



TABHAIGH EAST SCOPING REPORT

Mowi (Scotland) Ltd

Request for a Scoping Opinion

August 2024

MOWI[®]

Tabhaigh East Scoping Report

Request for a Scoping Opinion

For Mowi (Scotland) Ltd

August 2024 Version 1

PROJECT INFORMATION:

PROJECT CODE	Project 0041
NGR	NB 423 234/ NB 423 232
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LOCAL AUTHORITY	Comhairle nan Eilean Siar

PROJECT TEAM:

PROJECT MANAGER	Sarah Murray/Susan Mclvor
AUTHORS	Atlantic 58 - Sarah Murray, Laura Carse, Gareth Gentles, Ruth Jeavons, Angus Maclean; Land Use Consultants
APPROVED BY	Atlantic 58 Laura Carse, Mowi (Scotland) Ltd - Laura Tulip, Stephen MacIntyre
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1 INTRODUCTION

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1.1 PURPOSE OF THE REPORT

Mowi (Scotland) Ltd ('the Developer') proposes to install a new fish farm, Tabhaigh East ('the proposed development'), in Loch Erisort, Isle of Lewis. Atlantic58 Ltd has been appointed to prepare this document, a Request for a Scoping Opinion under the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 ('the EIA Regulations'), which will be submitted to Comhairle nan Eilean Siar (CnES) to seek an opinion on the required content and scope of an Environmental Impact Assessment (EIA) Report. The EIA Report will accompany a planning application for the proposed development under the Town and Country Planning (Scotland) Act 1997 (as amended).

The proposed development is classified as intensive fish farm activity, which falls under Section 1(d) of Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 and therefore requires an EIA. The legislative framework for Scoping and EIA is detailed in Chapter 2.

The purpose of the Scoping Report is to ensure that the EIA process is proportionate and effective through engagement with the planning authority (CnES) and consultation bodies early in the planning and design stages of a project. It also provides an opportunity to build mitigation measures into project design at an early stage to reduce or eliminate potential adverse effects. The scoping report and subsequent scoping opinion from the planning authority will determine the content and extent of information to be covered by the EIA. The process will:

- Provide a description of the location, nature and purpose of the proposed development.
- Identify the key issues to be considered in the EIA.
- Identify those matters that can be scoped out or which need not be addressed in detail.
- Describe, and reach agreement on, appropriate methods and approaches for assessment of potential impacts, including survey methodology, where relevant.

The EIA Regulations require the HRA and EIA to be coordinated to avoid duplication and ensure necessary information is provided to identify whether there are any likely significant effects on a European site. This will enable the planning authority to undertake an appropriate assessment and determine whether a proposal is likely to have a detrimental effect on the conservation interests of European sites. Therefore, an HRA Screening Report is provided as a separate Annex to the Scoping Report.

1.2 DEVELOPMENT OVERVIEW

The proposed project is located within the Loch Erisort complex on the west coast of the Isle of Lewis (Figure 1.1). The Developer currently operates three existing finfish farm sites in the eastern extent of the loch: Tabhaigh¹, North Shore East and North Shore West, with a combined maximum biomass of 6,550 tonnes (Figure 3.1). The sites are serviced by a shorebase located at Keose Glebe, 6.7 km to the southwest of the island of Tabhaigh.

The Developer proposes to install a new site approximately 0.35 km to the east of the existing Tabhaigh fish farm, which would be named 'Tabhaigh East' (Figure 3.1). The total pen number and configuration will be determined following completion of the hydrographic analysis, biomass modelling and compliance with SEPA's latest regulatory framework. At this stage, two indicative siting options are currently proposed (Figure 3.2): comprising of 8 x pens of 160 m circumference in a 2 x 4 grid configuration (100 m² grid matrix) and a maximum biomass of between

¹ A modification to the Tabhaigh site has recently been approved by CnES (20/06/2024, 24/00065/FFPA). The layout in Figure 3.1 illustrates the recently consented infrastructure.

2,000 tonnes and 2,500 tonnes. No acoustic deterrent devices (ADDs) for seals are currently proposed for the new site location. The proposed barge position and mooring extent will be refined during the EIA process.

Successful planning consent and CAR licensing of Tabhaigh East would also result in the removal of or reduction of biomass at the following sites, **resulting in no net increase of consented biomass within the Loch Erisort complex:**

- The relinquishment of the planning consent and CAR licence for the existing operational site **North Shore West**, currently consented for 1,650 tonnes biomass. The infrastructure would be removed and site fully decommissioned.
- Possible relocation of some biomass from another existing site within the Loch Erisort complex - **North Shore East** (current biomass of 2,400 tonnes) - to Tabhaigh East, which will be explored and informed by modelling results.

1.3 STRUCTURE OF THE REPORT

The Scoping Report is set out within the following structure:

Chapter 2. Legislative and Policy Context: describes the relevant legislative framework for EIA, including regulations and licensing, and policy context relevant to planning and the environment.

Chapter 3. Project Description: describes the site selection process and rationale for the project, a description of the location and details of the proposals including key components, proposed construction / installation and operations.

Chapter 4. Approach to Scoping: details the approach to the scoping of topics and potential impacts that could result in likely significant effects.

Chapter 5 to 16. Assessment Topics: each topic chapter provides a brief description of the baseline environment, identifies potential impacts associated with new fish farm developments, identifies those likely to result in significant effects and those which can be scoped out, and proposed an approach to EIA for each of the following topics:

- Ecological topics including Benthic Ecology; Wild Salmonids; Ornithology; and Marine Mammals.
- Human receptor topics including Socioeconomics (including tourism and recreation interests); Population and Health; Seascape, Landscape and Visual Amenity; Cultural Heritage; Marine Users, Navigation and Commercial Fisheries; Traffic and Transport.
- Physical environment topics including Water Quality and Climate Change

Chapter 17. Summary of Scoping Assessment: Summary of scoping results for all topics and potential impacts, identifying those proposed to be scoped in or scoped out of the EIA.

Chapter 18. Approach to EIA: Summary of the EIA process, approach to cumulative and in-combination effects, and proposed structure of the EIA Report.

The Scoping Report is supported by the following documents:

Appendix 12.1. Zone of Theoretical Visibility (ZTV) and Proposed Viewpoints

Appendix 13.1. Undesignated Terrestrial Remains Recorded Within the ZTV

Appendix A: Tabhaigh East Scoping Report Figures

Annex A: HRA Screening for Special Protection Areas (SPAs)

1.4 QUESTIONS FOR STAKEHOLDERS

The following questions are asked of the planning authority and statutory stakeholders, where topic receptors are relevant to the scope of interest and / or responsibility:

Questions for Stakeholders	
Q1	Has all the relevant project information been provided to determine the scope of the EIA?
Q2	Do you have any specific comment on the two proposed pen layout options being proposed?
Q3	Have all relevant receptors been identified?
Q4	Are the proposed study areas sufficient to account for potential zone of effects?
Q5	Have all of the relevant impacts been identified?
Q6	Do you agree with impacts scoped out / impacts scoped in?
Q7	Are the proposed assessment approaches and methodologies appropriate?
Q8	Have all the relevant stakeholders (including non-statutory and local groups) been identified for each receptor topic?
Q9	Question to CnES Planning: Are there any proposed or recently consented projects with potential connectivity that should be considered cumulatively with the development proposals?

2 LEGISLATIVE AND POLICY CONTEXT

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2.1 TOWN AND COUNTRY PLANNING (SCOTLAND) ACT 1997

Aquaculture is defined as ‘the breeding, rearing or keeping of fish or shellfish’ under the Town and Country Planning (Scotland) Act 1997 (‘the T&CP Act’). Amendments introduced by the Planning etc (Scotland) Act 2006, and the Town and Country Planning (Marine Fish Farming) (Scotland) Order 2007 brought marine aquaculture under planning control with effect from 1 April 2007. Planning permission for new and modified marine fish farming sites is required from the local planning authority in accordance with the Act.

2.2 EIA REGULATIONS

An Environmental Impact Assessment (EIA) Report is required under the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (‘EIA Regulations’) where the proposed development is:

- Schedule 1 development: development where an EIA is automatically required (not applicable to aquaculture development).
- Schedule 2 development: likely to have significant effects on the environment by virtue of factors such as its nature, size or location. Development of a type that meets criteria and exceeds relevant thresholds in Schedule 2 of the EIA regulations or is wholly or in part in a ‘sensitive area’ as defined by the EIA regulations.

The proposed development is classified as intensive fish farm activity, which falls under Section 1(d) of Schedule 2 of the EIA Regulations. The Schedule 2 criteria for intensive fish farming are as follows:

- The development is designed to produce more than 10 tonnes of dead fish weight per year.
- The development is situated in marine waters, the development is designed to hold a biomass of 100 tonnes or greater: or
- The development will extend to 0.1 hectare or more of the surface area of the marine waters, including any proposed structures or excavations.

The EIA regulations require the following information to be provided in a request for a Scoping Opinion:

- A description of the location of the development, including a plan sufficient to identify the land.
- A brief description of the nature and purpose of the development and of its likely significant effects on the environment.
- Such other information or representations as the developer may wish to provide or make.

2.3 OTHER REGULATORY FRAMEWORKS

Other relevant regulatory frameworks under which the project proposals will be assessed and require a license or consent to operate are outlined in Table 2-1.

Table 2-1 Other regulatory frameworks and licensing

Regulatory framework	Relevance
CAR licence: Water Environment (Controlled Activities) (Scotland) Regulations 2011 via SEPA	CAR licence authorisation for discharges from a marine fish farm and medicinal treatment residues from bath and in feed treatments. Sets site-specific limits on the amount of fish biomass held and the quantity of medicines and treatments that can be used on site. A CAR licence is also required for the discharge of chemotherapeutants from well boats.
Marine licence: Marine (Scotland) Act 2010 via Marine Scotland Licensing Operations Team (MS-LOT)	A marine licence is obtained to construct, alter, or improve any works, or deposit any object in or over the sea, or on or under the seabed. ⁸
Crown Estate lease: Crown Estate Act 1961 via Crown Estate Scotland	Equipment sited below Mean Low Water Springs will generally require a seabed lease from Crown Estate Scotland in discharge of its functions under the Act.
Habitats Regulations Appraisal: Conservation (Natural Habitats, &c.) Regulations 1994 via the planning authority (CnES)	Habitats Regulations Appraisal (HRA) required to identify potential connectivity with European sites, a Europe-wide network of protected sites developed under the European Commission Habitats Directive (Directive 92/43/EEC) and the Birds Directive (79/409/EEC). The planning authority must consider whether any plan or project will have a “likely significant effect” on a European site, if so, they must carry out an “appropriate assessment”. The Developer will provide information to inform HRA with any future planning application.
European Protected Species licence: The Conservation (Natural Habitats, &c.) Regulations 1994 via NatureScot/Marine Scotland	A European Protected Species (EPS) licence may be required for activities that could disturb species listed under the regulations as EPS. However, no EPS licence is required for disturbance to cetaceans as Acoustic Deterrent Devices (ADDs) are not proposed for use at the development site.
Aquaculture Production Business (APB) authorisation: Aquatic Animal Health (Scotland) Regulations 2009 via Marine Scotland Fish Health Inspectorate	All new fish farms (an Aquaculture Production Business) must apply to the Fish Health Inspectorate (FHI) for authorisation prior to commencement of farming activities to prevent the introduction and spread of infectious diseases. Certain conditions must be met before authorisation is issued.

2.3.1 Sea Lice Regulatory Framework

From 1 February 2024, SEPA will take on the lead regulatory responsibility for managing sea lice and wild salmonid interactions, and for managing sea lice and sea trout interactions from March 2025. Under the new framework a risk framework will be applied to assess sea lice exposure threshold. If SEPA concludes that action is required to manage interactions to protect wild salmon, it will set permit conditions that limit the maximum number of sea lice on the farm when authorising the development; or, if necessary, refuse to authorise the development.

2.4 PLANNING AND AQUACULTURE POLICY

Section 25 of the T&CP Act requires applications to be assessed against all relevant national and local policy guidance. The following frameworks and policies will be reviewed against the proposals:

- National Planning Framework 4 (NPF4) (2023) (replacing NPF3 and Scottish Planning Policy).
- Scotland’s National Marine Plan (2015).
- New Scottish Government Vision for Sustainable Aquaculture (Scottish Government, 2023).

- Outer Hebrides Local Development Plan (2018) and Supplementary Guidance: Marine Fish Farming (2018).

Other relevant legislation, policies and strategies relevant to marine aquaculture and specific to receptor topics will also be reviewed against the proposals and will be set out in each receptor chapter.

2.5 REFERENCES

Scottish Government (2023) Vision for Sustainable Aquaculture [online]. Available at: <https://www.gov.scot/publications/vision-sustainable-aquaculture/documents/>

SEPA (2023) Managing interactions between sea lice from finfish farms and wild salmonids. Proposed new regulatory framework. May 2023 [online]. Available at: <https://consultation.sepa.org.uk/regulatory-services/detailed-proposals-for-protecting-wild-salmon>

3 PROJECT DESCRIPTION

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3.1 BACKGROUND AND OVERVIEW OF PROPOSALS

The Developer is currently modifying existing farming operations in Loch Erisort. Three existing finfish farm sites are currently in operation in the eastern extent of Loch Erisort: Tabhaigh, North Shore East and North Shore West, with a combined maximum biomass of 6,550 tonnes; all of which are operated by the Developer (Figure 3.1). The sites are serviced from a shorebase located at Keose Glebe, 6.7 km from the proposed site (Figure 3.2).

The Developer proposes to install a new site to the east of the existing Tabhaigh farm¹, which would be named Tabhaigh East (the proposed development). The development of the new site would result in the relinquishment of one other site located within Loch Erisort, and a possible reduction of biomass at a second site within the loch complex. The overall objective of the reconfiguration is to relocate biomass from the inner, less flushed area of the Loch to the outer area of the complex.

Two indicative siting options are currently proposed for Tabhaigh East, illustrated on Figure 3.2. Both options are expected to comprise 8 x pens of 160 m circumference in a 2 x 4 grid configuration (100 m² grid matrix) and support a maximum biomass of between 2,000 tonnes and 2,500 tonnes. The proposed options are positioned at centre-points of approximately NB 423 234 (Option 1) and NB 423 232 (Option 2). The final configuration will be determined following completion of the hydrographic analysis, biomass modelling, EIA outputs and compliance with SEPA's regulatory framework. The proposal does not seek a net increase in biomass in Loch Erisort; it is proposed that the biomass remains as consented and is relocated from sites within Loch Erisort to the proposed development. The design and position of the feed barge will be confirmed in the planning application but is likely to be a 700 to 800 tonne steel barge.

Securing planning consent and CAR licensing of Tabhaigh East would result in:

- The closure and decommissioning of the existing North Shore West fish farm resulting in the relinquishment of the CAR Licence (CAR/L/1004085/V15) and variation to the existing planning consent (14/00318) which currently covers both North Shore West, and the adjacent operational fish farm site (North Shore East). North Shore West is located to the southeast of Beinn a' Chladaich Mhòir and has been operational since 2003. The farm comprises of 8 x pens of 120 m circumference in a 2 x 4 grid configuration (75 m grid matrix) with a shared barge located to the northeast, between this site and the North Shore East pens. The farm is consented for a maximum biomass of 1,650 tonnes. The pens are fitted with pole-mounted top-nets.
- Possible relocation of some biomass from North Shore East to Tabhaigh East, which will be explored and informed by modelling results. The North Shore East site (CAR/L/1129789/V3) is located adjacent to the North Shore West site and southeast of Ceanmhoir. The farm has been operational since 2015 and is consented for a maximum biomass of 2,400 tonnes. The farm comprises of 9 x pens of 120 m circumference in a 2 x 5 grid configuration (75 m grid matrix) and is serviced by a shared barge to the northwest of the pens. The pens are fitted with pole-mounted top-nets.

¹ A modification to the Tabhaigh site has recently been approved by CnES (20/06/2024, 24/00065/FFPA). The layout in Figure 3.1 illustrates the recently consented infrastructure.

3.2 PRE-APPLICATION CONSULTATIONS

Consultations with CnES Planning, statutory stakeholders and non-statutory stakeholders were initiated on 5 May 2023 and are ongoing, to present the proposals, inform the site design and identify any sensitivities or constraints at an early stage in the planning process. A summary of engagement to date, and proposed activities going forward, are presented in Chapter 4. Approach to Scoping.

3.3 SITE DESCRIPTION

Loch Erisort is a 13 km-long narrow sea loch on the east coast of the Isle of Lewis, to the south of Stornoway, in the Outer Hebrides. Tabhaigh East fish farm will be located at the eastern extent of the loch, off the northeast coast of the uninhabited island of Tabhaigh Mhòr. The crofting township of Cromore lies to the south, while the villages of Crosbost and Ranish are located to the northwest.

The proposed development is located within the boundary of the North-east Lewis Marine Protected Area (MPA), designated for sandeels (*Ammodytes marinus* / *Ammodytes tobianus*), Risso's dolphin (*Grampus griseus*) and its marine geomorphology; and the Inner Hebrides and the Minches Special Area of Conservation (SAC), designated for harbour porpoise (*Phocoena phocoena*).

Three existing finfish farm sites are currently in operation in the eastern extent of Loch Erisort: Tabhaigh, North Shore East and North Shore West, with a combined maximum biomass of 6,550 tonnes; all of which are operated by the Developer (Figure 3.1). The sites are serviced by a shorebase located at Keose Glebe, 5.7 km to the southwest of Tabhaigh. The sites are located within Disease Management Area (DMA) 5a, with two other farms further south in Loch Odhairn and Loch Sealg, and within a Scottish Government Locational Guidelines 'Category 2' area (Figure 3.3). The proposed development will fall within this DMA. Loch Erisort is also categorised as a Wild Salmon Protection Zone under draft proposals for managing interactions between fish farms and wild Atlantic salmon (SEPA, 2023).

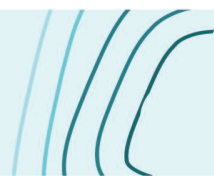
3.4 SITE SURVEYS

The following surveys to characterise the physical conditions around the proposed development area are planned, or have been completed and will be reported in the EIA Report and planning application:

- Bathymetric multibeam survey carried out on 22 May 2023 by Aspect Land and Hydrographic Surveys.
- Current meter deployment for 90 days.
- Sediment samples and ROV footage and report by Benthic Solutions Limited (BSL).

3.5 SITE SELECTION AND RATIONALE

The aim of the proposed modification is to relocate existing biomass into areas of improved hydrological conditions and water quality, increasing pen size (and therefore volume) to reduce stocking density and improve overall fish health. The biomass from North Shore West is proposed to be moved to Tabhaigh East, should consent be gained (leading to the relinquishment of North Shore West), and potentially a proportion of the biomass from North Shore East, which would reduce overall stocking density at North Shore East. The relocation of biomass from within Loch Erisort to the mouth of the loch is also anticipated to reduce potential interactions with wild salmonids transiting through the Erisort complex from the River Laxay system. Fewer, larger pens also enable treatments to be administered quickly and effectively with more fish being treated for sea lice at any one time, potentially reducing medicinal interventions.



3.6 PROJECT COMPONENTS

The Developer proposes to install a new fish farm with the following components:

- **Pens:** Up to 8 x pens of 160 m circumference in a 100 m² grid are proposed for the project site.
- **Biomass:** a maximum biomass of 2,000 - 2,500 tonnes is proposed and will be confirmed following completion of hydrographic survey and biomass modelling.
- **Pen moorings:** mooring system likely to be plough embedment anchors with standard installation. The number and approximate length of moorings will be confirmed in the EIA.
- **Pen netting:** top nets of pole-net design. Mesh specification: 100 mm ceiling net mesh, 25 mm side wall mesh (0 – 2 m height), 100 mm side wall mesh (remaining side wall).
- **Feed Barge:** the proposed barge and position will be confirmed in the planning application but is likely to be a 700 to 800 tonne steel barge.
- **Shorebase:** the proposed development will be serviced from the existing shorebase at Keose Glebe.
- **Navigational lighting and marking:** navigational markers will be installed to mark the periphery of the site and equipment. The site will be lit according to Northern Lighthouse Board (NLB) recommendations.
- **Maturation lighting:** used October to April every second year for the first 6-7 months of the production cycle. Six lights will be installed in each pen.
- **Acoustic Deterrent Devices:** ADDs are not proposed for use at the farm.

Table 3-1 Summary of proposed components

Component	Specification / Parameters
Biomass	2,000 – 2,500 tonnes
Pen number and size	8 x 160 m circumference, handrail height of 2 m height.
Pen surface area	0.0163 km ² / 1.63 ha
Mooring footprint	To be confirmed in planning application (<i>indicative area of search options presented</i>).
Feedbarge	Type and size to be confirmed in planning application. Likely to be 700 to 800 tonne steel barge.
Top nets	Pole-mounted top nets (7 m maximum height with pen handrails).
Netting mesh	100 mm ceiling net mesh 25 mm side wall mesh (0 - 2 m height) 100 mm side wall mesh (remaining side wall)
ADDs	Not proposed.

3.7 CONSTRUCTION AND INSTALLATION

The pens will be assembled at a dedicated off-site yard at Kishorn. Pens, mooring grids and moorings will be installed over approximately 2-3 weeks and will be towed by workboat from Kishorn. Navigational lighting will be installed, in accordance with National Lighthouse Board (NLB) requirements during this time. The feedbarge will also be installed over four days. The type and number of vessels likely to be required to complete the installation works will comprise of two multicat vessels as well as a landing craft from Mallaig Marine. No onshore works in the vicinity of Loch Erisort will be required. Moorings will be inspected post-installation by a contractor.



The North Shore West site will be relinquished, with pens and moorings removed from site prior to installation of the proposed development. Decommissioning of the existing pens is anticipated to take 2-3 weeks, depending on weather, with all pens and moorings removed and towed by workboat to be recycled at another site. The pens may be recycled, reused at another site, or sold on. Any waste material will be disposed of in accordance with the Developer's Waste Management Plan.

3.8 FARM MANAGEMENT AND OPERATIONS

3.8.1 Personnel

The Developer currently employs 13 staff and contractors, servicing all three existing farms within Loch Erisort, which will be maintained following the proposed relinquishment of North Shore West and installation of the proposed development. The team comprises of one farm manager, two assistant farm managers and ten skipper / technician / deckhands, the majority of whom are local to Lewis.

3.8.2 Stocking, production and harvesting

The proposed maximum allowable biomass will be between 2,000 to 2,500 tonnes. The preferred stocking density will depend on the final biomass of the site, which will be determined through NewDepomod modelling. The stocking density is anticipated to be less than 15 kg/m³, in line with RSPCA Assured standards. The Developer will apply for a CAR licence, which will determine the maximum biomass and permitted treatments that can be administered at the proposed farm.

Smolts raised from Mowi freshwater farm sites or land-based recirculation units will be transported via wellboat to the site and follow strict biosecurity protocols. During the production cycle, fish will be passively graded, a standard procedure that sorts fish into different size classes to maintain a uniform size within each pen to reduce aggression and feeding competition. This process allows for consistent removal of maturing fish and enables uniform uptake of feed within the pen and involves the use of a net panel facilitating selection of different fish size classes.

Generally, the complete production cycle can last from 18 – 24 months, with harvesting initiated from around 18 months. Pens will be left fallow for a minimum of four weeks as standard at the end of each production cycle to enable seabed recovery.

Stocking and coordination will be undertaken based on Disease Management Area 5a, which will include existing sites in Loch Erisort, all of which are operated by Mowi, and allows stocking, fallowing and treatments to be coordinated.

3.8.3 Feeding and monitoring

Feed will be delivered approximately twice per month by boat in the earlier stages of the cycle, then 3-4 times per month nearer the end of the production cycle when biomass is higher. Feed is administered from the surface by a tube system from the feed barge with feed dispersed twice a day. Fish will be monitored by a dedicated member of staff for 12 hours daily to monitor the feeding process and fish health.

3.8.4 Fish health and welfare

Fish health will be monitoring and maintained under standard site-specific plans following best practice, including:

- Veterinary Health and Welfare Plan: details the procedures for the management of fish health, welfare and prevention of disease. Includes measures around fish transfer and medicinal and non-medicinal treatments.

- Fish transfer risk assessment: which assesses and mitigates the potential health hazards relating to the transfer of farmed fish including stress, exacerbation of diseases and development and transfer of diseases and pathogens.

Operational requirements include a range of activities associated with veterinary treatments and disease prevention. Medicinal treatments are administered both as vaccinations, in-feed treatments, and as bath treatments. Medicinal treatments available and allowable quantities will be determined through CAR licensing process, which will also determine the maximum allowable biomass that can be held on the farm.

Non-medical treatments are anticipated to be available as part of the veterinary health and welfare plan. These include the use of cleaner fish - wrasse and / or lump suckers - as an ongoing measure to control sea lice within pens. A number of water-based treatments, based on changes of temperature and pressure will also be available to treat sea lice as part of a treatment programme. Freshwater treatments will be administered by specialised well boats using locally sourced licensed freshwater abstraction points.

3.8.5 General operations and farm maintenance

Day-to-day farm management, husbandry and maintenance at the proposed farm will include:

- Operating hours: winter period from end of October to end of March is 0800-1700; summer period is 0630-1830.
- Mortalities: collection and removal of mortalities on a regular basis, at least three times per week with an aim of daily removal. Stock mortalities removed from the pens will be stored in sealed containers and uplifted by licensed waste carrier for disposal at a licensed facility.
- Inspections and maintenance: an inspections and maintenance protocol will be followed to ensure pens, netting and moorings are in good working order and repairs made as soon as possible to reduce the risk of escapes or loss of equipment.
- Net washing: nets are washed at the start of every two-week cycle and two pens are washed per day.
- Noise suppressants: noise suppressants on equipment will be fitted as standard to reduce noise emissions from the barge.

3.8.6 Vessel types and movements

As the proposed new site will result in the relinquishment of North Shore West, there is unlikely to be an increase in vessel activity associated with the Developer's Loch Erisort operations. A number of different vessels will continue to support day-to-day operations at the new farm location throughout various stages of the production cycle, including three personnel carrying rigid hulled inflatable boats (RIBs), one net washing workboat and one site workboat (Monohull 1507 steel workboats, one for net washing, one for site support, 7-8 m polar Cirkel/Arran Workboat type personnel support boats x 3). The vessels will undertake husbandry and maintenance activities, including grading, administering treatments and harvesting. Day-to-day vessel routes are generally via the shorebase at Keose Glebe. Other vessels (i.e. harvest vessels) will transit from Mallaig harvest station or other farms in vicinity if using for health/welfare/treatments.

3.8.7 Land-based deliveries

All Loch Erisort farms are currently serviced via the existing shorebase at Keose Glebe in the Lochs area of Lewis, located off an unnamed minor road branching from the A859. The road also services residential properties towards the villages of Crosbost and Ranish. Staff use this route to the shorebase, while all feed deliveries are by sea

directly to the feedbarge. Fish are harvested and treated directly via wellboats and therefore do not utilise the road network.

Existing pens at North Shore West will be decommissioned and transferred to another site. New pens for the proposed project at Tabhaigh East will be transferred to site via sea from Kishorn. There will be no increase in staff, deliveries of supplies or removal of waste via road associated with the new development as the existing activities will continue for the new farm.

3.8.8 Environmental management and protection

Management plans

Farm management plans and protocols to protect the local ecological and physical environment will include:

- Containment and Contingency Escapes Plan: to prevent escapes of farmed fish.
- Inspection and Maintenance Schedule: to ensure equipment is well-maintained and prevent fish escapes and navigational risk from loss of equipment.
- Predator Mitigation Plan: to deter predators and prevent entanglement, protect fish welfare and prevent risk of escapes.
- Wildlife Entanglement Monitoring Protocol: as part of NatureScot's strategic monitoring programme on the efficacy of pole-nets in deterring predators and minimising entanglement of birds.
- Environmental Management Plan: to protect wild fish stocks. It is anticipated that the existing EMP for Loch Erisort will be replaced by the new regulatory structures introduced by SEPA under the new Sea Lice Framework. (At this stage it is not envisaged that any new planning permission for a fish farm will include mitigation conditions for protecting wild salmonids from the risk of adverse interactions with sea lice from farm raised salmon. SEPA will be implementing a national wild salmonid monitoring programme in 2025)
- Emergency Response Plan: to mitigate against unplanned events, including damage to pens from predation or storm events and pollution events from accidental spillages or leakages.
- Waste Management Plan: outlining general requirements for managing and disposing of non-fish waste, preventing pollution to the surrounding environment.

Climate change

The Developer has policies in place relating to sustainability and climate change, which include measures to reduce energy use and increase efficiency through sourcing of feed, including transport logistics and packaging. The Developer's Sustainability Strategy and 'Leading the Blue Revolution' Plan, includes climate change as a key sustainability programme.

Any risk to fish farm equipment from climate change through increased storm frequency is considered as part of hydrographic modelling and an attestation will be provided as part of the EIA providing validation that equipment has been designed to withstand a 1-in-50-year storm event.

3.9 DECOMMISSIONING

It is anticipated that the Planning Authority (CnES) will set a condition with any planning consent that requires decommissioning of the proposed development infrastructure if farming operations were to cease. Should the proposed modified development cease operating for the growing of finfish for a period exceeding three years, all infrastructure will be required to be removed and the site restored to the satisfaction of the Planning Authority,

usually within four months of being notified. The pens may be recycled, reused at another site, or sold on. Any waste material will be disposed of in accordance with the Developer's Waste Management Plan.

4 APPROACH TO SCOPING

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4.1 INTRODUCTION

Scoping is an important stage early in the EIA process and in the planning of a project. It enables a project to be designed to avoid or minimise potential adverse environmental impacts and provides an opportunity to incorporate environmental enhancements into the project. The aim of this Scoping Report is to engage with statutory and non-statutory consultees early in the EIA process, inviting them to provide relevant information and to comment on the proposed approach to the EIA, to ensure that a robust and proportionate EIA Report is submitted in support of the planning application.

The objectives of the Scoping Report are to ensure:

- The process identifies the relevant issues to be covered in the EIA Report.
- The EIA is proportionate to the nature, scale and location of a project and focusses on the key issues.
- Alternatives and mitigation measures can be incorporated early into project design.
- Opportunities are provided to engage all relevant statutory stakeholders and non-statutory stakeholders (i.e., local community organisations / groups) at an early stage in project development.

The aim of the EIA Report is to inform the decision maker of the environmental implications of the proposal. The EIA process is intended to ensure that the planning authority, when deciding whether to grant planning permission, does so with full knowledge of the likely significant effects, and takes these into account in the decision-making process.

4.2 SCOPING PROCESS

The Scoping report sets out:

- The indicative project proposal.
- An initial understanding of the current baseline conditions, including important features and sensitives, in the area likely to be impacted by the project.
- The potential impacts and subsequent likely significant effects that could arise.
- Potential embedded and additional mitigation measures that would avoid, reduce or off-set potential adverse effects; or enhancement measures that could result in beneficial effects.
- Identifies the topics (and specific impacts) to be scoped into the EIA, where potentially significant effects may result from the proposals on the physical, biological and human environment and scopes out topic impacts which are not expected to generate significant effects.
- Whether additional research or surveys are required to fill knowledge gaps.
- The methodologies and approaches to assessment for each receptor topic.
- Identifies all relevant stakeholders to be engaged in the EIA process.

The scoping assessment has been undertaken in line with the EIA Regulations and industry best practice, including: Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (2018); NatureScot's Environmental Impact Assessment Handbook (NatureScot & Historic Environment Scotland, 2018); and various guidance notes from the Institute of Environmental Management and Assessment (IEMA).

The process of identifying impacts that could result in likely significant effects includes:

- Identifying important and sensitive features and assets (receptors).
- Identifying typical impacts associated with marine fish farming developments (beneficial and adverse, direct and indirect).
- Establishing whether there is a pathway between receptor and impact.
- Consider whether the effect is likely to be significant in the absence of mitigation.
- Identify those impacts that should be taken forward and assessed under the EIA process, based on the understanding of the nature of the impact and information currently available to determine effects (described in Table 4-1).

Table 4-1 Identification of likely significant effects

Description of effects	Potential impact	Approach to EIA
Effects well understood and likely to be adverse on the receptor, with potential significant effects. Further information required to understand extent of impact and any necessary mitigation measures.	Likely significant effect	Scope in for further assessment
Effects uncertain due to gaps in baseline, uncertainty around the risk to receptor or further site-specific mitigation may be required. Further information required to determine whether there are likely significant effects.	Likely significance of effect uncertain	Scope in for further assessment
No pathway for impact, impact well-understood and / or embedded mitigation / standard best practice would avoid or reduce impact to ensure no likely significant effects.	No likely significant effect / effect unlikely to be significant	Scope out of the EIA

4.3 STAKEHOLDER CONSULTATION

4.3.1 Consultation strategy

The development proposals are not anticipated to trigger the requirement for formal Pre-Application Consultation (PAC) under the Planning (etc) Scotland Act 2006 (as amended) and do not fall under the classification of a 'Major Development'¹, the surface area for proposed pens is 1.63 ha and the final feed barge footprint is not anticipated to exceed the threshold of 2 ha.

The Developer has commenced a range of pre-application consultation activities with stakeholders with interest in Loch Erisort and the project proposals, described in Section 4.3.2. Engagement will continue throughout the pre-application process. All relevant correspondence and requests for further information to inform the EIA, including how they have been addressed in the EIA, will be documented within a stakeholder consultation record, and accompany any future planning application.

¹ The Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009 sets out thresholds for national and major developments which are subject of a planning application, which trigger the requirement for PAC and must undertake a statutory 12-week public consultation prior to the submission of a planning application. Fish farming infrastructure with a surface area footprint greater than 2 ha is classified as a 'major development'.

4.3.2 Engagement to date

Consultations with Comhairle nan Eilean Siar (CnES) Planning, Historic Environment Scotland (HES), Marine Scotland, NatureScot and Scottish Environment Protection Agency (SEPA) were initiated on 5 May 2023 and are ongoing, details are included in Table 4-2. Early consultation was initiated to present the proposals, inform the site design and identify any sensitivities or constraints at an early stage in the planning process. The Developer presented the proposals and wider strategy for managing operations in Loch Erisort to the stakeholders via a 'briefing note' and follow-up meeting in May 2023.

The briefing note on the proposal was also issued to a number of other key stakeholders in May 2023, including: the Northern Lighthouse Board (NLB), Ministry of Defence (MoD), Crown Estate Scotland (CES), Royal Yachting Association (RYA) Scotland, the local Harbour Master, local community councils (Pairc, Kinloch, and North Lochs), Western Isles District Fisheries Board (WIDFB), Outer Hebrides Fisheries Trust (OHFT), Western Isles Fishermen's Association (WIFA), Scottish White Fish Producers Association (SWFPA), and Soval Estate. The Developer will continue to engage these stakeholders, responding to any queries and requests for further information, throughout the planning process.

An open day at Loch Erisort was also held on the 26 July 2023, which invited members of the community, other stakeholders and statutory consultees to view the Developer's shore base, view and discuss proposed plans for modifications, and take a boat trip out to visit the three farm sites (40 members of public and stakeholders attended, including Pairc Community Trust and SEPA local officer).

Table 4-2 Summary of key pre-applications consultations to date

Stakeholders	Date	Detail
CnES Planning, HES, Marine Scotland, NatureScot and SEPA	April 2023	Briefing note to present proposed development and wider strategy for farm modifications in Loch Erisort, including discussion around potential constraints, layout options and survey requirements.
NLB, MoD, CES, RYA, Harbour Master, local community councils, WIDFB, OHFT, WIFA, SWFPA, and Soval Estate	April 2023	Briefing note to present proposed development and wider strategy for farm modifications in Loch Erisort.
NLB and Harbour Master	April 2023	Virtual meeting to discuss and obtain feedback on the proposed modifications in Loch Erisort.
CnES Planning, HES, Marine Scotland, NatureScot and SEPA	May 2023	Virtual meeting to discuss and obtain feedback on the proposed modifications in Loch Erisort.
Local community, statutory stakeholders and non-statutory stakeholders	July 2023	Open day to present plans with site visit to shore base and fish farm sites. Comments centred around the work that goes into fish farm developments and questions on habitats/species likely to live in the loch.

Stakeholders	Date	Detail
Comhairle Archaeology Service	July 2023	Recommended a programme of archaeological works (to identify potential shipwreck material in vicinity of proposed Tabhaigh modified site ²), comprising a desk-based assessment of historical environmental records and geophysical survey, such as multi-beam or side-scan sonar and propose appropriate mitigation, if required.
Comhairle Archaeology Service (CAS)	August 2023	Reviewed multi-beam survey outputs and confirmed no further assessment required due to distance of wreck from the existing Tabhaigh modification area ^{2,3} .
WIDFB, OHFT, & Soval Estate	August 2023	In person meeting to discuss, and received feedback on, the proposed modifications in Loch Erisort.

4.4 LAYOUT OF THE SCOPING ASSESSMENT

Each topic chapter is set out as follows:

- Scope of the receptor topic.
- Baseline summary and identification of important features and sensitive receptors.
- Potential impacts associated with the construction/installation (and decommissioning) and operational phases.
- Embedded mitigation measures / other proposed best practice measures.
- High-level assessment of whether impacts expected to result in likely significant effects and identification of those proposed to be scoped in or scoped out of the EIA.
- Assessment approach.
- Relevant stakeholders and consultation.

4.5 QUESTIONS FOR STAKEHOLDERS

The following questions are asked of the planning authority and statutory stakeholders, where topic receptors are relevant to the scope of interest and / or responsibility:

Questions for Stakeholders	
Q1	Has all the relevant project information been provided to determine the scope of the EIA?
Q2	Do you have any specific comment on the two proposed pen layout options being proposed?
Q3	Have all relevant receptors been identified?
Q4	Are the proposed study areas sufficient to account for potential zone of effects?
Q5	Have all of the relevant impacts been identified?
Q6	Do you agree with impacts scoped out / impacts scoped in?
Q7	Are the proposed assessment approaches and methodologies appropriate?

² A modification to the Tabhaigh site has recently been approved by CnES (20/06/2024, 24/00065/FFPA). The layout in Figure 3.1 illustrates the recently consented infrastructure. Multi-beam survey coverage is also relevant to the proposed development (Tabhaigh East), adjacent to existing Tabhaigh farm.

³ The Developer will further engage with CAS in relation to the proposed development (Tabhaigh East).

Questions for Stakeholders

- | | |
|----|---|
| Q8 | Have all the relevant stakeholders (including non-statutory and local groups) been identified for each receptor topic? |
| Q9 | Question to CnES Planning: Are there any proposed or recently consented projects with potential connectivity that should be considered cumulatively with the development proposals? |

5 WATER QUALITY

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5.1 INTRODUCTION

The chapter provides a high-level summary of the baseline and identifies potential impacts on water quality arising from the installation, operation and decommissioning of the proposed development. An approach to EIA is described for impacts where there is the potential for likely significant effects or effects are uncertain and further assessment is required.

5.2 BASELINE SUMMARY

5.2.1 Study area

Currently, the proposed development comprises two location options, Tabhaigh East Option 1 and Option 2 (Figure 3.2). Tabhaigh East Option 2 partially falls outside the Scottish Government Locational Guidelines category boundary for Loch Erisort. The study area adopted for assessment will comprise the Locational Guidelines boundary for Loch Erisort, considered to represent a conservative approach to the assessment of water quality in the Loch (Figure 5.1). The Water Framework Directive (WFD) classification area of Rubha Raerinis to Rubha na Creige More, the coastal body of water that the proposed development is located within, will be referenced for wider classification and quality metrics.

5.2.2 Water quality summary

The proposed development is located within Rubha Raerinis to Rubha na Creige More, a coastal body of water 49.1 square kilometres, in an area which has achieved 'good' overall status since 2009. The body of water classified as Loch Erisort has achieved a 'high' water quality status since 2013. Loch Erisort waterbody classification is expected to continue with 'good' and 'high' status beyond 2027 (SEPA, 2021). Loch Erisort was also classified as 'high' status for dissolved inorganic nitrogen in surface waters (SEPA, 2020). Several Controlled Activities Regulations (CAR) licences are in place within the Loch Erisort and greater Loch Leurbost complex for the discharge of sewage, septic system discharges, combined storm overflows (CSOs).

5.2.3 Locational Guidance

Locational Guidelines published by Marine Scotland Science designate delineated waterbodies, such as lochs, that support aquaculture based on calculated indices to estimate nutrient enhancement and benthic impacts. Areas are categorised based on Marine Scotland predictive models to estimate their environmental sensitivity and capacity for further aquaculture developments from category 1 to 3. Locational Guidelines published by the Scottish Government in March 2023 categorise Loch Erisort as a Category 2 loch with a maximum biomass of 8,777 tonnes.

5.2.4 Fish and shellfish farms

There are several other finfish farms in the study area, illustrated on Table 5.1. Three existing finfish farm sites are currently operated by the Developer (Mowi) in the eastern extent of Loch Erisort: Tabhaigh, North Shore East and North Shore West, with a combined maximum biomass of 6,550 tonnes.

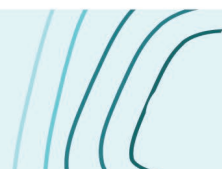


Table 5-1 Existing Finfish Farm Sites

Site	Number of Pens	Biomass (T)
Tabhaigh	8	2500
North Shore West	8	1650
North Shore East	9	2400
Total	27	6550

There are six shellfish sites (mussel farms) operating throughout Loch Erisort and four in Loch Leurbost. The nearest licensed site is 3.3 km to the west of the proposed development (Figure 14.1). Two areas of Loch Erisort are designated as Shellfish Water Protected Areas, designated for the protection of shellfish growth and production (Figure 5.2).

There are a range of other historical nutrient inputs into the loch complex, including discharges of sewage and diffuse pollution. Loch Erisort has experienced several shellfish toxin events during the summer months (July to August), and Food Standards Scotland has historically identified high levels of shellfish toxin (July 2020, September 2021 and July 2022).

5.3 IDENTIFICATION OF LIKELY SIGNIFICANT EFFECTS

5.3.1 Potential impacts

Potential impacts arising from the proposed development on water quality receptors during each phase include:

- Nutrient enhancement associated with the discharge of fish waste and uneaten food.
- Degradation of water quality from bath treatments and discharge of medicinal residues.

5.3.2 Project mitigation measures

Project mitigation measures that will avoid or reduce potential impacts on water quality receptors are described in Table 5-2. These measures are anticipated to form part of the project design (embedded mitigation) and are good practice industry measures that would form part of standard planning conditions for any fish farm development. Currently, the proposed development comprises two options, both of which partially fall outside the Scottish Government Locational Guidelines category boundary for Loch Erisort (Scottish Government, 2023).

Table 5-2 Project mitigation measures

Measure	Description	How secured
Project design	New site located in an area of improved hydrological conditions. Lower stock density located in a more exposed site with an increased flushing factor has the potential to improve fish health and requirements for bath treatments.	T&CP consent
Feed management	Nutrient enhancement minimised through feed management using automated monitoring equipment, feed composition and reduced feed conversion ratios to minimise feed waste. Daily monitoring of feeding on site.	CAR licence
Sea lice management	Undertake bath treatments in line with CAR licence. Adoption of non-medical treatments i.e., hydrolicer, thermolicer, freshwater treatment, or cleaner fish.	CAR licence

5.3.3 Scoping impacts

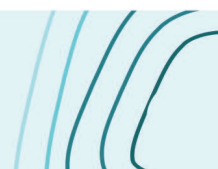
A high-level assessment of potential impacts and likely significance of effects on water quality receptors are detailed in Table 5-3. The assessment determines whether there is sufficient information to conclude significance and those impacts that should be scoped in for further assessment in the EIA, or scoped out where it can be confirmed that no likely significant effects will occur, based on the approach described in Chapter 4, Approach to Scoping.

Table 5-3 Identification of likely significant effects

Potential Impact	Description of Effect / Impact Significance	Scope In/Out
Construction and Installation Phase (inc. Decommissioning)		
N/A	N/A	Scope Out
Operations Phase		
Nutrient enhancement associated with the discharge of fish waste and uneaten food.	<p>The developer anticipates there will be no overall increase in total biomass within the developer's finfish sites in Loch Erisort. No further modelling is proposed.</p> <p>Movement of biomass into areas of improved hydrological conditions and water quality are anticipated to reduce the current nutrient enhancement in Loch Erisort. Outputs of hydrological survey data and biomass modelling will be provided as part of the EIA Report. Should the outputs of a new ECE model be required, the appropriate methodology will be agreed with the Marine Directorate following confirmation of pen design (the pen design for Option 1 includes four pens outwith the Locational Guidelines boundary, illustrated on Figure 5.1).</p> <p>Effect not expected to be significant.</p>	Scope Out
Degradation of water quality from bath treatment and discharge of medicinal residues.	<p>CAR Licence compliance with Environmental Quality Standard (EQS), in addition to reducing the range and quantities of medicinal treatments with best practice non-medicinal management measures, are anticipated to reduce potential adverse impacts. Movement of biomass into areas of improved hydrological conditions and water quality are anticipated to reduce increase dispersion and dilution of medicinal residues out of Loch Erisort. In addition, increasing pen size (and therefore volume) is anticipated to reduce stocking density and improve overall fish health, reducing use of medicinal treatments.</p> <p>However, site-specific modelling outputs required to confirm quantities of treatments available, details on proposed alternative treatments and subsequent impacts on water quality.</p> <p>Significance of effect uncertain.</p>	Scope In

5.4 APPROACH TO EIA

The proposed approach to undertaking the impact assessment for water quality is summarised below and identifies how baseline data gaps will be addressed, any stakeholder consultation required and outlines the proposed assessment methodology and relevant guidance. The general EIA process and methodology is detailed in Chapter 18. Approach to EIA.



Baseline data sources

The following baseline data sources will be reviewed:

- Edwards, A. and Sharples, F. 1986. Scottish Sea Lochs - a Catalogue. Scottish Marine Biological Association/Nature Conservancy Council.
- Scotland's Aquaculture Website: <http://aquaculture.scotland.gov.uk/>.

Other grey literature sources will be accessed for further relevant baseline information on water quality, including SEPA licences.

Policy and guidance

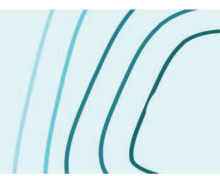
Relevant policies and guidance will inform the assessment approach, including:

- CnES. 2018. Outer Hebrides Local Development Plan
- CnES. 2018.OHLDP Supplementary Guidance for Marine Fish Farming
- Scottish Government. 2023. Locational Guidelines for Marine Fish Farms in Scottish Waters. March 2023.
- Gillibrand, PA, Gubbins MJ, Greathead, C and Davies IM. 2002. Scottish Executive Locational Guidelines for Fish Farming: Predicted Levels of Nutrient Enhancement and Benthic Impact. Scottish Fisheries Research Report Number 63/2002. Fisheries Research Services.
- Up to date advice provided by Marine Scotland Licensing and Operations Team.
- UK Technical Advisory Group (UKTAG) procedure to assess coastal waters using the winter mean of dissolved organic nitrogen (UKTAG 2008).
- SEPA's Fish Farm Manual (2005).

Assessment methodology

The following assessments will be undertaken to inform the EIA:

- **Nutrient Enhancement Budget** - Nutrient enhancement budgets will be re-calculated to provide a relative representation of the volume of dissolved nutrients released from salmon fish farming based on updated metrics. The volume of particulate and soluble nutrients can be determined based on a calculation of feed manufacturer's value for nutrient content and the relative nutrient content in fish.
- **Equilibrium Concentration Enhancement (ECE) Model** - Currently, the proposed development comprises two options, both of which partially fall outside the Scottish Government Locational Guidelines category boundary for Loch Erisort (Scottish Government, 2023). The potential nutrient enhancement from the site will be calculated using the Concentration Enhancement (ECE) model to estimate nutrient loading above background levels within the Loch Erisort water body, based on the standard ECE model outlined by Gillibrand *et al.*, (2002) for semi-enclosed bodies of water. An open water model will not be adopted.
- **Environmental Quality Standard (EQS)** - Medicinal treatments are administered topically using bath treatments and released into the water column as a dissolved plume. To assess the impact of bath treatments, a model is used to assess the discharge of spent bath treatments to the water column. The assessment is based on guidance derived within Appendix G of SEPA's Fish Farm Manual (2005). The maximum quantity of chemical allowable in a single growth cycle is determined by the maximum quantity of chemical applied in a single dose that does not exceed SEPA's standards (EQS values). The modelling results will provide the appropriate maximum quantity of each chemical for safe use within the water column.



Stakeholder consultation

- SEPA – Scoping Opinion and direct correspondence to agree scope of water quality assessment.

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Marine Scotland (2023). Predictive models to estimate their environmental sensitivity and capacity for further aquaculture developments (Scottish Government, 2023).

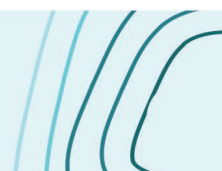
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6 BENTHIC ECOLOGY

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6.1 INTRODUCTION

This chapter describes the benthic ecology features within the vicinity of the proposed development. The chapter provides a high-level summary of the baseline benthic environment and identifies potential impacts on receptors arising from the installation, operation and decommissioning of the proposed development. An approach to EIA is described for impacts where there is the potential for likely significant effects or effects are uncertain and further assessment is required.

6.2 BASELINE SUMMARY

6.2.1 Study area

The study area will be defined as the area within which benthic ecological receptors may be affected by the development (the zone of influence - Zol). The Zol depends on the nature of the impact and is defined as appropriate to each impact as follows:

- The area of organic solid waste / carbon deposition defined via modelling outputs of NewDepomod; and
- The modelled area of in-feed treatment accumulation defined via the modelling outputs of NewDepomod.

In addition, consideration will be given to the “Aquaculture Modelling Screening and Risk Identification Report”, based on hydrodynamic data gathered at the site, which will be collated by SEPA once the pre-application consultation process with SEPA commences. This report provides an initial estimate of the influence of material discharged from the proposed site.

6.2.2 Nature conservation designations

The boundary of the proposed Tabaigh East farm falls within the North-east Lewis Marine Protected Area (Nature Conservation). The designation is based on the presence of features including sandeels (*Ammodytes marinus* / *Ammodytes tobianus*) as well as geodiversity features and Risso’s dolphins (Figure 6.1). Management advice published by NatureScot, in relation to sandeels and aquaculture, recommends minimising the potential impact on the habitat of sandeels, focusing on appropriate siting of new farms to ensure that the habitat of sandeels is maintained in extent and suitability (NatureScot, 2020).

6.2.3 Species and habitats of conservation value

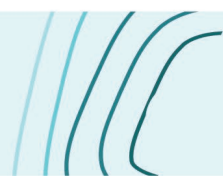
The following Priority Marine Features (PMF) are recorded within 2 km of the fish farm (derived from the GeMS (Geodatabase of Marine features adjacent to Scotland) database):

- Burrowed Mud: seapens and burrowing megafauna in circalittoral fine mud.
- Kelp Beds: *Laminaria hyperborea* and foliose red seaweeds on moderately exposed infralittoral rock.
- Northern Sea Fan and Sponge Communities: *Caryophyllia smithii* and *Swiftia pallida* on circalittoral rock.
- Sandeels.

Two Annex I habitats including (possible) sandbanks and reef habitats have also been recorded within 2 km of the development boundary.

6.2.4 Marine Habitats

The surveys planned to characterise the benthic environment at the proposed development site will be made available as part of the EIA Report (Section 6.4.1). However, a baseline video survey of the existing Tabaigh site, located approximately 400 m west from the proposed pens, was undertaken in 2014 to accompany the original



planning application for the site¹. The survey returned records of sparsely burrowed circalittoral fine mud (SS.SMu.CFiMu), aligning with the burrowed mud habitat PMF. However, due to the lack of sea pens and abundance of burrows, the site was classified as the non-PMF category of circalittoral sandy mud (SS.SMu.CSaMu) (Marine Harvest, 2014).

6.2.5 Hydrodynamic Environment

The Developer has undertaken hydrodynamic surveys throughout 2023 and 2024. The complete analysis of the hydrodynamic character of the site is currently underway; however, initial analysis suggests that the proposed site has greater flushing characteristics than the existing sites currently operational within Loch Erisort.

6.3 IDENTIFICATION OF LIKELY SIGNIFICANT EFFECTS

6.3.1 Potential impacts

Potential impacts arising from the proposed development on benthic ecology during each phase include:

Construction and Decommissioning

- Removal or abrasion of benthic habitats from installation of mooring infrastructure during construction.

Operational

- Smothering, enrichment, and deoxygenation of benthic habitats arising from carbon deposition.
- Contamination of benthic habitats from in-feed treatments.
- Permanent removal or abrasion of benthic habitats by mooring infrastructure.
- Degradation or contamination of benthic habitats outside the modelled boundary.
- Physical disturbance, siltation changes and abrasion impacting sandeel presence and density.

6.3.2 Project mitigation measures

Project mitigation measures that will avoid or reduce potential impacts on benthic receptors are described in Table 6-1.

Table 6-1 Project mitigation measures

Measure	Description	How secured
Relinquishment of North Shore West	Approval of Tabhaigh East will facilitate the relinquishment of North Shore West, located in more quiescent hydrodynamic conditions within Loch Erisort. The relocation of biomass to Tabhaigh East is anticipated to facilitate greater dispersion of carbon and in-feed medicinal treatments. Increased net sizes are expected to improve fish welfare and potential requirements for medicinal interventions.	T&CP
Site Location (General)	Exposed site location with higher dispersions rates than existing sites located within the Loch Erisort complex.	T&CP, CAR
Pen size and stocking density	Stocking density thresholds secured via CAR licensing and pen design secured via T&CP. Stocking density will be determined by the maximum	T&CP, CAR

¹ Planning reference: 14/00277/FFPAES (available at: <https://planning.cne-siar.gov.uk/PublicAccess/> A cyber incident on 7 November 2023 affected Comhairle nan Eilean Siar IT systems and access may not currently be available)

Measure	Description	How secured
	fish biomass of the site through NewDepomod modelling. The stocking density is anticipated to be less than 15 kg/m ³ , which is in line with RSPCA Assured standards.	
Anchors	The use of plough anchors displaces sediments on installation rather than occupying a physical footprint (eg gravity based anchors), and negligible loss of habitat is expected.	Marine licence
Mooring System	Impacts outwith this modelling domain are usually very low risk. Where there might be a risk, far field modelling would be carried out and this would be raised in the screening risk assessment report by SEPA and would be dependent on if there is a feature of interest in the area.	
Control of food and faecal waste	Mechanisms to control waste include feed controls, feed composition, feed management, surveillance, and training.	CAR
Medicinal Use Policy	Non-medicinal treatments are increasingly adopted at the Developer's sites including hydrolicer units, thermolicer units, freshwater treatments, sea lice skirts and cleaner fish.	CAR
Fallowing	Fallowing provides an opportunity to allow benthic community recovery. The pens will be left fallow for a period of at least four weeks at the end of each production cycle.	CAR
Mooring Infrastructure	Compliance with the <i>Technical Standard for Scottish Finfish Aquaculture</i> (Scottish Government, 2015). New infrastructure will be designed to reduce deformation of pens and under-tensioned mooring lines.	T&CP
Inspection and monitoring protocol	Remotely Operated Vehicle (ROV) /dive inspection (pre and post winter season). Full operation and maintenance proposals will be set out in a Site Maintenance and Servicing Plan.	T&CP
Enforcement (Carbon Deposition and In Feed Treatments)	SEPA has enforcement powers to decrease site biomass if the site is frequently non-compliant with benthic Environmental Quality Standards (EQS).	CAR

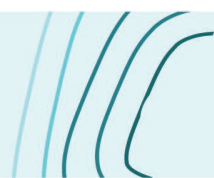
6.3.3 Scoping impacts

A high-level assessment of potential impacts and likely significance of effects on benthic ecology receptors are detailed in

Table 6-2. The assessment determines whether there is sufficient information to conclude significance and those impacts that should be scoped in for further assessment in the EIA, or scoped out where it can be confirmed that no likely significant effects will occur, based on the approach described in Chapter 4. Approach to Scoping.

Table 6-2 Identification of likely significant effects

Potential Impact	Mitigation	Description of Effect / Impact Significance	Scope In/Out
Construction and Installation Phase (inc. Decommissioning)			
Removal or abrasion of benthic habitats from installation of mooring infrastructure during construction		<p>Potential for loss of or damage to sensitive benthic habitats and species during mooring installation. Benthic surveys were completed in summer 2023 and the results are awaiting publication. Further baseline information is required to establish presence of sensitive habitats and potential impacts from installation activities.</p> <p>Significance of effect uncertain</p>	Scope In
Operations Phase			
Smothering, enrichment, and deoxygenation of benthic habitats arising from carbon deposition.		<p>Potential for loss of benthic habitat and immobile species sensitive to carbon deposition from fish waste, which may alter the benthic community composition. Benthic impacts are managed under the CAR licensing process, which includes limiting biomass to comply with a range of environmental quality standards. However, further analysis is required to determine the following:</p> <ul style="list-style-type: none"> • Carbon deposition footprint; and • Nature of seabed and distribution of species and / or habitats of conservation concern. <p>Significance of effect uncertain</p>	Scope In
Contamination of benthic habitats from in-feed treatments.		<p>The accumulation of in-feed treatments may result in the loss of sensitive benthic habitat and species, which may alter the benthic community composition.</p> <p>Benthic impacts are managed under the CAR licensing process, which includes limiting biomass to comply with a range of environmental quality standards. However, further information is required to understand the significance of effects arising from in-feed treatments on the benthos, including:</p> <ul style="list-style-type: none"> • In-feed deposition footprint; and • Nature of seabed and distribution of species and / or habitats of conservation concern. <p>Significance of effect uncertain</p>	Scope in
Permanent removal or abrasion of benthic habitats by mooring infrastructure.		<p>Long-term abrasion from mooring infrastructure may result in the permanent removal and loss of benthic habitats along the mooring footprint.</p> <p>Impacts from abrasion of mooring infrastructure are not explicitly regulated under a statutory regime; however, infrastructure will be designed to comply with the Technical Standard (Scottish Government, 2015b) and licensed by Marine Scotland. The anchor type / number, mooring extent and the nature of habitats are currently unknown.</p> <p>Significance of effect uncertain</p>	Scope In



Potential Impact	Mitigation	Description of Effect / Impact Significance	Scope In/Out
Degradation or contamination of benthic habitats outside the modelled boundary.		NewDepomod modelling is limited to a 6 km ² boundary; however, it is possible that deposited material will be transported outwith this area. Modelling undertaken by SEPA (Aquaculture Modelling Screening and Risk Identification Report) maps the modelled average sediment intensity over one month for the proposed development. Impacts outwith this modelling domain are usually very low risk. Where there might be a risk, far field modelling would be carried out and this would be raised in the screening risk assessment report by SEPA and would be dependent on if there is a feature of interest in the area. Significance of effect uncertain	Scope Out
Physical disturbance, siltation changes and abrasion impacting sandeel presence and density.		The site is located within an area designated for sandeels, an important prey resource for marine wildlife. Sandeels are sensitive to pressures that can affect seabed habitat, such as physical disturbance, siltation changes and surface/sub-surface abrasion, and have specific sediment requirements, which if changed, buried or removed can influence sandeel presence and density. Significance of effect uncertain	Scope In

6.4 APPROACH TO EIA

The proposed approach to undertaking the impact assessment for Benthic Ecology is summarised below and identifies how baseline data gaps will be addressed, any stakeholder consultation required and outlines the proposed assessment methodology and relevant guidance. The general EIA process and methodology is detailed in Chapter 18. Approach to EIA.

The approach used to assess the likely significant effects on benthic ecological receptors will be carried out with reference to the ecological impact assessment (EcIA) guidelines produced by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) in conjunction with relevant legislation and planning and policy guidance as detailed in Section 6.4.2.

6.4.1 Baseline data sources

The following surveys to characterise the physical conditions around the proposed development area are planned, or have been completed, and will be reported in the EIA Report and planning application:

- Bathymetric multibeam survey carried out on 22 May 2023 by Aspect Land and Hydrographic Surveys.
- Hydrographic surveys (90-day current meter deployment).
- Sediment samples, ROV footage and report by undertaken by Benthic Solutions Ltd.
- Aquaculture Modelling Screening and Risk Identification Report – report generated by SEPA providing an indicative assessment of the likely impact of a proposed fish farm on the surrounding area.
- Moorings analysis - details of the proposed mooring configuration, mooring tensions, and anchor locations to support assessments on benthic abrasion.
- Carbon and in-feed depositional modelling - detailed in-house modelling based on industry standard NewDepomod software undertaken to define the carbon and in-feed treatment deposition zones.

6.4.2 Relevant legislation, planning policy and guidance

Key Legislation

- Water Environment (Controlled Activities) (Scotland) Regulations 2011: the main regulatory framework which enforces site specific standards on biomass, medicinal and chemical use.

National Planning Policy

- National Planning Framework Policy 4 includes specific provisions for aquaculture, including consideration of operational impacts.
- Planning Circular 1 2007: Planning Controls for Marine Fish Farming (Scottish Government, 2007): provides guidance on the provision contained in the Acts, Regulations and Order relating to fish farming which came into effect in April 2007.
- Scotland's National Marine Plan (Scottish Government, 2015): General Policy 9(b) states that development and use of the marine environment must not result in significant impacts on the national status of Priority Marine Features (PMF). All PMFs have policy protection under this policy (Marine Scotland, 2015).
- The Scottish Priority Marine Features (PMFs) is a list of marine species and habitats developed by NatureScot and the Joint Nature Conservation Committee (JNCC) as an action to comply with conservation legislation to meet conservation targets (NatureScot, 2020).

Regional Planning Policy

- Outer Hebrides Local Development Plan (OHLDP) (CnES, 2018a). Policy ED4 outlines the role of CnES in supporting sustainable development of marine fish farm proposals whilst protecting the ecosystem.
- Supplementary Guidance for Marine Fish Farm (CnES, 2018b) sets out a spatial strategy and development policy framework for aquaculture, including specific provisions for aquaculture.

Other

Other relevant considerations include the Scottish Biodiversity list and other conservation frameworks that include marine species and habitats e.g., OSPAR List of Threatened and/or Declining Species & Habitats.

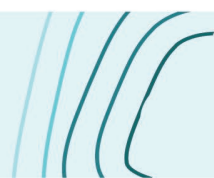
6.4.3 Stakeholder consultation

Consultations with Marine Scotland, NatureScot and Scottish Environment Protection Agency (SEPA) were initiated on 5 May 2023. The Developer presented the proposals and wider strategy for managing operations in Loch Erisort via a 'briefing note' and follow-up meeting in May 2023, also issued to non-statutory consultees (Chapter 4).

An open day at Loch Erisort was held on the 26 July 2023, which included members of the community, other stakeholders and statutory consultees to view the Developer's shore base. Consultation with SEPA is ongoing as part of CAR Licensing requirements. Outcomes of the benthic surveys may trigger additional consultation with NatureScot and / or Marine Scotland. Relevant responses from existing and ongoing consultation events with reference to the benthic environment will be integrated as part of the EIA process.

6.4.4 Cumulative and in-combination effects

Chapter 18. Approach to EIA outlines the approach to cumulative and in-combination effects. No changes to the approach for in combination effects are proposed. Cumulative impacts will be assessed considering:



- The Aquaculture Modelling Screening and Risk Identification Report published by SEPA.
- The relinquishment of North Shore West, and implications for benthic receptors.

6.5 REFERENCES

CnES (2018) Outer Hebrides Local Development Plan (Adopted Plan) [online]. Available from <<https://www.cne-siar.gov.uk/media/12598/ohldp-adopted-plan.pdf>>

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CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland – Terrestrial, Freshwater, Coastal and Marine. September 2018. V1.1 – updated September 2019.

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Scottish Government (2015a) Scottish National Marine Plan [online]. Available at: <https://www.gov.scot/publications/scotlands-national-marine-plan/> [Accessed 16/08/2023]

Scottish Government (2015b) A Technical Standard for Scottish Finfish Aquaculture [online]. Available at: <https://www.gov.scot/publications/technical-standard-scottish-finish-aquaculture/> [Accessed 04/06/2023]

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7 WILD SALMONIDS

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7.1 INTRODUCTION

This chapter describes the wild salmonids interests within the vicinity of the proposed development, including any designated sites, protected habitats and species. Two species of native marine wild salmonids are found on the west coast of Scotland: Atlantic salmon (*Salmo salar*) and sea trout (*Salmo trutta*).

The chapter provides a high-level summary of the baseline environment and identifies potential impacts on receptors arising from the installation, operation and decommissioning of the proposed development. An approach to EIA is described for impacts where there is the potential for likely significant effects or effects are uncertain and further assessment is required.

A Habitats Regulations Appraisal (HRA) screening has been undertaken to identify Special Areas of Conservation (SAC) and candidate SACs (cSACs), and their associated qualifying features, with potential connectivity to the proposed development. No SACs with wild salmonid features have been identified within the vicinity of the proposed development and it is proposed that no HRA will be required for this receptor group, which will be confirmed in consultation with NatureScot and Marine Scotland.

7.2 BASELINE SUMMARY

7.2.1 Study area

The study area for wild salmonids is defined as the area within which wild salmonid receptors may be affected by the development (zone of influence), particularly the transfer of sea lice, which occur naturally in the marine environment between farmed fish and wild salmonids; and the impact of farmed escapes mixing with wild salmonids.

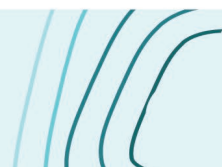
Sea Lice Interactions

SEPA suggests that the greatest risk of large numbers of salmon being infested with harmful levels of sea lice is during their passage at the start of their migration to oceanic feeding grounds (SEPA, 2023). The zone of influence for sea lice emanating from fish farms and interaction with wild salmonids depends on the proximity of natal salmonid rivers, their migratory routes and how fast they move through areas where infective sea lice larval stages are present. Environmental conditions, including sea temperature, salinity and hydrological regime are also important factors in dispersal patterns of lice.

SEPA's Wild Salmonid Protection Zones (WSPZ), introduced under the new Sea Lice Framework¹, aim to target protection where potential risk to wild salmonids from farms is greatest, as part of a network of protection zones around the West Coast of Scotland and the Western Isles. This includes:

- All sea lochs into which salmon rivers drain.
- Sounds through which salmon populations are likely to migrate.
- Sea areas within 5 km radius of all salmon river mouths, irrespective of whether the river drains into a sea loch or sound.

¹ Sea Lice Framework took effect from 1 February 2024 for wild salmon populations and will start in March 2025 for sea trout populations.



- All areas of sea within 5 km of rivers designated for the protection of freshwater pearl mussels. This includes salmon rivers and non-salmon rivers. In the latter, trout act as the sole hosts in the lifecycle of the mussels.

The proposed development is located approximately 2.3 km to the east of a WSPZ, which encompasses Loch Erisort, but bridges the transitional area where the loch meets the open sea and through which salmonids are likely to migrate.

Escapes

The zone of influence for escapes is dependent on the distance that escaped salmon could travel. The distance farmed salmon may travel and potentially interact with wild salmonids will depend on a range of factors including life stage of escapees; survival rate; geography of coast; proximity of a farm to salmonid rivers; prevailing currents and the size and health of wild populations.

Zone of Influence / Study Area

Consultation with stakeholders and review of the status of WSPZ will inform the final study area for risk to wild salmonids from the proposed development. The final study area is anticipated to include all rivers flowing into Loch Erisort and Loch Leurbost, where salmonids are known to be present. Salmonids from other loch and river systems may interact with the proposed development; however, the assessment will focus on those at greatest risk and any proposed management and mitigation measures are anticipated to apply to all salmonids migrating and feeding in proximity to the proposed development.

7.2.2 Atlantic salmon (*Salmo salar*)

Atlantic Salmon are an anadromous² species, spending time in both freshwater and marine environments, migrating to sea as smolts to feed and returning to their natal rivers as adults to spawn. During their lifecycle they undergo the physiological process of smolting to adapt to marine conditions.

Scotland's wild salmonid population is assessed through reported annual catches. Atlantic salmon numbers have decreased since 2010 on both the east and west coasts of Scotland, as shown within Scottish government catch data (Scottish Government, 2021a). The Laxay River and estuary, located form part of an established salmon and sea trout fishery managed by Soval Estate. The salmon fishery statistics for 2022 (rod fishery catch by assessment area and month) for the Soval Estate recorded 84 instances of catch and release of Atlantic Salmon (Marine Scotland, 2022).

The Atlantic salmon is a protected species under several international conventions, national laws, and policies, including:

- The North Atlantic Salmon Conservation Organization (NASCO), established by the UN Convention for the Conservation of Salmon in the North Atlantic Ocean.
- OSPAR list of threatened and/or declining habitats and species, in all the areas where it occurs (OSPAR regions I, II, III, IV).
- Annex II of the Habitats Directive.
- Scottish Biodiversity List and formerly the UK Biodiversity Action Plan (BAP).

² Anadromous – fish which spend most of their lives at sea and migrate up rivers from the sea to spawn.

- Priority Marine Feature (PMF) (when in maritime life cycle) adopted by Scottish Ministers to deliver Marine Scotland's vision for marine nature conservation, as set out in A Strategy for Marine Nature Conservation in Scotland's Seas.

The conservation status of Atlantic salmon is assessed globally via the IUCN Red List of Threatened Species as 'Least Concern', with the last assessment published in 1996 (ICUN, 1996), which is now likely to be outdated.

7.2.3 Brown trout / sea trout (*Salmo trutta*)

Brown trout has two life-cycle patterns. Brown trout remain in freshwater environments only. While some become anadromous and migrate to sea to feed in coastal areas and are known as sea trout. This difference in migration pattern leads to differences in morphological features and altered life cycles for the same species.

Scotland's wild salmonid population is assessed through reported annual catches. Brown trout numbers have decreased since 2010, as shown within Scottish government catch data (Scottish Government 2021b). The sea trout fishery statistics for 2022 (rod fishery catch by assessment area and month) for the Soval Estate recorded 161 instances of catch and release of sea trout (Marine Scotland, 2022).

Sea trout does not have the same protection status as the Atlantic salmon, but as the species is also in decline, it is listed in the Scottish Biodiversity List and is noted as a Scottish PMF when in its marine life cycle (NatureScot, 2020).

7.2.4 Designated sites

There are no SAC rivers with Atlantic salmon (*Salmo salar*), or freshwater pearl mussel³ (*Margaritifera margaritifera*) designated as qualifying features discharging into Loch Erisort, Loch Leurbost or other nearby river systems. The nearest SACs with Atlantic salmon and / or freshwater pearl mussel as qualifying features are located on the northwest coast of mainland Scotland, these include:

- Little Gruinard SAC (Atlantic salmon) – 62 km.
- Inverpolly SAC (Atlantic salmon) – 63 km.
- Ardvar and Loch a Mhullain Woodlands SAC (freshwater pearl mussel) – 73 km.

Both North Harris SAC – designated for Atlantic salmon and freshwater pearl mussel - and Langavat SAC in the Grimersta river and loch system, discharge to the west coast of Harris / Lewis and have limited likelihood of connectivity, illustrated on Figure 7.1.

As part of the Scottish Wild Salmon Strategy (Scottish Government, 2022) and SEPA's proposed 'Sea Lice Risk Assessment Framework' (SEPA, 2023) a Proposed Wild Salmon Protection Zone has been identified for Loch Erisort, with the proposed development located to the east of the designated zone, as described in Section 7.2.1. Consultation on the framework for managing the interaction between sea lice from marine fish farm developments and wild Atlantic salmon and sea trout in Scotland is ongoing and will be reviewed during preparation of the EIA Report.

³ Part of the freshwater pearl mussel lifecycle is spent attached to the gills of young salmon and sea trout, and viability of this species is subsequently dependant on viability of the host salmonid population.

7.2.5 Salmonid rivers

The mouth of Abhainn Lacasaidh (Laxay river), located approximately 11 km southwest of the proposed development, is an established salmon and sea trout fishery within the Soval Estate, although no statutory designations are associated with this river. The Loch Strandavat system discharges into Loch Erisort at the westernmost point of the loch via Abhainn Mhòr. There are several other rivers discharging into Loch Erisort with salmonids present, including Abhainn Eallaidh, Abhainn Ealaidh and Abhainn Cabharstadh. There is also one salmonid river discharging into Loch Leurbost approximately 8 km to the northwest of the proposed development (Abhainn Ghlas). Wild salmonids are likely to migrate past the proposed development and the two existing farms in the Loch Erisort system when leaving and returning to natal rivers.

Environmental Management Plan

An Environmental Management Plan is in place that covers the Loch Erisort area and includes wild fish monitoring within Loch Erisort. The EMP has been updated in 2024 to acknowledge the Wild Salmon Strategy Implementation Plan and SEPA's Sea Lice Risk Framework.

7.3 IDENTIFICATION OF LIKELY SIGNIFICANT EFFECTS

7.3.1 Potential impacts

Potential impacts arising from the proposed development on wild salmonid receptors during each phase include:

- Escapees of farmed salmon mixing or interbreeding with wild salmonid populations, resulting in loss of genetic diversity in wild fish and/or habitat competition.
- Transfer of disease or parasites (including sea lice) between farmed fish and wild salmonids.

7.3.2 Project mitigation measures

Project mitigation measures that will avoid or reduce potential impacts on wild salmonid receptors are described in Table 7-1. These measures are anticipated to form part of the project design (embedded mitigation) and/or are good practice industry measures that would be implemented for any fish farm development.

Table 7-1 Project mitigation measures

Measure	Detail	How secured
Relocation of site	The principle aims of the relocation of biomass from within Loch Erisort (with relinquishment of North Shore West site and reduction in biomass at North shore East) to the east of the loch (location of proposed development) are to move stock into an area of improved hydrological conditions and water quality. It is also anticipated to reduce potential interactions with wild salmonids transiting through the Erisort complex.	Planning consent (project design)
Increase in pen size, and reduction in quantity of pens	Fewer, larger pens will enable non-medicinal and medicinal treatments, including sea lice treatments, to be administered quickly and effectively with more fish being treated for sea lice at any one time.	Planning consent (project design)
Environmental Management Plan (EMP)	The EMP directs how the site will operate and take measures to protect wild fish stocks. (It is anticipated that the existing EMP for Loch Erisort will be replaced by the new regulatory structures introduced by SEPA under the new Sea Lice Framework.)	CAR Licence

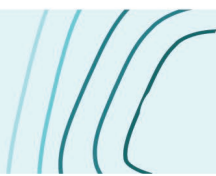
Measure	Detail	How secured
Emergency response plan	A plan which dictates how best to mitigate against unplanned events, including damage to pens from predation or storm events and pollution events from accidental spillages or leakages.	T&CP condition
Containment and contingency plan	The farm will hold site-specific contingency plans that describe actions to be taken in the event of any escapes	T&CP condition
Controlled Activities Regulations (CAR) licence	The developer will apply for a CAR licence from SEPA, which will determine the permitted medicinal treatments that can be administered on site.	CAR licence and conditions
Veterinary Health and Welfare Plan	A plan which details the procedures for the management of fish health, welfare, and prevention of disease on site. Includes measures around the process of transferring fish stocks, and medicinal and non-medicinal treatments.	
Fish transfer risk assessment	An assessment to be carried out which assesses and mitigates the potential health hazards relating to the transfer of farmed fish including the development and transfer of diseases and pathogens, as well as the exacerbation of diseases and effect on stress levels.	
Non-medical treatments (biological control)	This comes under the Veterinary Health and Welfare Plan and include the use of 'cleaner fish' - wrasse and / or lump sucker fish – held within the pens acting as an ongoing measure.	

7.3.3 Scoping impacts

A high-level assessment of potential impacts and likely significance of effects on wild salmonid receptors are detailed in Table 7-2. The assessment determines whether there is sufficient information to conclude significance and those impacts that should be scoped in for further assessment in the EIA, or scoped out where it can be confirmed that no likely significant effects will occur, based on the approach described in Chapter 4. Approach to Scoping.

Table 7-2 Identification of likely significant effects

Potential Impact	Description of Effect / Impact Significance	Scope In/Out
Construction and Installation Phase (inc. Decommissioning)		
No expected impacts	No impacts on wild salmonids that could result in likely significant effects, have been identified during the construction, installation, or decommissioning phases of the proposed development.	Scope out
Operations Phase		



Potential Impact	Description of Effect / Impact Significance	Scope In/Out
Escapes of farmed salmon mixing or interbreeding with wild salmonid populations, resulting in loss of genetic diversity in wild fish and/or habitat competition	<p>Escaped farmed salmon mixing or interbreeding with wild salmonid populations, may result in the loss of genetic diversity in wild fish, reduce lifetime success, individual fitness and reduced local adaptation. Mixing with farmed salmon may also increase competition for food, habitat, and territories.</p> <p>The relinquishment of an existing farm and movement of biomass from other established farms to the proposed development will result in no net increase in biomass in Loch Erisort. The proposed new pen size incorporates fewer, larger pens which are expected to be more hydrodynamically resilient to exposure.</p> <p>There have been no reports of escapes to date at existing sites; however, further information is needed to understand the resilience of the new pens to a more exposed location and how they will be maintained to ensure escape risk remains low.</p> <p>Likely significance of effect uncertain.</p>	Scope in
Transfer of disease or parasites (including sea lice) between farmed fish and wild salmonids	<p>The close proximity of the proposed development to salmonid migratory route and the proposed Wild Salmonid Protection Zone could result in the transmission of farm-derived sea lice to wild salmonids. There is no proposed net increase in biomass in Loch Erisort. The relinquishment of an existing site within Loch Erisort and establishment of a new site further offshore is expected to increase flushing and reduce sea lice exposure for wild salmonids. The proposed development is also expected to operate under the existing Environmental Management Plan, which will be updated to include the proposed development. However, further information is needed to understand how the new, larger pens will be managed and the treatment options available to manage fish health and reduce risk to wild salmonids.</p> <p>Likely significance of effect uncertain.</p>	Scope in

7.4 APPROACH TO EIA

The proposed approach to undertaking the impact assessment for wild salmonid interests is summarised below and identifies how baseline data gaps will be addressed, any stakeholder consultation required and outlines the proposed assessment methodology and relevant guidance.

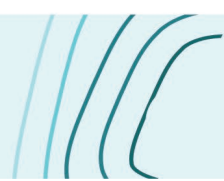
Baseline data sources

The following baseline data sources will be reviewed:

- Scottish Government's proposed river gradings for 2023/24 for Outer Hebrides
- Scottish Government's sea trout and salmon fishery statistics for 2022/23 (as published).
- Sea lice records and efficacy statements for existing Loch Erisort sites (Mowi internal reports).
- Wild salmonid monitoring reports as part of Loch Erisort Environmental Management Plan (EMP) (Western Isles District Salmon Fisheries Board and Mowi Scotland Ltd).

Policy and guidance

- National Planning Framework 4 (NPF4) includes specific provisions to support aquaculture development that is sustainable, whilst operating within environmental limits and ensures there is a thriving marine



ecosystem for future generations. Policy 32 for aquaculture requires new development to demonstrate that impacts on wild salmonids are acceptable and comply with the relevant regulatory framework.

- Outer Hebrides Local Development Plan (OHLDP) (CnES, 2018). Policy ED4 outlines the role of CnES in supporting sustainable development of marine fish farm proposals whilst protecting the ecosystem.
- Supplementary Guidance for Marine Fish Farm (CnES, 2018b) sets out a spatial strategy and development policy framework for aquaculture, including specific provisions for aquaculture.
- 'Code of Good Practice for Scottish Finfish Aquaculture, which sets out the standards with which farmers must demonstrate compliance when independently audited by UKAS-approved inspection services. It comprises more than 300 main specific compliance points, covering all aspects of finfish good practice including: fish health, protecting the environment, and welfare and husbandry. The annexes of the CoGP give further technical guidance on good practice, including the National Sea Lice Treatment Strategy, integrated sea lice management, containment, and a veterinary health plan.
- SEPA's Sea Lice Framework which took effect in February 2024 for wild salmon populations (and will start in March 2025 for sea trout populations) introduced Wild Salmonid Protection Zones to target protection where potential risk from farm derived sea lice is greatest.

Assessment methodology

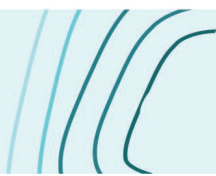
The proposed approach to assessment will comprise the following methodology and refer to relevant policies and best practice guidance. The methodology will broadly comprise:

- A desk-based assessment, following standard best practice EIA, including the methodology outlined in Chapter 18. Approach to EIA, for assessment of impacts, and cumulative and in-combination effects. The approach used to assess the likely significant effects on wild salmonid receptors will consider the guidelines for ecological impact assessment (EclA) produced by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) and relevant legislation and guidance.
- A sea lice efficacy statement will be provided, if requested by MSS, providing details on range and efficacy of treatment measures available to control sea lice and reference to sea lice levels and management at existing Loch Erisort sites.
- Impacts of Lice from Fish Farms on Wild Scottish Sea Trout and Salmon: Summary of Science (current version: Scottish Government Marine Directorate, 2021) will be referred to for the latest standing position on sea lice impacts.

Stakeholder consultation

The following stakeholders will be consulted to address any baseline data gaps and inform the proposed approach to assessment:

- Marine Scotland Science (MSS) on escape prevention and contingency plans, the EMP, sea lice management, treatment options and any changes to sea lice management introduced as part of the new Sea Lice Regulatory Framework which came into effect for wild salmon on 1st February 2024.
- Further consultation with SEPA regarding the new Sea Lice Risk Framework. From 1st February 2024, all proposals for new farms or expansions of existing farms are being assessed by SEPA to determine whether they could pose a risk to wild salmon populations
- NatureScot on escape prevention and contingency plans and sea lice management.
- Local fisheries stakeholders for input and any available wild fisheries data including Western Isles District Salmon Fisheries Board, Outer Hebrides Fisheries Trust and Soval Estate.



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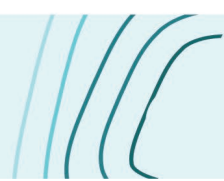
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8 MARINE MAMMALS

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8.1 INTRODUCTION

This chapter describes the marine mammal interests within the vicinity of the proposed development, including any designated sites and protected species, such as pinnipeds (species of seal), cetaceans (species of *whale, dolphin, and porpoise*) and otter (*Lutra lutra*). The chapter provides a high-level summary of the baseline and identifies potential impacts on receptors arising from the installation, operation and decommissioning of the proposed development. An approach to EIA is described for impacts where there is the potential for likely significant effects or effects are uncertain and further assessment is required.

A Habitats Regulations Appraisal (HRA) screening has been undertaken to identify Special Areas of Conservation (SACs), candidate SACs (cSACs) and Sites of Community Interest (SCIs), and their associated qualifying features, with potential connectivity to the proposed development. The following site has been identified and will be assessed under the HRA process and submitted with the EIA Report: the Inner Hebrides and the Minches Special Area of Conservation (SAC), designated for harbour porpoise (*Phocoena phocoena*).

8.2 BASELINE SUMMARY

8.2.1 Study area

The study area is defined as the area within which marine mammal receptors may be affected by the development (the zone of influence). This zone of influence can differ between species; Scottish coastal otter typically hold territories of between 2-10 km but have been known to hold ranges up to 19.3 km (Chanin, 2013). Harbour seal ranges extend to up to 50 km from their haul-outs (Jones *et al.*, 2015) and grey seals up to 100 km of a haul-out (SCOS, 2020). The proposed sites lie within 50 km of four designated seal haul-outs.

8.2.2 Designated sites

The proposed development lies within the Inner Hebrides and the Minches Special Area of Conservation (SAC), designated for harbour porpoise (*Phocoena phocoena*), the only protected site for this species in Scotland (Figure 8.1). The proposed site footprint is partially within the boundary of the North-east Lewis Marine Protected Area (MPA), which as a designation for risso's dolphin (*Grampus griseus*) and sandeels (*Ammodytes marinus / Ammodytes tobianus*).

The proposed development lies within one of five of Scotland's Seal Conservation Areas, which covers the whole extent of the Outer Hebrides and its surrounding waters. The nearest statutory seal haul out is located approximately 18 km from the proposed Development (*Sgeir Leathann*, Broad Bay), and is one of four designated seal haul-outs located within a 30 km radius of the proposals (Figure 8.1), which protect grey and harbour seals all year round: *Aird Dhubh*, *Eilean Glas Cheann Chrionaig*, *Bhalamus*.

8.2.3 Pinnipeds

Both the grey seal (*Halichoerus grypus*) and the harbour (common) seal (*Phoca vitulina*) inhabit Scottish waters. Approximately 35% of the global population of grey seals breed in the UK, and 80% of them breed at colonies in Scotland, with the main concentrations in the Outer Hebrides and in Orkney (Special Committee on Seals, 2022). The recent report from the Special Committee on Seals found that the UK population was approximately 162, 000 in 2022, an increase of 1.6% on the previous year. The European population of harbour seals sits at around 100,000 individuals (NatureScot, 2020) and approximately 32% of the European population is found in UK waters (Special Committee on Seals, 2022), with around 80% of these inhabiting Scottish waters (NatureScot, 2020a). A national aerial survey of seals carried out in 2017 made counts of 177 harbour seals and 21 grey seals in Seal Management Area 4 (SMA4) of the western isle during the annual seal moult (Morris, C. D., *et al.*, 2021). The

2017 harbour seal moult count represented the highest count to date (by 25%), with seal numbers increasing considerably on the east coast of the Outer Hebrides, and declining or remaining steady elsewhere – the east coast, Sound of Barra and Sound of Harris (NatureScot, 2021).

A search of the National Biodiversity Network (NBN) Atlas and Marine Scotland's National Marine Plan Interactive (NMPI) database identified multiple historical recordings of grey and harbour seals within the surrounding waters of Loch Erisort.

The nearest designated seal haul-out is *Sgeir Leathann* (Broadbay) which is approximately 18km northeast of the screening area. The site is situated within the Western Isles Seal Conservation Area¹. Harbour seals and grey seals are Scottish Priority Marine Features (PMF) and are listed on Annex II and Annex V in the Habitats Directive.

8.2.4 Cetaceans

There have been 21 species of cetacean recorded within 60 km of the coast of Western Scotland since 1980 (Seawatch Foundation, 2020), with 11 of those being present year-round or seasonal visitors. A search of the NBN Atlas and NMPI identified multiple recent recordings of minke whale (*Balaenoptera acutorostrata*), harbour porpoises (*Phocoena phocoena*), common bottlenose dolphins (*Tursiops truncatus*), Risso's dolphins (*Grampus griseus*) and white-beaked dolphins (*Lagenorhynchus albirostris*) within the surrounding waters of Loch Erisort.

All cetacean species found in Scottish territorial waters are classed as European Protected Species (EPS) and given protection under the Conservation (Natural Habitats. &c.) Regulations 1994 (as amended), making it an offence to:

- Kill, injure or capture a cetacean.
- Disturb or harass a cetacean.
- Damage or destroy a breeding site or resting place of such an animal.
- Or keep, transport, sell or exchange, or offer for sale or exchange any cetacean (or any part or derivative of one) obtained after June 1994.

The proposed development lies within the Inner Hebrides and the Minches Special Area of Conservation, which includes harbour porpoise as an Annex II species and partially within North-east Lewis Marine Protected Area (MPA), which has a designation for Risso's dolphin.

Otter

Otter is found throughout Scotland, anywhere close to water including watercourses, wetland, coastline, or estuary. Marine fish can account for up to 90% of a coastal otter's diet in north-west Scotland (Watt, 1995) and it is known that otter can occupy coastal ranges of 3-5 km (NatureScot, 2015). Otter are ubiquitous throughout the Isle of Lewis coastline and inland freshwater systems, especially those which support reasonable fish populations Hebrides.

¹ The Marine (Scotland) Act 2010 includes a comprehensive licence system. A seal conservation area introduces measures that require Marine Scotland to take into account the vulnerable condition of the local seal population before granting any licences to shoot them.

Otter is designated and protected as a European protected species (EPS). EPS are protected under the Conservation of Habitats and Species Regulations 2017, which provides protection for otters, their holts, and resting places. Otter is also listed under Annex II of the Habitats Directive and Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

A search of the NBN Atlas and NMPI identifies over 20 recordings of otter around the Loch Erisort area.

8.3 IDENTIFICATION OF LIKELY SIGNIFICANT EFFECTS

8.3.1 Potential impacts

Potential impacts arising from the proposed development on marine mammal receptors during each phase include:

- Disturbance (noise and visual) of seals and cetaceans due to vessel movements during installation and decommissioning activities.
- Death or injury of predatory species due to risk of entanglement or entrapment in pen netting and deployed gill nets (gill nets are only used should an escape event occur, and with relevant permissions from statutory bodies).
- Displacement from habitat due to presence of infrastructure.
- Disturbance (noise and visual) due to operational vessel movements.

Acoustic deterrent devices (ADD's) are not being considered for use on site and therefore, disturbance to cetaceans from ADD use is scoped out of the EIA.

8.3.2 Project mitigation measures

Project mitigation measures that will avoid or reduce potential impacts on marine mammal receptors are described in Table 8-1. These measures are anticipated to form part of the project design (embedded mitigation) and/or are good practice industry measures that would form part of standard planning conditions for any fish farm development.

Table 8-1 Project mitigation measures

Measure	Description	How secured
Noise suppressants	Noise suppressants will be fitted to equipment as a standard to reduce noise emissions from the feeding barge.	T&CP consent
Emergency response plan	The ERP sets out protocols in response to unplanned events, including damage to pens from predation or storm events and pollution events from accidental spillages or leakages.	T&CP condition
Wildlife Welfare Training	All Mowi staff are required to complete Wildlife Welfare Training to ensure that all staff are aware of protected species legislation and understand the importance of following and maintaining the site's Predator Mitigation Plan and the recording of wildlife interactions	T&CP condition
Containment and contingency plan	The farm will hold site-specific contingency plans that describe actions to be taken in the event of any fish escapes.	T&CP condition
Vessel good practice	All vessel skippers will follow standard good practice guidelines when encountering marine mammals in-situ, including the Scottish Wildlife Watching Code (SWWC).	T&CP condition



Measure	Description	How secured
Inspection and monitoring protocol	Inspections and maintenance protocol will be followed to ensure that pens, netting, and moorings are in good working order and repairs made as soon as possible to reduce the risk of entanglement by opportunistic predators.	T&CP condition
Use of tensioned nets	The site infrastructure will include high-tension nets which improves the rigidity of the pen structure and reduces the potential for marine mammals to damage the net to access stock in addition to reducing entanglement.	T&CP condition
Removal of fish carcasses	Inspections will be made at least three days a week – with the aim of daily removal to ensure timely removal of any fish carcasses from the dead fish basket to prevent opportunistic marine mammals (particularly seals) creating associations between the fish farm and readily available prey items.	T&CP condition
Mooring Infrastructure	Compliance with the Technical Standard for Scottish Finfish Aquaculture (Scottish Government, 2015). New infrastructure will be designed to reduce deformation of pens, under tensioned mooring lines.	T&CP condition

8.3.3 Scoping impacts

A high-level assessment of potential impacts and likely significance of effects on marine mammal receptors are detailed in Table 8-2. The assessment determines whether there is sufficient information to conclude significance and those impacts that should be scoped in for further assessment in the EIA, or scoped out where it can be confirmed that no likely significant effects will occur, based on the approach described in Chapter 4. Approach to Scoping.

Table 8-2 Identification of likely significant effects

Potential Impact	Description of Effect / Impact Significance	Scope In/Out
Construction and Installation Phase (inc. Decommissioning)		
Disturbance (noise and visual) of seals and cetaceans due to vessel movements during installation and decommissioning activities	The activities associated with installation of new infrastructure for the proposed development and removal of pens from the existing North Shore West farm could cause disturbance to marine mammal receptors in the area. Installation of farm pens, barge and associated infrastructure is likely to be completed over a relatively short period, with pens arriving incrementally (approx. 2-3 weeks for install and 2-3 weeks for removal of existing North Shore West pens, weather dependent), therefore any potential disturbance will be for a temporary and short duration. Vessel skippers will follow standard good practice guidelines if encountering marine mammals, including the Scottish Wildlife Watching Code (SWWC). Effect unlikely to be significant	Scope out
Operations Phase		

Potential Impact	Description of Effect / Impact Significance	Scope In/Out
Death or injury of predatory species (seals and otter) due to entanglement or entrapment in pen netting	<p>Predatory species, particularly seals, may become trapped in pens or entangled within pen netting or gill nets (if used as an option during an escape event with permission sought from NatureScot), which could result in injury or death. Entanglement can occur where nets are not properly tensioned or holes in netting are made due to wear and tear or predator damage. The Developer currently operates inspection and maintenance protocols at existing sites to reduce risk of damage and undertake timely repairs. Further information is needed to understand the importance of the proposed development area to marine mammals and how entanglement via the various pathways will be prevented.</p> <p>Significance of effect uncertain.</p>	Scope in
Displacement from habitat due to presence of infrastructure	<p>The presence of infrastructure may reduce the extent of available marine mammal habitat for foraging or other essential activities and may deter passage into Loch Erisort and other nearby coastal areas. The proposed development will result in the relinquishment of another farm and therefore not result in a substantial increase in overall footprint in Loch Erisort. The footprint will be relatively small in the context of wider available habitat. However, further information is needed to understand the importance of the proposed development area to marine mammals and the full extent of potential habitat loss.</p> <p>Significance of effect uncertain.</p>	Scope in
Disturbance (noise and visual) of seals and cetaceans due to operational vessel movements	<p>The operational movements of the vessels may cause disturbance to marine mammal receptors utilising waters for feeding, resting or other essential activities and lead to them leaving the area. However, marine mammals are likely to have become habituated to existing operations in Loch Erisort and no increase in overall vessel activity is anticipated as the proposed development will replace an existing, nearby farm. Operational vessel activity is relatively low and vessel skippers are required to follow standard best practice measures to minimise potential disturbance, including the SWWC.</p> <p>Effect unlikely to be significant</p>	Scope out

8.4 APPROACH TO EIA

The proposed approach to undertaking the impact assessment for marine mammal receptors is summarised below and will identify how baseline data gaps will be addressed, any stakeholder consultation required and outlines the proposed assessment methodology and relevant guidance.

Baseline Data Sources

The following baseline data sources will be reviewed:

- NatureScot SiteLink website (<https://sitelink.nature.scot/home>) – for statutory designated (SAC and SSSI) site boundaries, management advice and citation details.
- Predicted mean at-sea densities for harbour and grey seals from Marine Scotland's National Marine Planning Interactive (Marine Scotland NMPi, 2022).
- Current status of seal populations and findings of the most seal census in Scotland:



- Morris, C.D., Duck, C.D. and Thompson, D. (2021). Aerial surveys of seals in Scotland during the harbour seal moult, 2016-2019.
- Scottish Committee on Seals (SCOS) (2022). Scientific Advice on Matters Related to the Management of Seal Populations: 2022
- Latest census data for the distribution of pinnipeds in the Western Isles (Duck, C.D. and Morris, C.D. (2019). Aerial survey of harbour (*Phoca vitulina*) and grey seals (*Halichoerus grypus*) in Scotland in August 2017: the Western Isles, part of West Scotland and part of East Scotland. Scottish Natural Heritage Research Report No. 1143).

Policy and Guidance

The following policies and guidance will also inform the approach to the assessment:

- Scotland's National Marine Plan, A Single Framework for Managing Our Seas (Marine Scotland, 2015), sets out a policy (policy 2) dictating that marine and terrestrial development plans should jointly identify areas which are potentially suitable and sensitive areas which are unlikely to be appropriate for such development. Policy 8 guidance on harassment at designated seal haul-out sites should be considered, and that seal conservation areas should also be taken into account in site selection and operation.
- Outer Hebrides Local Development Plan (OHLDP) and Supplementary Guidance for Marine Fish Farming (CnES, 2018), including Policy NBH2: Natural Heritage, Spatial Strategy Policy 2: Sensitive Areas.
- The Scottish Government's 'Aquaculture Code of Practice - Containment of and Prevention of Escape of Fish on Fish Farms in relation to Marine Mammal Interactions'.
- 'Code of Good Practice Chapter 4: Seawater Lochs' Scottish Finfish Aquaculture, section on predator control

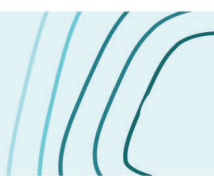
Assessment Methodology

The proposed approach to assessment will comprise the following methodology and refer to relevant best practice guidance and policies, including:

- The general EIA process and methodology, including approach to assessing cumulative and in-combination effects, detailed in Chapter 18. Approach to EIA.
- A desk-based assessment will be carried out to identify species within the proposed development area and any key foraging areas or areas used by species for other essential activities. The approach used to assess the likely significant effects on marine mammal receptors will be carried out with reference to the ecological impact assessment (EcIA) guidelines produced by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018).
- Details of the specification of pen netting including type, mesh size and tensioning will be presented. Details of a site-specific Predator Exclusion Plan will also be provided, including use of any gill nets as part of the proposed development's containment plan and how entanglement of marine mammals will be avoided.
- Information to support a Habitats Regulations Appraisal (HRA) will be provided separately.

Stakeholder consultation

Further consultation with NatureScot will be undertaken, where required, regarding baseline information and possible mitigation measures and proposed management plans and any required monitoring.



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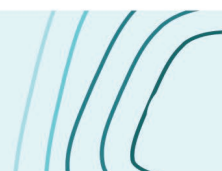
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9 ORNITHOLOGY

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9.1 INTRODUCTION

This chapter describes the ornithological interests in the vicinity of the proposed development, including any important and sensitive features. The chapter provides a high-level summary of the baseline and identifies potential impacts on receptors arising from the installation, operation and decommissioning of the proposed development. An approach to EIA is described for impacts where there is the potential for likely significant effects or effects are uncertain and further assessment is required.

Habitats Regulations Appraisal (HRA) screening has been undertaken to identify Special Protection Areas (SPA) and proposed SPAs (pSPA), and their associated qualifying features, with potential connectivity to the proposed development. The results are presented in Annex A, HRA Screening for SPAs.

9.2 BASELINE SUMMARY

9.2.1 Study area

The study area is defined as the area within which ornithological receptors may be affected by the development (the zone of influence - Zol), illustrated on Figure 9.1. The Zol for ornithological receptors is species- and season-dependent; some species of seabird can travel upwards of 300 km during chick-rearing foraging trips, therefore the potential Zol from the proposed development is extensive. The study area was defined as a 120 km buffer from the proposed development. The rationale for this being that 120 km allows inclusion of important seabird related designated sites, whilst excluding sites on the east coast of Scotland that are highly unlikely to have the potential to interact with this site due to the geographical barrier of mainland Scotland. The resulting Zol encompasses a number of designated sites with ornithological qualifying interests, described in Table 9-1 (NatureScot 2020a; Woodward *et al.*, 2019; see HRA screening).

9.2.2 Receptors of conservation value

Several ornithological species have the potential to interact with the proposed site, largely defined by birds that forage at sea, or on the coast. These including diving species: auks (razorbill *Alca torda*, common guillemot *Uria aalge* and Atlantic puffin *Fratercula arctica*), northern gannets *Morus bassanus* (hereafter gannet), divers (red-throated *Gavia stellata* and black-throated *Gavia arctica*), European shag *Phalacrocorax aristotelis*, cormorant *Phalacrocorax carbo* and scavenging species: great skuas *Stercorarius skua* and gull spp. These species may physically interact with the infrastructure, be displaced and / or disturbed by new infrastructure, or be displaced by reduced prey availability in the vicinity of the site.

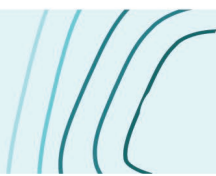
For the context of scoping, the ornithological receptors that are qualifying features of designated sites within 120 km of the proposed development are defined as species of conservation value. These are most likely to interact with the proposed development, and so are brought forward for assessment and are described in Table 9.1.

- Lewis Peatlands SPA (relevant qualifying features red-throated and black-throated divers)
- Shiant Isles SPA (relevant qualifying features common guillemot, razorbill, Atlantic puffin)
- Handa SPA (relevant qualifying features razorbill, great skua)
- Cape Wrath SPA (relevant qualifying features razorbill, Atlantic puffin)
- North Rona and Sula Sgeir SPA (relevant qualifying feature gannet)
- Seas off St Kilda SPA (relevant qualifying feature gannet)



Table 9-1 Ornithological Receptors at Designated Sites within 120 km

Receptors of Conservation Value	Designated Site	Distance from Proposed Development (km)
<ul style="list-style-type: none"> • Red-throated diver • Black-throated diver 	Lewis Peatlands SPA	4.9
<ul style="list-style-type: none"> • Fulmar • Greenland Barnacle Goose • Guillemot • Kittiwake • Puffin • Shag 	Shiant Islands SPA	21.3
<ul style="list-style-type: none"> • Fulmar • Great Skua • Guillemot • Kittiwake • Razorbill 	Handa SPA	70.5
<ul style="list-style-type: none"> • Fulmar • Guillemot • Kittiwake • Puffin • Razorbill 	Cape Wrath SPA	91
<ul style="list-style-type: none"> • Fulmar • Gannet • Great black-backed gull • Guillemot • Kittiwake • Leach's Petrel • Puffin • Razorbill • Storm Petrel 	North Rona and Sula Sgeir SPA	105
<ul style="list-style-type: none"> • Fulmar • Gannet • Guillemot • Puffin • Storm Petrel 	Seas off St Kilda SPA	72.6



9.3 IDENTIFICATION OF LIKELY SIGNIFICANT EFFECTS

9.3.1 Potential impacts

There are three existing finfish sites in operation in the eastern extent of Loch Erisort: Tabhaigh, North Shore East and North Shore West, which contain a total biomass of 6,550 tonnes and all operated by the developer (Figure 3.1). The proposed development will use the same operational vessel transit route as the current sites, therefore impact pathways on ornithological receptors are limited to direct predator interactions with the farm pens, the potential displacement of receptors due to the addition of physical infrastructure, and the indirect impacts from potential reduced prey availability.

Construction / decommissioning

- Temporary displacement of receptors due to disturbance during construction / decommissioning activities.

Operational

- Mortality through entanglement/ entrapment in pole-mounted top nets
- Mortality through entanglement / entrapment in underwater pen netting and gill nets.
- Permanent displacement from critical foraging or wintering habitats due to physical presence of new infrastructure.
- Disturbance/displacement of sensitive bird species due to operational vessel movements.
- Loss of prey species (sandeel presence and density) due to disturbance, siltation changes and abrasion leading to the displacement of receptors.

9.3.2 Project mitigation measures

Project mitigation measures that will avoid or reduce potential impacts on ornithological receptors are described in Table 9-2. These measures are anticipated to form part of the project design (embedded mitigation) and/or are good practice industry measures that would be implemented for any fish farm development.

Table 9-2 Project mitigation measures

Measure	Detail	How secured
Relinquishment of North Shore West	Approval of Tabhaigh East will facilitate the relinquishment of North Shore West, and so levels of activity are likely to be equivalent to present once operational.	T&CP planning consent
Pole-net and pen netting design	Pole-nets and pen netting will be sized in accordance with NatureScot's recommended sizing, as far as technically feasible for net and pen sizing and weight of netting to ensure properly tensioned and stabilised.	T&CP planning consent
Nets and weighting system	Use of well-tensioned nets of adequate strength for durability and resilience to exposed locations. Weighting system will ensure nets equally tensioned to avoid deformation and abrasion. Measures reduce risk of net damage, predator access to pens and subsequent entanglement or entrapment.	T&CP planning consent
Mortality removal	Daily inspections will be made to ensure any fish carcasses are removed from the dead fish basket, and stored securely in waste silos prior to waste disposal, to prevent predators creating associations between the fish farm and readily available prey items.	T&CP condition

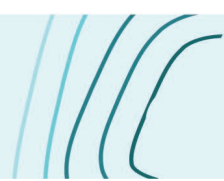
Measure	Detail	How secured
Inspection and monitoring protocol	Remotely Operated Vehicle (ROV) /dive inspection (pre and post winter season) and inspection and maintenance procedures set out within site-specific Site Maintenance and Scheduling and Servicing Plan.	T&CP condition
Wildlife monitoring protocol	The site will keep systematic records of any wildlife entrapment or entanglement incidents (including nil returns) using the approved NatureScot recording template and provide these to the relevant authorities as and when requested. Daily monitoring and recording in accordance with NatureScot's requirements and Mowi's internal procedure and guidance (Daily Monitoring and Reporting of Wildlife Entanglement, Entrapment and Notification of Significant Events).	T&CP condition
Wildlife Welfare Training	All Mowi staff are required to complete Wildlife Welfare Training to ensure that all staff are aware of protected species legislation and understand the importance of following and maintaining the site's Predator Mitigation Plan and the recording of wildlife interactions	T&CP condition

9.3.3 Scoping impacts

A high-level assessment of potential impacts and likely significance of effects on ornithological receptors are detailed in Table 9-3. The assessment determines whether there is sufficient information to conclude significance and those impacts that should be scoped in for further assessment in the EIA, or scoped out where it can be confirmed that no likely significant effects will occur, based on the approach described in Chapter 4. Approach to Scoping.

Table 9-3 Identification of likely significant effects

Potential Impact	Receptor(s)	Description of Effect / Impact Significance	Scope In/Out
Construction and Installation Phase (inc. Decommissioning)			
Disturbance of sensitive receptors during construction and decommissioning activities.	Red-throated and black-throated divers	Installation of the proposed development and decommissioning of an existing farm may result in disturbance of foraging divers. Impact is likely to be short-term in duration and disturbance minimised through skipper adherence to Scottish Wildlife Watching Code (SWWC). However, further assessment is required to understand how the proposed development area is used by sensitive species, including those associated with nearby SPAs, and likely timing of activities. Significance of effect uncertain.	Scope in
Operations Phase			
Mortality through entanglement/ entrapment in pole-mounted top nets	Gannets, great skuas	The proposed development would use pole-mounted top nets, as currently installed at existing sites. Both great skua and gannets are sensitive to entanglement in this net type. Further details of the pole-mounted top nets and pen netting will be provided in the EIA. Consideration should be made for the process of receptor adaptation to nets at the new site. Significance of effect uncertain.	Scope in



Potential Impact	Receptor(s)	Description of Effect / Impact Significance	Scope In/Out
Mortality through entanglement in underwater pen netting	Red-throated divers, black-throated divers, auks	Receptors identified are fish-eating, diving species at risk of drowning within nets in the water column. Further details of pen netting will be provided in the EIA. Significance of effect uncertain.	Scope in
Permanent displacement from critical foraging or wintering habitats due to physical presence of infrastructure	Red-throated and black-throated divers	The installation of the infrastructure may reduce the extent of ornithological foraging habitat. Due to the size of the footprint and infrastructure, it is highly unlikely that it will displace individual receptors; however, the site fidelity of divers in the proposed development area should be determined, given their moderate sensitivity to physical structures. The relinquishment of North Shore West may offset some displacement through the reintroduction of habitat and will be assessed further in the EIA. Significance of effect uncertain.	Scope in
Disturbance/displacement of sensitive bird species due to operational vessel movements	Red-throated and black-throated divers, auks	Divers are highly sensitive to anthropogenic disturbance, and auks display medium sensitivity. However, the vessel movements will be within a similar area of existing activity, with no increase in vessel movements proposed as the development will replace an existing nearby farm. As there is uncertainty around how the area around the proposed development is used by sensitive species, including those associated with nearby SPAs, the impact is precautionarily scoped in for further assessment. Significance of effect uncertain.	Scope in
Loss of prey species (sandeel presence and density) due to disturbance, siltation changes and abrasion leading to the displacement of receptors	Red-throated and black-throated divers	The site boundary is located within an area designated for sandeels, an important prey resource for marine wildlife. Sandeels are sensitive to pressures that can affect seabed habitat, such as physical disturbance, siltation changes and surface/sub-surface abrasion, and have specific sediment requirements which if changed, buried or removed can influence sandeel presence and density (There is no mention of sandeels in the benthic baseline video survey report). Divers are highly sensitive to a reduction in prey availability, favouring sheltered inshore coastal waters in winter and shallow marine waters. Significance of effect uncertain.	Scope in

9.4 APPROACH TO EIA

The proposed approach to undertaking the impact assessment for ornithology interests is summarised below and identifies how baseline data gaps will be addressed, any stakeholder consultation required and outlines the proposed assessment methodology and relevant guidance.

9.4.1 Baseline data sources

The following baseline data sources will be reviewed:



- NatureScot SiteLink website (<https://sitelink.nature.scot/home>) – for statutory designated (SPA and SSSI) site boundaries, current site conditions, and citation details.
- JNCC Seabird Monitoring Programme Report 1986-2019 (JNCC, 2021) for seabird populations and trends.
- Natural heritage zone (NHZ) bird population estimates for NHZ3 Western Isles, Coll and Tiree (*Wilson et al.*, 2015).
- Burnell D *et al.*, (2023) Seabirds Count. A census of breeding seabirds in Britain and Ireland (2015 – 2021).
- The status and distribution of species in the Outer Hebrides/Western Isles from the Outer Hebrides Bird Reports (Outer Hebrides Birds, 2022).
- Feature Activity Sensitivity Tool (FeAST) and development of marine bird sensitivity assessments for FeAST (Rogerson, K. *et al.*, 2021).

9.4.2 Assessment methodology

The proposed approach to assessment will comprise the following methodology and refer to relevant best practice guidance and policies, including:

- The general EIA process and methodology, including approach to assessing cumulative and in-combination effects, detailed in Chapter 18. Approach to EIA.
- A desk-based assessment will be carried out to identify species within the proposed development area and any key foraging and wintering areas. The approach used to assess the likely significant effects on ornithology receptors will be carried out with reference to the ecological impact assessment (EclA) guidelines produced by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018).
- Details of the specification of pen netting including type, mesh size and tensioning will be presented. Details of a site-specific Predator Exclusion Plan will also be provided, including use of any gill nets as part of the proposed development's containment plan and how entanglement of birds will be avoided.
- Reference to the findings of the benthic ecology assessment will be made in relation to impacts on prey species (sandeels).
- Information to support a Habitats Regulations Appraisal (HRA) will be provided separately but in parallel with the EIA Report.

9.4.3 Key legislation

- The Wildlife and Countryside Act 1981 (as amended) provides protection to all wild birds. The Schedules attached to the Act provide further protection to rarer species and species vulnerable to disturbance and/or persecution.
- The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) (The Habitats Regulations) transpose the requirements of the Habitats Directive and The Birds Directive into domestic law in Scotland. These regulations apply on land and in Scotland's inshore waters (up to 12 nautical miles from land).
- The Council Directive on the Conservation of Wild Birds 2009/147/EC (The Birds Directive) provides legal protection for all wild birds, their nests, eggs and habitats and requires the classification of European sites known as Special Protection Areas (SPAs) for species listed on Annex 1.
- The Nature Conservation (Scotland) Act 2004 (as amended) places a duty on public bodies to further conservation of biodiversity, increases protection for Sites of Special Scientific Interest (SSSI)s and strengthens wildlife enforcement legislation.

- The Wildlife and Natural Environment (Scotland) Act 2011 (Scottish Government, 2011) provides further species protection measures.

9.4.4 Planning policy and guidance

The following policies and guidance will also inform the approach to the assessment:

- National Planning Framework 4 (NPF4) includes specific provisions to support aquaculture development that is sustainable, whilst operating within environmental limits and which ensures there is a thriving marine ecosystem for future generations. Policy 32 requires impacts on natural heritage and designated sites to be assessed and mitigated.
- Outer Hebrides Local Development Plan (OHLDP) (CnES, 2018). Policy ED4 outlines the role of CnES in supporting sustainable development of marine fish farm proposals whilst protecting the ecosystem. Policy NBH2 Natural Heritage states that development which is likely to have a significant effect on a Natura (European) site and is not directly associated or necessary the conservation management of that site will be subject to an Appropriate Assessment by the Comhairle.
- Supplementary Guidance for Marine Fish Farm (CnES, 2018b) sets out a spatial strategy and development policy framework for aquaculture, including specific provisions for aquaculture.
- NatureScot (2022) Interim Technical Briefing Note - Pole-mounted top nets and birds at finfish farms.

9.4.5 Stakeholder consultation

Further consultation with NatureScot will be undertaken, where required, regarding baseline information, net design, the HRA process and possible mitigation measures and any required monitoring.

9.5 REFERENCES

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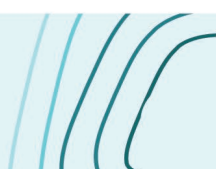
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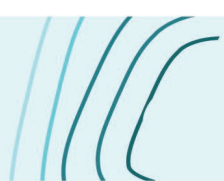
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10 SOCIOECONOMICS



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10.1 INTRODUCTION

This chapter describes the socioeconomic features within the study area for the proposed development, including local economic sectors and employment, population and community, and tourism interests. The chapter provides a high-level summary of the baseline and identifies potential impacts (beneficial and adverse) on socioeconomic receptors arising from the installation, operation and decommissioning of the proposed development. An approach to EIA is described for impacts where there is the potential for likely significant effects or effects are uncertain and further assessment is required.

Potential direct impacts on marine recreation and tourist users arising from the presence of the proposed development are addressed in Chapter 14. Navigation, Commercial Fisheries and Other Marine Users.

10.2 BASELINE SUMMARY

10.2.1 Study area

The proposed development lies within Loch Erisort, a 13 km-long narrow sea loch on the east coast of the Isle of Lewis, to the south of Stornoway, in the Outer Hebrides. The proposed development will be located at the eastern extent of the loch, off the northeast coast of the uninhabited island of Tabhaigh Mhòr. The crofting township of Cromore lies to the south, while the villages of Crosbost and Ranish are located to the northwest.

Three existing finfish farm sites are currently in operation in the eastern extent of Loch Erisort: Tabhaigh, North Shore East and North Shore West, all of which are operated by the Developer (Figure 3.1); North Shore West will be relinquished if the proposed development is consented and biomass transferred from this site, as well as some from North Shore East to the proposed development. The sites are serviced by a shorebase located at Keose Glebe, 6.7 km to the southwest of Tabhaigh islands.

The study area will include the local communities surrounding and utilising Loch Erisort. Consideration will also be given to the wider region for context on socioeconomic indicators, such as employment, income, community infrastructure and economic activities.

10.2.2 Local population and employment

The proposed development is located within the Comhairle nan Eilean Siar (Western Isles / Outer Hebrides) council region. The area profile indicates a population of 26,640 (July 2021) (NRS, 2022). Between 2018 and 2028, the population of the region is projected to decrease from 26,830 to 25,181; a decrease of 6.1%, while Scotland as a whole is projecting an increase of 1.8% (NRS, 2022). Population density (9 people per sq. km) is lower than the Highlands and Islands (12 people per sq. km) and considerably lower than the Scottish average (70 people per sq. km) (HIE, 2019).

A large proportion of the jobs generated in the Outer Hebrides are concentrated on human health and social work activities; the construction sector; and the agriculture, forestry and fishing sector, which includes aquaculture as a key employer in the area. Employment in the agriculture, forestry and fishing sector is particularly important to the Outer Hebrides, with 28.1% of the areas workforce employed in the sector in 2018, more than double that of the Highlands and Islands (11.7%) and more than eight times the figure for Scotland (3.2%) (HIE, 2019).

10.2.3 Aquaculture sector

According to CnES, the fish farming industry in the Outer Hebrides provides around 550 full time equivalent jobs. Direct employment, mainly in marine salmon farming, accounts for over 350 FTE jobs while related activities such as processing, marketing and distribution provide around 200 jobs (CnES, 2022).

There are a number of mussel farms operating throughout Loch Erisort and Loch Leurbost. The nearest active licensed shellfish farm is 6.7 km northwest of the proposed development at Crosbost, Loch Leurbost (Figure 5.1).

10.2.4 Tourism and recreation

Tourism is an important industry for the Outer Hebrides and the facilities within the islands attract an increasing number of visitors; approximately 220,000 visitors in 2017 (last full survey) with growth of 5% per annum (Visit Outer Hebrides, 2022). Loch Erisort is not identified in the Marine Recreation and Tourism Study (2015) as a popular area for recreational water sports or boating activities (such as canoeing, rowing, water-skiing, powerboating etc.) (Scottish Government, 2016). However, the study indicated there to be a low level of motor cruising, sailing and dinghy cruising at the eastern extent of the loch. At least one recreational charter vessel operates from the pier at Keose Glebe and other wildlife watching vessels occasionally enter the Loch.

Feedback from the Royal Yachting Association (RYA) was received on proposals to modify the Developer's existing Tabhaigh fish farm, adjacent to the proposed development. Comments indicated that the loch is well used by recreational sailors and some boats moored / berthed in Loch Leurbost, as well as visitors using it as an occasional anchorage.

10.2.5 Mowi operations

The Developer currently employs 13 staff and contractors, servicing all three existing farms in Loch Erisort. The team comprises of one farm manager, two assistant farm manger and ten skipper/technician/deckhands, the majority of whom are local to Lewis. A range of contractors and supply chain companies support day-to-day operations and provide infrastructure and resources. Current and proposed operational expenditure, employment, production rates, supply chain utilisation and community involvement will be presented in the EIA Report.

10.3 IDENTIFICATION OF LIKELY SIGNIFICANT EFFECTS

10.3.1 Potential impacts

Potential impacts arising from the proposed development on socioeconomic receptors during each phase include:

- Economic benefit associated with capital expenditure (CAPEX), and temporary employment during installation and decommissioning activities.
- Economic benefit associated with operational expenditure (OPEX) and utilisation of supply chain.
- Economic benefit associated with employment and income.
- Contribution to local community development and cohesion.
- Disruption to, or displacement of existing economic and community activities.

10.3.2 Project mitigation and enhancement measures

No specific mitigation or enhancement measures are proposed at this stage but will be identified, where appropriate, during the impact assessment.

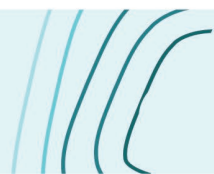


10.3.3 Scoping impacts

A high-level assessment of potential impacts (beneficial or adverse) and likely significance of effects on socioeconomic receptors are detailed in Table 10-1. The assessment determines whether there is sufficient information to conclude significance and those impacts that should be scoped in for further assessment in the EIA, or scoped out where it can be confirmed that no likely significant effects will occur, based on the approach described in Chapter 4, Approach to Scoping.

Table 10-1 Identification of likely significant effects

Potential Impact	Description of Effect / Impact Significance	Scope In/Out
Construction and Installation Phase (inc. Decommissioning)		
Economic benefit associated with capital expenditure (CAPEX), and temporary employment during installation and decommissioning activities	Expenditure on new infrastructure and installation activities associated with the proposed development, and decommissioning of the existing North Shore West site will utilise existing supply chains and bring addition short-term revenue and employment. Significance of effect uncertain.	Scope in
Operations Phase		
Economic benefit associated with operational expenditure (OPEX) and utilisation of supply chain	Operations associated with the proposed development will secure/maintain local and regional supply chains through day-to-day contractor support and provision of goods and services. Significance of effect uncertain.	Scope in
Economic benefit associated with employment and income	The proposed development will secure/maintain employment and income in the local area. The relinquishment of an existing site and installation of a new, modernised site is not anticipated to result in a net increase in employment; however, will ensure long-term sustainability for the area. Significance of effect uncertain.	Scope in
Contribution to local community development and cohesion	Fish farming is well-established in Loch Erisort with a locally based team employed to manage and support operations. The Developer and its team form part of the local community and it is anticipated that their involvement would be maintained/enhanced, should the proposed development be approved to improve overall strategic operations in the area. Significance of effect uncertain.	Scope in
Disruption to or displacement of existing economic and community activities	The location and scale of the proposed development may result in the displacement of existing activities in the locality i.e., associated with marine tourism, recreation, or local fisheries. However, relinquishment of an existing site may also reduce the overall loss of sea area. Further analysis is required to understand the importance of the development footprint to other economic sectors and local users. Significance of effect uncertain.	Scope in



10.4 APPROACH TO EIA

The proposed approach to undertaking the impact assessment for Socioeconomics is summarised below and identifies how baseline data gaps will be addressed, any stakeholder consultation required and outlines the proposed assessment methodology and relevant guidance. The general EIA process and methodology is detailed in Chapter 18. Approach to EIA.

Baseline data sources

The following baseline data sources will be reviewed:

- Outer Hebrides Local Development Plan (CnES, 2018).
- Socio Economic Updates (CnES).
- Highlands and Islands Enterprise (HIE) regional profiles.
- Office for National Statistics (ONS)/National Records of Scotland (NRS), including official census and labour market statistics.
- Scottish Government datasets, including: Scottish Index of Multiple Deprivation, Scotland's Labour Market, National Islands Plan.
- Biggar Economics (2020) Estimation of the Wider Economic Impacts of the Aquaculture Sector in Scotland.
- Mowi intend to commission an independent socioeconomic report as part of the EIA process.

Stakeholder consultation

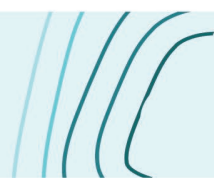
Substantial consultation has already been undertaken, described in Chapter 4. Approach to Scoping. The following stakeholders will be consulted to address any baseline data gaps and inform the proposed approach to assessment:

- Continued engagement with local community stakeholders, particularly local fisheries and recreational users, to understand their use of the proposed development area and surrounding waters.

Assessment methodology, policy and guidance

The proposed approach to assessment will comprise the following methodology and refer to relevant best practice guidance, including:

- Desk-based assessment following standard CIEEM (2018), SNH (2018) and IEMA (various) guidance and best practice approaches to EIA will be followed. There are currently no formal UK standards or guidance for a methodology for the assessment of the socioeconomic effects of fish farms. An approach in line with EIA and Social Impact Assessment (SIA) will be developed based on identification of receptors, assessing the magnitude and subsequently the significance of impacts.
- Sectoral guidance developed for offshore wind provides a detailed approach for assessing the socioeconomic impacts of development on local communities: *Guidance on assessing the socioeconomic impacts of offshore wind farms (OWFs)* (Glasson *et al.*, 2020). Whilst not developed for the scale of an aquaculture development, elements of the guidance will be adopted in the assessment.
- Relevant receptors will be identified based on the social and economic composition of the study area and the proposed development being considered e.g., residents, business owners, recreational users, housing supply, where relevant. Receptor sensitivity will be defined primarily based on the indicators contained in the Scottish Index of Multiple Deprivation (SIMD).



- The outcomes of the impacts on other marine users (navigation and commercial fisheries interests) will be integrated into this assessment. Details of proposed approach to this assessment are set out in Chapter 14.
- Assessment of 'no development' scenario will be undertaken to compare the potential impacts of the proposed development with those should the development not go ahead, including consideration of CAPEX, OPEX, employment and income, supply chain and community.

The following policies will also inform the approach to the assessment:

- Scotland's National Planning Framework 4, Aquaculture Policy 32, Scottish Government.
- Scotland's National Marine Plan, A Single Framework for Managing Our Seas (Marine Scotland, 2015).
- Outer Hebrides Local Development Plan and Supplementary Planning Guidance for Aquaculture (2018), including Development Policy 7: Economic Benefit.

10.5 REFERENCES

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11 POPULATION AND HEALTH

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11.1 SCOPING SUMMARY

11.1.1 Introduction

Impacts from marine aquaculture developments on population and health can include nuisance and disturbance for local residents and marine users from lighting, noise and odour association with the installation and operation of fish farms.

11.1.2 Baseline

The proposed development will be located towards the eastern extent of Loch Erisort, off the northeast coast of the uninhabited island of Tabhaigh Mhòr. The crofting township of Cromore lies 3.1 km to the south, while the villages of Crosbost and Ranish are located 3.9 km and 2.5 km, respectively, to the northwest. There are no inhabited properties or coastal infrastructure directly overlooking the proposed development site.

11.1.3 Potential Impacts

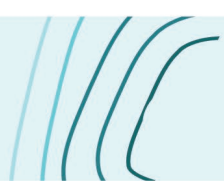
Potential impacts on population and health include:

- Disturbance to local residents and recreational users from noise arising from equipment and operational activities.
- Nuisance odours resulting in disturbance to local residents and recreational users arising from fish feed and fish mortalities.
- Visual disturbance and reduction in visual amenity of local residents and recreational users arising from the presence of infrastructure associated with the fish farm.

The closest residential receptor to the proposed development is 1.7 km. Embedded project design and best practice management measures include the use of noise insulation on equipment, particularly on the feed barge, and restriction of operational activity to normal operation hours, as far as practicable. Implementation of best practice measures will eliminate, reduce, or manage any potential noise impacts to levels within the limits of background noise, and ensure that they are minimised to ensure there are **no likely significant effects** from noise disturbance.

Odours from fish farms are generally associated with fish feed and storage of mortalities. Fish mortalities will be collected in a cone located at the bottom of each pen and retrieved using an integrated lift-up system. Site staff will aim to remove mortalities from the base of the pen on a daily basis and three times a week as a minimum. Stock mortalities removed from the pens will be stored in sealed containers and uplifted by licensed waste carrier for disposal at a licensed facility. There will be no net increase in overall biomass produced in the Developer's Loch Erisort sites and no increase in volume of waste produced anticipated. There will be no material change to existing processes dealing with mortality disposal in the farm management area. Therefore, **no likely significant effects** from nuisance odour or indirect impacts on human health are anticipated.

Visibility of the proposed development will be restricted from key settlements and dwellings. Lighting is generally restricted to those required for safe navigation, underwater maturation lighting (limited use in production cycles) and on the feed barge during low-light operations in winter months, which are generally restricted to day-time operating hours. Visual amenity will be assessed separately under a specific methodology for seascape, landscape and visual amenity (detailed in Chapter 12. Seascape, Landscape and Visual Amenity).



11.1.4 Scoping conclusion

Therefore, **no likely significant effects** on population and health associated with noise and odours are anticipated and the topic is **scoped out of the EIA**.

12 SEASCAPE, LANDSCAPE AND VISUAL AMENITY

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12.1 INTRODUCTION

This chapter describes the seascape, landscape and visual interests within the vicinity of the proposed development, including any designated sites, important features and an analysis of visibility from sensitive receptors.

The chapter provides a high-level summary of the baseline landscape, seascape and visual characteristics, and identifies potential impacts on receptors arising from the installation, operation and decommissioning of the proposed development. An approach to EIA is described for impacts where there is the potential for likely significant effects or effects are uncertain and further assessment is required.

12.2 BASELINE SUMMARY

12.2.1 Study area

The site is located in the eastern edge of Loch Erisort on the eastern coastline of the Isle of Lewis. The proposed farm site options are approximately 0.2 km north of the uninhabited Tabhaigh Mhòr island, which is positioned between the Rubha Rànais headland to the north and Eilean Orasaidh to the south.

The study area has been defined as a 5 km radius from the proposed development boundary, as it is considered unlikely that the proposed development would have significant effects on landscape or visual receptors beyond this distance, due to its size and scale, and due to the higher ground that limits longer views to the site. The study area is shown in Figure 12.1 and Appendix 12.1. The study area was further refined through the generation of a zone of theoretical visibility (ZTV), also shown in Figure 12.1 / Appendix 12.1, which indicates that most areas from which there is potential visibility are within 5 km of the site boundary.

12.2.2 Landscape and Coastal Character

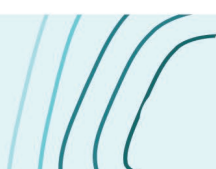
This section provides a description of the landscape and coastal character baseline across the study area. The onshore landscape character is described in the Landscape Character Assessment in Scotland (*NatureScot, 2019*), and the coastal character in the Landscape/seascape capacity for aquaculture: Outer Hebrides pilot study (*ASH design + assessment, 2011*).

Coastal Character

National Coastal Character

Thirteen national coastal character types (CCT) and sub types have been identified by SNH at a broad scale and provide a strategic level of characterisation (*Scott et al, 2005*). The study area is located entirely within CCT 13: Low Rocky Island Coasts, which is present along the majority of the Outer Hebrides coastline. Key characteristics of CCT 13 include:

- Physical Character
 - “Generally low rocky coastline, rising to cliffs in places;
 - Moorland, either rocky, ‘Stepped’ or boggy, tends to back a narrow sparsely settled open coastal fringe;
 - Usually some crofting and few settlements;
 - Views of open Atlantic Ocean in the main.”
- Experiential Qualities



- “can feel very remote due to the sparse settlement, moorland or low key crofting hinterland and exposure to open sea
- Strong sense of being on an island due to close proximity of sea often with ‘all round’ views and little distance from the sea.”

The closest area of coastline to the site is within CCT 13 sub type 13C: Fragmented Low Rocky Island Coasts. The description states:

- “The ‘Knock and Lochan’ and fragmented lower lying coasts of the Western Isles, particularly the east coasts of Harris and North Uist where fragmented small knocks and flatter boggy islands, break off into the sea as rocky promontories and offshore skerries. Sparsely settled, backed by small areas of crofting but mainly moorland hinterland. This is a small-scale landscape with an intricate pattern where views to the open sea are restricted.” (*Scott et al, 2005*).

Local Coastal Character

A series of smaller scale Regional Coastal Character Areas (RCCA) and Local Coastal Character Areas (LCCA) were identified in an SNH commissioned report in 2011, which are more specific to the study area than the aforementioned CCTs. The pilot study covered Loch Liurbost within the study area. This is further divided into three RCCAs:

- Loch Griomsidar RCCA;
- Outer Loch Eireasort RCCA; and
- Loch Liurbost RCCA.

The closest area to the north of the site is within the Outer Loch Eireasort RCCA, which spans the stretch of coastline between Rubha Rànais in the east to Eilean Chalaibhrih in the west, on the northern bank of the mouth of Loch Erisort. The stretch of coastline is largely uninhabited and provides a sense of wildness.

The pilot study also classifies LCCAs within the area of coastline:

- Narrow Enclosed Inner Loch LCCA;
- Narrow Outer Loch LCCA;
- Moorland Headland Coastal Edge LCCA;
- Secluded Bay with Settlement LCCA;
- Settled Loch Edge LCCA;
- Crofting Slopes with Settlement LCCA;
- Rocky Moorland Edge LCCA; and
- Rocky Moorland with Coastal Edge LCCA.

The closest LCCA to the site is Moorland Headland Coastal Edge, which makes up a portion of the RCCA. Key characteristics of the LCCA include:

- “Rocky irregular coastline, often with craggy small-scale cliffs, small inlets and occasional small gravel beach results in visual foci;
- Backdrop of rounded hills with exposed rocky outcrops;
- Uniformity of hinterland ground cover, consisting of rough grassland, heather and bracken;

- Small islands, islets and small prominent headlands break up views and provide an interesting composition; and
- Open medium scale seascape combined with undulating topography which gives the hinterland landscape an impression of being smaller scale.” (*ASH design + assessment, 2011*).

Overall, the LCCA is stated to be of medium susceptibility to development. The study states that ‘Large scale development’ would detract from its small-scale character, however there is potential for small to medium scale development (*ASH design + assessment, 2011*).

The Outer Hebrides pilot study did not cover the other parts of the study area, including inner Loch Erisort and the coast to the south. To ensure a consistent baseline, LCCAs would be defined for the purposes of the SLVIA for an area up to 3 km around the Proposed Development. This would cover the coasts of Eilean Chaluim Chille, Cromore, and the islands south of Tabhaigh Mhòr. Key characteristics will be developed using the same approach as the Outer Hebrides pilot study, drawing on desk study and site work to achieve a reliable baseline for the SLVIA.

Landscape Character

The national programme of landscape character assessment was re-published by SNH in 2019 and defines 390 distinct landscape character types (LCT) that occur across Scotland, some of which have a strong coastal component. There are five LCTs within the study area (Figure 12.1):

- LCT 324: Cnoc and Lochan, located approximately 0.4 km north of the site boundary at its nearest point.
- LCT 319: Dispersed Crofting, located approximately 1.1 km northwest of the site boundary at its nearest point.
- LCT 323: Rocky Moorland - Outer Hebrides, located approximately 2.2 km west of the site boundary at its nearest point.
- LCT 318: Linear Crofting, located approximately 2.4 km northwest of the site boundary at its nearest point.
- LCT 322: Boggy Moorland – Outer Hebrides, located approximately 4.0 km northwest of the site boundary at its nearest point.

The ZTV indicates potential visibility from three of these LCTs:

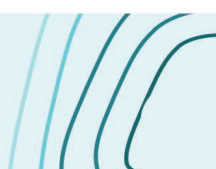
- LCT 324 – north of the site around Beinn Mhòr and Meall an Eoin, and south of the site around Eilean Orasaidh;
- LCT 319 – around Ranais and Crosbost to the north and Crobeag and Marbhig to the south; and
- LCT 323- around the Druim a’ Chanaich ridgeline (*NatureScot, 2019*).

12.2.3 Designated sites

There are no Wild Land Areas (WLA) or National Scenic Areas (NSA) located within the study area. The closest WLA is WLA 30: Harris – Uig Hills at approximately 8.2 km to the west (*NatureScot, 2014*). There are no landscapes designated for their scenic value at a local level within the study area. There are therefore no designated sites relevant to the SLVIA.

12.2.4 Visual baseline

There are a number of potentially sensitive visual receptors (people) within the study area, including (but not limited to):



- Residential receptors within nearby settlements where visibility is indicated, including:
 - Ranais, located approximately 1.5 km northwest of the site. Visibility is indicated from the east of the village and on the approach to Poll Skut bay. Several properties have primarily outlooks southeast across the bay.
 - Crosbost, located approximately 2 km northwest of the site, visibility is indicated from the southeastern part of the village adjacent to the shoreline. Several properties have primarily outlooks across Eilean Orasaigh towards the site.
 - Cromore, located approximately 2.2 km southwest of the site. Visibility is indicated from a small number of properties in the northern extents of the village, to the northeast of Tòb Cromore bay.
 - Marbhig, located approximately 4 km south of the site, just south of Loch Mharabhig. Potential visibility is indicated from the majority of properties within the village.
 - Griomsiadar, located between 3-4 km northwest of the site. Visibility is indicated from several properties along the unclassified road.
 - Individual scattered properties along the Loch Erisort coastline.
- Recreational receptors, such as those using long distance walking routes, or those visiting hill summits or promoted viewpoints, including:
 - The small hill summit of Beinn Mhòr (AOD 104), located approximately 0.7 km north of the site may attract visitors and is indicated to have potential visibility, as the highest point of Rubha Rànais
 - Locally promoted cycle route between Cromore, Marbhig and Calbost, travelling along local roads where some visibility is indicated (*Outer Hebrides Tourism, 2023*)
 - There are no core paths or national long-distance recreational routes within the study area.
- Road users – where outward views are afforded:
 - Potential visibility is indicated on the B897, through the village of Ranais. Additional visibility from this road is indicated from sections between 4-5 km northwest of the site.
 - Potential visibility is indicated from unclassified roads within the villages of Crosbost, Marbhig and Griomsiadar, where views between properties are afforded.
- People engaging in water activities:
 - People sailing, kayaking, etc within outer Loch Erisort, accessing the local settlements and islands.
 - People sailing along the east coast of Lewis to or from Stornoway to the north.

These people experience views across Loch Erisort, taking in the headlands, islands and open water. Views in this area undoubtedly have a scenic component. The waters of Loch Erisort host several aquaculture sites, some of which would remain in place should the Proposed Development go ahead.

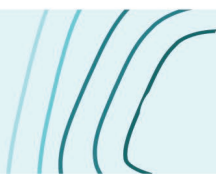
12.3 IDENTIFICATION OF LIKELY SIGNIFICANT EFFECTS

12.3.1 Potential impacts

Potential impacts arising from the proposed development on landscape receptors during each phase include:

- Impacts during construction on landscape and coastal character; and
- Impacts during operation on landscape and coastal character.

Potential impacts arising the proposed development on visual receptors during each phase include:



- Impacts on the views and visual amenity of people within settlements and communities;
- Impacts on views experienced by recreational users such as those visiting hill summits and promoted viewpoints; and
- Impacts on views experienced by recreational users and activities taking place on the water, such as sailing or kayaking.

12.3.2 Project mitigation measures

Project mitigation measures that will avoid or reduce potential impacts on seascape, landscape and visual receptors are described in Table 12-1. These measures are anticipated to form part of the project design (embedded mitigation).

Table 12-1 Project mitigation measures

Measure	Description	How secured
Consideration of the development's position near landform	Tabhaigh Mhòr would provide local screening, particularly for north and northeast facing views from south of the site. Consideration of the development's exact positioning by the island could reduce visibility from certain locations.	Project design via T&CP consent
Low height of pens above sea level	Having a low-lying development may reduce overall visibility and potentially remove theoretical visibility from certain locations.	Project design via T&CP consent
The use of fewer, larger pens	The development may appear less cluttered and prominent.	Project design via T&CP consent
Consider the colour of pens and feed barge	In choosing a colour that does not stand out against the sea, negative visual effects may be reduced.	Project design via T&CP consent
Operational lighting kept to minimum	To reduce visual effects during dusk and nighttime.	Project design via T&CP consent

12.3.3 Scoping impacts

A high-level assessment of potential impacts and likely significance of effects on seascape, landscape and visual receptors are detailed in Table 12-2. The assessment determines whether there is sufficient information to conclude significance and those impacts that should be scoped in for further assessment in the EIA, or scoped out where it can be confirmed that no likely significant effects will occur, based on the approach described in Chapter 4. Approach to Scoping.

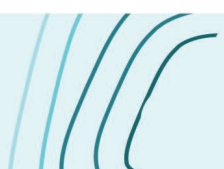
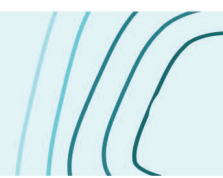


Table 12-2 Identification of likely significant effects

Potential Impact	Mitigation	Description of Effect / Impact Significance	Scope In/Out
Construction and Installation Phase, and Decommissioning			
Impacts on coastal character as a result of construction activity being present in the offshore view.	n/a	The installation / removal of pens is likely to be completed over a relatively short period, and will involve limited change in the baseline, therefore significant effects on coastal receptors are unlikely to occur. Effect unlikely to be significant.	Scope out
Physical impacts on landscape as a result of the construction and decommissioning of the proposed development	n/a	There are no onshore works proposed as part of the Proposed Development, therefore no likely significant effects on landscape or coastal character will occur. Effect unlikely to be significant.	Scope out
Visual impacts on views experienced by onshore visual receptors as a result of the presence and activity of construction and decommissioning works.	n/a	The installation of farm pens is likely to be completed over a relatively short period, therefore significant effects on visual receptors are unlikely to occur. Effect unlikely to be significant.	Scope out
Operations Phase			
Impact on coastal character of the study area, with reference to LCCAs, arising from the presence of the Proposed Development (including lighting)	1-5	The LCCA description notes its sensitivity to large scale aquaculture developments. While the proposed development will be small to medium scale in terms of the Outer Hebrides pilot study on landscape/seascape capacity for aquaculture, there is potential for aquaculture sites to affect coastal character in this and other LCCAs. With the proposed changes in Loch Erisort there will be a net reduction in pen numbers in the loch - with the neighbouring site of Tabhaigh transitioning to 160 m pens, the relinquishment of the Northshore West site. Significance of effect uncertain.	Scope in
Impact on onshore landscape character, with reference to LCTs, arising from the presence of the Proposed Development (including lighting)	1-5	The proposed Development is located offshore, therefore no physical aspects relating to the landscape character will be affected. It is possible that experiential aspects of the landscape character will be affected, particularly where coastal views are referred to. However, the Proposed Development is unlikely to substantively alter key characteristics of any LCTs. Effect unlikely to be significant.	Scope out
Impacts on views experienced by visual receptors, arising from the presence of the Proposed Development (including lighting)	1-5	The Proposed Development is located in close proximity to Tabhaigh Mhòr which would provide localised screening for visual receptors to the south. However, open views afforded from much of the surrounding coastline could result in significant effects on visual receptors. Significance of effect uncertain.	Scope in



12.4 APPROACH TO EIA

The proposed approach to undertaking the SLVIA for the proposed development is outlined below and identifies how baseline data gaps will be addressed, the assessment methodology and any consultations required.

Baseline data sources

The following baseline data sources will be reviewed:

- Scotland's fourth National Planning Framework (NPF4)
- Comhairle nan Eilean Siar (CnES), Outer Hebrides Local Development Plan (OHLDP, 2018)
- Scottish Landscape Character Types Map and Descriptions (2019)
- Landscape/seascape capacity for aquaculture: Outer Hebrides pilot study (2011)
- Outer Hebrides Tourism: Cromore and Calbost (2023)

Stakeholder consultation

The following stakeholders will be consulted to fill any baseline data gaps and inform the proposed approach to assessment:

- CnES – to inform the number and location of viewpoints
- NatureScot

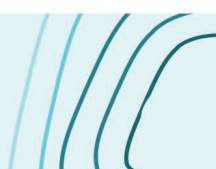
Assessment methodologies and guidance

The proposed approach to assessment will be based on relevant good practice guidance, including:

- Landscape Institute and the Institute of Environmental Management and Assessment (2013) *Guidelines for Landscape and Visual Impact Assessment*. 3rd Edition ('GLVIA3');
- Landscape Institute (2019) Visual Representation of Development Proposals. Technical Guidance Note 06/19;
- Scottish Natural Heritage (2008) Guidance on Landscape/Seascape Capacity for Aquaculture;
- Scottish Natural Heritage (2011) The siting and design of aquaculture in the landscape: visual and landscape considerations;
- Scottish Natural Heritage (2018) *Guidance on Coastal Character Assessment*. Version 1a;
- Scottish Natural Heritage (2018) *Visualisations for aquaculture*. Guidance Note;
- Comhairle nan Eilean Siar (2018) Outer Hebrides Local Development Plan, Adopted Plan; and
- Comhairle nan Eilean Siar (2018) Outer Hebrides Local Development Plan, Supplementary Guidance: Marine Fish Farming.
- The Scottish Government (2015) Scotland's National Marine Plan: A Single Framework for Managing Our Seas

12.5 PRELIMINARY ZTV AND PROPOSED VIEWPOINTS

The ZTV indicates potential visibility of the proposed development within the study area. Theoretical visibility was calculated for the heights of the pens, including pole-nets (7 m). A feed barge may be taller but is unlikely to alter the ZTV. Due to the height and scale of the proposed development, theoretical visibility is not indicated in variations



of extent, but rather it highlights which areas will have some extent of theoretical visibility. The ZTV is based on two alternate layout options, and therefore shows a ‘worst case’ that would apply, whichever option is selected.

The terrain model assumes bare ground and is derived from OS Terrain 5 heights (resolution 5 m). Earth curvature and atmospheric refraction have been taking into account. The ZTV was calculated using ArcPro v3.0.3. The ZTV is depicted in Figure 12.1 / Appendix 12.1 with a study area of 5 km with 1:50,000 Ordnance Survey base mapping.

The ZTV indicates that the majority of on-land visibility is located within a 5 km radius of the site. This was used to further refine and determine the study area as set out in Section 12.2.1. A number of viewpoints are proposed in locations where visibility is indicated, representative of receptors which may be susceptible to changes in views. Viewpoints have been chosen to represent locations where the identified receptors may experience views of the Proposed Development. They are listed in Table 12-3 below.

Table 12-3 Proposed Viewpoints

No.	Title	Eastings	Northings	Reason
1	Beinn Mhòr	142517	924476	Land-based view, representing recreational receptors – hill walkers. Visibility is indicated on the ZTV, as it is the highest point of the Rubha Rànais headland. The view is south facing.
2	Rànais	141027	924703	Land-based view, representing residential and roadside receptors. The ZTV indicates visibility in the eastern side of the settlement, including several properties. The view is southeast facing.
3	Cromore	140023	921667	Land-based view, representing residential receptors. The ZTV indicates visibility from several properties within the north of Cromore. The view is northeast facing.
4	Loch Erisort	140162	922974	Sea-based view, representing recreational receptors such as people sailing/ kayaking within outer Loch Erisort sea loch. The view is east facing, looking towards the open sea.
5	Little Minch	143821	923427	Sea-based view, representing recreational receptors and people sailing along the east coast of Lewis. The view is west facing, looking into the mouth of the sea loch.

The SLVIA will be supported with photomontages that will illustrate the likely appearance of the Proposed Development. Photomontages will be provided for each of the viewpoints listed in Table 12-3. In the event that capturing sea-based views is not feasible due to access, safety or weather conditions, wireline views will be provided.

12.6 REFERENCES

ASH design + assessment. (2011) *Landscape/seascape capacity for aquaculture: Outer Hebrides pilot study*. Scottish Natural Heritage Commissioned Report No.460.

NatureScot. (2019) *Scottish Landscape Character Types Map and Descriptions*. [online] Available at: <https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions>

NatureScot. (2014) *Wild Land Areas map and descriptions 2014*. [online] Available at: <https://www.nature.scot/doc/wild-land-areas-map-and-descriptions-2014>

Outer Hebrides Tourism. (2023) *Cromore and Calbost*. [online] Available at: <https://www.visitouterhebrides.co.uk/routes/cromore-and-calbost-p582121>

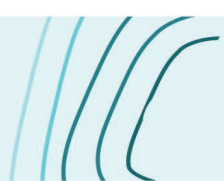
Scott *et al.* (2005) *An assessment of the sensitivity and capacity of the Scottish seascape in relation to offshore windfarms*. Scottish Natural Heritage Commissioned Report No.103 (ROAME No. F03AA06).



13 ARCHAEOLOGY AND CULTURAL HERITAGE

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13.1 INTRODUCTION

This chapter describes the cultural and archaeological interests within the vicinity of the proposed development, including statutory designated and undesignated cultural heritage. The chapter provides a high-level summary of the baseline and identifies potential impacts on archaeological receptors arising from the installation, operation and decommissioning of the proposed development, including indirect and direct impacts. An approach to EIA is described for impacts where there is the potential for likely significant effects or effects are uncertain and further assessment is required.

13.2 BASELINE SUMMARY

13.2.1 Study area

The study area for direct impacts in the EIA will comprise the mooring footprint (Figure 13.1) and the carbon deposition footprint, which will be defined following completion of NewDepomod modelling. In the absence of a defined carbon deposition footprint at scoping stage, a 2 km buffer has been applied to the mooring footprint options. The study area for indirect (setting) impacts comprises the zone of theoretical visibility (ZTV), rendered to 5 km.

13.2.2 General

The area around Loch Erisort has been inhabited for thousands of years, with evidence of ancient settlements, stone circles, and burial sites dating back to prehistoric times. The surrounding coastal area is scattered with the marker / navigation cairns which held importance for the navigation of marine vessels throughout the loch, some linked with an ecclesiastical function, the small island of Eilean Chaluim Chille has probably related to Christianity since the 7th century. There is evidence of Norse Influence identified around former monastic sites. Clan MacLeod, which held extensive land across the Western Isles and west of Scotland also owned land around Loch Erisort. Their clan seat, Lews Castle, is nearby and played a significant role in the area's history.

13.2.3 Marine cultural heritage

Statutory designated features

A search was made of the following designations within 2 km of the site mooring footprint:

- Sites and vessels designated under the Protection of Military Remains Act 1986 (war graves)
- Scheduled Monuments
- Historic Marine Protected Areas

No statutory designations for marine cultural heritage features were identified within the study area.

Non-statutory designated features

A search was made of the National Record of the Historic Environment (Canmore) Database for maritime recorded losses. Four undesignated wreck features are recorded within 2 km of the mooring boundary summarised in Table 13-1. The tentative¹ location of the losses are illustrated on Figure 13.2.

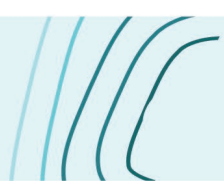


Table 13-1 Undesignated wreck records within 2 km of mooring boundary options.

ID	Name	Description	Location ¹	Canmore ID	Distance (Mooring Footprint)
0	Unknown	Wreck recorded during geophysical surveys undertaken summer 2023.	142442, 923817 (Confirmed)	n/a	450 m
Tentative Wreck Locations (Unconfirmed)					
1	<i>Hero</i>	<i>A 19th Century Smack</i>	<i>NB 420 228</i>	<i>251926</i>	<i>160 m</i>
2	<i>Jeannies</i>	<i>A 19th Century Lugger</i>	<i>NB 42 23</i>	<i>296531</i>	<i>Within mooring footprint.</i>
3	<i>Primrose</i>	<i>Auxiliary Lugger (20th Century)</i>	<i>NB 42 20</i>	<i>296514</i>	<i>1390 m</i>
4	<i>Enterprise</i>	<i>A 19th Century Schooner</i>	<i>NB 420 228</i>	<i>217528</i>	<i>160 m</i>

Geophysical surveys undertaken to support site modifications to another fish farm: Tabhaigh, approximately 400 m west of the proposed pens included a multibeam survey of the development footprint of Tabhaigh East. The survey outputs are presented in Image 13-1. The survey identified the presence of one potential wreck feature, approximately 450 m to the north of the proposed pen options, also illustrated on Figure 13.3. Consultation with the CnES Archaeology Service confirmed that they were content there was no other wrecks identified within the survey area.

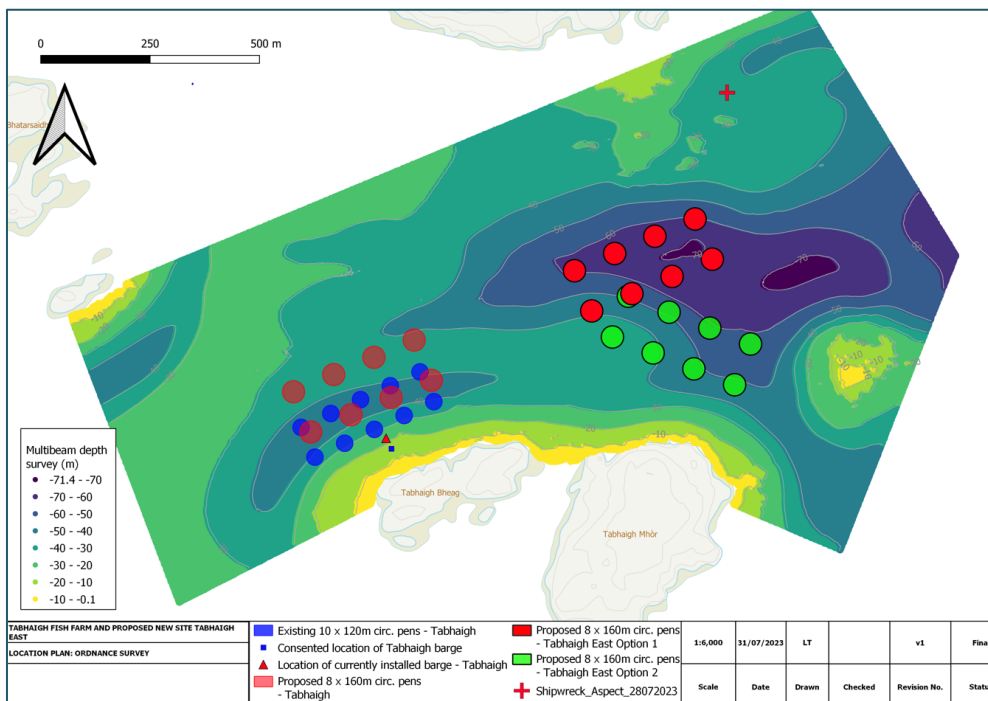


Image 13-1 Outputs of the multibeam survey for Tabhaigh (consented) and proposed options for Tabhaigh East

¹ The locations assigned to wreck records are essentially tentative, and are usually derived from unverified locations.

13.2.4 Terrestrial cultural heritage

Statutory designated features

A search was made of all statutory cultural heritage features within the ZTV (to scope heritage assets that may be subject to setting impacts). No heritage assets with a statutory designation were identified within the ZTV.

Undesignated features

A search was made of undesignated terrestrial archaeological features, extracted from the National Record of the Historic Environment (Canmore). Forty-eight records were returned which fall within the ZTV which may be subject to setting effects listed in Table 13-3 illustrated on Figure 13-3. Most of these features relate to the agricultural context (enclosures, sheilings, field systems). The records also include numerous cairn features which are thought to represent navigational cairns positioned to aid boats manoeuvring through the straits between islands. The records include Eilean Croix (ID17, 3.4 km from the mooring option centre point) at the eastern end of Eilean Chailium Cille, which is considered the best example of these navigational markers (Burgess, 2004 from Canmore Database).

13.3 IDENTIFICATION OF LIKELY SIGNIFICANT EFFECTS

13.3.1 Potential impacts

Potential impacts arising from the proposed development on archaeological receptors during each phase include:

Construction

- Direct physical damage to known cultural heritage features during the construction process.
- Direct physical damage to unknown or buried cultural heritage features during the construction process.
- Direct physical damage to paleo landscapes.
- Indirect effects on setting of cultural heritage from the construction of the fish farm.

Operation

- Direct physical damage or alteration to cultural heritage features arising from abrasion by mooring lines.
- Smothering of cultural heritage features from increase in carbon deposition.
- Indirect effects on setting of cultural heritage features from the presence and operation of the fish farm.

13.3.2 Project mitigation measures

Project mitigation measures that will avoid or reduce potential impacts on cultural heritage receptors are described in Table 13-2.

Table 13-2 Project mitigation measures

Measure	Description	How secured
General Mitigation	Relinquishment of North Shore West - approval of Tabhaigh East will facilitate the relinquishment of North Shore West, removing impacts associated with this development on the setting of archaeological features.	Planning Condition

Measure	Description	How secured
General Mitigation	Moorings Design - demonstration that any ROV and side scan sonar (SSS) surveys are undertaken as part of the mooring and pen design process. Any anomalous features likely to represent cultural heritage asset will be avoided in the mooring design.	Planning condition

13.3.3 Scoping impacts

A high-level assessment of potential impacts and likely significance of effects on cultural heritage receptors are detailed in Table 13-3. The assessment determines whether there is sufficient information to conclude significance and those impacts that should be scoped in for further assessment in the EIA, or scoped out where it can be confirmed that no likely significant effects will occur, based on the approach described in Chapter 4, Approach to Scoping.

Table 13-3 Identification of likely significant effects

Potential Impact	Description of Effect / Impact Significance	Scope In/Out
Construction and Installation Phase (inc. Decommissioning)		
Direct physical damage to known cultural heritage features during the construction process.	The mooring spread area and surrounds have been subject to ROV and multibeam surveys as part of the standard site characterisation works and will inform moorings placement. Features identified as potential cultural heritage receptors will be avoided as part of the mooring design spread. Effect unlikely to be significant.	Scope Out
Direct physical damage to unknown or buried cultural heritage features during the construction process.	Geophysical surveys completed summer 2023 identified the location of wreck approximately 450 m from of Tabaigh East (Option 2). Proposed anchoring options (plough anchors) have a relatively shallow penetration and likelihood of further impacts considered very low / negligible. Effect unlikely to be significant.	Scope Out
Direct physical damage to submerged landscapes.	Submerged landscapes are associated with shallower coastal fringes of the current landscape. The development occupies a depth of 40 – 70 m and is not anticipated to impact submerged landscapes. Effect unlikely to be significant.	Scope Out
Indirect effects on setting of cultural heritage from the construction of the fish farm.	The construction of the fish farm will introduce new anthropogenic elements which may impact the setting of statutory and non-statutory designated cultural heritage features. However, the construction phase will be very short in duration (over 2-3 weeks, weather dependent), using minimal vessels and infrastructure. The scale and extent of the impact is anticipated to be low. Effect unlikely to be significant.	Scope Out
Operational phase		

Potential Impact	Description of Effect / Impact Significance	Scope In/Out
Direct physical damage or alteration to cultural heritage features arising from abrasion by mooring lines.	Design of mooring lines in line with the Technical Standard (Scottish Government, 2015) to include pre-defined tensioned moorings lines which do not contact seabed. Annual ROV /dive inspections (pre and post winter season) form part of the operation and maintenance strategy to ensure slack mooring lines are identified and re-tensioned when necessary. Effect unlikely to be significant.	Scope Out
Smothering of cultural heritage features from increase in carbon deposition.	The increase in carbon deposition footprint may smother existing marine cultural heritage features. One low value wreck recorded to north of the site. This wreck is ~500m from the most northerly pen of the preferred layout option and unlikely to be impacted by carbon deposition from the fish farm. Carbon deposition is not expected to impact the integrity of the wreck and is scoped out on the basis. Effect unlikely to be significant.	Scope Out
Indirect effects on setting of cultural heritage features from the presence and operation of the fish farm.	The fish farm will represent a new development which may impact the setting of statutory and non-statutory designated cultural heritage features. Significance of effect uncertain	Scope In

13.4 APPROACH TO EIA

The proposed approach to undertaking the impact assessment for cultural heritage is outlined below and identifies how baseline data gaps will be addressed, suggests an assessment methodology and any consultations required.

13.4.1 Baseline data sources

The following baseline data sources will be accessed as part of the EIA process:

- The UKHO data for charted wrecks and obstructions.
- ROV and additional geophysical survey datasets acquired for the project.
- Extract of the Historic Environment Record (HER), requested from CnES Archaeology.
- Historic Environment Scotland: Designations.
- National Marine Plan Interactive.
- Other relevant and documentary sources, including grey literature.

In addition, the Zone of Theoretical Visibility (ZTV)² is based on two mooring options and represents a wider ZTV expected from the final pen design. A refined ZTV will be generated as part of the Seascape and Landscape Visual Impact Assessment (SLVIA) and will be used to refine the key cultural heritage receptors which may experience visibility of the new project.

² ZTV generated based on OS Terrain 5 dataset and 7 m pole net height.

13.4.2 Assessment methodologies and guidance

- Chartered Institute for Archaeologists (CIfA) (2020) 'Standards and Guidance for Historic Environment Desk Based Assessments.
- SNH (2018) Environmental Impact Assessment Handbook. Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment process in Scotland. Version 5, April 2018.
- Historic Environment Scotland (2020) Managing Change in the Historic Environment: Setting.
- CnES (2019) Outer Hebrides Local Development Plan and supplementary aquaculture guidance.

13.4.3 Stakeholder consultation

- CnES Archaeology Service – The CnES archaeologist is content that there are no other wrecks identified within the survey area and that the identified wreck is located to the north of and beyond the proposed fish farm development. No other wrecks showed up on the multibeam survey.
- Historic Environment Scotland – HES is content that the proposals are not likely to have significant effects on the setting of assets within their terrestrial interests such as scheduled monuments and category A listed buildings. However, HES recommend contacting the Local Authority archaeologist for more detailed advice on any category B or C listed buildings and any other any surviving marine archaeology.
- Input from public consultations – any input relevant from an archaeological perspective will be integrated into the EIA process.

13.5 REFERENCES

SNH (2018) Environmental Impact Assessment Handbook. Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment process in Scotland. Version 5, April 2018.

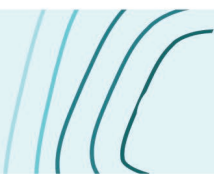
Burgess, C. (2004) Archaeological Survey and Evaluation of Eilean Chalium Chille and the Putative Site of the Seaforth Head Castle.

14 NAVIGATION, COMMERCIAL FISHERIES AND OTHER MARINE USERS



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14.1 INTRODUCTION

This chapter describes the marine user interests within the vicinity of the proposed development, including navigational routes and vessel activity, commercial fisheries, aquaculture, marine recreational users, fixed marine assets, and related commercial activity (including other Crown Estate lease areas).

The chapter provides a high-level summary of the baseline and identifies potential impacts on receptors arising from the installation, operation and decommissioning of the proposed development. An approach to EIA is described for impacts where there is the potential for likely significant effects or effects are uncertain and further assessment is required.

14.2 BASELINE SUMMARY

14.2.1 Study area

The proposed development lies within ICES¹ rectangle 45E3, within which fisheries landings are reported, and includes much of the inshore and offshore waters of Lewis. Landings are also reported by district, which includes landings from an extensive area of fishing grounds covering the Western Isles. However, a more appropriate scale for the type and footprint of the development is to consider fishing activity within approximately 6 km of the proposed development, including the approaches of Loch Erisort and Loch Leurbost for context. A 6 km study area also allows for sufficient coverage of wider navigational activities, approaching vessel transits and any assets within proximity of the proposed development.

14.2.2 Navigational features, ports and anchorages

The proposed development is not located near key maritime infrastructure or resources such as large-scale ports, harbours or formal anchorages and does not lie within or close to statutory harbour limits. Cromore, 3.1 km to the southwest, is identified as a small fishing pier. Crosbost to the northwest in Loch Leurbost has a small fishing pier and slipway, identified as North Lochs within the Stornoway fisheries district. There is also a small fishing landing port, Lochs, at Tabost in Loch Erisort^{2,3}. There is a small slipway with floating pier and shorebase at Keose Glebe, 6.7 km to the southwest of Tabhaigh, which services the Developer's existing fish farms in Loch Erisort (Figure 14.1). The final study area will be confirmed following feedback from stakeholders on the Scoping Report.

The proposed development is not located within any designated vessel routes; there are no traffic routing schemes, Scottish ferry routes or recommended shipping routes or fairways in the vicinity.

14.2.3 Vessel routes and activity

Automatic Identification System (AIS) data shows a weekly density of all vessel types (2012-2017) using the area around the proposed development area as low, relative to densities in wider waters (5-20 transits per week) (MMO, 2017). The data show low numbers (2-10 vessels) of weekly cargo vessel transits (expected to account predominantly for existing fish farm vessel traffic, which attend sites in Loch Erisort daily). Port and non-port service craft are also concentrated around the area where existing fish farms are located (North Shore East and North Shore West). The data indicate that no or very few tankers are using the area, and there are very low vessel

¹ International Council for the Exploration of the Seas (ICES) standardise the division of sea areas for statistical analysis, including fishing activity. Fishing effort, quantity and value of landings are reported within these statistical grids.

² Sea Fisheries Statistics - Ports (2013 onwards): <https://marine.gov.scot/maps/527>

³ Ports and harbours around Scotland: <https://marine.gov.scot/maps/23>

transits associated with fishing (>15 m overall length), dredging or underwater operations, and recreational craft. There are no planned ferry or shipping routes transiting the site or wider Loch Erisort.

A number of smaller vessels may not carry AIS, including inshore fishing vessels (<15 m) and small recreational craft.

14.2.4 Commercial fisheries

Vessel Monitoring System (VMS) data for larger vessels (>12 m overall length) indicate average intensity (hours) of fishing activity for *Nephrops* and crustaceans by bottom trawls was 1-2 days on average between 2010-2020 in the vicinity of the proposed development, with greater activity to the east outwith Loch Erisort (ICES, 2021).

Vessels under 12 m overall length must declare a latitude and longitude position on each fishing day indicating where the majority of the catch was taken. Data is derived from positions self-declared by fishers. Gridded fisheries data within Scottish waters for Scottish fishing vessels (annual averages 2017 to 2021) indicate moderate quantities of landings for pot and creel vessels of approximately £16,000 per year. Dredges and 'other gear types' report less than five vessels in the area and do not report average landings.

According to ScotMap data⁴, representing the activity of local vessels under 15 m overall length from 2007-2011, up to three fishing vessels with gear classified as *Nephrops* trawls and up to three with *Nephrops* pots may have operated in the vicinity of the site (Scottish Government, 2013). The data also indicate up to 6-7 vessels with crab and lobster pots may have operated in the area during this period. A small number of scallop diving boats may operate in Loch Erisort and around the Tabhaigh islands (2-5 vessels). These datasets are now outdated and are aggregated across broad areas (grid cells) but provide an indication of likely activity and intensity across a wide area for context. The Developer has contacted fisheries representatives to confirm current fishing activities around the proposed development area (see section 14.4).

Information gathered from consultation with the Developer's site operatives at Tabhaigh (and wider Erisort complex) indicated that creeling occurs to the north of the existing Tabhaigh farm and proposed development area, along the south shore of Rubha Raerinis (1-2 boats). Occasional *Nephrops* pots are deployed in an isolated area in the channel to the north-east of Tabhaigh (anecdotally understood to be one boat). Larger offshore fishing vessels generally fish further offshore, outwith Loch Erisort; however, it has been observed that a single *Nephrops* trawler may occasionally run a transect north of the Tabhaigh farm.

14.2.5 Recreational users

Loch Erisort is not identified in the Marine Recreation and Tourism Study (2015) as a popular area for recreational water sports or boating activities (such as canoeing, rowing, water-skiing, powerboating etc.) (Scottish Government, 2016). However, the study indicated there to be a low level of motor cruising, sailing and dinghy cruising at the eastern extent of the loch.

Annual averages of vessel density for sailing vessels carrying AIS (2012-2017) indicate very low levels of activity in the vicinity of the proposed development (less than 0.5 hours per square kilometre per month), with higher levels of activity further southwest around Cromore (around 5 hours per square kilometre) (MMO, 2017).

⁴ ScotMap data are derived from a Marine Scotland study in 2013, which provided spatial information on the fishing activity of Scottish-registered inshore commercial fishing vessels under 15 m in overall length, based on interviews with local fisheries.

Feedback from the Royal Yachting Association (RYA) on proposals to modify the Developer’s existing Tabhaigh fish farm, adjacent to the proposed development on the western side, indicated that the loch is well used by recreational sailors with people sailing from Stornoway and some boats kept in Loch Leurbost, as well as visitors using it as an occasional anchorage⁵.

14.2.6 Marine aquaculture

There are a number of shellfish sites operating throughout Loch Erisort, all of which are farming mussels within Loch Leurbost and further within Loch Erisort. The nearest licensed site is 3.3 km northwest of the proposed development (Figure 5.1).

There are three existing Atlantic salmon fish farms operating in the loch, all of which are owned and managed strategically by the Developer (Mowi). As detailed in Chapter 3. Project Description, one of these sites (North Shore West) would be relinquished upon any consent for the proposed development (Figure 3.1).

14.3 IDENTIFICATION OF LIKELY SIGNIFICANT EFFECTS

14.3.1 Potential impacts

Potential impacts arising from the proposed development on Navigation, Commercial Fisheries and Other Marine Users during each phase include:

- Disruption to marine users and navigation during installation and decommissioning works.
- Obstruction of marine users due to presence of the proposed development and associated operations.
- Disruption to, or loss of, access to fishing grounds (including displacement) due to the presence of the proposed development and associated operations.
- New availability of fishing grounds arising from the relinquishment of an existing fish farm and removal of associated infrastructure.
- Changes to the distribution and abundance of target species due to impacts on benthic communities.

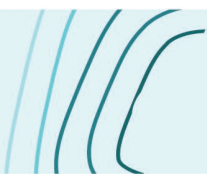
14.3.2 Project mitigation measures

Project mitigation measures that will avoid or reduce potential impacts on Navigation, Commercial Fisheries and Other Marine Users receptors are described in Table 14-1. These measures are anticipated to form part of the project design (embedded mitigation) and/or are good practice industry measures that would be implemented for any fish farm development.

Table 14-1 Project mitigation measures

Measure	Description	How secured
Navigational markers	Measures set out by NLB to ensure the proposed development is appropriately marked with navigational aids will be implemented, including marker buoys and lighting.	Planning condition, marine licence condition

⁵ RYA response to Planning reference: 23/00354/SCR_L (17 August 2023). Available at: <https://planning.cne-siar.gov.uk/PublicAccess/>



Measure	Description	How secured
Notice to Mariners	A Notice to Mariners (NtM) will be issued before any work commences to remove existing pens and moorings at North Shore West and install the new pens for the proposed development, with the final farm location marked on navigational charts.	Planning condition, marine licence condition

14.3.3 Scoping impacts

A high-level assessment of potential impacts (beneficial or adverse) and likely significance of effects on marine user receptors are detailed in Table 14-2. The assessment determines whether there is sufficient information to conclude significance and those impacts that should be scoped in for further assessment in the EIA, or scoped out where it can be confirmed that no likely significant effects will occur, based on the approach described in Chapter 4. Approach to Scoping.

Table 14-2 Identification of likely significant effects

Potential Impact	Description of Effect / Impact Significance	Scope In/Out
Construction and Installation Phase (inc. Decommissioning)		
Disruption to marine users and navigation during installation and decommissioning works	Installation of farm pens is likely to be completed over a relatively short period, with pens arriving incrementally (2-3 weeks for install and 2-3 weeks for removal of existing North Shore West pens, weather dependent). Navigation through the mouth of Loch Erisort will be maintained and NtM in place to notify other marine users of installation activities. Any impacts are likely to constitute a minor nuisance and will be short in duration and temporary. Effect unlikely to be significant.	Scope out
Operations Phase		
Obstruction of marine users due to presence of the proposed development and associated operations	The presence of a new fish farm may create an obstruction to other marine users, including recreational users. The proposals will align the pens / mooring system as close to the Tabhaigh islands and existing adjacent farm as possible, while maintaining channels into Leurbost and Erisort lochs, both north and south of the pens. Appropriate navigational markings will facilitate safe passage. Navigational routes and vessel densities in the vicinity of the proposals are relatively low and anticipated to be maintained such that the presence of a new farm is likely to constitute a minor diversion for incoming vessel traffic. However, further consultation with local marine stakeholders, particularly recreational sailing users, is required to understand potential implications for navigation into Loch Erisort and potential cumulative effects with the proposed Tabhaigh modification (Planning ref: 23/00354/SCR_L). Significance of effect uncertain.	Scope in

Potential Impact	Description of Effect / Impact Significance	Scope In/Out
Disruption to or loss of access to fishing grounds (including displacement) due to the presence of the proposed development and associated operations	The proposed development will result in the relinquishment of another farm and therefore not result in a substantial increase in overall footprint of operating farms in Loch Erisort. The footprint will be relatively small in the context of wider available fishing grounds. However, further information is needed to understand the importance, or otherwise, of the proposed development area to local fisheries. Significance of effect uncertain.	Scope in
New availability of fishing grounds arising from the relinquishment of an existing fish farm and removal of associated infrastructure	The relinquishment of the existing North Shore West farm will make an area of seabed available, potentially offsetting some of the seabed loss associated with the proposed development. However, the period of seabed recovery and likely re-colonisation of the seabed with commercially targeted species is uncertain. Further information is needed to understand the importance of the development area to local fisheries and suitability of the relinquished location to support target species. Significance of effect uncertain (beneficial).	Scope in
Changes to the distribution and abundance of target species due to impacts on benthic communities	Benthic impacts are managed under the CAR licensing process, which includes limiting biomass and use of medicinal treatments to comply with seabed and water quality standards. However, further analysis is needed of proposed biomass deposition and use of bath treatments to determine potential indirect impacts on the target species resource for commercial fisheries and to understand the proportion and distribution of any important fishing grounds in the vicinity. The relinquishment of North Shore West may also result in an increase in available grounds as the seabed recovers. Significance of effect uncertain.	Scope in

14.4 APPROACH TO EIA

The proposed approach to undertaking the impact assessment for Navigation, Commercial Fisheries and Other Marine Users is summarised below and identifies how baseline data gaps will be addressed, any stakeholder consultation required and outlines the proposed assessment methodology and relevant guidance.

Baseline data sources

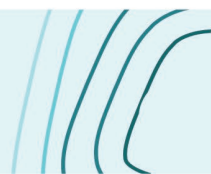
The following baseline data sources will be reviewed:

- National Marine Plan datasets, including AIS and ScotMap.
- Marine Scotland VMS datasets.
- Scottish Sea Fisheries Statistics datasets.

Stakeholder consultation

The following stakeholders will be consulted to address any baseline data gaps and inform the proposed approach to assessment:

- Consultation with local commercial fisheries stakeholders is underway to confirm current fishing activities in the area and how they might be affected by the proposed development. Briefing notes on the proposals



were issued to the local Harbour Master, Western Isles Fishermen's Association, Scottish White Fish Producers Association and local community councils in May 2023. A public open day (detailed in Chapter 4. Approach to Scoping) was held on 26 June 2023 with invites extended to these stakeholders, including the general public. Consultation will continue throughout the pre-application stage.

- A meeting with NLB and the local Harbour master was held on 21 April 2024 who indicated they preferred the layout of option 2 as it is more aligned to Tabhaigh Mhor island.
- A letter was received from RYA 21 April 2024 who do not envisage any significant issues for recreational boaters from these plans, indicating they prefer option 2 for Tabhaigh East.

Assessment methodology, policy and guidance

The proposed approach to assessment will comprise the following methodology and make reference to relevant best practice guidance and policies, including:

- The general EIA process and methodology, including approach to assessing cumulative and in-combination effects, detailed in Chapter 18. Approach to EIA.
- Desk-based assessment following standard CIEEM (2018), SNH (2018) and IEMA (various) guidance and best practice approaches to EIA will be followed, in addition to sector specific guidance.
- Scotland's Fishing Industry – Guidance for Decision Makers and Developers (Batts *et al.*, 2017) – this guidance looks at key emerging issues concerning interactions between the fishing industry and those with other marine interests that should be considered in any proposed marine development.
- Good Practice Guidance for assessing fisheries displacement by other licensed marine activities (Marine Scotland, Xodus, 2022).
- Scotland's National Marine Plan, A Single Framework for Managing Our Seas (Marine Scotland, 2015), sets out a policy (6. Sea Fisheries) requiring marine planners and decision makers to consider the potential impacts of development on fisheries interests and is useful to identify some of the key concerns and issues that should be addressed in any impact assessment.
- Outer Hebrides Local Development Plan - Supplementary Planning Guidance: Marine Fish Farming (CnES, 2018), including Development Policy 3: Other Marine Interests.

14.5 REFERENCES

Batts, L., Shucksmith, R.J., Shelmerdine, R.L., Macdonald, P, Mouat, B. (2017). Scotland's Fishing Industry - Guidance for Decision Makers and Developers. Report for Fisheries Innovation Scotland, project FIS014.

CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland – Terrestrial, Freshwater, Coastal and Marine. September 2018. V1.1 – updated September 2019.

CnES (2018) Outer Hebrides Local Development Plan (Supplementary Guidance: Marine Fish Farming) [online]. Available at: <https://www.cne-siar.gov.uk/planning-and-building/planning-service/development-planning/development-plan/local-development-plan/> (Accessed 04/09/2023)

ICES (2021) MS - Average intensity (hours) - Nephrops and crustaceans with bottom trawls (OT CRU) - 2010-2020 [online]. Available at: <https://marine.gov.scot/maps/1832> (Accessed 04/09/2023)

Marine Management Organisation (MMO) (2017). AIS Shipping Traffic - Average weekly density of all vessel types 2012 - 2017 (time aware) and Vessel Density Annual Averages [online]. Available at: <https://marine.gov.scot/maps/1332> (Accessed 16/08/2023)

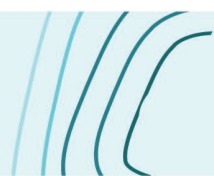
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Scottish Government (2015). Scottish National Marine Plan [online]. Available at: <https://www.gov.scot/publications/scotlands-national-marine-plan/> (Accessed 03/10/2023)

Scottish Government (2016). Scottish Marine Recreation & Tourism Survey 2015, Land Use Consultants [online]. Available at: <https://marine.gov.scot/information/scottish-marine-recreation-tourism-survey-2015> (Accessed 04/09/2023)

SNH (2018) Environmental Impact Assessment Handbook. Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment process in Scotland. Version 5, April 2018.

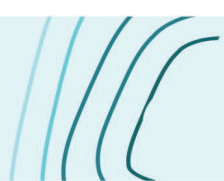




15 TRAFFIC AND TRANSPORT

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15.1 SCOPING SUMMARY

Impacts from marine aquaculture developments on terrestrial traffic and transport, including local road users, can occur where there are new shorebase facilities proposed, new access is required or where there is likely to be an increase in traffic relating to farm operations (deliveries, waste collection and staff travel).

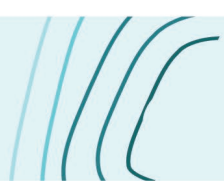
The proposed development will be serviced via the existing shorebase at Keose Glebe in the Lochs area of Lewis, located off an unnamed minor road branching from the A859 (Figure 3.1). The road also services residential properties towards the villages of Crosbost and Ranais. Staff managing existing fish farms in Loch Erisort currently use this route to the shorebase, while all feed deliveries are by sea directly to the feed barge. Fish are harvested and undergo bath treatments directly via wellboats and therefore do not utilise the road network.

Existing pens at North Shore West will be decommissioned and transferred via sea to another site. New pens will be transferred to site via sea from Kishorn (see Chapter 3. Project Description for further details). There will be no increase in staff, deliveries of supplies or removal of waste via road associated with the proposed development, which will replace current activities associated with the North Shore West farm (to be relinquished upon any planning consent for the proposed development) and therefore, no likely significant effects on traffic and transport are anticipated and the topic is **scoped out of the EIA**.

16 CLIMATE CHANGE, RESILIENCE AND ADAPTATION

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16.1 INTRODUCTION

The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 require the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change to be considered in the assessment of environmental impacts. Climate change is expected to result in incremental and long-term but ongoing changes to the marine environment including warming seas, increased sea levels, changes in storm frequency and intensity, and ocean acidification.

Impacts relating to climate change can be defined under three categories / types of interactions:

- Project contribution to climate change via greenhouse gas emissions.
- Project resilience and adaptation to climate change.
- In-combination effects of climate change and project impacts on a receptor.

This chapter sets out the proposed approach to assessing each type of interaction of the project with climate change, in accordance with relevant guidance, including the Institute of Environmental Management and Assessment's (IEMA) 'Environmental Impact Assessment Guide to: Climate Change Resilience & Adaptation' (2020).

16.2 APPROACH TO ASSESSMENT

16.2.1 Project contribution to climate change

The project may contribute to climate change through greenhouse gas emissions associated with vessel traffic and indirectly through supply chain and production processes.

The proposed development will result in the relinquishment of an existing fish farm, North Shore West. There will be no net increase in production in Loch Erisort, with some biomass from other existing sites i.e. North Shore East anticipated to move to the proposed development. No significant net change in emissions is anticipated as a result of the development of the new site at Tabhaigh East and the relinquishment of the existing site at North Shore West. Whilst Tabhaigh East is located further from the shore base, operational efficiencies are expected to slightly offset slightly increased emissions. No increase in vessel traffic is proposed, while installation and decommissioning activities are anticipated to require a minimal number of vessels to transport pens and moorings over a limited period (2-3 weeks for decommissioning and 2-3 weeks for installation), resulting in a short-term and nominal increase in emissions.

As there is no net increase in biomass proposed as part of Loch Erisort operations, no increase in feed use and waste production is anticipated. However, indirect processes associated with feed production and waste disposal are regulated under separate regimes. Contribution to climate change through emissions is therefore **scoped out** of the EIA, with **no likely significant effects** anticipated, which is considered proportionate to the scale of the proposed development and in line with IEMA guidance (2017). However, the Developer has policies relating to sustainability and climate change, which include measures to reduce emissions from its operations from fuel use to feed source. These are described in Chapter 3. Project Description.

16.2.2 Project resilience and adaptation to climate change

The proposed development's resilience to climate change will be considered in an EIA chapter detailing the site selection and alternatives considered as part of the design process. Measures to mitigate against future climate change effects will be embedded in the project design i.e. increased storm frequency and intensity. Meanwhile



farming operations, including husbandry, and inspections and maintenance, will incorporate measures through a number of site plans, Standard Operating Procedures and emergency response planning to deal with unplanned events as a consequence of climate change i.e. weather-related damage to infrastructure, algal blooms and other fish health-related issues.

The proposed development incorporates a reduced number of larger, more hydrodynamically resilient pen sizes. Any risk to fish farm equipment from climate change through increased storm frequency is considered as part of hydrographic modelling and infrastructure replacement schedules based on six-year cycles and specified based on hydrodynamic data capture campaigns. The attestation process provides third party validation to ensure equipment can withstand a 1-in-50-year storm event. Hydrographic outputs and attestation documents will be provided with any planning application for the proposed development.

The mooring and pen design for the project will be designed and confirmed by a competent third party as suitable for use at the proposed location. Measures will be in place to monitor hydrological conditions and adapt mooring systems, as necessary.

The proposed cage specification will conform to best practice standards, including the British Standard BS EN 12201-2 (and relevant Norwegian Standards), as outlined in 'A Technical Standard for Scottish Finfish Aquaculture' (Marine Scotland, 2015), which places technical requirements on the dimensions, design, installation, and operation of floating aquaculture solutions. The Developer will purchase all nets from reputable manufacturers who meet or exceed the Scottish Technical Standard.

16.2.3 In-combination climate impact (ICCI) effects

In-combination climate impact (ICCI) effects are those where climate is exacerbating or conversely diminishing the effect of an existing impact of the development. An example would be when a projected future climate impact (e.g. increase in temperatures) interacts with a project-related impact identified for a receptor and exacerbates its effect (IEMA, 2020). It assesses the impact of an external factor (climate change) on the scheme, in-combination with the impact of the scheme on environmental receptors.

The assessment of ICCI will be undertaken in accordance with IEMA's Environmental Impact Assessment Guide to: Climate Change Resilience & Adaptation (2020) and will be proportionate in approach, focussing on likely material issues. In assessing ICCI, consideration will be given to whether climate change could exacerbate the likely effects of an existing impact of the development to such an extent that significant effects become likely, either due to a change in the value/importance of a receptor or in the scale/geographic spread of impact, or wholly, new additional effects are likely to arise from the development, which are significant. This will be undertaken with reference to significance criteria already developed for each topic area. Use of the high emissions climate scenario (Met Office UK Climate Projections (UKCP) 18: RCP 8.52) of how the climate is going to change is generally recommended for the assessment.

The potential for ICCI effects will be assessed in each respective topic assessment, where applicable.

16.3 REFERENCES

IEMA (2020). Institute of Environmental Management and Assessment's (IEMA) Environmental Impact Assessment Guide to: Climate Change Resilience & Adaptation

Marine Scotland (2015). A Technical Standard for Scottish Finfish Aquaculture Developed by the Ministerial Group for Sustainable Aquaculture's Scottish Technical Standard Steering Group. The Scottish Government, June 2015





17 SUMMARY OF SCOPING ASSESSMENT

CONTENTS

17.1 PROPOSED SCOPE OF THE EIA.....	17-2
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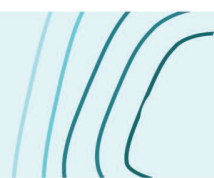
17.1 PROPOSED SCOPE OF THE EIA

The results of the Scoping exercise are summarised in Table 17-1 for each receptor topic (detailed rationale in Chapters 5 to 16). Potential impacts, conclusion on likely significance of effect and whether the impact should be scoped in or scoped out of the Environmental Impact Assessment (EIA) is detailed for each impact. Subject to the Scoping Opinion, those impacts 'scoped in' are proposed to be taken forward to the EIA for further detailed assessment.

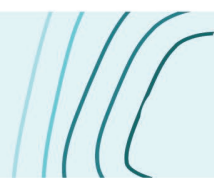
Table 17-1 Proposed Scope of the EIA

Potential Impacts	Likely Significant Effects	Scope for EIA
Water Quality		
Construction, installation and decommissioning phase – none	n/a	n/a
Nutrient enhancement associated with the discharge of fish waste and uneaten food.	Significance of effects uncertain	Scope in
Degradation of water quality from bath treatment and discharge of medicinal residues.	Significance of effects uncertain	Scope in
Benthic Ecology		
Removal or abrasion of benthic habitats from installation of mooring infrastructure during construction.	Significance of effects uncertain	Scope in
Smothering, enrichment, and deoxygenation of benthic habitats arising from carbon deposition.	Significance of effects uncertain	Scope in
Contamination of benthic habitats from in-feed treatments.	Significance of effects uncertain	Scope in
Permanent removal or abrasion of benthic habitats by mooring infrastructure.	Significance of effects uncertain	Scope in
Degradation or contamination of benthic habitats outside the modelled boundary.	Significance of effects uncertain	Scope in
Physical disturbance, siltation changes and abrasion impacting sandeel presence and density.	Significance of effects uncertain	Scope in
Wild Salmonids		
Construction, installation and decommissioning phase – none	n/a	n/a
Escapees of farmed salmon mixing or interbreeding with wild salmonid populations, resulting in loss of genetic diversity in wild fish and/or habitat competition.	Significance of effects uncertain	Scope in
Transfer of disease or parasites (including sea lice) between farmed fish and wild salmonids.	Significance of effects uncertain	Scope in
Marine Mammals		
Disturbance (noise and visual) of seals and cetaceans due to vessel movements during installation and decommissioning activities.	Effects unlikely to be significant	Scope out
Death or injury of predatory species (seals and otter) due to entanglement or entrapment in pen netting and gill nets.	Significance of effects uncertain	Scope in

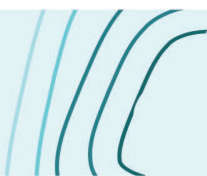
Potential Impacts	Likely Significant Effects	Scope for EIA
Displacement from habitat due to presence of infrastructure.	Significance of effects uncertain	Scope in
Disturbance (noise and visual) of seals and cetaceans due to operational vessel movements.	Effects unlikely to be significant	Scope out
Ornithology		
Disturbance of sensitive receptors during construction and decommissioning activities.	Effects unlikely to be significant	Scope in
Mortality through entanglement/ entrapment in pole-mounted top nets	Significance of effects uncertain	Scope in
Mortality through entanglement in underwater pen netting	Significance of effects uncertain	Scope in
Direct displacement from critical foraging or wintering habitats due to physical presence of infrastructure	Significance of effects uncertain	Scope in
Disturbance/displacement of sensitive bird species due to operational vessel movements	Effects unlikely to be significant	Scope in
Indirect displacement from reduced prey availability	Significance of effects uncertain	Scope in
Socio-economics		
Economic benefit associated with capital expenditure (CAPEX), and temporary employment during installation and decommissioning activities.	Significance of effects uncertain (beneficial)	Scope in
Economic benefit associated with operational expenditure (OPEX) and utilisation of supply chain.	Significance of effects uncertain (beneficial)	Scope in
Economic benefit associated with employment and income.	Significance of effects uncertain (beneficial)	Scope in
Contribution to local community development and cohesion.	Significance of effects uncertain (beneficial)	Scope in
Disruption to or displacement of existing economic and community activities.	Significance of effects uncertain (adverse)	Scope in
Population and Health		
Disturbance to local residents and recreational users from noise arising from equipment and operational activities.	Effects unlikely to be significant	Scope out
Nuisance odours resulting in disturbance to local residents and recreational users arising from fish feed and fish mortalities.	Effects unlikely to be significant	Scope out
Visual disturbance and reduction in visual amenity of local residents and recreational users arising from the presence of infrastructure associated with the fish farm.	Significance of effects uncertain	Scope out (assessed under SLVIA)
Seascape, Landscape and Visual Amenity		
Impacts on coastal character as a result of construction activity being present in the offshore view.	Effects unlikely to be significant	Scope out



Potential Impacts	Likely Significant Effects	Scope for EIA
Physical impacts on landscape as a result of the construction and decommissioning of the proposed development.	Effects unlikely to be significant	Scope out
Visual impacts on views experienced by onshore visual receptors as a result of the presence and activity of construction and decommissioning works.	Effects unlikely to be significant	Scope out
Impact on coastal character of the study area, with reference to LCCAs, arising from the presence of the Proposed Development (including lighting).	Significance of effects uncertain	Scope in
Impact on onshore landscape character, with reference to LCTs, arising from the presence of the Proposed Development (including lighting).	Effects unlikely to be significant	Scope out
Impacts on views experienced by visual receptors, arising from the presence of the Proposed Development (including lighting).	Significance of effects uncertain	Scope in
Archaeology and Cultural Heritage		
Direct physical damage to known cultural heritage features during the construction process.	Significance of effects uncertain	Scope in
Direct physical damage to unknown or buried cultural heritage features during the construction process.	Significance of effects uncertain	Scope in
Direct physical damage to paleo landscapes.	Effects unlikely to be significant	Scope out
Indirect effects on setting of cultural heritage from the construction of the fish farm.	Effects unlikely to be significant	Scope out
Direct physical damage or alteration to cultural heritage features arising from abrasion by mooring lines.	Effects unlikely to be significant	Scope out
Smothering of cultural heritage features from increase in carbon deposition.	Significance of effects uncertain	Scope in
Indirect effects on setting of cultural heritage features from the presence and operation of the fish farm.	Significance of effects uncertain	Scope in
Marine Users, Navigation and Commercial Fisheries		
Disruption to marine users and navigation during installation and decommissioning works.	Effects unlikely to be significant	Scope out
Obstruction of marine users due to presence of the proposed development and associated operations.	Significance of effects uncertain	Scope in
Disruption to, or loss of, access to fishing grounds (including displacement) due to the presence of the proposed development and associated operations.	Significance of effects uncertain	Scope in
New availability of fishing grounds arising from the relinquishment of an existing fish farm and removal of associated infrastructure.	Significance of effects uncertain (beneficial)	Scope in
Changes to the distribution and abundance of target species due to impacts on benthic communities.	Significance of effects uncertain	Scope in
Traffic and Transport		



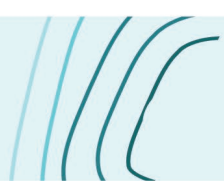
Potential Impacts	Likely Significant Effects	Scope for EIA
Traffic-related disruption (all project phases).	No likely significant effects	Scope out
Climate Change		
Project contribution to climate change via greenhouse gas emissions.	No likely significant effects	Scope out
In-combination climate impact (ICCI) effects.	Significance of effects uncertain	Scope in
Project resilience and adaptation to climate change.	n/a	Scope in



18 APPROACH TO EIA

CONTENTS

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18.1 EIA PROCESS

The EIA process will be undertaken in accordance with the requirements of the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 and the Scoping Opinion issued by the planning authority (CnES).

18.1.1 Guidance and best practice

The EIA Report will include the information required to reach a reasoned conclusion on the **likely significant effects** of the development. Reference will be made to the latest available best practice guidance, including:

- Planning Advice Note (PAN) 1/2013 Environmental Impact Assessment.
- Planning Circular 1/2017: The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017.
- Chartered Institute of Ecology and Environmental Management's (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. September 2018. V1.2 - updated April 2022.
- Scottish Natural Heritage (SNH) and Historic Environment Scotland (HES). Environmental Impact Assessment Handbook. Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment process in Scotland. Version 5, April 2018.
- Institute of Environmental Management and Assessment (IEMA): various guidance notes and journals on approach to EIA and topic-specific methodologies.

18.1.2 Approach

Introduction

In accordance with the EIA Regulations, the EIA report will include:

- A description of the development comprising information on the site, design and other relevant features of the development;
- A description of the reasonable alternatives considered by the developer and an indication of the main reasons for the option chosen, taking into account the effect of the development on the environment;
- A description of the likely significant effects of the development on the environment; and
- A description of the features of the development and any measures proposed to avoid, reduce and offset likely significant adverse effects on the environment.

Description of the development

A full description of the proposed development, including all infrastructure, the installation phase, decommissioning of the existing site, and farm operations will be provided in the EIA.

Site selection and alternatives

Details of the site selection process, alternatives considered and full rationale for the proposed development will be described in the EIA. This will include details of the technical and environmental constraints and opportunities, policy and economic rationale, and any relevant stakeholder engagement that have informed the final design. The 'no development' or 'do nothing' scenario will also be presented as one of the reasonable alternatives to the proposal, whereby the proposed development is not progressed. It will describe the current baseline scenario

should farm operations in Loch Erisort continue as at present, and relevant environmental, social and economic implications.

Baseline characterisation

Baseline information will be gathered to inform the EIA from both desk-based and survey reports, where relevant. Impacts will be assessed in the context of the predicted baseline conditions and potential changes arising during the lifetime of, including future baseline, and in response to or as a result of the proposed development.

The baseline characterisation will also consider the future baseline. This process includes any predicted or ongoing changes to the current baseline e.g. species population increase/decline, or climate change effects on species and habitats, and how they might influence the magnitude of impacts of the proposed development.

Assessment of impacts

A consistent approach to the assessment of impacts will be adopted across all topics, as far as possible. Where there is a deviation from a standard methodology approach, in accordance with topic-specific technical guidance, this will be described in the relevant chapter.

To assess the likely significant effects of the proposed development, the magnitude of impact will be evaluated against the value, importance and sensitivity of the receptor. The value or importance of a receptor may depend upon its frequency or extent of occurrence at a geographical scale (international, national, regional or local level), in legislation, by conservation status, or by societal value.

The impact assessment will evaluate and predict the magnitude of impact against the baseline environment and status of the receptor. Spatial extent, scale (size, amount, volume and intensity), duration, frequency and timing, reversibility and sensitivity of receptors, are all factors considered in the characterisation of the magnitude of impact.

Impact significance

Impact 'significance' is not defined in the EIA Regulations. The definition of a significant effect is one which, in isolation or in combination with others, is material to the environment and should be taken into account in the decision-making process. The significance of an effect results from the interaction between the magnitude of an impact and the importance, sensitivity or value of those receptors that might be affected. Professional judgement is used to determine the likely significance of effects, based on an assessment of the available data and an understanding of how a specific feature is likely to be affected by the activities associated with the proposed development. The approach taken in many cases is topic-specific, in line with industry guidelines or best practice and will be presented in respective chapter assessments.

Where there are not anticipated to be likely significant effects on receptors for specific impacts, these impacts will be scoped out with the appropriate level of detail and justification for this. Under the EIA Regulations, such impacts may be of little or no significance and, if included in the EIA Report, will need only very brief treatment to indicate that their possible relevance has been considered.

18.1.3 Securing Mitigation

Mitigation measures will be secured through the planning consent issued under the Town and Country Planning (Scotland) Act 1997 (as amended), by project design and/or through prescribed planning conditions. Other



mitigation measures may be required under separate legislative processes and as such will be secured through these regimes i.e.:

- CAR licensing under Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) from SEPA.
- Marine licensing under the Marine (Scotland) Act 2010 from Marine Scotland – Licensing Operations Team.

All proposed measures to ensure no likely significant effects will be collated into a Schedule of Mitigation and submitted with the EIA Report.

18.2 CUMULATIVE AND IN-COMBINATION EFFECTS

18.2.1 Defining cumulative effects

The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 requires the likely significant effects of the development on the environment to be considered in relation to the characteristics and location of the development, and with regard to the impact of the development, taking into account the cumulative impacts with other existing and/or approved development.

There are two types of cumulative impacts, which can be referred to interchangeably but should be distinguished as:

- **In-combination effects (additive/incremental):** the combined action of different impacts (internal to the project) upon a single resource/receptor, which added together may give rise to significant effects on a receptor.
- **Cumulative effects:** the combined action of a number of different projects, cumulatively with the project being assessed, on a single resource/receptor.

18.2.2 Cumulative effects

Approach to identifying cumulative projects

SNH (2012) 'only seek cumulative impact assessments (CIA) where it is considered that a proposal could result in significant cumulative impacts which could affect the eventual planning decision', and therefore, all cumulative impact assessments should 'focus on the likely significant effects and in particular those which are likely to influence the outcome of the consenting process'.

Projects within the same zone of influence that have been considered for inclusion in the CIA are as follows:

- Proposals for which consent has been applied which are awaiting determination in any regulatory process (not necessarily limited to planning permission).
- Projects which have been granted consent (not limited to planning permissions) but which have not yet been started or which have been started but are not yet completed (i.e., under construction).
- Proposals which have been refused permission, but which are subject to appeal, and the appeal is undetermined to the extent that their details are in the public domain, proposed projects that will be implemented by a public body but for which no consent is needed from a competent authority.
- Projects that have submitted a Scoping Report are defined as being "reasonably foreseeable" and therefore may need to be included in the CIA; however, it is recognised that due to lack of information available only a qualitative assessment may be possible.

- In some situations, it may be necessary to also consider constructed developments whose full environmental effects are not yet felt and therefore cannot be accounted for in the baseline.

If there is potential connectivity between impacts arising from the source project and pathway for cumulative impacts with other developments, those developments and relevant impacts are taken forward for further assessment. Where there is no potential pathway for cumulative impacts i.e., there is no physical overlap of any project elements from the proposals or within the zone of influence between proposals, they are screened out and no further assessment is undertaken. In some cases where there may be no significant effects from the development in isolation, they may give rise to potentially significant effects when considered cumulatively with other developments; therefore, these impacts may be screened in for further assessment.

Cumulative projects

At the time of Scoping preparation, there are no other developments, recently consented or proposed with any potential adverse impacts of which would overlap or have connectivity with the proposed development. However, the Developer submitted a Screening Request to modify an adjacent existing fish farm, Tabhaigh, to the west of the proposed development and this was approved by Comhairle nan Eilean Siar in June 2024¹. The Developer will consider this farm and any proposed changes to the layout and operations in a cumulative impact assessment.

The Developer will seek advice from the planning authority in relation to other recently proposed projects in the planning system prior to completion of the EIA Report, and within a reasonable timescale to allow consideration before submission of the planning application for the proposed development, Tabhaigh East.

18.2.3 In-combination effects

In-combination (synergistic) effects are defined as the combined action of different environmental topic-specific impacts upon a single receptor i.e., when a particular receptor is affected by impacts from the same scheme in different ways (IEMA, 2016; Highways England, 2020). There is no accepted method for assessing in-combination (or synergistic) effects of a development. In developing the methodology to assess 'in-combination' effects in the EIA, reference to the methodology of other published projects will be made (IEMA, 2016).

The process to assess in-combination effects will be as follows:

- Impacts assessed for each receptor are screened for significant residual effects (i.e., those assessed as 'moderate' or 'major' adverse).
- Impacts with 'minor' residual effects are also screened in as a precautionary measure, where there is potential for the combination of two impacts to result in a significant in-combination effect on a receptor.
- Identification of potential synergistic effects of two or more impacts combined on a receptor.
- Assessment of impact magnitude of combined impacts, identification of any further relevant mitigation.
- An evaluation of significance is undertaken based on the assessment, in line with EIA guidance.

¹ A modification to the Tabhaigh site has recently been approved by CnES (20/06/2024, 24/00065/FFPA). The layout in Figure 3.1 illustrates the recently consented infrastructure.

18.3 ACCIDENTS AND UNPLANNED EVENTS

There are a range of management practices, protocols and plans in place to prevent and manage accidental and unplanned events associated with the proposed development. Accidental and unplanned events associated with fish farming can include weather-related events (e.g. extreme storm events, leading to equipment failure), predator and human interactions (e.g. damage to or inadequate maintenance of infrastructure, leading to fish escapes) and climate change impacts (e.g. algal blooms and other fish-health related issues). The EIA will describe how these are managed through project design, preventative measures, site inspection and maintenance, and emergency response planning. These will be described in the Project Description, Site Selection and Alternatives and Climate Change chapters, where appropriate, and relevant plans and procedures appended to the EIA Report.

18.4 CONTENT OF THE EIA REPORT

The proposed structure and content of the EIA Report is outlined in Table 18-1. Topic assessment chapters will depend on the outcome of consultation with the planning authority and statutory stakeholders and their Scoping Opinion on the proposed development.

Table 18-1 Indicative structure for the EIA Report

Chapter	Outline Content / Proposed Approach
Introductory Chapters	
Introduction	Introduction to proposals, purpose of the EIA Report, context, and background to development.
Legislation and policy	Aquaculture industry regulations, Local Development Plan, National Marine Plan and other relevant strategies and national policy.
Site selection and alternatives	Description of the reasonable alternatives considered, relevant to the proposed Project and its specific characteristics. The rationale will include an indication of the main reasons for selecting the chosen option, including a comparison of the alternative options and environmental effects.
Project description	Description of all project phases, including all infrastructure and equipment and farm management processes.
Consultation process	Pre-application consultations, including Scoping, relevant EIA correspondence and reference to a consultation database/gap analysis.
Approach to EIA	Setting out the best practice methodology for assessing impacts with reference to the latest industry and topic-specific guidance.
Topic Assessment Chapters (<i>final topics to be confirmed via the Scoping Opinion</i>)	
Ecological environment	Benthic Ecology; Wild Salmonids; Marine Mammals; Ornithology.
Physical environment	Water Quality; Climate Change.
Human environment	Socioeconomics, Population and Health; Archaeology and Cultural Heritage; Marine Users, Navigation and Commercial Fisheries; Seascape, Landscape and Visual Amenity; Traffic and transport.
Concluding Chapters	
Environmental management and monitoring	Summary of environmental management and any relevant monitoring measures proposed, including key roles and responsibilities. Reference will be made to a schedule of mitigation.
Summary of effects	Chapter summarising receptors and impacts assessed, proposed mitigation and management measures, conclusion on significance of effects.
Cumulative and in-combination effects	In-combination effects – assessment of impacts internal to the project, which in combination with other impacts of the project may result in significant additive effects on a receptor. Cumulative effects - Identification of other proposed or recently consented development with potential significant effects which overlap with zone of effect for the proposed development.
Supporting Technical Reports and Annexes	
Non-Technical Summary	Summary of the EIA Report findings in an accessible format with non-technical language.
Schedule of Mitigation	Record of all proposed measures to mitigate impacts and avoid likely significant effects, many of which will form conditions via planning consent or other regulatory regimes via SEPA or Marine Scotland.
Stakeholder Consultation Record	Record of all pre-application consultations and requests for information from stakeholders, detailing where and how they have been addressed in the EIA.
Information to Inform HRA	Information to inform HRA of European Sites with connectivity to the proposals to enable the planning authority to undertake an 'appropriate assessment', if required.
Technical Appendices to EIA	Biomass modelling, benthic surveys, mooring analysis, farm management operations and protocols (e.g. predator mitigation, containment and escapes, inspection and maintenance, emergency response etc.) etc.

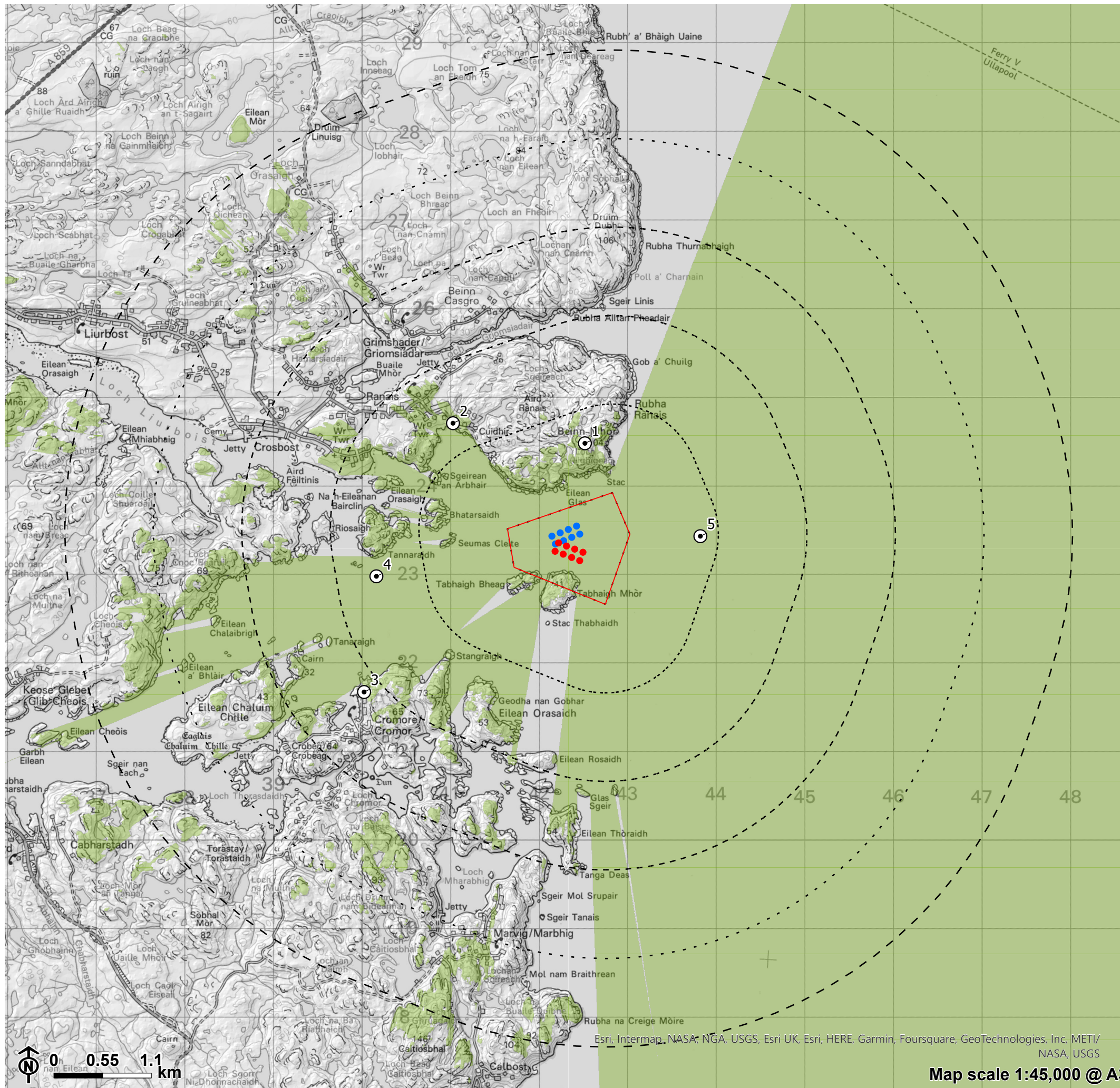


APPENDIX 12.1

Zone of Theoretical Visibility
(for Seascape, Landscape and Visual Amenity)

Zone of Theoretical Visibility

- Tabhaigh East Option 2
- Tabhaigh East Option 1
- ▭ Screening area
- ⋯ 1km radii
- ⋯ 5km study area
- Zone of theoretical visibility
- ▭ Proposed development theoretically visible
- ⊙ Viewpoint Location
- 1. Beinn Mhòr
- 2. Ranais
- 3. Cromore
- 4. Loch Eireasort
- 5. Little Minch



The ZTV is calculated with heights from the cages (7m). The terrain model assumes bare ground and is derived from OS Terrain 5 heights (resolution 5m). Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcPro v3.0.3



APPENDIX 13.1

Undesignated Terrestrial Remains
Recorded within the ZTV
(for Archaeology and Cultural Heritage)

APPENDIX 13.1

UNDESIGNATED TERRESTRIAL REMAINS RECORDED WITHIN THE ZTV

ID	CANMORE ID	SITE NAME	SITE TYPE	NGR	Distance ¹
1	336082	Ecc 42.4 Eilean Orasaidh	Field System (Post Medieval)	NB 41370 21370	2.2
2	336080	Ecc 8.6 Eilean Orasaidh	Cairn (Period Unassigned), Marker Cairn (Period Unassigned)	NB 41637 21174	2.3
3	4291	Lewis, Ranish, Dunan	Site (Prehistoric)(Possible)	NB 4035 2430	2.3
4	4293	Lewis, Ranish	Head Dyke (Post Medieval), Township (Period Unassigned)	NB 4050 2480	2.4
5	336058	Ecc 33.1 Cromore (24), Rubha Nam Fad	Blackhouse (Modern), Byre (Modern), House (Modern), House (Modern)	NB 40495 21745	2.5
6	336066	Ecc 39.1 Meall Na Nonach	Shieling (Post Medieval) (Possible), Still House (Post Medieval)(Possible)	NB 40528 21688	2.5
7	336104	Ecc 42.6 Cnoc Dubh	Field System (Post Medieval)	NB 40950 21160	2.6
8	336068	Ecc 33.11 Cromore, Creag Mhor	Stock Enclosure (Period Unassigned) (Possible)	NB 40253 21729	2.7
9	336067	Ecc 33.10 Cromore, Creagan Cribhinn	Harbour (Period Unassigned), Naust (Period Unassigned), Slipway (Period Unassigned)	NB 40126 21792	2.7
10	336064	Ecc 40.1 Cromore (24), Rubha Nam Fad	House (Modern), Sheep Dip (Modern)	NB 40092 21777	2.8
11	336060	Ecc 36 Cromore, Rubha Nam Fad	Enclosure (Period Unassigned)	NB 40002 21825	2.8
12	336063	Ecc 69.1 Cromore (24), Rubha Nam Fad	House (Modern)	NB 40058 21723	2.8
13	336059	Ecc 35 Cromore, Rubha Nam Fad	Field System (Modern)	NB 40009 21795	2.8
14	336061	Ecc 33.5 Cromore, Rubha Nam Fad	Enclosure (Modern)	NB 40058 21684	2.8
15	336062	Ecc 37 Cromore, Rubha Nam Fad	Enclosure (Period Unassigned)	NB 40054 21684	2.8
16	336171	Ecc 42.13 Aird Fhalasgair	Field System (Post Medieval)	NB 41490 20080	3.3
17	336035	Crois Eilean	Cairn (Post Medieval)	NB 39300 21915	3.4

¹ Distance from the centrepont of the Tabhaigh East mooring options.

ID	CANMORE ID	SITE NAME	SITE TYPE	NGR	Distance ¹
18	336050	Ecc 28.5 Crobeag, Meal Na Eoin	Barn (Post Medieval)(Possible), Blackhouse (Post Medieval)	NB 39386 21291	3.6
19	336032	Ecc 20.2 Cnoc Mor, Eilean Chaliuim Cille	Settlement (Norse)(Possible)	NB 38990 21800	3.7
20	336027	Ecc 8.2 Eilean Chaliuim Cille	Cairn (Period Unassigned), Marker Cairn (Period Unassigned)	NB 38990 21766	3.7
21	336031	Ecc 8.4 Cnoc Mor, Eilean Chaliuim Cille	Cairn (Period Unassigned), Marker Cairn (Period Unassigned)	NB 38872 21886	3.8
22	336029	Ecc 20.1 Eilean Chaliuim Cille	Field System (Period Unassigned)	NB 38994 21612	3.8
23	336030	Ecc 8.3 Eilean Chaliuim Cille	Cairn (Period Unassigned), Marker Cairn (Period Unassigned)	NB 38970 21519	3.9
24	4230	Lewis, Grimshader	Township (Period Unassigned)	NB 3990 2638	4.0
25	336235	Ecc 8.15 Mullach Nead A'chlamhain	Cairn (Period Unassigned), Marker Cairn (Period Unassigned)	NB 40450 19840	4.0
26	336023	Ecc 17.1 Eilean Chaliuim Cille	Field System (Post Medieval)	NB 38929 21296	4.0
27	336022	Ecc 16 Eilean Chaliuim Cille	Cellular Building (Period Unassigned) (Possible)	NB 38922 21296	4.0
28	336162	Ecc 42.11 Loch Beiste, Sidhean Ard Na Clibhe	Field System (Post Medieval)	NB 39980 20070	4.0
29	132163	Lewis, Ceann Hurnavay	Head Dyke(S) (Post Medieval), Mill(S) (Period Unassigned), Township (Period Unassigned)	NB 398 264	4.0
30	336024	Ecc 2.14 Eilean Chaliuim Cille	Cairn (Prehistoric), Kerb Cairn (Prehistoric)(Possible)	NB 38909 21242	4.0
31	336236	Ecc 42.20 Mullach Nead A'chlamhain, Cnoc A Charnain	Field System (Post Medieval)	NB 40500 19700	4.1
32	336228	Ecc 8.12 Sidhean Ard Na Clibhe	Cairn (Period Unassigned), Marker Cairn (Period Unassigned)	NB 40021 19937	4.1
33	336025	Ecc 18 Eilean Chaliuim Cille	Grave (Modern), Grave Marker (Modern), Mausoleum (Modern)	NB 38799 21178	4.2
34	336017	Ecc 2.11 Eilean Chaliuim Cille	Cairn (Period Unassigned), Clearance Cairn (Modern), Kerb Cairn (Prehistoric)	NB 38740 21177	4.2
35	336016	Ecc 12.2/2.10 Eilean Chaliuim Cille	Kiln (Post Medieval)(Possible), Stone Setting (Prehistoric)(Possible)	NB 38742 21172	4.2
36	336229	Ecc 8.13 Loch Dubh, Gliac Mhor	Cairn (Period Unassigned), Marker Cairn (Period Unassigned)	NB 40115 19735	4.2

ID	CANMORE ID	SITE NAME	SITE TYPE	NGR	Distance ¹
37	336015	Ecc 12.1/2.9 Eilean Chaliuim Cille	Kiln (Post Medieval)(Possible), Stone Setting (Prehistoric)(Possible)	NB 38740 21163	4.2
38	336018	Ecc 2.12 Eilean Chaliuim Cille	Cairn (Period Unassigned), Chambered Cairn (Prehistoric)(Possible), Clearance Cairn (Modern), Kerb Cairn (Prehistoric)(Possible)	NB 38744 21155	4.2
39	336230	Ecc 8.14 Loch Dubh, Gliac Mhor	Cairn (Period Unassigned), Marker Cairn (Period Unassigned)	NB 40106 19725	4.2
40	336008	Ecc 2.6/8.2 Creag Mhor	Cairn (Period Unassigned), Kerb Cairn (Prehistoric)(Possible), Marker Cairn (Post Medieval)(Possible)	NB 38377 21568	4.4
41	336009	Ecc 10 Eilean Chaliuim Cille	Blackhouse (Post Medieval)(Possible), House (Post Medieval)(Possible), Shieling (Post Medieval)(Possible)	NB 38270 21322	4.6
42	336020	Ecc 2.13 Eilean Chaliuim Cille	Standing Stone (Prehistoric)	NB 38345 21016	4.7
43	336021	Ecc 1.8 Eilean Chaliuim Cille	Field System (Post Medieval)	NB 38338 21018	4.7
44	335985	Ecc 3.1 Eilean Chaliuim Cille	Shieling (Post Medieval)(Possible)	NB 38345 20921	4.7
45	335984	Ecc 2.1 Eilean Chaliuim Cille	Cairn (Post Medieval), Cairn (Prehistoric), Kerb Cairn (Prehistoric), Kerb Cairn (Post Medieval), Marker Cairn (Post Medieval)(Possible), Marker Cairn (Prehistoric)(Possible)	NB 38337 20934	4.7
46	132171	Lewis, Loch Roisgeil	Enclosure (Period Unassigned), Shieling Hut(S) (Post Medieval) ((Possible)	NB 3930 2710	4.9
47	132158	Lewis, Beinn Buidhe	Shieling Hut(S) (Post Medieval) (Possible)	NB 373 239	5.1
48	134060	Druim Airigh Speireig, Lewis	Shieling Hut (Post Medieval) (Possible)	NB 409 183	5.2



APPENDIX A

Tabhaigh East Scoping Report Figures

APPENDIX A: FIGURE PACK

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Figure 13.2	Maritime Works
Figure 13.3	Potential Indirect (Setting) Impacts
Figure 14.1	Marine User Features



Tabhaigh East Scoping

Figure 1.1 - Project Location

Proposed Development

- Tabhaigh East



30 60 km



Coordinate system: OSGB36 / British National Grid

1:1,100,000 @ A4

Project Code: 41
Project Name: Tabhaigh East
Author: BA

Prepared by: Atlantic58
Date: 08/07/2024
Review: SM

Prepared for:
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Tabhaigh East Scoping

Figure 3.1 - Existing Loch Erisort Farms

Proposed Development

 Indicative Mooring Extent (Area of Search)

Existing Infrastructure

-  North Shore East Pens
-  North Shore West Pens
-  Tabhaigh Pens
-  Keose Glebe Shorebase

1 2 km

Coordinate system: OSGB36 / British National Grid

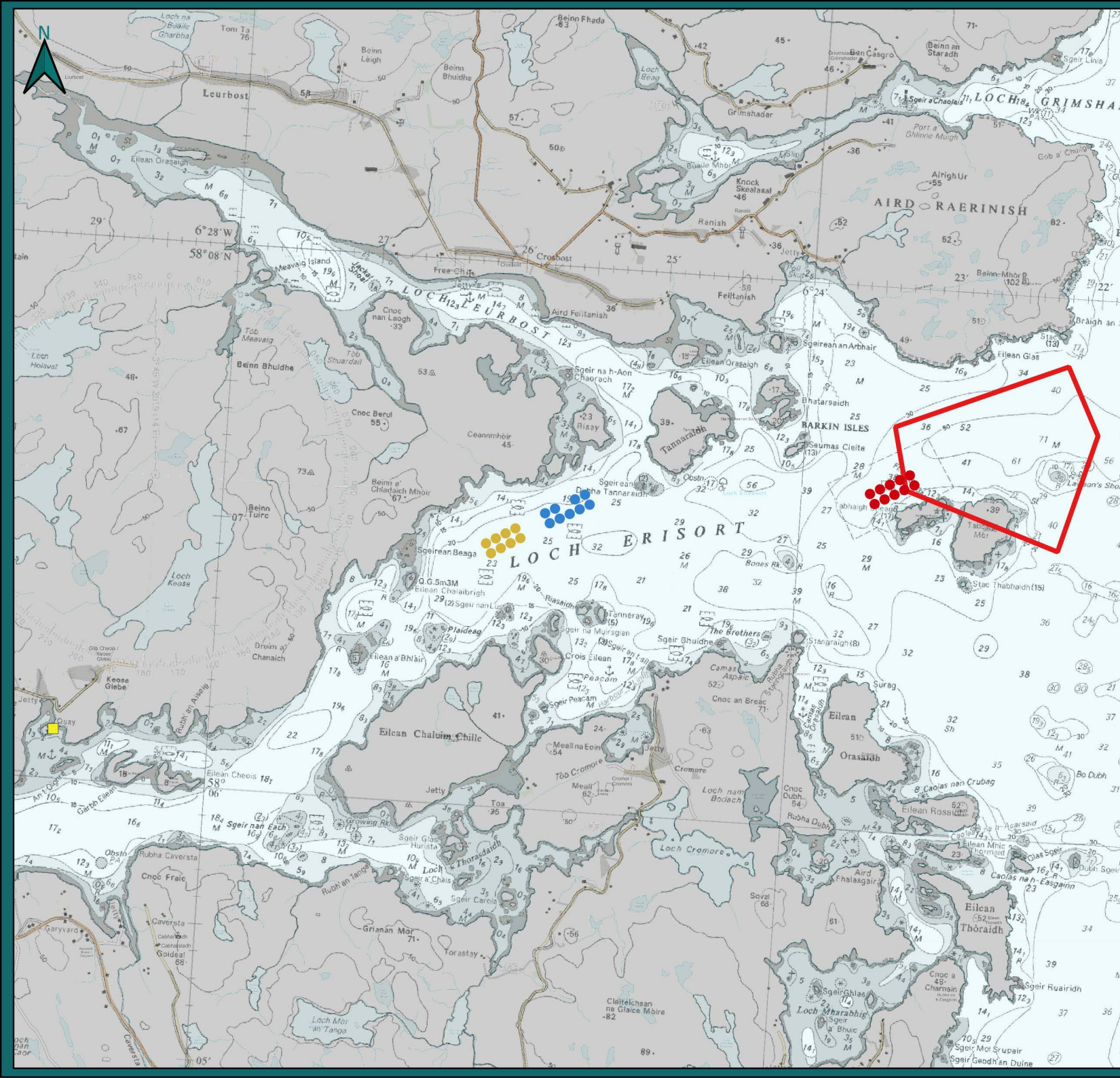
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Project Name: Tabhaigh East
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Date: 07/08/2024
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Tabhaigh East Scoping

Figure 3.2 - Site Layout Options

Proposed Development

-  Pen Layout Option 1
-  Pen Layout Option 2
-  Indicative Mooring Extent (Area of Search)



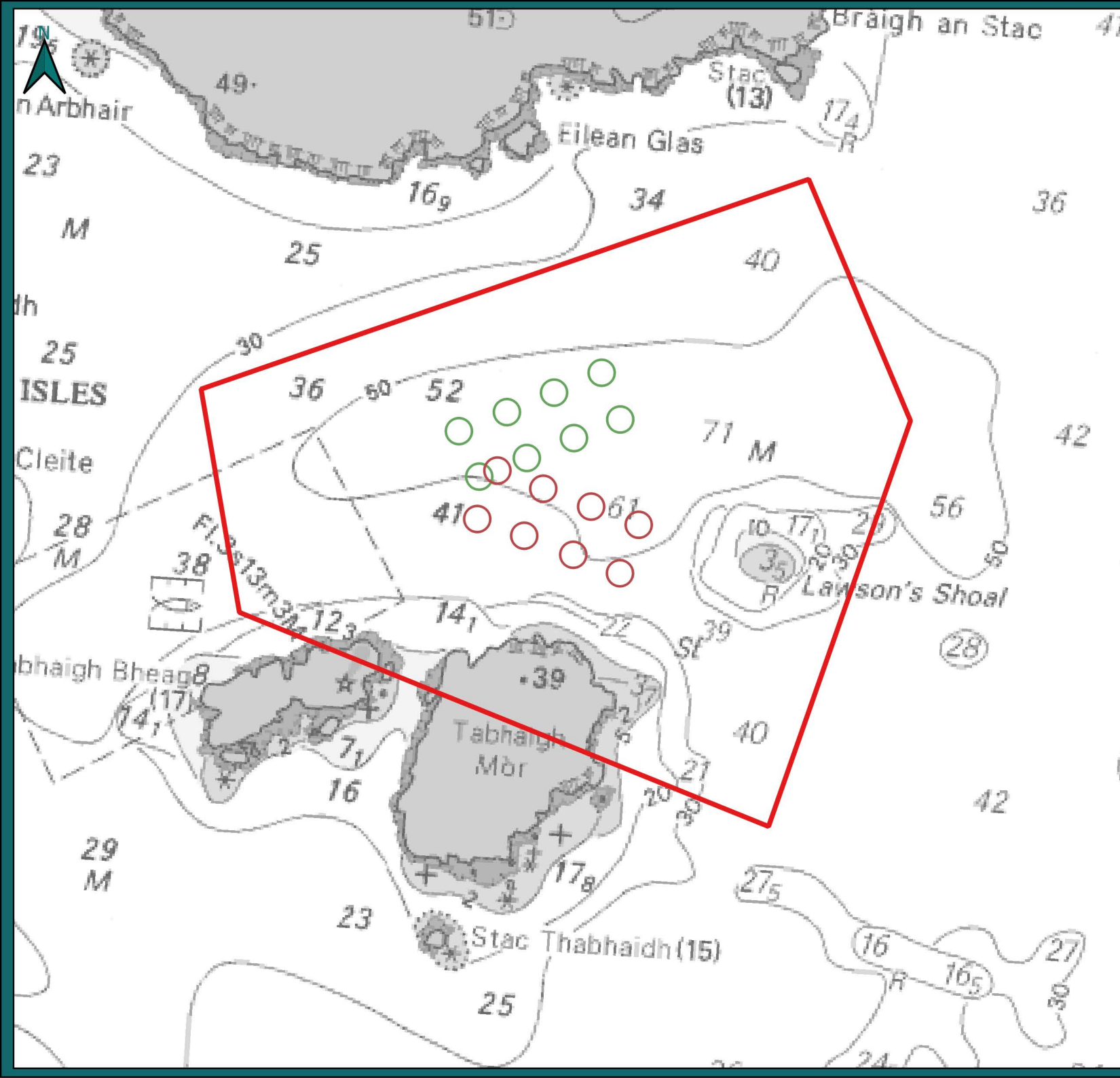
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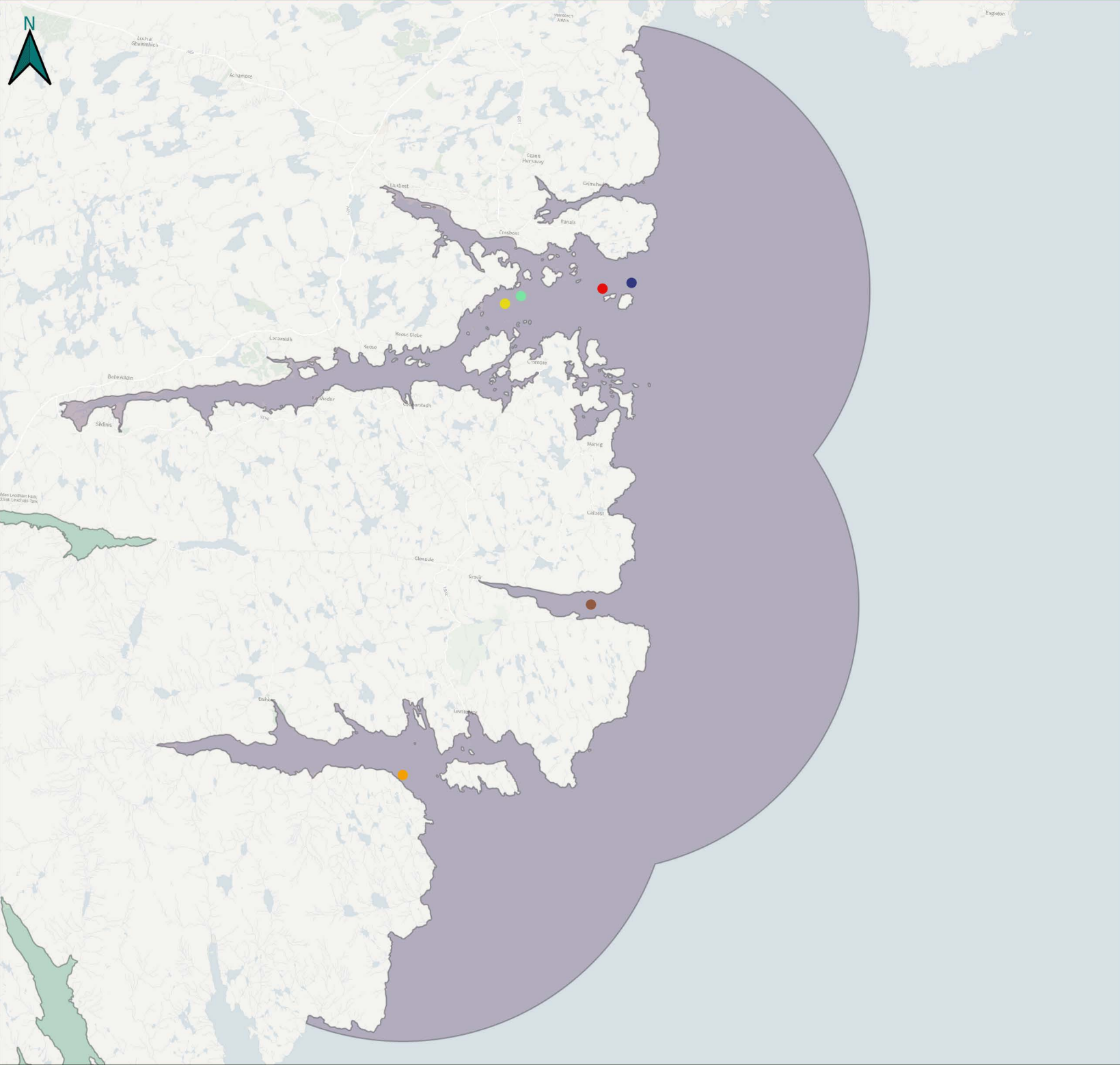
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Tabhaigh East Scoping

Figure 3.3 - Disease Management Areas

Fish Farms

- Tabhaigh East
- Gravir
- Ceolas A Deas
- Northshore East
- Northshore West
- Tabhaigh

Disease Management Areas

- 5a
- 5b

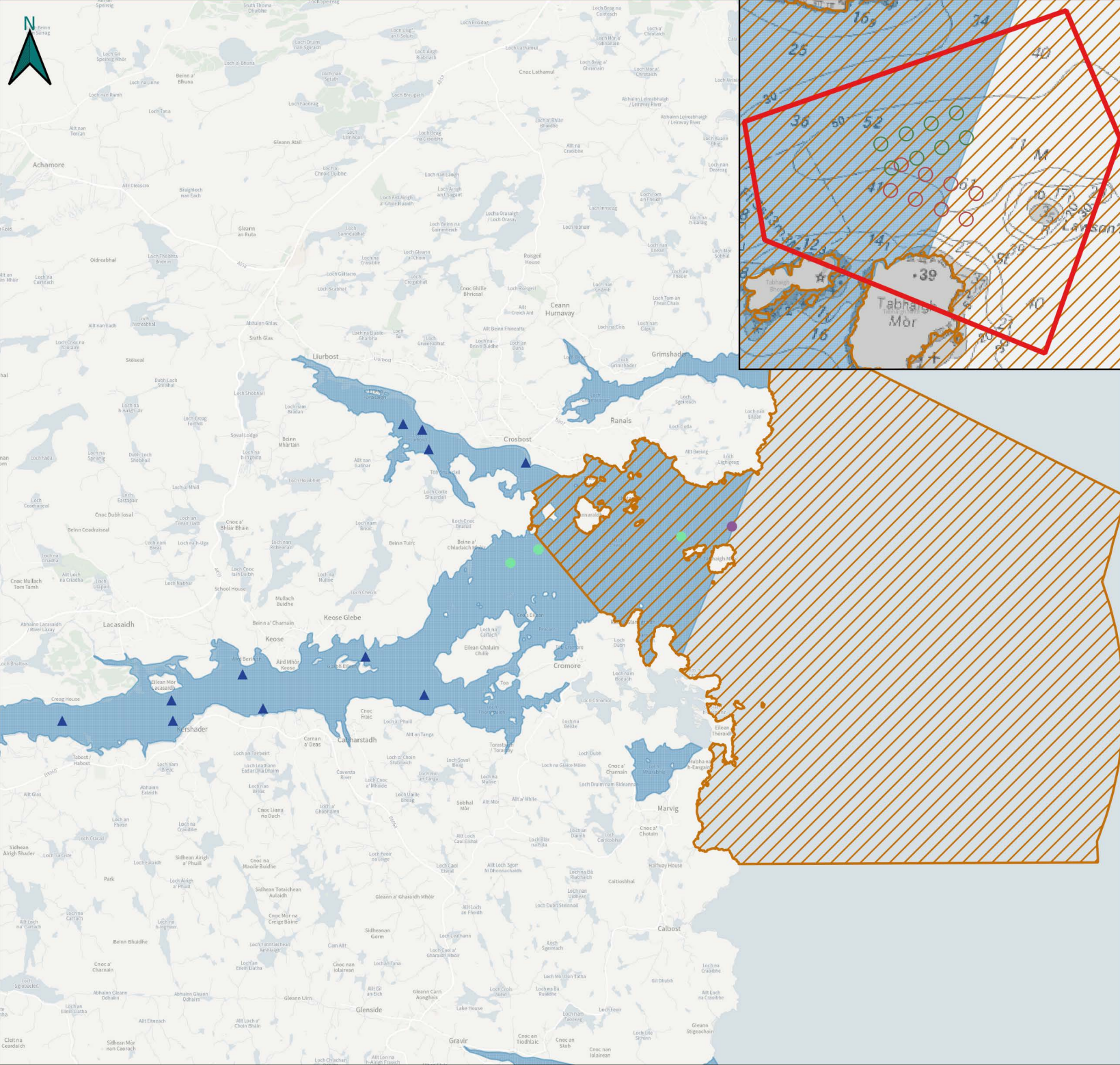
4 8 km

Coordinate system: OSGB36 / British National Grid
 1:140,000 @ A4

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Project Name: Tabhaigh East	Date: 08/07/2024
Author: BA	Review: SM

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Tabhaigh East Scoping

Figure 5.1 - Water Quality Features

Proposed Development

- Tabhaigh East

Existing Farms

- ▲ Shellfish Sites
- Marine Fish Farms

Boundaries

- ▨ WFD Classification Area
- ▭ Locational Guidelines Boundary

Inset Map

- Tabhaigh East Option 1
- Tabhaigh East Option 2
- ▭ Indicative Mooring Extent (Area of Search)

2.5 5 km

Coordinate system: OSGB36 / British National Grid
 1:80,000 @ A4

Project Code: 41	Prepared by: Atlantic58
Project Name: Tabhaigh East	Date: xx/xx/xxxx
Author: BA	Review: Initials


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Scotland River Basin District

Map 36

Loch Erisort

 Area identified as a shellfish water protected area




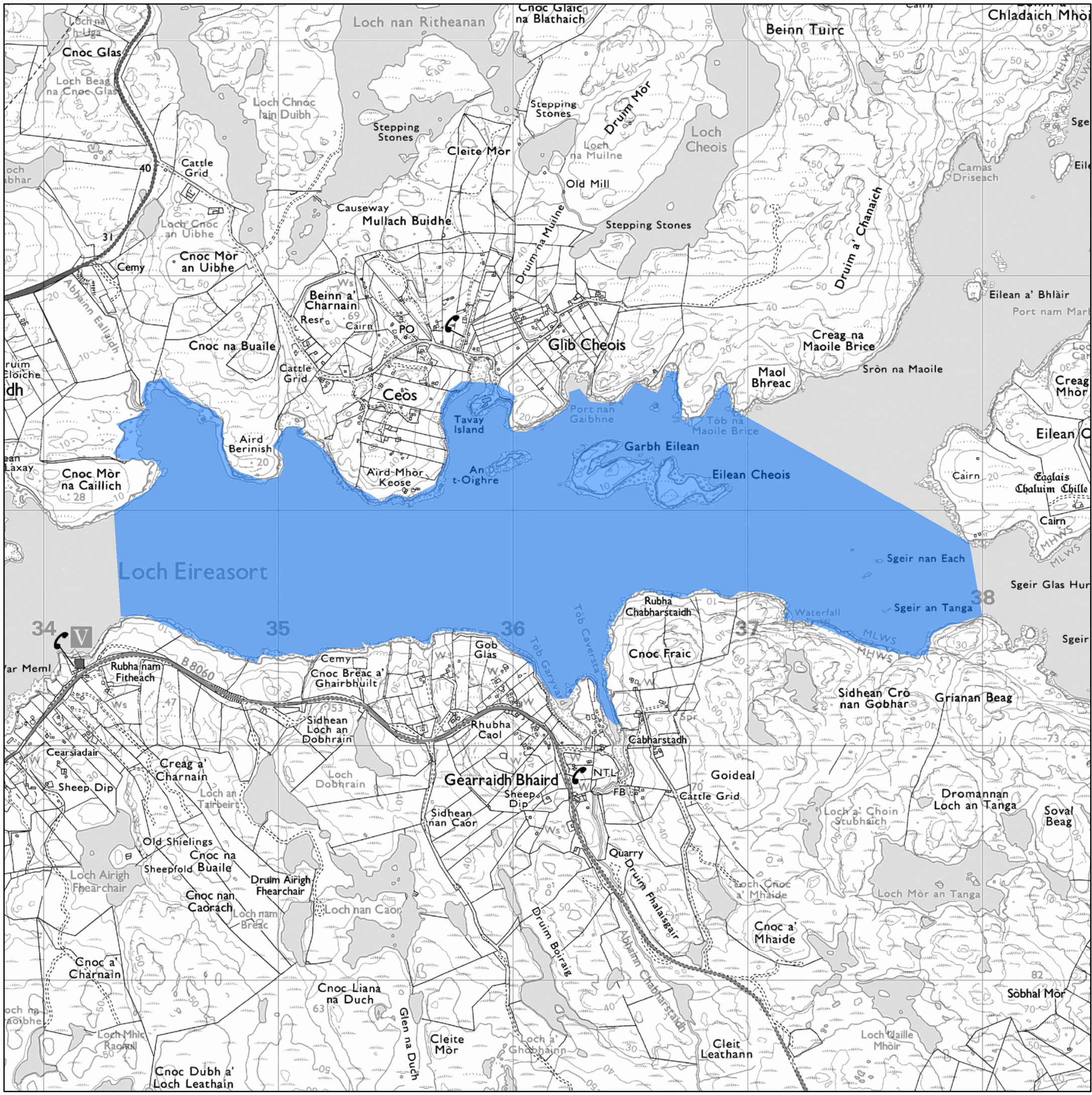
This map identifies an area of coastal water or transitional water within the Scotland River Basin District for the purposes of the Water Environment (Shellfish Water Protected Areas: Designation) (Scotland) Order 2013. The Order designates this area of coastal water or transitional water as a shellfish water protected area for the purposes of Part 1 of the Water Environment and Water Services Act (Scotland) 2003.

Signed _____

Dated _____

A member of the staff of the Scottish Ministers

 Sources: Shellfish Waters, Scottish Government 2013
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Scottish Government GI Science & Analysis Team
November 2013, Job: 5362ac



Tabhaigh East Scoping

Figure 6.1 - Benthic Features

Proposed Development

- Tabhaigh East Option 1
- Tabhaigh East Option 2
- Indicative Mooring Extent (Area of Search)

Designations

- ▭ MPA

Priority Marine Features

- Burrowed mud
- Northern sea fan and sponge communities
- Sandeels
- Kelp beds



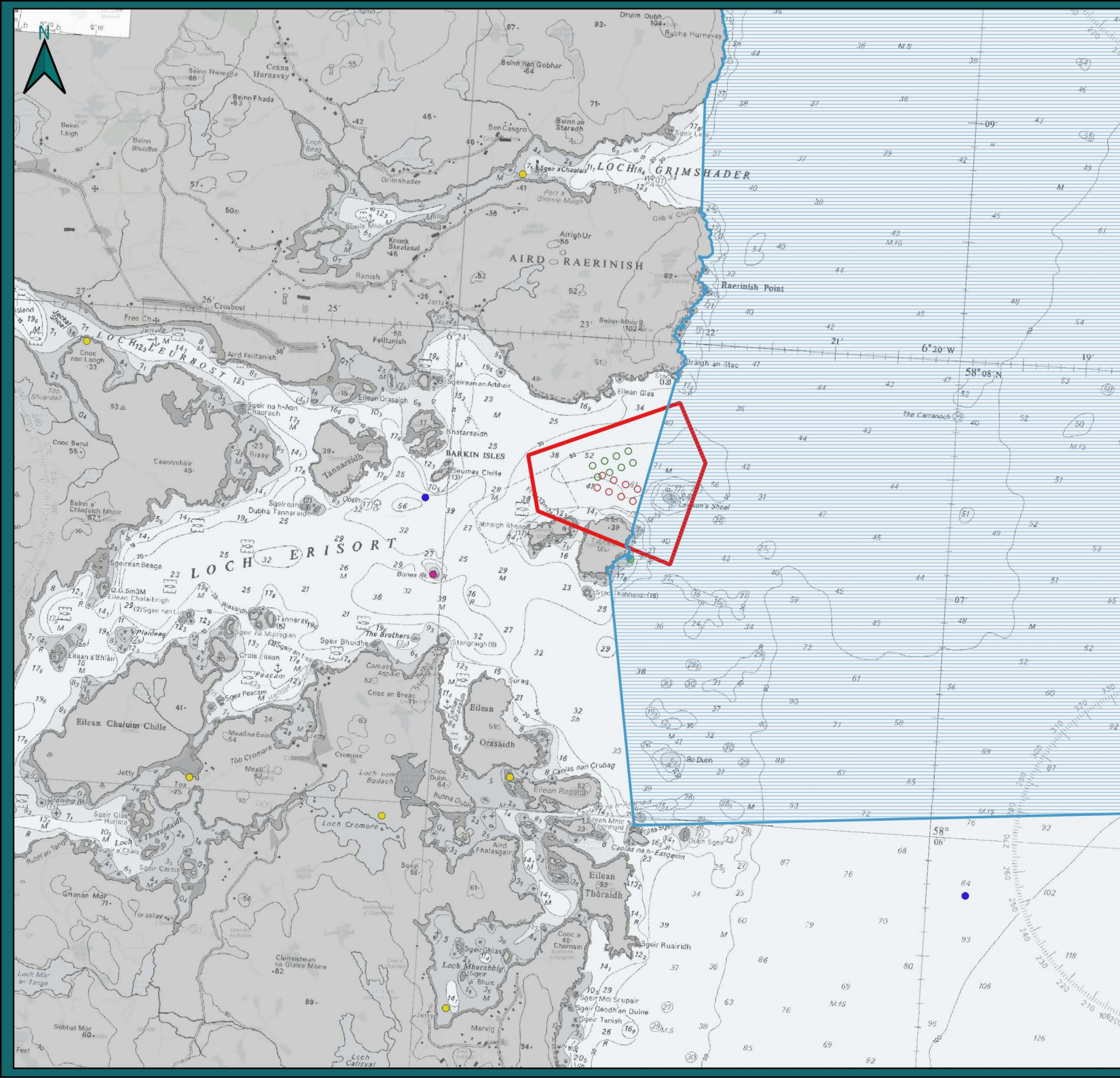
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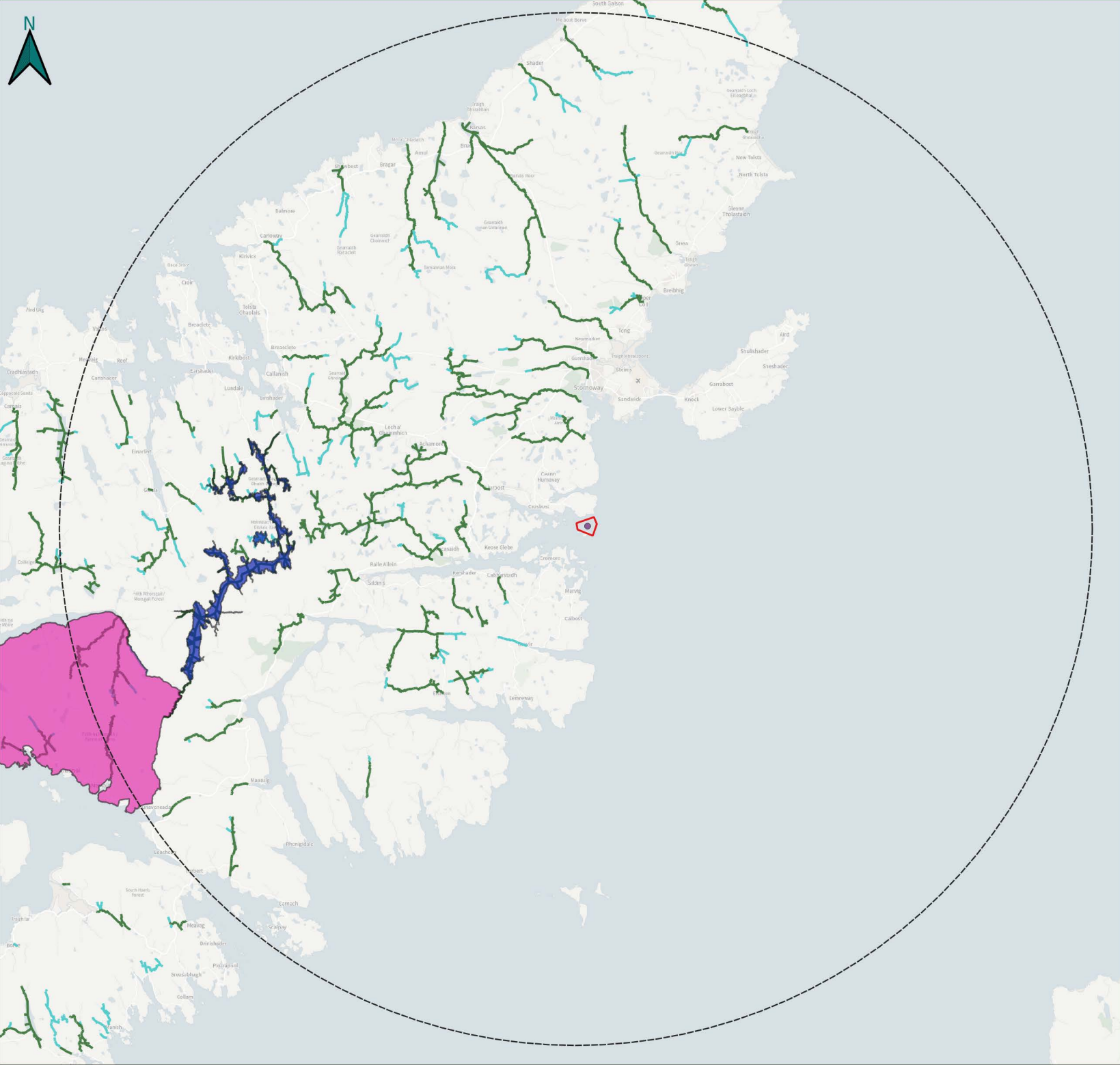
Project Code: 41
Project Name: Tabhaigh East
Author: BA

Prepared by: Atlantic58
Date: 08/07/2024
Review: SM

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Tabhaigh East Scoping

Figure 7.1 - Wild Salmonid Locations

Proposed Development

- Indicative Mooring Extent (Area of Search)
- Tabhaigh East
- 35km Buffer

Designations

- Langavat SAC
- North Harris SAC

Salmonid Rivers

- Salmon Present
- Salmon Likely Present

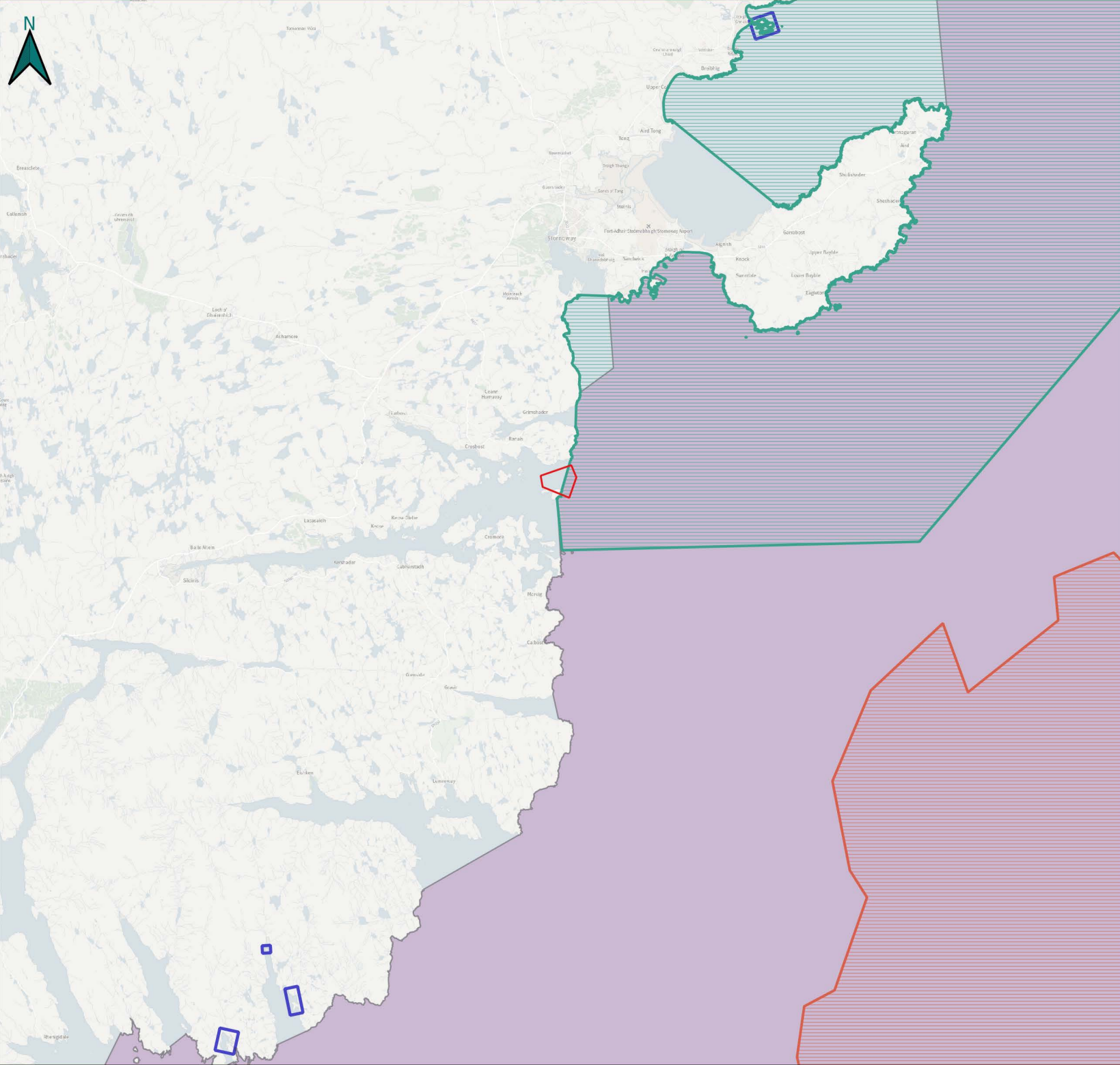


Coordinate system: OSGB36 / British National Grid
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

Tabhaigh East Scoping

Figure 8.1 - Marine Mammal Features


Proposed Development

-  Indicative Mooring Extent (Area of Search)

Designations

-  North-east Lewis MPA
-  Shiant East Bank MPA
-  Inner Hebrides and the Minches SAC
-  Seal Haul-Outs

5 10 km



Coordinate system: OSGB36 / British National Grid
 1:200,000 @ A4

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Author: BA	Review: SM

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Tabhaigh East Scoping

Figure 9.1 - Sites Designated for Ornithology Interests

Proposed Development

● Tabhaigh East

□ 120km Buffer

Designations

■ Cape Wrath SPA

■ Handa SPA

■ Lewis Peatlands SPA/Ramsar

■ North Rona and Sula Sgeir SPA

■ Seas off St Kilda SPA

■ Shiant Isles SPA

25

50 km

Coordinate system: OSGB36 / British National Grid

1:1,200,000 @ A4

Project Code: 41

Project Name: Tabhaigh East

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Date: 08/07/2024

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Figure 12.2 - Landscape Character

Proposed Development

 Indicative Mooring Extent
(Area of Search)


 5km Buffer

Zone of Theoretical Visibility

 Visible

Landscape Character Assessment

 Boggy Moorland - Outer Hebrides

 Cnoc and Lochan

 Dispersed Crofting

 Linear Crofting

 Rocky Moorland - Outer Hebrides

1 2 km



Coordinate system: OSGB36 / British National Grid

1:55,000 @ A4

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Project Name: Tabhaigh East
Author: BA

Prepared by: Atlantic58
Date: 08/07/2024
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Tabhaigh East Scoping

Figure 13.1 - Cultural Heritage Study Area

Proposed Development

 Indicative Mooring Extent
(Area of Search)

 2km Buffer

 5km Buffer

Zone of Theoretical Visibility

 Visible

1 2 km



Coordinate system: OSGB36 / British National Grid

1:55,000 @ A4

Project Code: 41
Project Name: Tabhaigh East
Author: BA

Prepared by: Atlantic58
Date: 08/07/2024
Review: SM








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Tabhaigh East Scoping

Figure 13.2 - Maritime Wrecks

Proposed Development

-  Tabhaigh East Option 1
-  Tabhaigh East Option 2
-  Indicative Mooring Extent (Area of Search)
-  2km Buffer
-  Multibeam Survey Area
-  Surveyed Wreck Location
-  Tentative (Undesignated) Wreck Locations

0.5 1 km

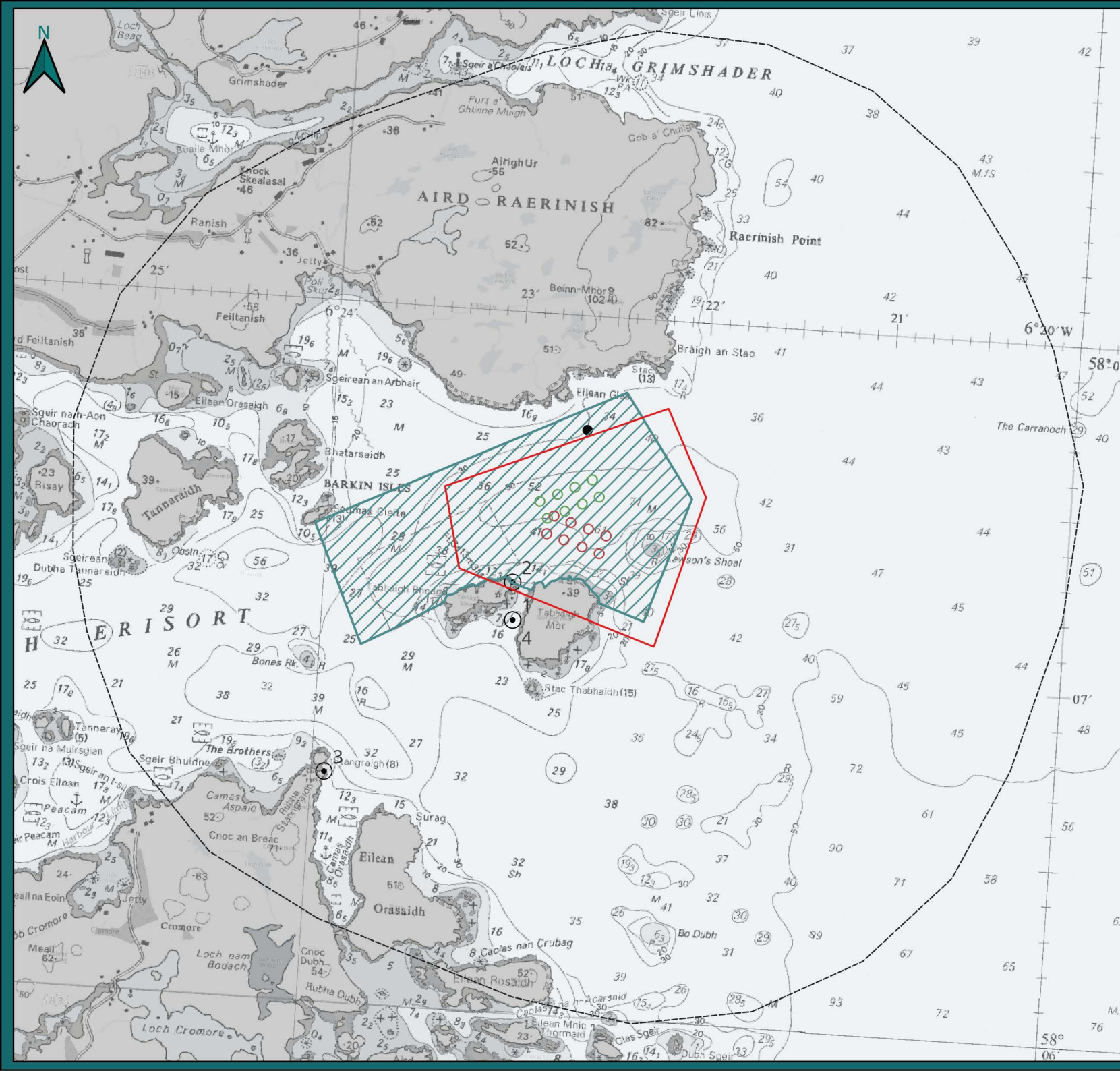


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Project Name: Tabhaigh East	Date: 08/07/2024
Author: BA	Review: SM

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Tabhaigh East Scoping

Figure 13.3 - Potential Indirect (Setting) Impacts

Buffers

 2km Buffer

 5km Buffer

Receptors

-  Undesignated (Terrestrial) Heritage Features
-  Proposed Landscape Viewpoint Receptors

Zone of Theoretical Visibility

 Visible

1 2 km



Coordinate system: OSGB36 / British National Grid

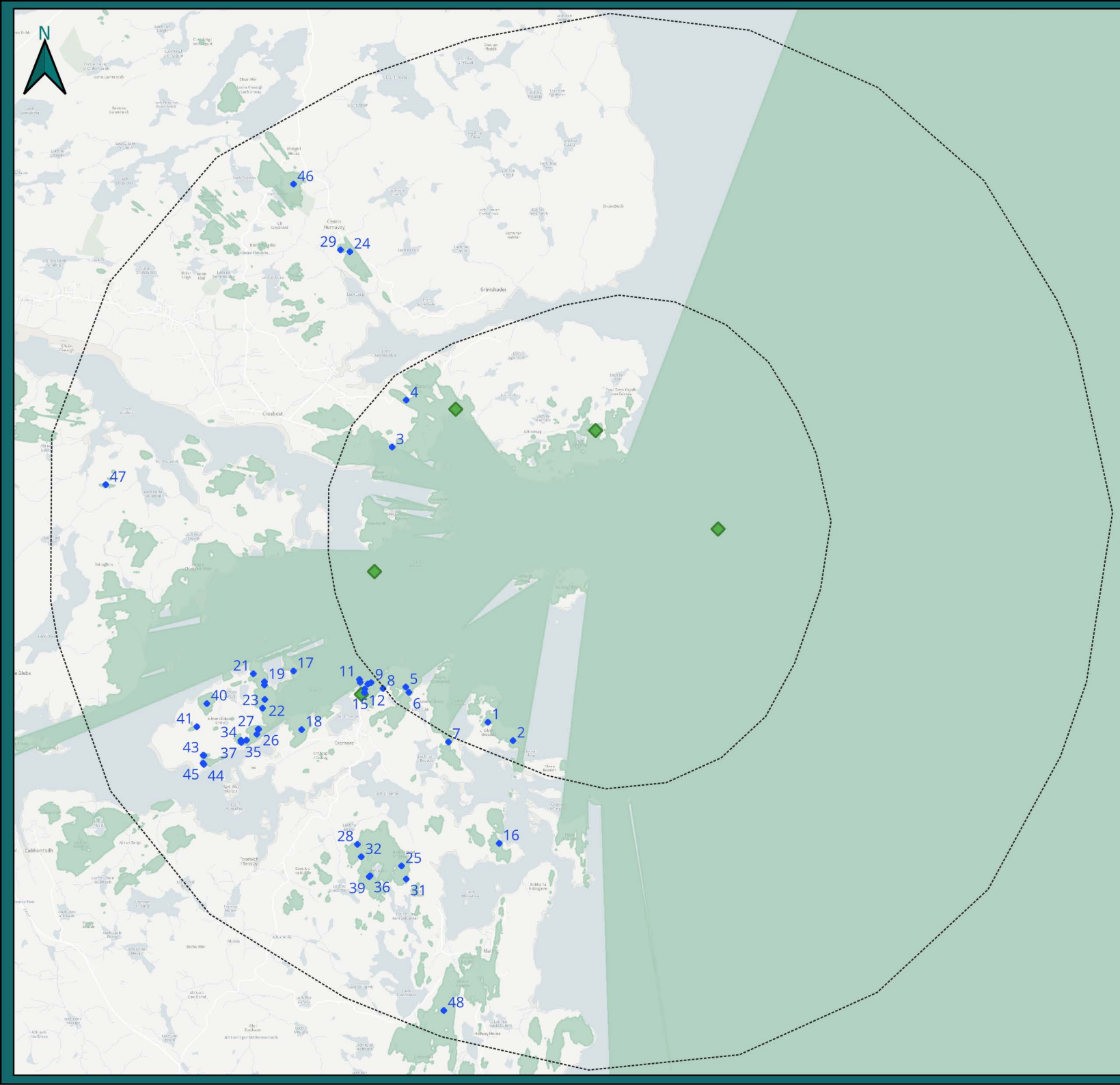
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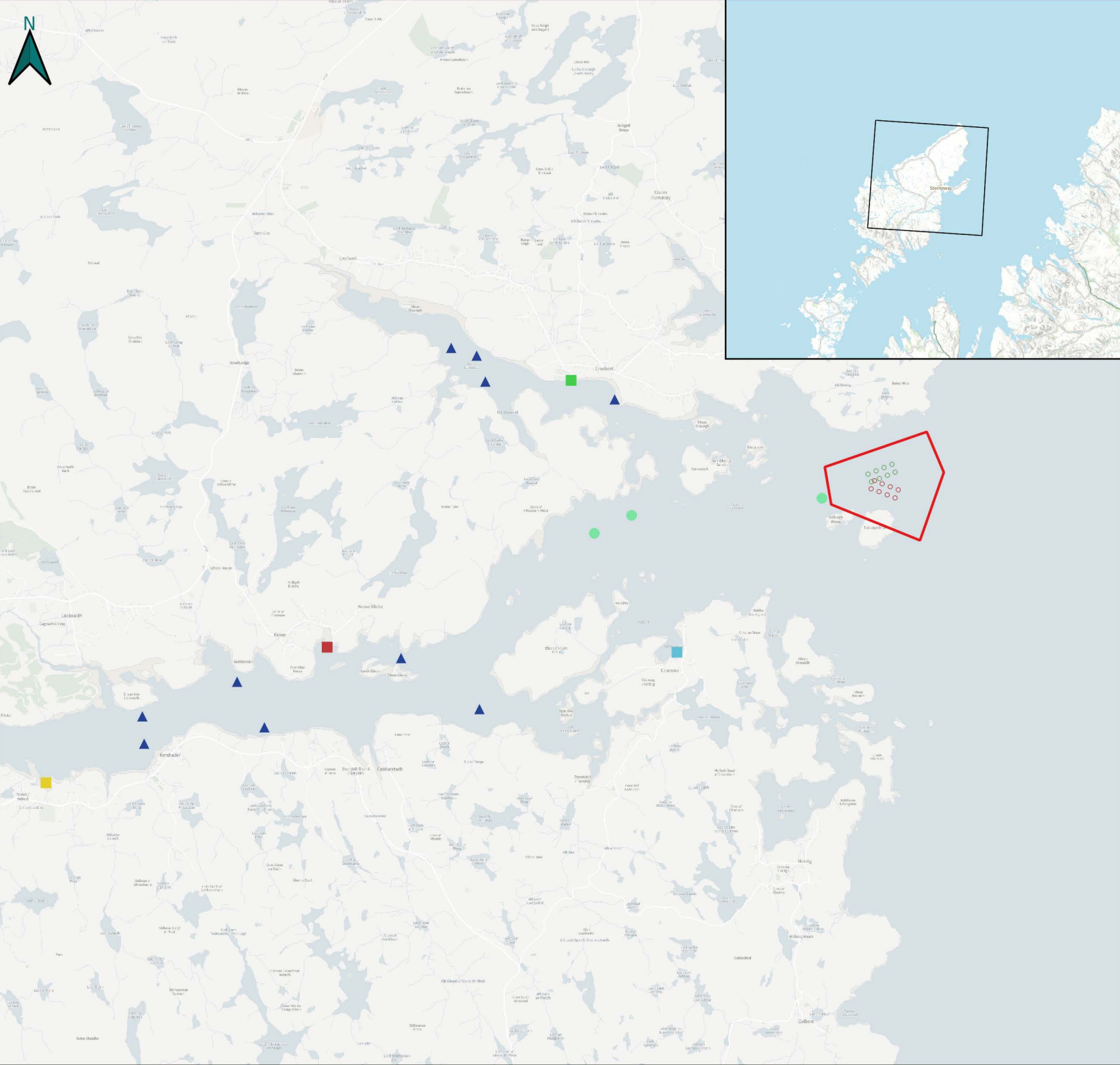
Project Code: 41
Project Name: Tabhaigh East
Author: BA

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Review: SM

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Tabhaigh East Scoping

Figure 14.1 - Marine User Features

Proposed Development

- Tabhaigh East Option 1
- Tabhaigh East Option 2
- ▭ Indicative Mooring Extent (Area of Search)

Ports, Harbours and Piers

- Cromore
- Crossbost
- Keose Glebe (MOWI Shorebase)
- Lochs (Talbot)

Marine Aquaculture

- Existing Marine Fish Farms
- ▲ Shellfish Sites

Inset Map

- ▭ ICES Rectangle 45E3, Stornoway Fisheries District

1 2 km

Coordinate system: OSGB36 / British National Grid
 1:60,000 @ A4

Project Code: 41	Prepared by: Atlantic58
Project Name: Tabhaigh East	Date: 22/07/2024
Author: BA	Review: Initals

Prepared for:
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ANNEX A

Habitats Regulations Assessment (HRA)



Habitats Regulations Appraisal (HRA) Screening (Special Protection Areas)

For Proposed Tabhaigh East Fish Farm (Area of Search), Isle of Lewis

Version 2

Report to Atlantic 58

Issued by Aquateira Ltd

P1101 - September 2023



www.aquateira.co.uk

This study was completed for:

Atlantic 58 Ltd
Contact: Sarah Murray

This study was completed by:

Aquatera Ltd
The Charles Clouston Building
Back Road
Stromness
Orkney
KW16 3AW

Contact: Jude Hamilton
Tel: 01856 850 088
Email: office@aquatera.co.uk

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1 HRA SCREENING FOR TABHAIGH EAST FISH FARM

1.1 INTRODUCTION

Aquatera Ltd has undertaken Habitats Regulations Appraisal (HRA) screening for an area of search for Mowi Scotland's proposed Tabhaigh East Fish Farm (the proposed development) located in Loch Erisort, Isle of Lewis. The scope of this HRA screening was specifically regarding Special Protection Areas (SPA) and proposed SPAs (pSPA) and does not include Special Areas of Conservation (SAC).

The objective of this HRA screening was to identify those SPAs and pSPAs and their associated qualifying features with potential for connectivity with the proposed development and determine whether the proposed development is likely to have a significant effect (LSE) on the qualifying features of any of these SPAs or pSPAs either alone or in-combination with other plans or projects.

1.2 REGULATORY BACKGROUND

The requirements of the Habitats Directive and the Wild Birds Directive are transposed into domestic law in Scotland by The Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the 'Habitats Regulations'). These Regulations apply on land in Scotland, and in Scottish inshore waters (the area of sea adjacent to Scotland from 0 to 12 nautical miles). The UK's exit from the European Union has resulted in some changes in terminology regarding the Habitats Regulations. European sites are no longer part of the European Union's Natura 2000 network. Instead, they form a UK-wide network of protected sites. The UK site network is made up of SPAs and SACs. It is Scottish Government policy to afford the same protection to pSPAs and candidate SACs (cSACs) as fully classified sites.

1.3 OVERVIEW OF HRA PROCESS

Under the Habitats Regulations, a competent authority must consider whether a plan or project could affect a European site, firstly by considering whether it will have a likely significant effect on a European site, and if so, they must carry out an appropriate assessment. This process is known as HRA. HRA applies to any plan or project which has the potential to affect the qualifying features of a European site, even when those interests may be at some distance from that site.

A competent authority must not authorise a project unless it can be shown beyond reasonable scientific doubt – through an appropriate assessment, that the project will not adversely affect the integrity of a European site. The competent authority, in this instance Comhairle nan Eilean Siar will decide whether an appropriate assessment is necessary and carry it out (with advice provided by NatureScot) if required. It is the applicant, in this instance Mowi Scotland, who is usually required to provide the information to inform the appropriate assessment.

NatureScot guidance¹ sets out nine stages to HRA, these are:

Stage 1: What is the plan or project?

Stage 2: Is the plan or project directly connected with or necessary to site management for nature conservation?

Stage 3: Is the plan or project (either alone or in combination with other projects) likely to have a significant effect on a European site?

Stage 4: Undertake an appropriate assessment of the implications for the site in view of its conservation objectives.

Stage 5: Can it be ascertained that the proposal will not adversely affect the integrity of the site?

¹ Available at: <https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra>



Stage 6: Are there alternative solutions?

Stage 7: Would a priority habitat or species be affected adversely?

Stages 8 and 9: Are there imperative reasons of overriding public interest?

The purpose of this HRA screening exercise is essentially to carry out Stages 1 - 3 of this process to consider whether there is potential for any likely significant effects and therefore determine whether an appropriate assessment is required.

1.4 STAGE 1: WHAT IS PROJECT?

1.4.1 Project description

Mowi Scotland is proposing to install a new fish farm site, Tabhaigh East, within Loch Erisort, Isle of Lewis. Mowi Scotland currently operates three finfish farm sites in the eastern extent of the loch; these are: Tabhaigh, North Shore East and North Shore West, with a combined maximum biomass of 6,550 tonnes. Successful planning consent and CAR licensing of Tabhaigh East would result in the relinquishment of the planning consent and CAR licence for the existing operational site North Shore West, currently consented for 1,650 tonnes biomass.

An area of search has been identified within which the Tabhaigh East Fish Farm would be sited (Figure 1.1). The total pen number and configuration has yet to be determined however an indicative layout would comprise of 8 x pens of 160 m circumference in a 2 x 4 grid configuration (100 m² grid matrix) and a maximum biomass of between 2,500 tonnes and 3,500 tonnes. A feed barge would also be required.

The proposed development would be serviced from the shore base at Keose Glebe, currently used to service the existing sites in Loch Erisort. Keose Glebe shore base is approximately 5.7 km to the southwest of the area of search for Tabhaigh East, (see Figure 1.1). There is not anticipated to be any increase in vessel traffic as a result of the proposed development however there would be a shift in vessel activity away from the relinquished North Shore West site to the new Tabhaigh East Fish Farm.

The proposed development would use pole-mounted top nets as currently installed at the existing sites. Further details of the pole-mounted top nets and cage netting will be provided in the EIA.

No acoustic deterrent devices (ADDs) for seals are proposed for the new site location.

1.4.2 Project location

The HRA screening was undertaken using the boundary shown in Figure 1.1. This covers an indicative area of search for siting options for the proposed development.



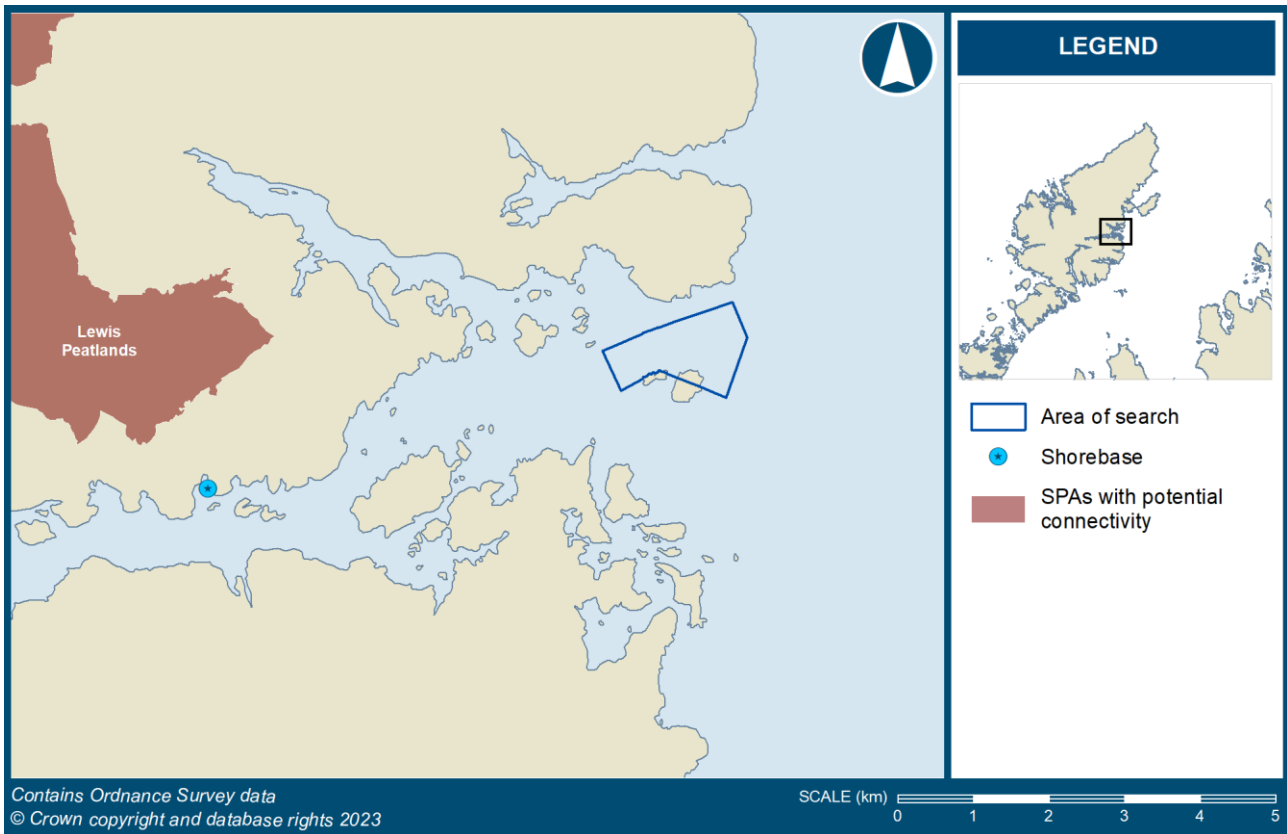


Figure 1.1 Indicative area of search boundary used in the HRA screening

1.5 STAGE 2: IS THE PROJECT DIRECTLY CONNECTED WITH OR NECESSARY TO SITE MANAGEMENT FOR NATURE CONSERVATION?

No, the proposal is not directly connected with or necessary to site management for the conservation of any SPAs and therefore consideration of Stage 3 is required.

1.6 STAGE 3: IS THE PROJECT (EITHER ALONE OR IN COMBINATION WITH OTHER PROJECTS) LIKELY TO HAVE A SIGNIFICANT EFFECT ON THE SITE?

1.6.1 Identification of relevant European sites

The proposed development (the area of search and associated operational vessel transit route) does not overlap with any SPA or pSPA boundaries (Figure 1.1). The vessel transit route for the proposed development is likely to be a short extension of the route to and from Mowi’s existing Tabhaigh Fish Farm and the Keose Glebe shore base.

The proposed development is within foraging range of several species of birds that are qualifying features of SPAs/pSPAs designated to protect breeding seabird populations in the wider area. During the breeding season, many seabird species regularly fly considerable distances on foraging trips from nest sites; therefore, SPAs/pSPAs at considerable distances from the proposed development could have potential connectivity for particular qualifying features.

The ‘Aquatera HRA Screening Tool’ was used to identify a long list of SPAs/pSPAs with qualifying features that could potentially be present within the area of search, based on relevant connectivity criteria. For breeding seabird qualifying features of SPAs/pSPAs, the relevant connectivity criteria used to determine the potential for connectivity with the area

of search are foraging range estimates. For gannet, NatureScot advise that the mean maximum + 1 SD foraging range of 315.2 km (+194.2 km) (Woodward *et al.*, 2019) should be used (NatureScot, 2020). For other species, NatureScot consider use of mean foraging range plus one standard deviation (mean + 1 SD) from Woodward *et al.*, (2019) as a suitably precautionary metric for to establish connectivity for aquaculture developments. Mean maximum + 1 SD has also been applied for European storm-petrel as this is the only foraging range distance available (see Appendix table A.1).

Site-specific foraging ranges are also available for some breeding seabird species (Woodward *et al.*, 2019). These values have been used in those cases where the site-specific mean foraging range value is greater than the generic mean value, therefore a precautionary approach has been taken.

The 'Aquatera HRA Screening Tool' considers each qualifying feature for each site (for each relevant season) as listed in JNCC's UK National Site Network spreadsheet². The spatial data for the SPA boundaries were obtained from JNCC's UK National Site Network datasets. Where relevant, spatial data for site boundaries were sourced from the relevant statutory nature conservation bodies, (to ensure the latest boundary data was used).

For breeding seabird SPA/pSPA qualifying interests, the first step in determining connectivity was based on the overlap between the foraging range and the straight-line distance between the area of search boundary and each of the SPAs/pSPAs.

As most seabird species (with the exception of gulls and terns) are unlikely to fly over land for long distances, the at-sea distance between the mooring extent area and each of the SPAs/pSPAs was then calculated which screened out some qualifying features for some SPAs/pSPAs. Those species for which at-sea distances were used are shown in Appendix table A.1. The site-specific values used to determine connectivity are shown in Appendix table A.2.

As the HRA screening process was regarding a finfish aquaculture development, all marine interests were considered and species that are only present in coastal or terrestrial environments were scoped out.

A further three species were screened out of the assessment as there are no relevant impact pathways with respect to aquaculture developments and therefore no potential for likely significant effects; these are: northern fulmar *Fulmarus glacialis*; Arctic tern *Sterna paradisaea*; and black-legged kittiwake *Rissa tridactyla*.

Seas off St Kilda SPA, located 114 km to the west of the proposed development is designated for its importance as a foraging area for several seabird species, therefore it is not appropriate to use foraging range (from a breeding site) as suitable connectivity criteria. However, as the proposed development also has connectivity with St Kilda SPA for gannet and European storm-petrel, Seas off St Kilda SPA has also been screened in for these two species as the two SPAs are functionally linked.

The results of this stage of the HRA screening process are shown in Table 1.1. Twenty SPAs were identified as having potential connectivity to the proposed development based on the relevant connectivity criteria (Table 1.1). The proposed development site has ten qualifying features with potential connectivity. The location of each of the relevant SPAs in relation to the proposed development is shown in Figure 1.2.

² <https://jncc.gov.uk/our-work/uk-protected-area-datasets-for-download/> This spreadsheet contains the latest UK-wide data gathered as part of the Standard Data Form (SDF) information completed for all sites in the UK National Site Network. The spreadsheet was last updated in April 2023.

Table 1.1 SPA qualifying features with potential connectivity with the proposed development

Qualifying feature	Relevant SPAs	At-sea/straight line distance from the Area of Search (km)	Connectivity criteria (km)	Breeding (Br)/Non-breeding (Nbr) season interest
Red-throated diver <i>Gavia stellata</i>	Lewis Peatlands	4 (straight line)	4.5	Br
Black-throated diver <i>Gavia arctica</i>	Lewis Peatlands	4 (straight line)	10	Br
Common guillemot <i>Uria aalge</i>	Shiant Isles	21 (at-sea)	Mean + 1 SD 33.1 + 36.5	Br
Razorbill <i>Alca torda</i>	Shiant Isles	21 (at-sea)	Mean + 1 SD	Br
	Handa	70 (at-sea)	61.3 + 33.4	Br
	Cape Wrath	91 (at-sea)		Br
Atlantic puffin <i>Fratercula arctica</i>	Shiant Isles	21 (at-sea)	Mean + 1 SD	Br
	Cape Wrath	91 (at-sea)	62.4 + 34.4	
Great skua <i>Stercorarius skua</i>	Handa	70 (straight line)	Mean + 1 SD 67 + 31.5	Br
Northern gannet <i>Morus bassanus</i>	North Rona and Sula Sgeir	111 (at-sea)	Mean max. + 1 SD 315.2 + 194.2	Br
	Seas off St Kilda	114 (at-sea)	NA	
	Sule Skerry and Sule Stack	144 (at-sea)	Mean max. + 1 SD	
	St Kilda	150 (at-sea)	315.2 + 194.2	Br
	Fair Isle	309 (at-sea)		Br
	Noss	381 (at-sea)		Br
	Hermaness, Saxa Vord and Valla Field	426 (at-sea)		Br
	Ailsa Craig	470 (at-sea)		Br
	Outer Firth of Forth and St Andrews Bay Complex	476 (at-sea)		Br
European storm-petrel <i>Hydrobates pelagicus</i>	Priest Island (Summer Isles)	53 (at-sea)	Mean maximum (no mean value available) 336	Br
	North Rona and Sula Sgeir	111 (at-sea)		Br
	Seas off St Kilda	114 (at-sea)		Br
	Sule Skerry and Sule Stack	144 (at-sea)		Br
	St Kilda	150 (at-sea)		Br
	Treshnish Isles	186 (at-sea)		Br
	Auskerry	256 (at-sea)		Br

Qualifying feature	Relevant SPAs	At-sea/straight line distance from the Area of Search (km)	Connectivity criteria (km)	Breeding (Br)/Non-breeding (Nbr) season interest
Leach's storm-petrel <i>Oceanodroma leucorhoa</i>	North Rona and Sula Sgeir	111 (at-sea)	Mean 657	Br
	Flannan Isles	127 (at-sea)		Br
	Sule Skerry and Sule Stack	144 (at-sea)		Br
	St Kilda	150 (at-sea)		Br
	Foula	327 (at-sea)		Br
	Ramna Stacks and Gruney	404 (at-sea_		Br
Manx shearwater <i>Puffinus puffinus</i>	Rum	122 (at-sea)	Mean + 1 SD 136.1 + 88.7	Br
	St Kilda	150 (at-sea)		Br



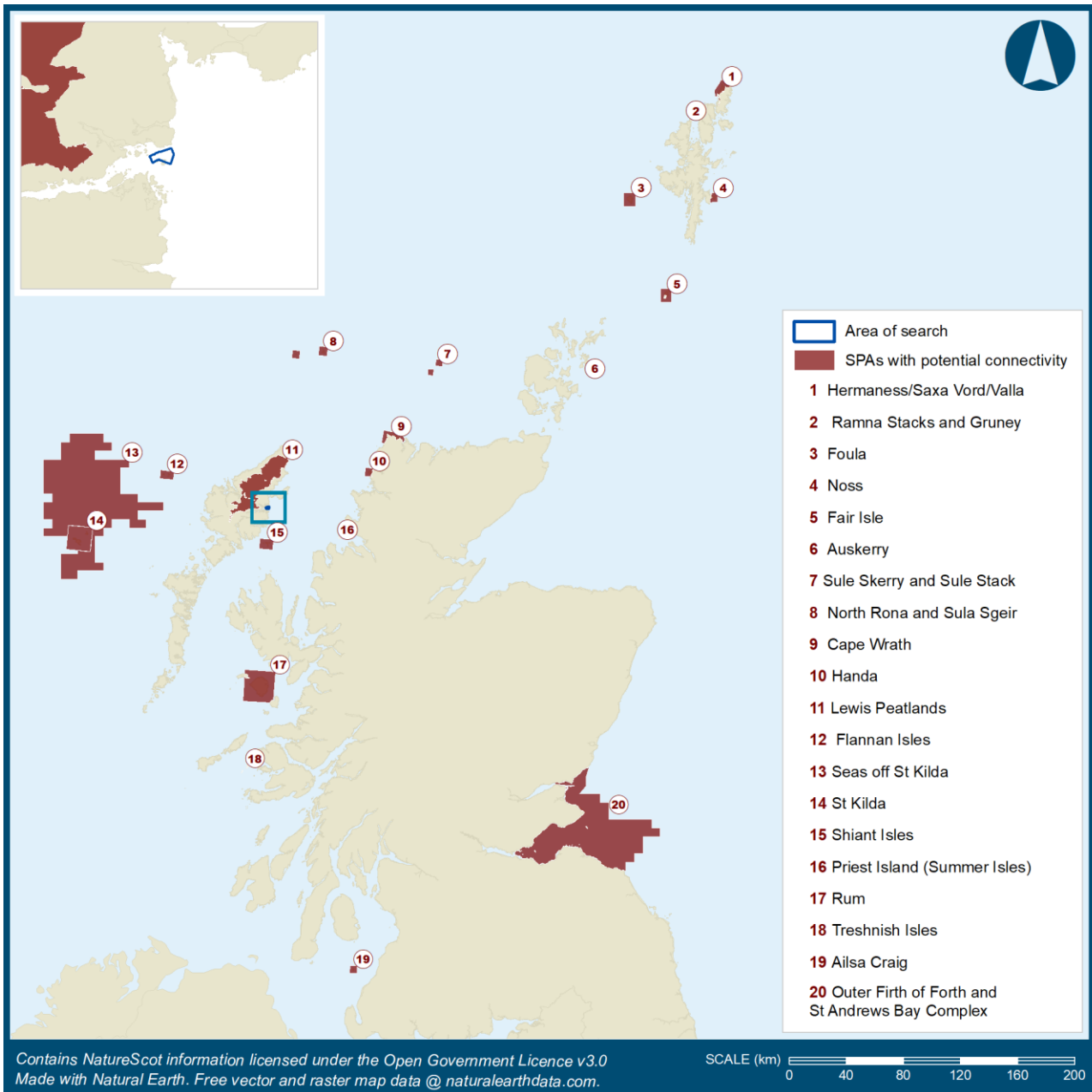


Figure 1.2 SPAs with potential connectivity to the proposed development

1.6.2 Conservation objectives

St Kilda SPA; Seas off St Kilda SPA; Outer Firth of Forth and St Andrews Bay Complex SPA

The draft conservation objectives for these SPAs are:

1. To ensure that the qualifying features of [the site] are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.
2. To ensure that the integrity of [the site] is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:
 - 2a. The populations of the qualifying features are viable components of [the site].
 - 2b. The distributions of the qualifying features throughout [the site] are maintained by avoiding significant disturbance of the species.
 - 2c. The supporting habitats and processes relevant to qualifying features and their prey/food resources are maintained, or where appropriate restored, at Foula SPA and Seas off Foula SPA.

As the Project is located outwith these SPA boundaries, only conservation objectives 1 and 2a are relevant to the Project and have been considered in this assessment.

All other SPAs

The conservation objectives for all of the other SPAs are:

- To avoid deterioration of the habitats of the qualifying species 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

As the Project is located outwith these SPA boundaries, two of these conservation objectives are of relevance to the Project and have been considered in this assessment, these are:

- to avoid significant disturbance to the species; and
- to maintain the population of the species as a viable component of the SPA.

1.6.3 Impacts associated with the proposed development

The following key impact pathways relevant to marine bird interests are associated with finfish aquaculture:

- Mortality – by-catch through entanglement and/or entrapment in pole-mounted top nets, cage or antipredator netting or in any nets deployed to recapture stock in event of escape;
- Direct displacement from the fish farm footprint;
- Disturbance, potentially leading to temporary, repeated or permanent displacement in the vicinity of the fish farm and associated vessel transit route;



- Loss of or damage to prey-supporting habitats in the vicinity of the farm and/or as a consequence of export of organic materials or chemicals from the farm site.

1.6.4 Sensitivity of species to finfish aquaculture activities

The sensitivity of each of the SPA qualifying features with connectivity to the proposed development has been considered in relation to each of the potential impacts associated with the proposed development. Sensitivity to entanglement and/or entrapment is based on the interim guidance issued by NatureScot (NatureScot, 2020). Sensitivity to all other impacts is based on the review of sensitivity of seabird species undertaken by Furness *et al*, (2012). This is summarised in Table 1.2.

Table 1.2 Sensitivity of qualifying features of SPAs to impacts associated with finfish aquaculture

Qualifying feature	Sensitive to entanglement and entrapment in pole-mounted top nets	Sensitive to entanglement (drowning risk)	Sensitive to disturbance due to presence of structures	Sensitive to vessel disturbance	Sensitive to loss or damage of prey-supporting habitat
Red-throated diver	Very low sensitivity. There is no evidence to suggest that this species is sensitive to entanglement in pole-mounted top nets.	High sensitivity to drowning in underwater nets. A piscivorous (fish-eating) diving species at risk of death or injury through entanglement in nets in the water column.	Moderate sensitivity to disturbance due to presence of structures	Very high sensitivity to disturbance created by vessel movements.	High sensitivity. This species has a moderate proportion of benthic prey in its diet, typically dives to depths less than 9 m and prefers nearshore shallow marine waters
Black-throated diver	Very low sensitivity. There is no evidence to suggest that this species is sensitive to entanglement in pole-mounted top nets.	High sensitivity to drowning in underwater nets. A piscivorous (fish-eating) diving species at risk of death or injury through entanglement in nets in the water column.	Moderate sensitivity to disturbance due to presence of structures	Very high sensitivity to disturbance created by vessel movements.	High sensitivity. This species has a moderate proportion of benthic prey in its diet, typically dives to depths less than 6 m. Breeds on inland lochan in summer and favours sheltered inshore coastal waters in winter, in particular certain relatively shallow and predominantly sandy-bottomed sites.



Qualifying feature	Sensitive to entanglement and entrapment in pole-mounted top nets	Sensitive to entanglement (drowning risk)	Sensitive to disturbance due to presence of structures	Sensitive to vessel disturbance	Sensitive to loss or damage of prey-supporting habitat
Common guillemot	Very low sensitivity. There is no evidence to suggest that this species is sensitive to entanglement in pole-mounted top nets.	High sensitivity to drowning in underwater nets. A piscivorous (fish-eating) diving species at risk of death or injury through entanglement in nets in the water column.	Very low sensitivity to disturbance due to presence of structures.	Medium sensitivity to disturbance created by vessel movements.	Very low sensitivity. This species has a small proportion of benthic prey in its diet, forages over a large area typically within offshore areas (with inshore and pelagic feeding less common).
Razorbill	Very low sensitivity. There is no evidence to suggest that this species is sensitive to entanglement in pole-mounted top nets.	High sensitivity to drowning in underwater nets. A piscivorous (fish-eating) diving species at risk of death or injury through entanglement in nets in the water column.	Low sensitivity to disturbance due to presence of structures.	Medium sensitivity to disturbance created by vessel movements.	Very low sensitivity. This species has a small proportion of benthic prey in its diet, forages over a large area and prefers foraging hotspots in areas with tidal stratification.
Atlantic puffin	Very low sensitivity. There is no evidence to suggest that this species is sensitive to entanglement in pole-mounted top nets.	Medium sensitivity to drowning in underwater nets. A piscivorous (fish-eating) diving species at risk of death or injury through entanglement in nets in the water column.	Low sensitivity to disturbance due to presence of structures.	Low sensitivity to disturbance created by vessel movements.	Very low sensitivity. This species has no benthic prey in its diet, is wide-ranging and feeds far from the coast in pelagic habitat.
Great skua	High sensitivity. This species is sensitive to entanglement in pole-mounted top nets	Very low sensitivity to drowning in underwater nets. This species does not dive deep underwater therefore there	Very low sensitivity to disturbance due to presence of structures.	Very low sensitivity to disturbance created by vessel movements.	Very low sensitivity. This species has no benthic prey in its diet and forages widely over a large area



Qualifying feature	Sensitive to entanglement and entrapment in pole-mounted top nets	Sensitive to entanglement (drowning risk)	Sensitive to disturbance due to presence of structures	Sensitive to vessel disturbance	Sensitive to loss or damage of prey-supporting habitat
		is no risk of entanglement in underwater netting.			in shallow seas over the continental shelf.
Northern gannet	Very high sensitivity. This species is sensitive to entanglement in pole-mounted top nets	Low sensitivity to drowning in underwater nets. A piscivorous (fish-eating) diving species at risk of death or injury through entanglement in nets in the water column.	Low sensitivity to disturbance due to presence of structures.	Low sensitivity to disturbance created by vessel movements.	Very low sensitivity. This species has no benthic prey in its diet, is pelagic and forages widely over a large area but mainly inshore over the continental shelf.
European storm-petrel	Very low sensitivity. There is no evidence to suggest that this species is sensitive to entanglement in pole-mounted top nets.	Very low sensitivity to drowning in underwater nets. This species does not dive deep underwater therefore there is no risk of entanglement in underwater netting.	Very low sensitivity to disturbance due to presence of structures.	Very low sensitivity to disturbance created by vessel movements.	Very low sensitivity. This species has no benthic prey in its diet, is pelagic and forages widely over a large area across the continental shelf.
Leach's storm-petrel	Very low sensitivity. There is no evidence to suggest that this species is sensitive to entanglement in pole-mounted top nets.	Very low sensitivity to drowning in underwater nets. This species does not dive deep underwater therefore there is no risk of entanglement in underwater netting.	Very low sensitivity to disturbance due to presence of structures.	Very low sensitivity to disturbance created by vessel movements.	Very low sensitivity. This species has no benthic prey in its diet, is pelagic and forages widely over a large area beyond the shelf break and over deep water.
Manx shearwater	Very low sensitivity. There is no evidence to suggest that this species is sensitive to entanglement in	Very low sensitivity to drowning in underwater nets. This species does not dive deep underwater therefore there	Very low sensitivity to disturbance due to presence of structures.	Very low sensitivity to disturbance created by vessel movements.	Very low sensitivity. This species has no benthic prey in its diet, is pelagic and forages widely



Qualifying feature	Sensitive to entanglement and entrapment in pole-mounted top nets	Sensitive to entanglement (drowning risk)	Sensitive to disturbance due to presence of structures	Sensitive to vessel disturbance	Sensitive to loss or damage of prey-supporting habitat
	pole-mounted top nets.	is no risk of entanglement in underwater netting.			over a large area over the continental shelf.

1.6.5 Determination of potential for LSE

Based on the project description details available at this time (see Section 1.4.1) an initial assessment has been made to determine whether the proposed development is likely to have a significant effect on any of the qualifying features with potential connectivity with the proposed development (Table 1.3). Following NatureScot advice³, where there is connectivity and the potential exists for LSE, then it has been concluded 'LSE'. Where there is no potential for connectivity, or it is obvious that the proposed development will not undermine the conservation objectives despite there being connectivity, it has been concluded 'no LSE'.

Table 1.3 Determining potential for LSE

Qualifying feature (SPAs with connectivity)	Potential for LSE?				
	Entanglement and entrapment (pole-mounted top nets)	Entanglement (underwater cage netting)	Displacement from critical habitats	Vessel disturbance	Loss of supporting habitat
Red-throated diver (Lewis Peatlands SPA)	No	Yes	Yes	Yes	Yes
Black-throated diver (Lewis Peatlands SPA)	No	Yes	Yes	Yes	Yes
Common guillemot (Shiant Isles SPA)	No	Yes	No	Yes	No
Razorbill (Shiant Isles SPA, Handa SPA, Cape Wrath SPA)	No	Yes	No	Yes	No
Atlantic puffin (Shiant Isles SPA, Cape Wrath SPA)	No	Yes	No	No	No
Great skua (Handa SPA)	Yes	No	No	No	No
Northern gannet (North Rona and Sula Sgeir SPA; Seas off St Kilda SPA; Sule Skerry and	Yes	No	No	No	No

³ <https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra>

Qualifying feature (SPAs with connectivity)	Potential for LSE?				
	Entanglement and entrapment (pole-mounted top nets)	Entanglement (underwater cage netting)	Displacement from critical habitats	Vessel disturbance	Loss of supporting habitat
Sule Stack SPA; St Kilda SPA; Fair Isle SPA; Noss SPA; Hermaness, Saxa Vord and Valla Field SPA; Ailsa Craig SPA; Outer Firth of Forth and St Andrews Bay Complex SPA)					
European storm-petrel	No	No	No	No	No
Leach's storm-petrel	No	No	No	No	No
Manx shearwater	No	No	No	No	No

LSE has been concluded for gannet from nine SPAs and great skua from two SPAs as these species are sensitive to entanglement and/or entrapment in pole-mounted top nets.

For entanglement and/or entrapment in underwater netting, LSE has been concluded for red-throated diver (Lewis Peatlands SPA), black-throated diver (Lewis Peatlands SPA), common guillemot (Shiant Isles), Atlantic puffin (Shiant Isles SPA and Cape Wrath SPA) and razorbill (Shiant Isles SPA, Handa SPA, Cape Wrath SPA) as these species are sensitive to drowning in underwater nets.

LSE has been concluded for displacement for red-throated diver and black-throated diver from Lewis Peatlands SPA.

LSE has been concluded for disturbance due to vessel activity for red-throated diver and black-throated diver from Lewis Peatlands SPA, common guillemot (Shiant Isles) and razorbill (Shiant Isles SPA, Handa SPA, Cape Wrath SPA).

LSE has been concluded for loss of supporting habitat for red-throated diver and black-throated diver from Lewis Peatlands SPA.

For all sites where LSE has been concluded, consideration of Stage 4 is required.



2 REFERENCES

Furness, R. W., Wade, H. M., Robbins, A. M. C. and Masden E. A 2012. Assessing the sensitivity of seabird populations to adverse effects from tidal stream turbines and wave energy devices. ICES Journal of Marine Science, Volume 69 Issue 8. <https://doi.org/10.1093/icesjms/fss131> (Accessed 30 August 2023)

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3 APPENDICES



APPENDIX A CONNECTIVITY CRITERIA FOR RELEVANT SPECIES

Appendix table A.1 Connectivity criteria and distance measurements used in the Aquatera HRA Screening for the proposed development

Qualifying feature	Season of interest	Distance measurement	Connectivity criteria (km)
Arctic skua <i>Stercorarius parasiticus</i>	Breeding	Straight line distance	2.7
Arctic tern <i>Sterna paradisaea</i>	Breeding	Straight line distance	N/A Screened out
Atlantic puffin <i>Fratercula arctica</i>	Breeding	At-sea distance	96.8
Black (common) scoter <i>Melanitta nigra</i>	Wintering	At-sea distance	4
Black-legged kittiwake <i>Rissa tridactyla</i>	Breeding	At-sea distance	N/A Screened out
Black-throated diver <i>Gavia arctica</i>	Breeding	Straight line distance	10
	Wintering	At-sea distance	4
Common eider <i>Somateria mollissima</i>	Wintering	At-sea distance	4
Common goldeneye <i>Bucephala clangula</i>	Wintering	At-sea distance	4
Common guillemot <i>Uria aalge</i>	Breeding	At-sea distance	69.6
	Wintering	Straight line distance xxx	0
Common gull <i>Larus canus</i>	Wintering	Straight line distance	5
Common tern <i>Sterna hirundo</i>	Concentration (on passage)	Straight line distance	1
	Breeding	Straight line distance	10.9
Eurasian wigeon <i>Anas penelope</i>	Wintering	Straight line distance	0
European shag <i>Gulosus aristotelis</i>	Breeding	At-sea distance	14.1
European storm-petrel <i>Hydrobates pelagicus</i>	Breeding	At-sea distance	336 (mean maximum as no mean value available)
Great black-backed gull <i>Larus marinus</i>	Breeding	Straight line distance	30
Great cormorant	Breeding	At-sea distance	10.9

Qualifying feature	Season of interest	Distance measurement	Connectivity criteria (km)
<i>Phalacrocorax carbo</i>	Wintering	At-sea distance	2
Great crested grebe <i>Podiceps cristatus</i>	Concentration (on passage)	Straight line distance	2
	Wintering	Straight line distance	2
Great northern diver <i>Gavia immer</i>	Wintering	At-sea distance	4
Great skua <i>Stercorarius skua</i>	Breeding	Straight line distance	98.5
	Wintering	Straight line distance	0
Greater scaup <i>Aythya marila</i>	Wintering	At-sea distance	4
Herring gull <i>Larus argentatus</i>	Breeding	Straight line distance	30
Leach's storm-petrel <i>Oceanodroma leucorhoa</i>	Breeding	At-sea distance	657
Lesser black-backed gull <i>Larus fuscus</i>	Breeding	Straight line distance	61.7
Little gull <i>Larus minutus</i>	Wintering	Straight line distance	5
Little tern <i>Sterna albifrons</i>	Breeding	At-sea distance	3.5
Long-tailed duck <i>Clangula hyemalis</i>	Wintering	At-sea distance	4
Mallard <i>Anas platyrhynchos</i>	Wintering	Straight line distance	0
Manx shearwater <i>Puffinus puffinus</i>	Breeding	At-sea distance	224.8
Mediterranean gull <i>Larus melanocephalus</i>	Breeding	Straight line distance	11.5
	Wintering	Straight line distance	5
Northern fulmar <i>Fulmarus glacialis</i>	Breeding	At-sea distance	N/A screened out
Northern gannet <i>Morus bassanus</i>	Breeding	At-sea distance	170.4
Razorbill <i>Alca torda</i>	Breeding	At-sea distance	94.7
Red-breasted merganser <i>Mergus serrator</i>	Wintering	At-sea distance	1
Red-throated diver	Wintering	At-sea distance	4

Qualifying feature	Season of interest	Distance measurement	Connectivity criteria (km)
<i>Gavia stellata</i>	Breeding	Straight line distance	4.5
Roseate tern <i>Sterna dougallii</i>	Breeding	Straight line distance	6.7
Sandwich tern <i>Sterna sandvicensis</i>	Concentration (on passage)	Straight line distance	1
	Breeding	Straight line distance	18.2
Slavonian grebe <i>Podiceps auritus</i>	Wintering	At-sea distance	2
Velvet scoter <i>Melanitta fusca</i>	Wintering	At-sea distance	4

Appendix table A.2 Site-specific mean foraging ranges used in this HRA screening

Species	Site name	Generic mean foraging range (mean + 1 SD)	Mean foraging range (km)	Sample (no. birds)
Atlantic puffin	Fair Isle	62.4 + 34.4	106.5	29
Razorbill	Fair Isle	61.3 + 33.4	152.2	79
Common guillemot	Fair Isle	33.1 + 36.5	145.4	18
Lesser black-backed gull	Skomer, Skokholm and the Seas off Pembrokeshire	43.3 + 18.4	74	58