species diversity.

The dominant habitats identified within the surveyed area around the Borrow Pit include unimproved calcareous grassland, wet heath/acid grassland mosaic and wet modified bog. The habitats within the development boundary of the Borrow Pit largely consist of bare ground with patches of short-perennial and neutral grassland vegetation.

An otter field sign survey was carried out at the SCH development and at the Borrow Pit to assess the extent to which these areas are utilised by the species. Particular survey effort was focussed on the watercourses and shoreline present within the survey areas, which included thorough checks for otter resting places. In addition, three camera traps were deployed at the Borrow Pit and vantage point watches were conducted at the site of the SCH development. During the otter survey, the species was not identified as regularly utilising either the Harbour area or Borrow Pit. Several potentially suitable resting places for otter were found, however, no evidence of these resting places being utilised was detected. Otter likely utilise higher quality areas of habitat in the wider Staffin and Lealt areas instead. This does not mean that otters will not be present within the vicinity of the proposed SCH development or the Borrow Pit, as the areas are likely transiting routes for otter.

Ornithological surveys were carried out to determine what bird species are present around the sites of the SCH development and Borrow Pit with the potential to be impacted by the development. This included a series of three raptor surveys at both sites to establish if any raptors used the areas for breeding. In addition, two breeding bird surveys were undertaken at both sites. During the surveys the location, number and behaviour of all bird species encountered was recorded. The ornithological surveys found a typical distribution of bird species for the area and habitats present. Very few raptors or other species of conservation concern were observed during any of the surveys.





It is not anticipated that there will be any impacts to terrestrial ecology receptors during the operational phase of the development. However, several impacts have been considered during the construction phase at both the SCH development and the Borrow Pit. This includes the permanent removal of terrestrial habitats. Most of the onshore construction elements of the SCH development will be occur on an area of existing hardstanding or the newly reclaimed land from the foreshore area, which will minimise the loss of terrestrial habitat.

Small areas of marsh/marshy grassland, unimproved acid grassland and acid/neutral grassland will be lost at the SCH site and through the associated improvements to the access road. Semi-improved neutral grassland, acid/neutral grassland and unimproved calcareous grassland are anticipated to be impacted at the Borrow Pit. The habitat types subject to small areas of removal at both sites are all relatively common and widespread habitats in the wider regions and the areas affected have been minimised through sensitive site design. The effects associated with habitat loss as a result of the construction of the development are therefore, not anticipated to be significant.

Small areas of habitats may also be subject to temporary disturbance at the SCH development and Borrow Pit. Small strips of marsh/marshy grassland and unimproved acid grassland will be temporarily excavated to allow a water pipe to be laid that connects the new harbour buildings to a natural spring in the south. This vegetation will be reinstated at the earliest possible opportunity. Tracking over by machinery may also impact these habitats at the SCH development, as well as semi-improved neutral grassland, acid/neutral grassland and unimproved calcareous grassland. The area affected by such disturbance will be minimal and it is very likely that the vegetation will rapidly recover, and so these impacts are not anticipated to be significant.

The accidental release of hazardous chemicals may also affect the vegetation surrounding the proposed development, with knock on effects to the protected species present in the area (such as otters and birds). However, with appropriate mitigation as discussed in Section 16.2, the likelihood and effect of a potential release would not give rise to any significant effects on the terrestrial ecology features of the Borrow Pit and the proposed SCH development.

The increased activity, noise from the machinery and equipment (blasting and drilling etc at the Borrow Pit) and human presence has the potential to impact protected species such as otters during the construction phase. Disturbance to otter as a result of the construction activities has therefore been considered. General disturbance to transiting otters would not be continuous and there is sufficient and higher quality habitat available nearby. However, in the unlikely event that an active otter holt or resting place is present within the vicinity of either site, the impacts could give rise to a moderate significant effect.

Accidental physical harm to otters may also occur through encounters with equipment and machinery, which would result in a significant effect on the otter. However, both disturbance and physical harm can be mitigated through a variety of measures that will be detailed in a Species Protection Plan. The content of the plan and need for other licences will be informed by pre-construction surveys. The plan will include mitigation such as sensitive positioning of artificial lighting, capping pipes, providing escape ramps in open excavations, adhering to site speed limits and minimising the area and duration of disturbance sources. To further minimise the risk, site operatives will be instructed to stop works if an otter approaches closer than 30m, and to not resume until such a time that the otter has moved further than 30m away. When





the mitigation measures have been implemented it is anticipated that the effect significance level becomes non-significant for disturbance and accidental physical damage to otter.

There is also the potential for construction at the SCH development and Borrow Pit sites to cause disturbance and accidental physical damage to birds. Birds would be most sensitive to these impacts when they are nesting during the breeding season (May-September). The majority of the works will take place outwith typical nesting habitat and a number of mitigation measures have been identified to reduce the risk of disturbance or physical injury. These include conducting ongoing nest checks throughout the breeding season and establishing exclusion zones around nests should any be found. The sensitive positioning of artificial lighting, adherence to site speed limits and minimising the area and duration of disturbance sources will further reduce the risk. The impacts associated with disturbance and physical harm to breeding birds are therefore deemed non-significant.

## 11 Soils, Geology and Palaeontology

### 11.1 Soils and Geology

A number of the elements associated with the proposed SCH development will be constructed on land, and therefore consideration of soil and geology is required. As discussed in Section 10.1, the proposed SCH development area contains areas of marsh/marshy grassland and acid grassland, which suggests that there is some soil within the development footprint. Although, majority of the proposed onshore footprint of the proposed SCH development is on existing made ground (i.e. roads and buildings).

During the early stages of the project, peat was identified to the south of the proposed SCH development area. This was taken into account during the design phase, such that no area of peat will be constructed upon, thereby avoiding any peat related impacts.

The geology within the proposed SCH development has been identified as Duntulm Formation.

The Borrow Pit comprises mostly bare ground, with only a small area of soil restricted to an area to the north of the Borrow Pit site. The geology of with the Borrow Pit site is comprise intrusive igneous strata, predominantly sills of the Little Minch Sill Complex, within the North Britain Palaeogene Sill Suite, of Palaeogene age.

Peat is shown to be present to the north-east of the Borrow Pit but is outwith the proposed Borrow Pit site boundary. While there are no documented areas of made ground (i.e. roads and buildings), there may be areas isolated areas of made ground associated with historic quarrying operations.

Soils will be disturbed during the installation of the water pipeline, which will be used to get water from the spring to the proposed SCH development. This will involve digging a trench in which the pipeline can be laid and then reusing the soil to bury the pipe. All other construction activities will occur within the sea or on existing hardstanding or reclaimed areas and therefore any potential impacts to soil and geological are deemed non-significant.

Impacts on soil resources during the operation of the Borrow Pit are likely to arise from the soil stripping at the commencement of operations. There are a number of measures that will



be implemented onsite with regards to handling of the soil, to ensure the soil quality will not be reduced. This will give rise to non-significant effects on soil resources.

The nature of a Borrow Pit is for rock extraction for the construction of the proposed SCH development, geological assets (i.e. rock) will therefore be removed from the Borrow Pit. The amount of rock to be blasted and processed is greater than what will be required for the development due to the need to obtain appropriately sized blocks for use as rock armour. The excess material resulting from blasting will be retained on site once the operations at the Borrow Pit have been completed. No significant impacts associated with the use of geological assets are anticipated at the Borrow Pit.

## 11.2 Palaeontology

The Isle of Skye has a number of designated areas which are protected for their geological features including fossils and dinosaur footprints. An Corran Beach is located approximately 450m from the existing slipway, dinosaur footprints that have been found on the foreshore there. As such the foreshore area (from the existing public road down to the sea) between An Corran beach and the existing slipway is designated as a Geological Conservation Review (GCR) area. The designation aims to protect the site from damage and to prohibit uncontrolled removal of Jurassic fossils. The Borrow Pit is located adjacent to the Valtos Site of Special Scientific Interest (SSSI), an area which is also designated for the protection of fossils. The statutory designated sites for the Borrow Pit and the proposed SCH development are shown in Figure 11.1 and Figure 11.2.

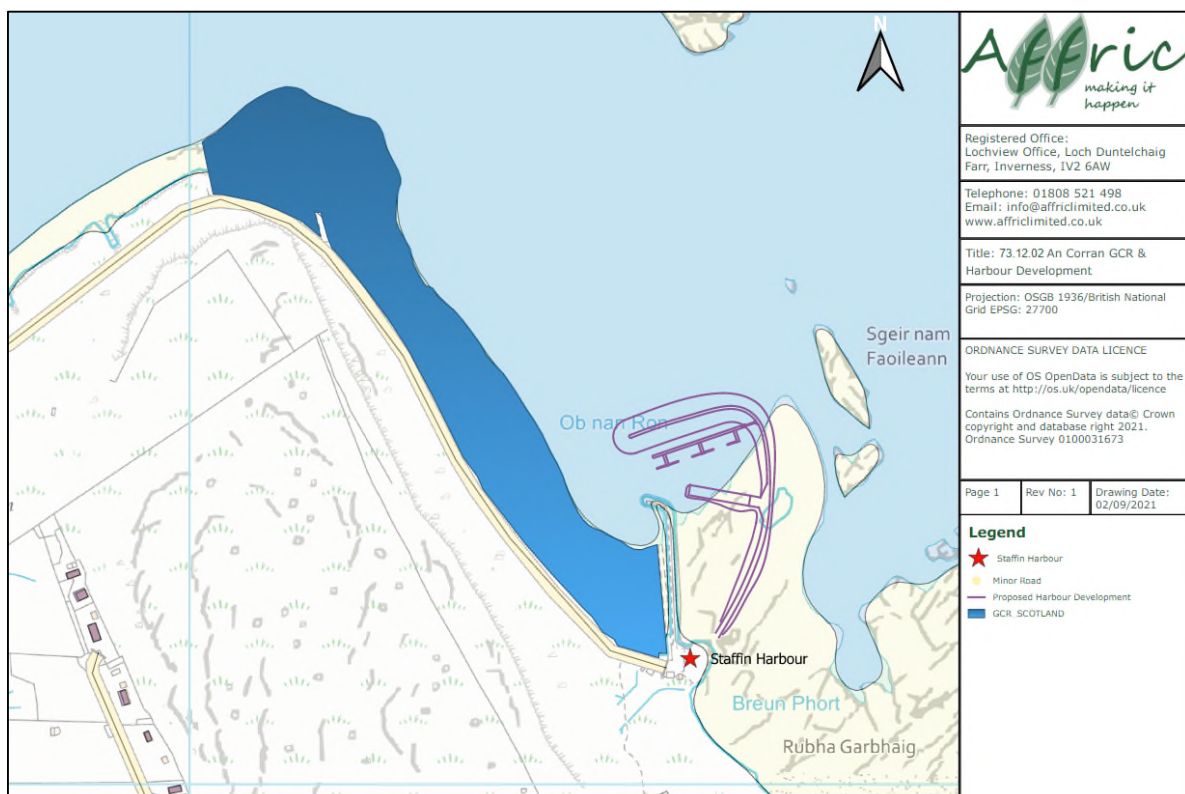
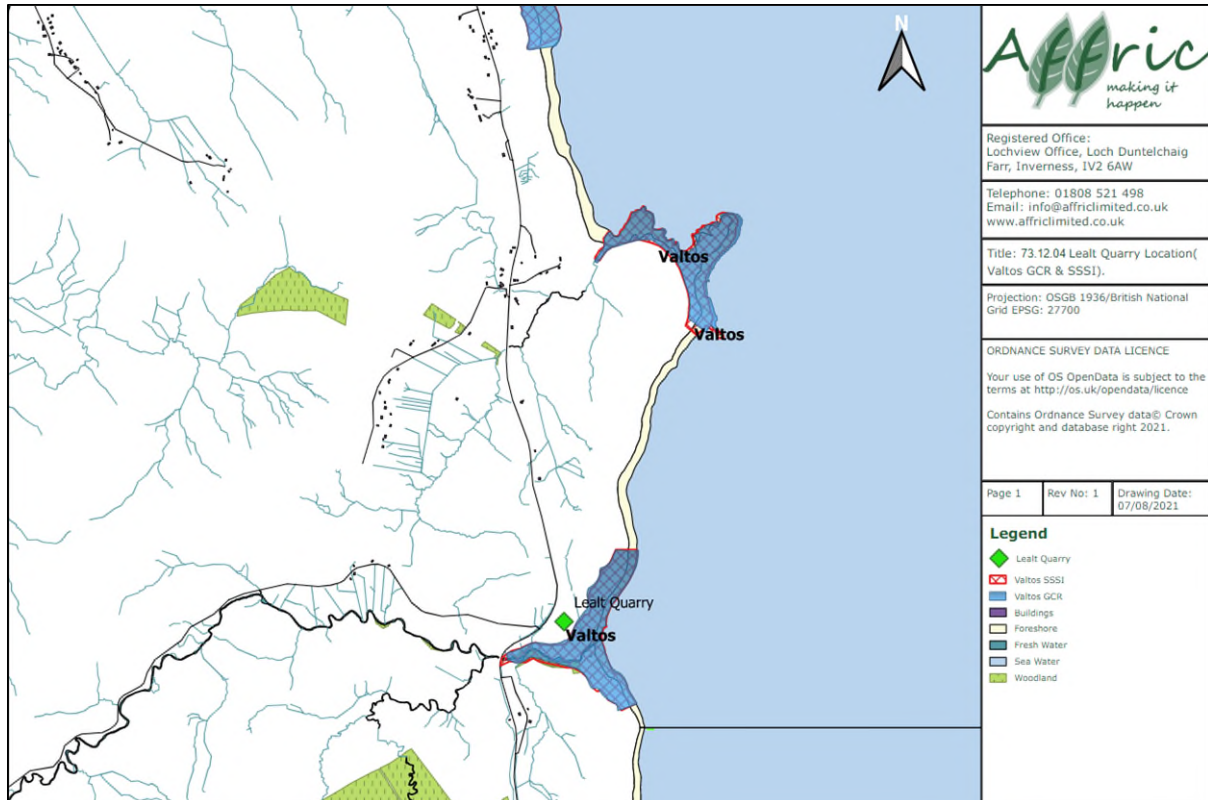


Figure 11.1: The An Corran GCR (in blue) in relation to the proposed SCH development





**Figure 11.2: The location of Valtos SSSI and the Borrow Pit (Lealt Quarry)**

Due to the proximity of both the proposed SCH development and the Borrow Pit sites to these designated areas a palaeontological assessment had to be undertaken to consider the potential impacts will have on these designated areas and their protected features.

A detailed desk-based assessment was carried out utilising the wealth of existing literature including information on previous discoveries within the wider Staffin and Lealt area.

During the construction and operation of the proposed SCH development the receptors identified for assessment was the An Corran GCR but also the palaeontological features within the GCR namely the Fossil dinosaur footprints in the Duntulm Formation.

During construction, the foreshore to the west of the slipway will be avoided, thereby not encroaching on the An Corran GCR, It is however, noted that with the removal of the breakwater, there is potential for new discoveries which have been covered up by the existing breakwater. The effects on the An Corran GCR and the dinosaur footprints are not anticipated to be significant.

During the quarrying works at the Borrow Pit the receptor was identified as the Valtos SSSI and the following palaeontological features within the SSSI which could be impacted:

- The most northerly occurrences of the Elgol Sandstone;
- The type section of the Lealt Shale Formation; and
- Middle Jurassic vertebrate fossils including dinosaur bones and tracks.

Within 2 miles of the Borrow Pit there are related palaeontological features and discoveries made in areas under designated protection, notably:





- Extensive dinosaur footprint tracksites at Rubha Nam Brathairean, as part of the Valtos SSSI; and
- Theropod dinosaur tooth found at Rubha Nam Brathairean, as part of the Valtos SSSI.

The Borrow Pit does not presently contain any known significant geological features from a palaeontological perspective. Phase 2 of the Borrow Pit operations may expose the Valtos Formation level, excavation activities may damage previously undiscovered fossils. If it were to occur it could give rise to significant effects. Borrow Pit operatives will therefore be given awareness training to highlight this potential, should the lower strata be exposed and allow them to identify fossils, as well as what to do if they make a discovery to avoid inadvertent damage and reducing the effects to non-significant levels. It is noted that discoveries can potentially be seen as a positive, if new significant fossil discoveries are made as a result of the increased rock exposure. By ensuring that Borrow Pit activities do not encroach on the Valtos SSSI, no significant effect is anticipated on the designated site.

The operation of the proposed SCH development, could lead to an increased footfall within the area, which could give rise to a very slight increase in erosion of the protected features. The increased number of people visiting the area also increases the probability of more fossils being found, which is a positive impact. The effects arising are therefore anticipated to be non-significant overall.

The wave conditions and sediment transport patterns associated with the proposed SCH development layout have been modelled to understand how they change coastal processes. They have shown that there will be little, to no change in the wave and sediment patterns along the shore. Hence, the proposed SCH development will not lead to the covering up or erosion of the palaeontological features of the An Corran GCR. This is discussed in more detail in Section 16.3. No significant effects on An Corran are predicted as a result of the proposed SCH development.

## 12 Landscape, Seascape and Visual

The landscape, seascape and visual assessment considered the effects of the proposed SCH development and Borrow Pit on the landscape and visual character of the area.

The proposed SCH development lies within the Trotternish National Scenic Area (NSA) and will be constructed within a previously developed site and comprises a slipway, breakwater and supporting land based infrastructure. The Borrow Pit will be constructed within an area which has been previously worked as a quarry. While the Borrow Pit does not fall within the NSA, it does fall within the Trotternish and Tianavaig Special Landscape Area (SLA). The landscape type at both developments is categorised as Smooth Stepped Moorland.

Computer modelling was undertaken to produce zones of theoretical visual (ZTV) influence. The ZTV's identify where the development may potentially be visible and were used to identify representative viewpoints for use in the assessment. Figure 12.1 considers the ZTV, with the orange shading identifying where the proposed development may theoretically be visible. The three viewpoint (VP) locations are also indicated on Figure 12.1. Figure 12.2 considers the ZTV for the existing and proposed rock face and soil mounds, indicated in green, and just the soil mounds, indicated in orange. The three VP locations are also indicated on Figure 12.2. Photomontages were then created to show what the development would look like from each of the viewpoints. The photomontages are provided in Volume 4 of the EIAR. Table 12.1 below





provides a description of each of the VP's identified. An additional illustrative viewpoint (VP1A) using a high elevation drone from northeast of the slipway, has been utilised on the cover of this document.

**Table 12.1: Viewpoint Descriptions**

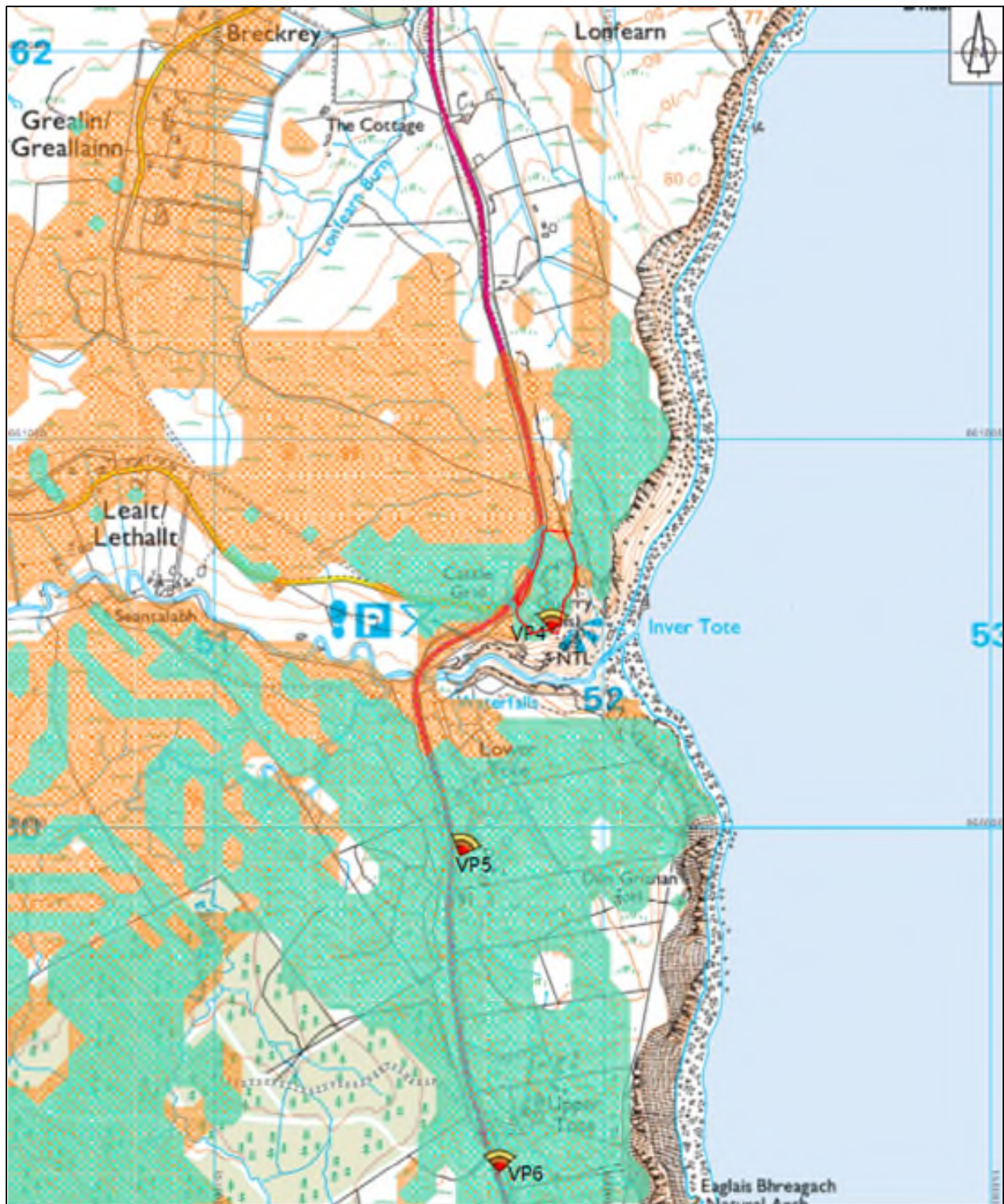
Viewpoint	Description
<b>Proposed SCH Development</b>	
VP 1B	Representative of marine views looking towards the proposed SCH development. Receptors are commercial fisherman/ fish farms, recreational boat users and other boat users. These receptors are considered to have low sensitivity.
VP 2	Representative of views from the footpath between Columba 1400 and the slipway. Receptors are visitors or local community members. These receptors are considered to have considered to have medium sensitivity.
VP 3	Representative of the views on the access road at An Corran looking towards the proposed SCH development. Receptors are local community members and other road users. These receptors are considered to have considered to have medium sensitivity.
<b>Borrow Pit</b>	
VP 4	Representative of the views from the An Leth-allt footpath. Representative of transient receptors. Receptor sensitivity is considered low-medium.
VP 5	Representative of the road to Lower Tote access. Representative of residential receptors. Receptor sensitivity is considered low-medium.
VP 6	Layby on the A855 at the Upper Tote. Representative of residential and transient receptors. Receptor sensitivity is considered low-medium.





Figure 12.1: Viewpoints (VP) 1, 2 and 3 Location Plan for the Proposed SCH Development





**Figure 12.2: Viewpoints (VP) 4, 5 and 6 Location Plan for the Borrow Pit**

An assessment of the predicted construction impacts from the proposed SCH development on visual amenity for receptors from VP's 1, 2 and 3, concluded that there will be a significant effect on viewers at VP's 2 and 3 due to the storage of materials and construction activities.

At the Borrow Pit, the landscape has been affected by historic operations. The assessment concluded that only at VP 4 will there be a significant effect on visual amenity during Borrow Pit operations as the footpath passes the quarry which will be fully visible.





During the operational phase of the proposed SCH development the impacts considered arise from the intensification of use of the site through the development of the breakwater, pontoons, slipway and onshore elements. The design has taken into account the characteristics of the area, with the use of natural materials for construction of infrastructure. In addition, buildings will be designed in accordance with the local vernacular with natural finishes where possible.

At VP1 the notable elements of the proposed SCH development will be the breakwater, sheds, vehicles, and vessels. They may be considered beneficial or adverse, being subjective and likely to be influenced by viewer familiarity and use of the harbour. Those seeking berth will welcome this sight. As this view is most likely associated with the proposed harbour users, the effect is not deemed significant.

At VP 2 the notable elements of the proposed SCH development will be the breakwater, slipway, sheds, vehicles and vessels. The new buildings will be more noticeable than the existing containers, however, taking into consideration the aesthetic design of the buildings they will be better suited to the setting than the existing containers. The effect on viewers from VP 2 is deemed to be significant, however, it may also be seen as beneficial / positive by some receptors.

At VP 3 the notable elements of the proposed SCH development will be the breakwater, slipway, sheds, vehicles and vessels. This may be considered acceptable, even positive, to those who benefit directly from the creation of a safe harbour (i.e. boat users both recreational and commercial). The new buildings will be more noticeable than the existing containers. The effect on viewers at VP 3 is deemed to be significant, however, it may also be seen as beneficial / positive by some receptors.

The proposed SCH development is unlikely to impact significantly on landscape within the Stepped Smooth Moorland landscape character type. No significant effects are identified on the landscape character itself; there are changes to landform and land cover as well as to several existing landscape components. While new elements are introduced, they are all considered complementary to the established land use. The design has considered the sensitive character of the area and once this is considered there are no significant effects on landcover, landform or landscape character.

No adverse effect is predicted on the special qualities of the NSA or on its integrity.

The Borrow Pit operations are unlikely to impact on landscape within the Stepped Smooth Moorland landscape character type. No effects are identified on the landscape character itself as these are temporary operations within a previously worked quarry. While there are changes to the landform through the extension to bare ground and land cover, the use of an established quarry (currently disused) as a Borrow Pit does not introduce new elements to the landscape.

No adverse effect is predicted on the special qualities of the SLA.





## 13 In-Air Noise

The former Lealt Quarry site is located approximately 1km to the east of the hamlet of Lealt, immediately adjacent to the east side of A855. The quarry is located between the public road and the coast. The closest residential properties are Lealt Falls House and no.2 Tote, located some 460m to the south-west.

The closest noise receptors for the Borrow Pit operations were identified as:

- 1 Lealt Falls House;
- 2 No.2 Tote;
- 3 No. 10 Culnacnock; and
- 4 No. 2 Lealt.

Recreational receptors have also been considered, namely the Lealt car park, picnic areas and paths.

Predictions have then been made of noise levels which are likely to be experienced at these locations these include soil handling, drilling and blasting, extraction operations and material processing and despatch of rock from the Borrow Pit to the proposed SCH development. It is noted that the Borrow Pit proposal has restricted operational hours, 7:00am to 7:00pm Monday to Friday and 7:00am to noon on a Saturday. No operations shall be undertaken outwith these hours with the exception of essential maintenance operations or emergency works.

The impact assessment considered the predicted noise levels at each of the locations described above for each 'noisy' activities against guidance provided by the relevant Scottish Government's Planning Advice Notes (PAN), which is based on methods from the British Standard "Code of practice for noise and vibration control on construction and open sites – Part 1: Noise."

The assessment noted that the level of noise experienced in most of the phases of the development is lower than prescribed PAN noise thresholds, with noise levels only exceeding the thresholds when processing and drilling occur at the same time, this is anticipated to only last for a short period throughout the envisaged working life of specific phases of the Borrow Pit. Noise from the Borrow Pit at all receptors is therefore predicted to give rise to non-significant effects.

## 14 Traffic and Access

In order for construction activities to occur, materials and equipment will need to be delivered to the site. These deliveries increase the vehicle movement and traffic within an area. In order to determine if there will be any significant impacts on the community, and to determine if the road network can handle the increased traffic during both the construction and operational phases of the project a Traffic Impact Assessment has been undertaken.

To predict whether the proposed SCH development will have any significant effects, the nature of the surrounding road infrastructure and the current level of traffic needed to be established. The proposed SCH development will be accessed from the A855, utilising the existing single-track access road, which comprises passing places all the way down to the harbour area.





The Borrow Pit is accessed directly off the A855 south of the proposed SCH development. The A855 between Staffin and Lealt is a local distributor road.

The assessment considered users of the A855 and users and residents living along the access road. For each of these receptors the following have been assessed:

- Severance (the perceived division that can occur within a community when it becomes separated by a major traffic artery); Driver delay;
- Pedestrian delay;
- Pedestrian amenity;
- Fear and intimidation; and
- Accidents and safety.

During the construction phase of the project the following traffic will require access to the site:

- Staff transport, either cars or minibuses; and
- Construction equipment and materials, deliveries of machinery and supplies of cement.

Peak traffic flows associated with the proposed SCH development are predicted to be 74 movements per day (37 trips in and 37 trips out). Of this 26 would be light vehicles (cars etc.) and 48 would be HGV's. The assessment identified that based on the current and predicted traffic flows, the existing road network from the Borrow Pit to the proposed SCH development has the capacity to accommodate the construction traffic.

The assessment for residents and users of the A855 and the single-track access road identified potential significant effects associated with accidents and safety. The issue is due to a lack of intervisibility between passing places on the single-track access road, this leads to additional reversing and manoeuvring being required which may increase the risk of accidents occurring. All other considerations give rise to non-significant effects.

In order to improve access to the proposed SCH development and reduce the risk of accidents, a number of passing place and minor road improvements have been identified. These will be undertaken prior to the commencement of construction, thereby reducing construction traffic effects to non-significant.

Once operational there will be up to 65 vehicle movements per day to the proposed SCH development, this is not a significant number of vehicle movements. The road improvements and the passing place enhancements will remain after the construction phase is completed. As such there is a slight, non-significant beneficial effect on users of the single-track access road in terms of driver and pedestrian delay due to improved visibility between passing places. Fear and intimidation will be reduced due to having appropriately sized passing places to allow for large vehicle passing. The improved intervisibility and passing place size will both help to reduce the chance of accidents occurring.





## 15 Navigation

The existing slipway is owned and maintained by The Highland Council. There is no statutory harbour authority and no formal management of the facilities. Access to the Staffin Slipway at Òb nan Ron is from Staffin Bay to the north, past the west side of Staffin Island. There is no safe access directly from the east due to the shallow water depths and presence of a rock reef. Vessels are reliant on charts, onboard navigational equipment (depth sounders) and local knowledge to access the Staffin slipway safely.

Currently, the slipway is utilised by:

- Commercial fisherman and fish farm operators who utilise the slipway throughout the year;
- Local non-commercial users for non-commercial fishing during summer months;
- Occasional marine tourists during the summer months; and
- Local and visiting recreational vessels during the summer.

During the removal of the existing breakwater and the construction of the new breakwater, slipway and pontoons, there are likely to be small safety boats and works botas in close proximity to the navigation route to the existing slipway. This, coupled with the construction related plant and equipment being utilised around the slipway is likely to increase the risk of collision or restrict access to the existing slipway. These collision risks are anticipated to be non-significant as the water is shallow, so vessels are unlikely to be moving quickly and majority of boat users, utilise the slipway during daylight hours.

The impact associated with the slipway access being reduced is likely to effect commercial fisherman and fish farm operators. However, the commercial fishing sector utilise the slipway first thing in the morning and later on in the day and this can easily be accommodated with good communication and forward planning, reducing the potential significant effect to a non-significant level. The seasonal users of the slipway wanting to launch and haul out boats are also likely impacted by reduced access to the slipway, as they utilise the harbour at various times of the day, they are more likely to be inconvenienced by the construction work. This can give rise to potential significant effects. The provision of a local liaison officer and a published schedule of access will help to minimise issues to non-significant levels.

The assessment has considered the effect of the increase in vessels and the likelihood of collision with each other and the new breakwater during operations. No significant adverse effects were predicted however, the relevant authorities will be informed of the development to allow charts to be updated. Markings may be installed on the breakwater if deemed appropriate by the National Lighthouse Board.

The development specifically aims to improve facilities for marine users as such there will be a number of beneficial navigation effects associated with the proposed SCH development. The project significantly benefits all users in some way the effects include:

- The installation of the 6 Aids to Navigation marking out the channel from between Staffin Bay and Òb nan Ron reduced risk of grounding of vessels approaching the harbour;
- The provision of safe all year round berthing on the pontoons;
- The provision of services for boats on the pontoons (refuelling and power);





- Improved launching and hauling of boats from the new slipway during any tidal state; and;
- Doubled capacity for temporary berthing alongside the upgraded existing slipway.

## 16 Hydrology, Hydrogeology, Water Quality and Coastal Processes

### 16.1 Hydrology and Hydrogeology

Consideration was given to both surface water (hydrology) and ground water (hydrogeology) for the proposed Borrow Pit.

The surface water drainage at the Borrow Pit can be split into two sub-catchment areas:

- Sub-catchment A which comprises the main historic hard rock quarry void, which collects rainfall and groundwater seepage.
- Sub-catchment B which comprises the access track, car parking areas and associated former quarry periphery.

The site lies in an aquifer of limited potential with small amounts of groundwater in the near surface weathered zone and secondary fractures and from rare springs.

Changes to surface water drainage are anticipated during the operation of the Borrow Pit as rainwater will be managed on site. Sub-catchment A will increase in size as the existing excavations will be extended to the west and north-west. However, once operations are completed there will be no change in the way water naturally drains. For sub-catchment B the reprofiled mounds will mean that water which naturally follows from the north will be diverted around the headwalls of the quarry preventing water from flowing into the operational void. The likely effects on overland drainage is deemed non-significant.

Deepening the excavation can lead to groundwater seeping into the excavated void. However, groundwater within the Borrow Pit area flows in isolated joints, with rainwater being the main source of recharge. This will not result in significant effects on the groundwater regime.

During the operation of the Borrow Pit, the volume of water that the catchment area can receive will be slightly increased due to an increase in surface area resulting in a non-significant beneficial effect on the hydrological regime in the area.

### 16.2 Water Quality

Consideration was given to changes in the water environment associated with both the construction and operation of the proposed SCH development and the Borrow Pit. The proposed SCH development will be constructed within the Òb nan Ron, located within the North Skye coastal waters. The closest river is the Stenscholl River, located approximately 1km from the proposed development and hence too far away to be impacted by the development.

The coastal waters immediately south of the Borrow Pit is the Sound of Rassay. The Borrow Pit is located within the Lealt River catchment and is located within the groundwater body Skye North.

As discussed in Section 2.4 there is a spring located south of the development and there are no water resource features at the Borrow Pit.





During construction there will be a need to store and utilise oils, fuels and potentially chemicals. If these were released to the environment and reached a watercourse or the sea they could reduce water quality. A source pathway receptor model was utilised to consider each potential pollution risk associated with the construction of the proposed SCH development and the Borrow Pit operations. No significant effects on water quality arising from the potential loss of containment were identified. Mitigation was identified to minimise the risk further this includes storing all oils, fuels and chemicals securely in an appropriate area away from watercourses and drains where possible. Spill response plans will be developed to detail procedures to be followed in case of a spill, spill kits will be available onsite to contain and clean up any spills.

As discussed in Section 2.4 the proposed SCH development will have storage tanks for fuel in order to facilitate refuelling of boats. The tanks will be designed to ensure that in the event of failure the contents will be captured and contained, it is therefore unlikely that the entire contents of the tank will be lost. With the installation of an oil interceptor and the design of the tank being doubled skinned, fuel entering the sea is unlikely and therefore no significant effects are anticipated.

There is potential for fuel to spill during the refilling of fuel storage tanks. However, the installation of the oil interceptor, having procedures in place for refuelling activities and having spill kits in place at the refuelling area to contain any spills make it unlikely that fuel will enter the sea. When refuelling vessels at the pontoons, any overfilling or drips from the hose may result in fuel going into the sea. While these are small volumes, over the lifetime of the proposed SCH development this can lead to localised pollution levels. However, with mitigation measures such as signage at the pontoons advising people on safe refuelling procedures and installing nozzles which have safety features to prevent overfilling, the effects on water quality are not considered significant.

Litter is likely to arise during the construction phase if waste is not effectively managed, potentially allowing it to reach the sea. This can however be easily managed through the use of covered waste receptors on site and properly sorting, storing and handling waste.

Litter during the operational phase of the proposed SCH development could arise from poor waste management practices on site. However, with the placement of waste bins and appropriate waste management, litter is unlikely to result in significant effects on water quality.

As discussed in Section 2.5, foul effluent from the WCs and showers will drain into a septic tank and then be discharged to sea. In addition, clean water from the oil interceptor will be discharged through the same discharge pipeline. While the discharge has the potential to impact on water quality, the effluent will be treated prior to being discharged and the discharge point is below mean low water springs so will be immediately diluted. Therefore, the effects on water quality likely to arise from foul discharge into the sea is not anticipated to be significant.

Flooding and rising sea levels need to be considered for this project as a number of the elements will be constructed on land. The design has considered the current mean high water springs and have considered a sea level rise of 0.89m, which is the level considered by the Scottish Environment Protection Agency as the sea level rise by the year 2100 within the West Highland River Basin Sea Rise allowance. The design has taken this level into account and have





ensured that infrastructure such as buildings and storage sheds are constructed to height that ensures they are safe from future rising sea levels.

### **16.3 Coastal Processes and Sediment Transport**

As the proposed SCH development will entail the construction of infrastructure in the sea, the effects on coastal processes need to be considered. The north of Skye lies between the Little Minch and the Sound of Raasay in the Sea of Hebrides, which is directly connected to the Atlantic Ocean. Hence the proposed SCH development is subject to tidal and wave regimes characteristic of the open sea.

Hydraulic modelling has been undertaken to understand the effects of the proposal on waves and currents, during various conditions and storm events. The output of the modelling was used to design the development to ensure that the breakwater is effective in providing an appropriate wave climate at the pontoons and slipway. Even during a 1 in 50 year storm, the maximum significant wave height at the pontoons is below 0.4m.

The modelling suggested that although the breakwater reduces wave height within the harbour area, there will be very little change in wave conditions and current speeds along the coastline in the wider Staffin area. Therefore, the construction of the breakwater will not give rise to significant effects on coastal processes.

The impact of the proposed SCH development on the sediment transport regime was considered by modelling the wave climate and the seabed materials. The modelling and assessment concluded that there are very low levels of suspended solids within Staffin Bay, the location of the breakwater will slightly alter the flow of currents just to the north of the proposed breakwater, which will change sediment transport in this isolated area, but will not affect the coastline. The change is unlikely to be noticeable and therefore the proposed SCH development will not give rise to significant effects on sediment transport within the Staffin area.

## **17 Population and Socio-Economics**

As the project aims to construct a facility for the community to enjoy and infrastructure to support the commercial fishing, fish farm and tourism sectors, the effects of the proposed SCH development on the population (i.e. local community) and socio-economics (i.e. local economy) were considered.

The Highlands and Islands is characterised by population sparsity, and an aging population with more young people leaving the area than moving in. The population within Staffin is currently 678 people with 23 crofting townships and more than 50% of Staffin population being over the age of 50. The main employment sectors in Skye are construction; retail; transport and storage; accommodation and food services; education and arts, entertainment, recreation and other services. As of 2018, percentage employment in the tourism sector (accommodation and food services) in Lochaber, Skye and Wester Ross was more than double that of the Highlands and Islands and Scotland. Data on the economics and employment sectors for Staffin dates back to the 2011 census, showing that the sectors which employ the largest proportion of the Staffin population are agriculture, forestry and fishing, construction, education, human health and social work and accommodation and food services.





With regard to tourism in Skye, the busiest months are May to September, with September having the most visitors. A survey of visitors to the area showed that the things that were lacking during their time on Skye were toilets / facilities and parking spaces.

There are a number of walking routes around Staffin and Lealt, which are utilised by both the local community and visitors. There is a circular walking route, which includes a path that leads from Columba 1400, off the A855 above the proposed SCH development, down the slipway and along the single-track access road back to the A855. As discussed in Section 11, there are dinosaur footprints at An Corran beach which is just west of the proposed SCH development and is a popular tourist attraction within the area.

The existing Borrow Pit lies adjacent to the A855 which is the main tourist route in the area. Access to the quarry is directly from the A855. Approximately 200m to the south-west of the borrow pit is the Lealt Gorge car park from which a path leads to a viewpoint for Lealt Falls. There is a further car park and picnic area, immediately to the south of the borrow pit access road and a path leading to the An Leth-Allt viewpoint over the old Diatomite furnace and mill, on the shore at Inver Tote.

Impacts associated with the construction phase of the proposed SCH development are associated with job creation, access restriction to local amenities, access to slipway infrastructure and a negative effect on visitor experience when utilising one of the local amenities. The receptors identified during the construction phase are:

- Local economy;
- Local community and visitors; and
- Commercial users.

Construction will provide more than five full time equivalent (FTE) years, it could be up to 15 FTE years. Depending on the successful contractor and availability of the relevant skills locally, this is likely to include a combination of workers from the local community, from Skye and from the mainland. This is a beneficial non-significant effect on the economy.

During the construction phase of the project, there is likely to be an increase in activity including movements of construction vehicles and machinery, and the need for areas to store materials. This will limit the available space for parking at the slipway for individuals wanting to access the walking trails. There is no intention to restrict access to the walking trail around Staffin, however, the access to the slipway area may at times be restricted and alternative routes from the core walking path onto the single-track access route will need to be utilised.

This is unlikely to give rise to significant effects to visitors and the local community. Any access restrictions to the slipway will be communicated to the community in advance and signage will be displayed to indicate any diversions.

Access to the slipway for recreational users, other than launching and hauling, will be restricted, as this will be a construction site and for safety reasons visitor access will be limited. However, this is unlikely to give rise to significant effects.

During the construction of the proposed SCH development, the activities and noise associated with construction are likely to impact on the value of the experience to those using the circular walking route, specifically when they reach the section which passes above the proposed SCH





development. In addition, the slipway area will not be accessible for those wanting to use the harbour for non-vessel related recreational uses, thereby impacting on the value of the experience at the slipway area. However, this temporary effect will not be significant.

Footpaths around the Borrow Pit will be closed for safety reasons during blasting events. This is only likely to last 30 minutes at a time, on up to 20 occasions. The blasts will likely be spaced out over a 12 month period. The community will be notified of blasts in advance. No significant effects on the local community or visitors are anticipated.

During operations at the Borrow Pit, the movement of vehicles, noise and dust associated with the operations are likely to reduce the overall value of the experience for the local community and visitors when using the surrounding footpaths, viewpoint and picnic area. The effects will be minimised through the implementation of a Site Dust Management Plan as discussed in Section 5 and in-air noise mitigation as discussed in Section 13. The Borrow Pit will only be operational for around 3 months of excavation and processing all be it spread over a 12 month period. As such, the Borrow Pit operations will not give rise to significant effects on the local community and visitors.

During the operational phase of the proposed SCH development, there are no adverse or negative effects anticipated. Rather, there are several beneficial or positive effects associated with the operation of the proposed SCH development with two significant beneficial effects namely improved facilities for commercial users and the creation of a community resource. While job creation and encouraging tourism into the wider Staffin area are beneficial they are unlikely to significantly affect the local economy.

The cumulative assessment considered the effects of the farm shop, located at the junction of the A855 and the proposed SCH development single-track access road, and the proposed SCH development once both facilities are operational. The proposed SCH development and farm shop complement each other, and they will both help to make Staffin a destination which will encourage visitors to stay longer on the island. Hence, there is a potential knock-on benefit to the wider service providers of the island (i.e. food, accommodation). The beneficial effect on the local economy is not predicted to be of a magnitude that would be classed as significant in EIA terms.

## 18 Schedule of Mitigation

All the mitigation identified throughout the EIA has been collated in a Schedule of Mitigation. The construction mitigation measures identified will be utilised to produce a Construction Environmental Management Document (CEMD) which provides additional detail on how the mitigation will be implemented, taking into account additional construction information, which will become available later in the project. The CEMD in turn will be implemented by the contractor who will incorporate mitigation into their Risk Assessment Method Statements (RAMS). The implementation of mitigation will be audited to ensure it is effective and improvements made where required.





## 19 Conclusion

Having completed a scoping exercise, the Environmental Impact Assessment (EIA) focused on the topics areas in which there was a potential for significant effects. Impacts have been assessed and appropriate mitigation identified where required, to minimise adverse effects. The significant effects identified are summarised in Table 19.1.

There were 13 significant adverse effects associated with the proposed SCH development construction works without secondary mitigation. Once secondary mitigation was taken into account, the number of residual adverse significant effects was reduced to two. The remaining significant effects are associated with landscape, seascape and visual effects on viewers at viewpoint 2 (the core path above the slipway) and viewers at viewpoint 3 (the single-track access road). Although mitigation has been proposed to minimise the effect on receptors utilising the core path and the single-track road during construction, the construction works will remain highly visible.

There were three significant adverse effects associated with the operations at the Borrow Pit without secondary mitigation. Once secondary mitigation was taken into account, the number of residual adverse significant effects reduced to one. The remaining adverse effect is associated with viewers at viewpoint 4 (Borrow Pit entrance) who are walking past the Borrow Pit. While mitigation to minimise the visual impact will be implemented on site, the Borrow Pit will remain visible.

There were eight significant adverse effects associated with the operation of the proposed SCH development, without secondary mitigation. Once secondary mitigation had been taken into account, two adverse effects remain significant. These two effects are associated with the viewers at viewpoint 2 (the core path above the proposed SCH development) and viewers at viewpoint 3 (the single-track access road); these residual effects may be perceived by some viewers as beneficial. As mentioned above the proposed SCH development is within an NSA however the proposed SCH development will be constructed using natural materials and has been designed with minimal 'clutter' to fit in with the local vernacular.

In addition, to the eight significant adverse effects during the operation of the proposed SCH development, there were seven significant beneficial effects associated with the operational phase. The beneficial effects are all associated with the creation of safe berthing, improved launching and hauling of boats and creating a community resource at the proposed SCH development which give rise to both navigational and socio-economic benefits.

Five projects were identified as having potential cumulative effects, namely the farm shop in Staffin, Stornoway Deep Water Port, Lochmaddy Ferry Terminal, Uig Ferry Terminal Development and the agricultural shed in Lower Tote, Lealt. There were no significant adverse effects from the cumulative assessments undertaken within the relevant chapters. A potential non-significant beneficial cumulative effect was however identified on the local economy, associated with the farm shop, as visitors will potentially visit both developments, stay longer in the area due to the larger offering and hence, utilise additional services and increase spend.

In conclusion, during both construction and operation of the proposed SCH development there will be adverse effects which can be minimised through appropriate mitigation to non-significant levels, with the exception of landscape, seascape and visual effects due to the change in landscape and intensification of use; these residual effects may be perceived as





beneficial. There are , a number of beneficial effects for the local community, visitors to Staffin and commercial harbour users arising from the proposed SCH development.





**Table 19.1: Summary of Significant Effects in the Absence of Mitigation**

Receptor	Nature of Impact	Receptor Sensitivity/ Value/ Probability	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
<b>Construction – Proposed SCH Development</b>							
Atlantic Salmon	Mortality and reduced productivity resulting from water quality issues caused by the release of hazardous substances.	International	Low Adverse Short-term Reversible	Moderate: Significant Adverse	Mitigation outlined in Chapter 17: Hydrology, Hydrogeology, Water Quality and Coastal Processes will be implemented.	Negligible Adverse Short-term Reversible	Minor: Non-Significant Adverse
European Eel		International	Low Adverse Short-term Reversible	Moderate: Significant Adverse		Negligible Adverse Short-term Reversible	Minor: Non-Significant Adverse
Common Seal		International	Low Adverse Short-term Reversible	Moderate: Significant Adverse		Negligible Adverse Short-term Reversible	Minor: Non-Significant Adverse
Grey Seal		International	Low Adverse Short-term Reversible	Medium: Significant Adverse		Negligible Adverse Short-term Reversible	Minor: Non-Significant Adverse
Otters	Disturbance of Protected Species	International	Low Adverse Short-term Reversible	Moderate: Significant	Pre-construction surveys. EPS licence sought if required. Development of Species Protection plan . Artificial lighting within the site should only be used where required to light works sites and for safety reasons and should be directional towards the required works area. Minimise area and duration of disturbance.	Negligible Adverse Short-term Reversible	Minor: Non-significant Adverse





Receptor	Nature of Impact	Receptor Sensitivity/ Value/ Probability	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
Otters	Accidental Physical Damage	International	Low Adverse Short-term Reversible	Moderate: Significant Adverse	Measures to prevent entrapment. Pollution prevention as identified in Chapter 17: Hydrology, Hydrogeology, Water Quality and Coastal Processes.	Negligible Adverse Short-term Reversible	Minor: Non-significant Adverse
An Corran GCR – whole area	Direct Impacts	High / Very High	Minor / Moderate Adverse	Major / Moderate Significant Adverse	Harbour Construction not to encroach on An Corran GCR; key employees aware of existing assets.	Negligible Adverse	Negligible/ Minor: Non-significant Adverse
An Corran GCR - Dinosaur Footprints and other fossils	Potential for direct impacts and new discoveries.	Very High	Minor Adverse	Moderate Significant Adverse	Potential for fossils included in risk assessment; visual check for fossil assets prior to construction, and after boulder removal; Scottish Fossil Code posters put up; key employees made aware of fossil potential; plans in place for collection/study if fossils found.	Negligible Adverse	Minor: Non-significant Adverse
Viewers at VP 2		Medium	Medium - High	Moderate-Major: Significant	Maintenance of a tidy site. Appropriate storage of construction materials and consumables. Maintenance of temporary elements such as safety barriers, fencing, signage and lighting.	Medium / High	Moderate-Major: Significant
Viewers at VP 3		Medium	Medium-High	Moderate-Major: Significant	Maintenance of a tidy site. Appropriate storage of construction materials and	Medium-High	Moderate-Major: Significant





Receptor	Nature of Impact	Receptor Sensitivity/ Value/ Probability	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
					consumables. Maintenance of temporary elements such as safety barriers, fencing, signage and lighting.		
Residents and users of the A855 and Staffin Road	Accidents and Safety	Medium	Moderate Adverse	Moderate: Significant	Construction Traffic Management Plan (CTMP) proposals and layby enhancements on Staffin Road.	Slight Adverse	Minor: Non-Significant
Commercial fishing vessels and Fish farm support vessels	Access to Slipway Reduced	High	Medium Adverse Short-term	Moderate: significant Adverse	Agree and communicate schedule of access to slipway. If practicable make new slipway available prior to concrete works on existing slipway.	Low Adverse Short-term	Minor: Non-significant Adverse
Marine tourism vessels; Local non-commercial fishing vessels; Local seasonal recreational users.	Access to Slipway Reduced	Medium	Medium Adverse Short-term	Moderate: Significant Adverse	Local liaison officer in place. Publish schedule of access. If practicable make new slipway available prior to concrete works on existing slipway.	Low Adverse Short-term	Minor: Non-significant Adverse
<b>Construction – Borrow Pit</b>							
Otters	Disturbance of Protected Species	International	Low Adverse Short-term Reversible	Moderate: Significant Adverse	Pre-construction surveys. EPS licence sought if required. Development of Species Protection plan . Artificial lighting within the site should only be used where required to light works sites and for safety reasons	Negligible Adverse Short-term Reversible	Minor: Non-significant Adverse





Receptor	Nature of Impact	Receptor Sensitivity/ Value/ Probability	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
					and should be directional towards the required works area. Minimise area and duration of disturbance.		
Otters	Accidental Physical Damage	International	Low Adverse Short-term Reversible	Moderate: Significant Adverse	Measures to prevent entrapment. Pollution prevention as identified in Chapter 17: Hydrology, Hydrogeology, Water Quality and Coastal Processes.	Negligible Adverse Short-term Reversible	Minor: Non-significant Adverse
Viewers at VP 4		Low-Medium	Medium – High	Moderate – Major: Significant	Mitigation to reduce effects; construction works will however remain highly visible	Medium-High	Moderate-Major Significant
<b>Operation</b>							
Atlantic Salmon	Mortality and reduced productivity resulting from water quality issues caused by the release of hazardous substances.	International	Low Adverse Short-term Reversible	Moderate: Significant Adverse	Mitigation outlined in Chapter 17: Hydrology, Hydrogeology, Water Quality and Coastal Processes will be implemented	Negligible Adverse Short-term Reversible	Minor: Non-significant Adverse
European Eel		International	Low Adverse Short-term Reversible	Moderate: Significant Adverse		Negligible Adverse Short-term Reversible	Minor: Non-significant Adverse
Common Seal		International	Low Adverse Short-term Reversible	Moderate: Significant Adverse		Negligible Adverse Short-term Reversible	Minor: Non-significant Adverse
Grey Seal		International	Low Adverse	Medium: Significant		Negligible Adverse	Minor: Non-significant





Receptor	Nature of Impact	Receptor Sensitivity/ Value/ Probability	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
			Short-term Reversible	Adverse		Short-term Reversible	Adverse
Land cover	Introduction of new land cover.	Medium	Medium	Moderate: Significant	Use of natural rock, minimise impermeable surfaces, quality built design.	Medium	Slight – Moderate: Non-significant
Landscape Character	Redevelopment of SCH Intensification of use	High	Low	Moderate: Significant	Sensitive design, appropriate scale and form. Use of local vernacular and natural finishes where possible, minimal 'clutter'	Low	Slight-Moderate: Non-significant
Viewers at VP 2		Medium	Medium	Moderate: Significant <sup>+</sup>	Use of natural materials, minimise impermeable surfaces, local vernacular, minimal 'clutter'	Medium	Moderate: Significant <sup>+</sup>
Viewers at VP 3		Medium	Medium	Moderate: Significant <sup>+</sup>	Use of natural materials, minimise impermeable surfaces, local vernacular, minimal 'clutter'	Medium	Moderate: Significant <sup>+</sup>
Visiting skippers as part of flotilla.	Grounding of Vessels	Medium	Medium	Moderate: significant Beneficial	Appropriately communicate new arrangements.	Medium	Moderate: significant Beneficial
Commercial fishing vessels and Fish farm support vessels.	Safe Berthing	High	High Beneficial Permanent	Major: significant Beneficial	No mitigation required.	High Beneficial Permanent	Major: Significant Beneficial
Marine tourism vessels; Local non-commercial fishing vessels;	Safe Berthing	Medium	High Beneficial Permanent	Moderate: Significant Beneficial	No mitigation required.	High Beneficial Permanent	Moderate: Significant Beneficial





Receptor	Nature of Impact	Receptor Sensitivity/ Value/ Probability	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
Recreational flotilla; and Local seasonal recreational users.							
Commercial fishing vessels and Fish farm support vessels	Improved Launching and Hauling of Boats	High	Medium Beneficial Permanent	Moderate: Significant Beneficial	No mitigation required.	Medium Beneficial Permanent	Moderate: Significant Beneficial
Marine tourism vessels; Local non-commercial fishing vessels; Recreational flotilla; and Local seasonal recreational users.	Improved Launching and Hauling of Boats	Medium	Medium Beneficial Permanent	Moderate: Significant Beneficial	No mitigation required.	Medium Beneficial Permanent	Moderate: Significant Beneficial
Commercial users	Improved facilities for commercial users	Moderate local	High Beneficial Permanent	Moderate: Significant Beneficial	No mitigation required.	High Beneficial Permanent	Moderate: Significant Beneficial
Local Community	Community Resource	Moderate local	High Beneficial Permanent	Moderate: Significant Beneficial	Posters / information boards with information on how to enjoy the marine environment responsibly to be displayed.	High Beneficial Permanent	Moderate: Significant Beneficial

**Key**

<b>Significant Effect</b>
<b>Non-significant Effect</b>





## 20 References

- Affric Limited. 2021. Pre-Application Consultation Report.
- Institute for Air Quality Management. 2016. Guidance on the Assessment of Mineral Dust Impacts for Planning.

## 21 Glossary

Acronym	Definition
CEMD	Construction Environmental Management Document
CTMP	Construction Traffic Management Plan
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
GCR	Geological Conservation Review
GENs	General Planning Principles
HGV's	Heavy Goods Vehicle
km	kilometres
LDP	Local Development Plan
LOA	Length Overall
m	metres
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
MPA	Marine Protected Area
NMP	National Marine Plan
NPF	National Planning Framework
NSA	National Scenic Area
PAC	Pre-Application Consultation
PAN	Planning Advice Notes
PANs	Planning Advice Notes
PM	Particulate Matter
PMF	Priority Marine Feature
RAMS	Risk Assessment Method Statements
SAC	Special Area of Conservation
SCH	Staffin Community Harbour
SCT	Staffin Community Trust
SDPs	Strategic Development Plan
SLA	Special Landscape Area
SPP	Scottish Planning Policy
SSSI	Site of Special Scientific Interest
UAV	Unmanned Aerial Vehicle
VP	Viewpoint
WC	Water Closest
ZTV	Zone of Theoretical Visual Influence