Appropriate Assessment for Shetland Islands Council, Fair Isle Harbour Improvement works and capital dredging and sea deposit. December 2023.

MARINE DIRECTORATE - LICENSING OPERATIONS TEAM'S ASSESSMENT OF THE PROJECT'S IMPLICATIONS FOR DESIGNATED SPECIAL PROTECTION AREAS IN VIEW OF THE SITES' CONSERVATION OBJECTIVES.

APPLICATION FOR A MARINE LICENCE UNDER THE MARINE (SCOTLAND) ACT 2010 FOR HARBOUR IMPROVEMENT WORKS, CAPITAL DREDGING AND SEA DEPOSIT OF DREDGED MATERIAL AND OBJECTS.

SITE DETAILS: FAIR ISLE HARBOUR

Name	**Assessor or Approver**	**Date**
David Hutchison	Assessor	12 December 2023
Naomi Gibson	Approver	14 December 2023

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SECTION 1: BACKGROUND

1 Appropriate assessment conclusion

1.1 This appropriate assessment ("AA") concludes that there will be no adverse effect on the site integrity of the Fair Isle Special Protection Area ("SPA") from the Sheland Islands Council ("SIC") proposal either in isolation or in combination with other plans or projects, providing that the conditions set out in Section 4 are complied with.

1.2 Marine Directorate – Licensing Operations Team ("MD-LOT") considers that the most up to date and best scientific advice available has been used in reaching the conclusion that the SIC proposal will not adversely affect the integrity of the Fair Isle SPA and is satisfied that no reasonable scientific doubt remains.

2 Introduction

2.1 This is a record of the AA undertaken by MD-LOT in regards to the SIC proposal to undertake harbour improvements, capital dredging and sea deposit of dredged materials and objects associated with the Fair Isle harbour improvement works ("the Works") as required under Regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 ("the 1994 Habitats Regulations"). MD-LOT, as the 'competent authority' under the 1994 Habitats Regulations, has to be satisfied that the project will not adversely affect the integrity of any European site (special areas of conservation and special protection areas), either alone or in combination with other plans or projects, before it can grant consent for the project.

2.2 NatureScot, operating name of Scottish Natural Heritage, has been consulted.

3 Details of proposed project

3.1 The Works are located at Fair Isle Harbour on the Fair Isle and involve the following licensable marine activities below Mean High Water Springs ("MHWS"):

- Capital dredging and deposit of dredged substances or objects;
- Extension to existing breakwater;
- Construction of new quay and linkspan; and
- Replacement of slipway and improvements to existing pier.

3.2 The Works are expected to take approximately 3 years to complete, with the construction works being carried out in two phases. Phase one spans eight months and will encompass the improvements to the existing pier and slipway structures. Phase two will take 6 months and involve the construction of the new quay and linkspan and extension to the existing breakwater. Capital dredging and sea deposit of dredged material will take place over 17 months.

Capital Dredging and deposit of dredged substances or objects

3.3 The Works include capital dredging and sea deposit of dredged material to facilitate the safe navigation of the new larger roll on – roll off vessel and the construction of the new quay. The dredging to facilitate the safe navigation will increase the water depth to -4.5 metres ("m") chart datum ("C.D."). Dredging to facilitate the new quay construction will increase the depth to -4 m C.D. The maximum dredge volume is approximately 2,730 cubic metres ("m³") or 5,340 wet tonnes. Of this 1,280 m³ is anticipated to be soft sediments with the remaining 1,450 m³ rock. A backhoe dredger or cutter suction dredger will be used to remove the sediment material with a barge mounted excavator used for the removal or the rock. Dredged material will be loaded onto a barge and deposited at the Scalloway designated sea deposit site (FI095), which is the closest open deposit site to the Works. The material will be deposited from the barge using the bottom discharge method.

Extension to existing breakwater

3.4 The existing Fair Isle Harbour breakwater is approximately 80 m in length and 25 m in width. To provide greater shelter for the new quay and linkspan, the breakwater will be extended in height and in area. Approximately 3000 m³ of rock armour will be used for the extension and the rock will be delivered to site by vessel.

Construction of new quay and linkspan

3.5 A new quay will be constructed between the northern end of the existing quay and breakwater. The new quay will include a new linkspan to facilitate the berthing of the new vessel. The new quay construction consists of approximately 1,070 m³ of prefabricated concrete caisson units along with 9,600 m³ of aggregate for backfilling the new quay. The aggregate will include site won rock obtained during terrestrial works. Any additional aggregate required, and the prefabricated concrete structures will be delivered to site by vessel. The height of the new quay will be +3.4 m C.D.

3.6 Once the required depth has been dredged to allow construction of the quay to commence, concrete foundations will be cast in-situ with steel dowels installed into the bedrock to create a level footing for the precast caisson units to be installed on top of it. A concrete mattress will be installed on the breakwater behind the caisson units to prevent any fine aggregate backfill being lost into the breakwater. The aggregate, which may include site won rock, will be used to infill the area between the breakwater/land and caisson units. Precast concrete deck panels will be installed on top of the caisson units and block paving installed on top of the backfill aggregate.

3.7 A linkspan is to be installed on the new quay to improve resilience of the ferry service and improve safety for both passenger access and goods handling. The linkspan to

be installed is 14 m in length and 5.5 m wide at the nose. The steel linkspan deck will be fabricated off site and delivered to site by vessel. For the construction of the linkspan support structure, concrete foundations will be cast in-situ with steel dowels installed into the bedrock to create a level footing for the precast caisson units to be installed on top of it. Jacking frame cylinders will be installed on top of the support structures along with an A-frame to support spragging of the linkspan. An access walkway will be constructed over the sea from the new quay to the southerly linkspan support structure.

Replacement of slipway and improvements to existing pier

3.8 The existing steel slipway will be replaced to facilitate new, larger vessel. The existing slipway rails and concrete cross members will be removed with the footings remaining in place. New steel beams will be installed on top of 18 new concrete bases anchored into the seabed using steel dowels. The slipway rail will then be installed on top of the steel beams. The length of the slipway will be approximately 48 m below MHWS. It is anticipated that divers will be used for part of the construction of the slipway. Repairs will also be carried out on the existing pier structure including the replacement of fenders to accommodate the new vessel.

4 Consultation

4.1 NatureScot was consulted on 01 September 2023 and provided a response on 26 September 2023. Further advice was sought from NatureScot on 12 December 2023 and a response was provided on the same day.

5 Main points raised during consultation

5.1 NatureScot advised that the Works would have a likely significant effect on the bird qualifying interests of the Fair Isle SPA and advised that an AA was required.

SECTION 2: INFORMATION ON EUROPEAN SITES

6 Background information and qualifying interests for the relevant European site

6.1 This section provides links to the NatureScot SiteLink website (“SiteLink”) where the background information on the site being considered in this assessment is available. The qualifying interests for the site are listed as are the conservation objectives.

Table 1 Name of European site affected and relevant link(s) to SiteLink

Fair Isle SPA https://sitelink.nature.scot/site/8496

Table 2 Qualifying interests

Fair Isle SPA
Arctic skua (*Stercorarius parasiticus*)* breeding
Arctic tern (*Sterna paradisaea*) breeding
Fair Isle wren (*Troglodytes troglodytes fridariensis*) breeding
Fulmar (*Fulmarus glacialis*)* breeding
Gannet (*Morus bassanus*)* breeding
Great skua (*Stercorarius skua*)* breeding
Guillemot (*Uria aalge*) breeding
Kittiwake (*Rissa tridactyla*)* breeding
Puffin (*Fratercula arctica*)* breeding
Razorbill (*Alca torda*)* breeding
Shag (*Phalocrocorax aristotelis*)* breeding
Seabird assemblage breeding
* indicates assemblage qualifier only

Table 3 Conservation objectives

Fair Isle SPA
To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and To ensure for the qualifying species that the following are maintained in the long term: • Population of the species as a viable component of the site • Distribution of the species within site • Distribution and extent of habitats supporting the species • Structure, function and supporting processes of habitats supporting the species • No significant disturbance of the species

SECTION 3: ASSESSMENT IN RELATION TO REGULATION 48 OF THE CONSERVATION (NATURAL HABITATS, &C.) REGULATIONS 1994

7 Requirement for appropriate assessment

7.1 Is the project directly connected with or necessary to the conservation management of the site(s)?

The project is not directly connected with or necessary to the conservation management of the site.

7.2 Is the project likely to have a significant effect on the qualifying interest(s)?

In its response dated 26 September 2023, NatureScot advised that the proposal is likely to have a significant effect on the bird qualifying interests of the Fair Isle SPA due to disturbance during construction, modification to the marine environment, loss of habitat and accidental introduction of land predators.

MD-LOT agrees with NatureScot's advice and has undertaken an AA for the Fair Isle SPA.

8 Appropriate assessment of the implications for the site in view of the site's conservation objectives.

8.1 NatureScot advised that the bird qualifying interest of the Fair Isle SPA could be impacted by the SIC proposal due to disturbance during construction, modification to the marine environment, loss of habitat and accidental introduction of land predators.

NatureScot advised that there would be disturbance to breeding birds during the construction of the works due to noise. However, this disturbance would be temporary and not affect the breeding population to a significant extent. NatureScot acknowledged that the noisy construction works relating to the expansion of the noust, will take place above MHWS. It advised that as these works will commence in early spring, the potentially disturbing activities will already be underway when the birds begin to nest, giving them the opportunity to habituate or avoid the area. It also highlighted the presence of an Ecological Clerk of Works on site who will liase with the Fair Isle Bird Observatory warden to ensure the arctic tern colony at Bu Ness is not affected and will minimise any impact to other birds.

SIC provided in support of their application, a Report to Inform Appropriate Assessment ("RIAA"). Within section 1.3.2 of this assessment, the applicant has provided a list of good practise/management measures which they propose to adopt. This include the requirement for an Ecological Clerk of Works during the construction who will also liase with the Fair Isle Bird Observatory Warden. Adherence to the RIAA will be included as a condition of any marine licence issued. NatureScot further advised that the noisy works around the expansion of the noust are above MHWS and outwith the scope of the marine licence, however, confirmed that the mitigation provided by SIC and contained within the RIAA, is sufficient to ensure there are no adverse impacts on designated sites.

NatureScot further advised that the qualifying interest could be impacted by the direct loss of breeding habitat. Habitat supporting 7 Nesting pairs of fulmar will be lost to the footprint of the proposed quay. This represents 0.02% of the Fair Isle fulmar population. Nesting habitat within the Fair Isle SPA is not likely to be limiting, so these pairs could relocate. NatureScot further advised that fulmar is a very common and widespread species throughout Shetland and these impacts would therefore be negligible.

NatureScot also advised that there was the possibility for changes to water and sediment quality during both the dreding and construction activities and operation, however it predicted these would be negligible and not significant.

NatureScot finally advised that there would be the possibility for the accidental introduction of land predators onto the Fair Isle. However, it advised that the implementation of the Biosecurity Management Plan produced by the applicant would minimise the risk of introducing predatory mammals. Adherence to the Biosecurity Management Plan will be included as a condition of any marine licence.

8.2 Conclusion

MD-LOT concurs with the conclusion of NatureScot that provided the conditions in Section 4 are adhered to, there will be no adverse effect on the qualifying interests of the Fair Isle SPA from the SIC proposal in isolation.

9 In combination assessment

9.1 MD-LOT has carried out an in combination assessment to ascertain whether the SIC proposal will have a cumulative effect with other plans or projects which, in combination, would have the potential to affect the qualifying interests of the Fair Isle SPA.

9.2 The following projects currently have an active marine licence or section 36 consent and associated AA which identified a likely significant effect on the qualifying interests of the Fair Isle SPA.

9.3 BT R100 Telecommunications Cable Installation – Shetland

BT are undertaking the installation of sixteen armoured fibre optic telecommunications cables in Scottish water, five of them in the Shetland Marine Region. This forms part of the Scottish Governments Reaching 100 (R100) broadband project to supply 100% of the Scottish population with superfast broadband. The cable routes have been chosen to be the shortest and most direct routes between the islands meaning the cables will not require optical amplifiers to be installed to ensure the signal gets through. This means that there will be no electromagnetic field (“EMF”) emitted by the cables once they are in operation. The project is to install 25-45 millimetres armoured cables with a plough burial method or surface laid and secured with pins and rock armour. Above Mean Low Water Springs (“MLWS”) the cable will be buried to a depth of 2 metres below the surface. Offshore there is a target burial depth of 1 metre depth to protect and secure the cables. A post lay inspection will take place to allow burial of the cable with rock armour where it has been surface laid. During the landing of the cables at either end an excavator will be utilised to dig the cable trench and pull the

cables ashore, utilising excavated material to bury the cables and return the beach profile to its original state.

9.4 Meygen Tidal Turbines

Construction and operation of a tidal array in the Inner Sound of the Pentland Firth. Phase 1a of the project is complete with four tidal turbines having been installed. A construction timeline for phases 1b and 1c has not yet been determined. Phase 1b of the project (also known as Project Stroma) will consist of the installation of a further four tidal turbines along with the deployment of a subsea hub. Two tidal turbines will be initially installed and then monitored for a period of time in order to inform decisions on future deployment of the remaining two tidal turbines for Phase 1b and the remaining tidal turbines (53) for deployment during phase 1c. Further information regarding the project can be found here.

9.5 Fish farms

9.5.1 There are a number of fish farms which were identified as having a likely significant effect on the Fair Isle SPA which could also be affected by the SIC proposal. The table below summarises these projects.

Table 4: Fish farms identified as having a likely significant effect on Fair Isle SPA also affected by the SIC proposal

Site Name	Licensee	Licensed Equipment	Dates of Licence
Kirkabister, Yell	Cooke Aquaculture Scotland Ltd	8 ring cages 15 grid mooring 1 feedbarge	07/07/2023 - 06/07/2048
Setterness North, Shetland	Scottish Sea Farms Ltd	12 ring cages 1 feed barge 20 grid mooring 21 marker buoy	14/04/2023 – 13/04/2048
Holms Geo, Shetland	Scottish Sea Farms Ltd	6 ring cages 1 feedbarge 24 grid moorings	22/04/2023 – 21/04/2048
Fiunary, Sound of Mull	Scottish Sea Farms Ltd	8 Ring cages 1 Feedbarge 21 Grid Moorings 5 Boat moorings	29/06/2023 – 28/06/2048

9.6 Assessment of in combination effects on the Fair Isle SPA

There will be no incombination effect with the BT R100 cable as the marine licence for this will end before the SIC proposal will start. There is potential for in combination

effect with the fishfarms listed above, the pathway of effect for these are entanglement of bird species in the fish farm topnets. Provided that conditions in respective planning permissions are adhered to or they are carried out in accordance with the conditions within their respective AA, MD-LOT concludes that any in combination effects will not adversely affect site integrity of the Fair Isle SPA.

10 MD-LOT Conclusion

10.1 MD-LOT concludes that providing the conditions listed in Section 4 are adhered to, there will be no adverse effect on the site integrity of the Fair Isle SPA from the SIC proposal either in isolation or in combination with other projects.

SECTION 4: CONDITIONS

11 Requirement for conditions

11.1 The following conditions are required to ensure the project will not adversely affect the site integrity of the Fair Isle SPA:

11.1.1 The Licensee must adhere to the mitigation listed in section 1.3.2 of the Report to Inform Appropriate Assessment submitted to the Licensing Authority on 15 August 2023.

11.1.2 The Licensee must adhere to the Biosecurity Management Plan submitted to the Licensing Authority on 15 August 2023.