Appendix 8.1 Extended Phase 1 Habitat Survey and National Vegetation Classification

ORKNEY'S COMMUNITY WIND FARM - FARAY

Extended Phase 1 Habitat Survey and National Vegetation Classification

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Contents

Summary

ITPEnergised was appointed by Orkney Islands Council to undertake an ecological desk study, extended Phase 1 habitat survey and National Vegetation Classification survey of the island of Faray, Orkney. The purpose of the work was to document the habitats and plant communities present, assess their potential suitability for protected or otherwise notable faunal species and record any incidental evidence of such species. The survey results are intended to facilitate the identification of potential constraints to development and the potential need for mitigation and/or further survey work as part of a future planning application for a wind farm at the Site.

The Site is an uninhabited, sheep-grazed island, located to the west of Eday. The Sound of Faray is present east of the island, and Rapness Sound is present to the west. Several drainage ditches run across the island, in addition to a few small, unmodified burn channels rising from the wetter areas. The shoreline comprises primarily rocky exposures and cliffs, with some beaches also present (south-eastern side of the southern tip; and in several locations along the western coastline). A number of abandoned dwellings are also present, the majority of which have lost their roofing.

A number of nature conservation designations listed for terrestrial or marine ecological interests are present in the area. These include Faray and Holm of Faray Site of Species Scientific Interest (SSSI) and Species Area of Conservation (SAC), which overlaps with the Site, as well as Wyre and Rousay Sounds Marine Protection Area (MPA), Muckle and Little Green Holm SSSI and Rousay SSSI. A limited number of protected or otherwise notable faunal species records also exist for the area. Primary species of interest identified include otter (*Lutra lutra*), recorded as being present on Faray itself; and grey seal (*Halichoenus grypus*), harbour seal (*Phoca vitulina*) and a number of cetaceans including orca (*Orcinus orca*) and common dolphin (*Delphinus delphis*) using the waters (and in the case of the seals, the shoreline) around the island's coast. A large number of bird records were also identified.

Including boundary features, a total of 12 Phase 1 habitat types were recorded in the survey. The island is dominated by grazed improved and semi-improved acid grassland, with some marshy grassland, standing and running waters also present. Shoreline habitats comprise the majority of the remaining habitat component. Vegetation diversity was recorded as being relatively limited (though with a few local exceptions), as would be expected of an area of agricultural grazing. Habitat alignment to the NVC descriptions is limited due to the modified nature of the agricultural grasslands that comprise the majority of the island's vegetation cover. However, where possible, a best-fit has been identified. The semi-improved grassland locally resembles MC10 *Festuca rubra-Plantago* spp. maritime grassland. Improved grasslands shows some affinity to MG11 *Festuca rubra-Agrostis stolonifera-Potentilla anserina* grassland, the *Lolium perenne* sub-community. Wetland vegetation is generally a best fit with M28 *Iris pseudacorus-Filipendula ulmaria* mire, with areas dominated by reed canary-grass comprising S28 *Phalaris arundinacea* tall-herb fen.

Suitable habitat was recorded for otter and seals and the general absence of common mammalian predators promotes the suitability of the island for bird breeding activity, despite the presence of livestock. The mix of derelict and partially intact buildings appears to provide some low potential roosting features for bat species, although the foraging habitat is considered limited.

1. Introduction

1.1 Overview

ITPEnergised was appointed by Orkney Islands Council to undertake an ecological desk study, extended Phase 1 habitat survey and a National Vegetation Classification (NVC) survey of the isle of Faray, Orkney (hereafter referred to as the 'Site'). The Site centres on Ordnance Survey Grid Reference HY 53058 36806 and its location is shown on Figure 1.

The purpose of the survey was to document the habitats and plant communities present within the Site and assess their potential suitability for protected or otherwise notable faunal species. The survey results are intended to facilitate the identification of potential constraints to development and where mitigation and/or further survey work may be required to inform a future planning application for a wind farm at the Site.

This report describes the methods used to gather and record habitat baseline information for the Site and summarises the findings of the field survey.

1.2 Site Description

The Site is an uninhabited island located 1.5 km to the west of Eday (north-west of Fersness Bay) and south-east of Westray, lying between the Sound of Faray to the east and Rapness Sound to the west. Several drainage ditches run across the island, in addition to a few small, unmodified burn channels rising from the wetter areas. The shoreline comprises primarily rocky exposures and cliffs, with some beaches also present (south-eastern side of the southern tip; and in several locations along the western coastline). A number of abandoned dwellings are present, the majority of which have lost their roofing, but some of which are reasonably watertight and are used for agricultural storage.

The island is used for livestock (sheep) grazing, with a number of field enclosures present, to either side of a central track. At the time of survey, 200 head of sheep were on the island; however, this has historically been up to 850 animals.

1.3 Development Proposal

The survey was undertaken to inform a planning application to develop a wind farm on Faray ('the Proposed Development').

2. Legislation, Policy and Guidelines

An overview of relevant legislation, policy and guidance is provided below.

2.1 Legislation

Full consideration has been given to all relevant nature conservation legislation when carrying out this assessment. This includes the following:

- Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive);
- Council Directive 2009/147/EC on the conservation of wild birds (the Birds Directive);
- The Ramsar Convention 1975;
- The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended);
- The Conservation of Habitats and Species Regulations 2010;
- The Wildlife and Countryside Act 1981 (as amended);

- The Nature Conservation (Scotland) Act 2004 (as amended); and
- The Wildlife and Natural Environment (Scotland) Act 2011 (as amended).

2.2 Policy Framework

The policies relevant to nature conservation include those from the Scottish Planning Policy (SPP) (Scottish Government, 2014), Planning Advice Note (PAN) 60 (Scottish Government, 2008) and Orkney Local Development Plan (LDP) (OIC, 2017a); see Annex A.

2.3 Biodiversity Priorities

2.3.1 Scottish Biodiversity List

Scottish Ministers created the Scottish Biodiversity List (SBL) (Scottish Government, 2013) to satisfy the requirements under Section 2(4) of the Nature Conservation (Scotland) Act 2004, assist public bodies in carrying out conservation of biodiversity, as well as to provide the general public with information regarding conservation within Scotland. The SBL comprises species and habitats listed using both scientific and social criteria; only scientific criteria are considered relevant to this report. They include the following:

- All UK Priority Species present in Scotland;
- Species which Scotland has an international obligation to safeguard;
- All species defined as nationally rare at a UK level that are present in Scotland;
- Species with populations present (resident, wintering or breeding) in 5 or fewer 10km squares or sites in Scotland;
- All species that are endemic to Scotland;
- Any sub-species or race that is widely recognised and accepted by the scientific (or other relevant) community and that is endemic to Scotland, if it also meets one of the other criteria; and
- Natural and semi-natural habitats that are known to be particularly important for supporting assemblages of plant or animal groups that are data deficient, such as fungi, bryophytes, lichens, algae and invertebrates.

2.3.2 Local Biodiversity Reporting

The Orkney Local Biodiversity Action Plan (LBAP) is a targeted action plan for the period 2018 – 2022 (Orkney's Biodiversity Steering Group, 2018). The LBAP addresses biodiversity planning in Orkney through the following four themes: greenspace, farmland, peatland and the marine environment.

2.4 Good Practice Ecological Guidance

As part of the baseline report, cognisance has been taken of the Chartered Institute of Ecology and Environmental Management (CIEEM) good practice guidelines and survey methods, notably the standard methods developed for Preliminary Ecological Appraisals (CIEEM, 2017) and Ecological Impact Assessment (CIEEM, 2018). Phase 1 habitat survey methodology follows that of the Joint Nature Conservation Committee (JNCC, 2010).

3. Methods

3.1 Desk Study: Non-avian Ecological Interests

A preliminary ecological desk study was completed for the scoping report for the wind farm proposal that was issued in March 2019 (ITPEnergised, 2019). Information gathering included interrogation of the following online database resources, for commercially available information.

- National Biodiversity Network Atlas (NBN, 2019);
- Scottish Natural Heritage SiteLink (SNH, 2019); and
- MAGIC: Nature on the Map (Magic, 2019).

Sites designated for terrestrial and marine ecological interests of international and national importance were identified for up to 10k from Faray; and local-level designations were identified up to 2km from the Site boundary. The Orkney Wildlife Information & Records Centre (OWIRC) was approached for existing records of protected or otherwise notable species (e.g. SBL/LBAP priority species) from within a 10km distance of the Site boundary. Only records from within the last 10 years were considered relevant to the study. In addition, data on seal populations was obtained through the reporting of the Special Committee on Seals (SCOS, 2018).

The desk study data presented here covers the non-avian ecological interests associated with the Site; avian interests are reported in a separate ornithological study.

3.2 Fields Surveys

3.2.1 Extended Phase 1 Habitat Survey

A Phase 1 habitat survey was carried out of the Site on 31st May 2019 by a qualified and experienced ecologist using the standard JNCC survey methodology (JNCC, 2010) to map the habitats present on Site. The vegetation was described in a series of georeferenced target notes (see TNs), with plant nomenclature following Stace (2010). Target notes were also produced to describe notable habitats too small to be mapped (i.e. <0.1ha).

Potentially suitable habitats for faunal and any physical evidence of presence were to be recorded, as the "extended" part of the study. The standard method would include a survey buffer; however, as an island site, the additional search area was limited to the shoreline and intertidal zone (when exposed). For this part of the exercise, cognisance was taken of the standard methodologies for otter (Chanin, 2003) and bats (Collins, 2016), etc., to ensure sufficient understanding of the habitats to target any potential future protected species survey requirements. Birds and other animals were identified and recorded on an ad hoc basis.

3.2.2 National Vegetation Classification

The vegetation within the Site was also classified using the standard NVC survey methodology (Rodwell 1991 *et seq*., Rodwell 2006). However, because of the modified nature of the vegetation owing to agricultural grazing, NVC mapping was rarely possible as it would in most cases be misleading and suggest a better alignment with the NVC classification than is actually the case. NVC mapping was therefore not undertaken.

Sampling involved recording the species present, together with their abundances and noting other relevant information, such as evidence of grazing, poaching or drainage. The data were subsequently compared with the standard NVC tables and classified accordingly. Stands were classified to sub-community level, where possible, although in many cases the vegetation was mapped to community level only, because vegetation patches were too small, species-poor and/or exhibited characteristics of two or more sub-communities.

NVC communities were compared to described conservation priorities, as laid out on the SBL (and with habitat descriptions provided in Maddock [2011]) and the Orkney BAP. Potential groundwater dependence was identified by comparing the recorded communities with the list of potentially moderately or highly groundwater dependent terrestrial ecosystems (GWDTEs) defined by the Scottish Environment Protection Agency (SEPA) (SEPA, 2017).

Botanical nomenclature follows that of Stace (2010) for vascular plants and Atherton *et al*. (2010) for bryophytes.

3.2.3 Survey Limitations

The field surveys were carried out according to current recommended guidelines, at an appropriate time of year, during favourable weather conditions and with full access across the Site. As such, no significant limitations have been identified.

4. Results

4.1 Desk Study: Non-avian Ecological Interests

It should be noted that data availability is limited. With no permanent resident (human) population on the island, the non-avian ecology is generally under-reported. See Chapter 7 Ornithology and Appendix 7.1 Avian Baseline Report for details of the avian baseline.

4.1.1 Statutory Nature Conservation Designations

Five statutory nature conservation designations, covering four areas, and which are listed for non-avian biological reasons, are present within 10 km of the Site (see Table 1, below, and Figure 1).

Table 1: Statutory Nature Conservation Designations within 10km of the Site

Name	Designation	Distance and direction from Proposed Development	Reason for Designation	
Faray and Holm of Faray	SAC	Partly overlaps with Site	Species:	Grey seal (*Halichoerus grypus*)
	SSSI	Partly overlaps with Site	Species:	Grey seal
Wyre and Rousay Sounds	MPA	6.3km SW	Habitats:	Kelp and seaweed communities on sublittoral sediment and maerl beds
Muckle and Little Green Holm	SSSI	7.8km S	Species:	Grey seal
Rousay	SSSI	8.2km SW	Habitats:	Blanket bog, maritime cliff, mesotrophic loch and subalpine wet heath
			Species:	Vascular plant assemblage

A number of designated seal haul-out sites are also present in the wider area (see Figure 1).

4.1.2 Non-statutory Nature Conservation Designations

Two Local Nature Conservation Site (LNCS) are located within 2km of the site boundary. At c.1.31km east of the site and on the west of Eday, Braehead is designated for nationally important upland heath, blanket bog and oligotrophic and dystrophic lake habitats. Resting Hill LNCS is c.1.66km east of the Site and adjacent to Braehead LNCS; it is designated for nationally important upland heath and blanket bog habitats (OIC, 2017b).

4.1.3 Invasive Plant Species

No records were identified for non-native, invasive species within a 2km search radius of the Site boundary.

4.1.4 Terrestrial/Marine Animals

Records of eleven animal species of conservation concern, and of potential relevance to the project, were identified within the 10km radius of the Site boundary (from within the last 10 years); see Table 2, below.

Table 2: Protected Species and/or Species of Conservation Concern within 10 km

Common Name	Scientific name	Legal/Conservation Status	Existing Records
Orca	*Orcinus orca*	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). Schedule 5 WCA 1981 European Protected Species; Scottish Biodiversity List (SBL); LBAP	17 records, 2013, x3 Calf Sound, east side of Eday, c.4.0 km east; x1 record, 9 records - Fall of Warness Eday, c.5.5 km south, 4 off Sanday, 1 each off Egilsay, Rousay, Papa Westray and Green Holm; all >5 km from Faray
Atlantic white-sided dolphin	*Lagenorhynchus acutus*	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). Schedule 5 WCA 1981 European Protected Species; SBL; LBAP	Single records, Warness Sound 5 km south of Faray, 2014
Bottle-nosed dolphin	*Tursiops truncatus*	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). Schedule 5 WCA 1981 European Protected Species; SBL; LBAP	Single record, Westray 2009 (N.B. this data search was completed in 2019)
Common dolphin	*Delphinus delphis*	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). Schedule 5 WCA 1981. European Protected Species; SBL; LBAP	One record, 2014, Sound of Faray, c.0.5 km east
Common porpoise	*Phocoena phocoena*	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). Schedule 5 WCA 1981. European Protected Species; SBL; LBAP	72 records, 1 record south of Faray and 67 records in Warness sound, Eday
Otter	*Lutra lutra*	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). Schedule 5 WCA 1981. European Protected Species; SBL; LBAP	26 records 2013-14 0-10.0 km, on Faray, Eday, Egilsay and Sanday
Grey seal	*Halichoenus grypus*	Conservation of Habitats and Species Regulations 2017. Schedule 4 (restrictions to methods to control). Conservation of Seals Act 1970, extended by the Conservation of Seals (Scotland) Order 2002; Marine (Scotland) Act 2010. Annex II; LBAP	Four records, 2012: x1 record of a common seal near Braeswick, Sanday, c. 7.6 km east; and x3 records for grey seals: Point of Geldibist, Rapness, Westray, c.2.6km north-west; Bay of Stove, Sanday, c.4.5 km east; and just south of Braeswick, Sanday, c.6.6 km east
Long-finned pilot whale	*Globicephala melaena*	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). Schedule 5 WCA 1981. European Protected Species; SBL; LBAP	Single record, Twiness Westray 4.5 km northwest, 2012
Minke whale	*Balaenoptera acutorostrata*	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). Schedule 5 WCA 1981. European Protected Species; SBL; LBAP	24 records, 20 off Warness sound, Eday. Other records Eday, Westray, Sanday, Egilsay all >5 km from Faray

Common Name	Scientific name	Legal/Conservation Status	Existing Records
Risso's dolphin	*Grampus griseus*	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). Schedule 5 WCA 1981. European Protected Species; SBL; LBAP	14 records, 9 Warness Sound Eday. 3 records Sanday and a single records at Rapness, Westray in 2017. All records > 5 km from Faray
White-beaked dolphin	*Lagenorhynchus albirostris*	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). Schedule 5 WCA 1981. European Protected Species; SBL; LBAP	4 records between 2009 and 2015, 3 off Warness Sound and one of Westray all > 5 km from Faray

Data from SCOS (2018) for the grey seal population indicated the last survey to have been in 2016. Due to movements, i.e. dispersal of the grey seal population throughout the year, population counts are based on pup production.

Orkney pup production since 2000 is noted as relatively stable, but low, in comparison to the rest of the UK (+0.2% increase since 2014). However, this represents c.43.6% of the Scottish population (36.7% of the UK total) for 2016 (SCOS, 2018). The Orkney seal population is significant on a UK scale; the UK grey seal population was estimated at 150,000, therefore the Orkney population would be estimated at c. 23,854 for 2016.

In addition to the above, the harbour seal (*Phoca vitulina*) is also present across the Orkneys, with the vast majority of the 2016 count for North Coast Scotland and Orkney (a total of 1,349 animals) being made on haul-outs around the islands (SCOS, 2018). The UK population appears to have increased, with the 2016 numbers almost back to the levels recorded in the 1990s.

4.2 Field Surveys

The results of the Phase 1 habitat survey are shown on Figure 2, which illustrates the location and extent of all habitat types recorded within the Site and described below. Target note (TN) locations are also shown on Figure 2 and described in Annex B. NVC results are described within the relevant broad Phase 1 sections below. A species list can be found in Annex C.

4.2.1 Habitats

The island is dominated by agricultural grazing, which extends to the coastal cliff or beaches, and very little natural or semi-natural vegetation is present. The following 12 terrestrial habitat types (Phase 1 habitat codes in brackets) were recorded in the study:

- Semi-improved acid grassland (B1.2);
- Improved grassland (B4);
- Marshy grassland (B5);
- Standing water (G1);
- Running water (G2);
- Intertidal sand (H1.1);
- Intertidal boulders/rocks (H1.3);
- Sea cliffs (H8.1);
- Exposed rock (J1.4.1);
- Post and wire fencing (J2.4);
- Drystone wall (J2.5);
- Dry ditch (J2.6);

- Buildings (J3.6); and
- Graveyard and Track (J5).

4.2.1.1 Semi-improved acid grassland

Most of the semi-improved acid grassland component was found in mosaic with improved grassland, with only one discrete (i.e. more uniform) area not in mosaic.

Short-grazed semi-improved acid grassland was recorded in three distinct locations: on the northern and southern tips of the island and eastern fringes of the island (see TN1-3). Dominant grasses included short-grazed meadow grass (*Poa* sp), Yorkshire fog (*Holcus lanatus*), common bent (*Agrostis capillaris*) and creeping bent (*Agrostis stolonifera*), with tufted hair-grass (*Deschampsia cespitosa*), purple moor-grass (*Molinia caerulea*) and mat-grass (*Nardus stricta*) present at lower abundance. The range of associated forb species was locally modestly high, with white clover (*Trifolium repens*), bird's-foot-trefoil (*Lotus corniculatus*), broad-leaved dock (*Rumex obtusifolius*), primrose (*Primula vulgaris*), common dandelion (*Taraxacum* agg.), marsh ragwort (*Senecio aquaticus*), spring squill (*Scilla verna*), marsh grass of Parnassus (*Parnassia palustris*) and creeping thistle (*Cirsium arvense*) all commonly recorded.

The vegetation shows no clear affinity to any NVC type, which is likely to reflect a history of agricultural improvement and grazing. The vegetation locally resembles MC10 *Festuca rubra-Plantago* spp. maritime grassland, but some typical species of MC10, such as red fescue (*Festuca ovina*) and plantain species (*Plantago* spp.) were not recorded, whereas some species recorded, e.g. tufted hair-grass and marsh ragwort, are not associated with MC10 grassland.

4.2.1.2 Improved acid grassland

Improved grassland used for grazing sheep, is present across much of the island and forms the dominant habitat type (see TN4). The dominant grass species recorded are perennial rye grass (*Lolium perenne*), with meadow grass, Yorkshire fog, creeping bent (*Agrostis stolonifera*), sweet vernal-grass (*Anthoxanthum odoratum*) also present. Within the grassland are locally dense patches of sea mayweed (*Matricaria maritima*), silverweed (*Potentilla anserina*) and common nettle (*Urtica dioica*), with common daisy (*Bellis perennis*), tormentil (*Potentilla erecta*) also frequently recorded.

Sections of the improved grassland grade into semi-improved acid grassland, notably towards the coast and cliff edges.

The vegetation shows some affinity to MG11 *Festuca rubra-Agrostis stolonifera-Potentilla anserina* grassland, the *Lolium perenne* sub-community. This community is relatively common as pasture near the coast and has been subject to agricultural improvement.

4.2.1.3 Marshy grassland

Two areas of marshy grassland were recorded in the west and southwest of the island (see TN5 and TN6). The larger section (see TN5) was recorded adjacent to an area of rock exposure, close to the mid-point of the western side of the island and associated with a pond, and it follows drainage channels to the coast. The vegetation is dominated by yellow iris (*Iris pseudacorus*), tufted hair-grass, Yorkshire fog and silverweed, with curled dock (*Rumex crispus*), horsetail (*Equisetum* sp.), marsh marigold (*Caltha palustris*) and buttercups (*Ranunculus* spp.) all frequently recorded. Associated species include bogbean (*Menyanthes trifoliata*), bottle sedge (*Carex rostrata*), wild Angelica (*Angelica sylvestris*), ragged robin (*Silene flos-cuculi*), yellow rattle (*Rhinanthus minor*) and marsh orchid (*Dactylorhiza purpurella*). The smaller section (see TN6) contains many of the same species but follows a drainage channel in the south west of the island which is locally dominated by reed canary-grass (*Phalaris arundinacea*).

The vegetation shows some affinity with M28 *Iris pseudacorus-Filipendula ulmaria* mire, a widespread oceanic community, although several atypical species are present. The vegetation dominated by reed canary-grass keys out as S28 *Phalaris arundinacea* tall-herb fen.

4.2.1.4 Standing water

Pools are present throughout the island, including in a number of areas where they are linked with drainage channels, which were dry at the time of the survey (see TN7-17). Following the survey there was a spell of heavy rainfall which created more pools in the area of mosaic semi-improved acid grassland at the north of the Island. The northern fringes of the island (see TN7-8) contained several small areas of standing water, with channels linking the pools which flood during heavy rain. The area of improved acidic grassland in the south-east of the Site is presumed to have an increase in ephemeral pools following rainfall, as dry bare patches of cracked soil were evident on the slopes at time of survey (see TN12-14). Further areas of standing water were noted in the centre and centre west of the island (see TN15-17), with further small pools noted in the centre north and east of the island (see TN9-11).

4.2.1.5 Running water

Two drainage ditches run across Faray (see TN18-19). They are approximately 0.3-0.7m wide and flow from the centre of the island to the coast on the east and west. The ditches are overgrown with silverweed and other species characteristic of semi-improved grassland. A number of other wet and dry ditches are also present around several field boundaries. Small streams/overflow ditches link standing water on the island, and one was flowing during the survey (see TN20).

4.2.1.6 Intertidal mud/sand

Sand and shingle beaches are present along the south-west and south-east of the island (see TN21-22). The sections of beach are made up of white sand, with a build of larger boulders and rocks above the high tide.

4.2.1.7 Intertidal boulders/rocks

Most of the shoreline comprises exposed rock and cliffs (see TN23), with a cover of the black-coloured tar lichen (*Verrucaria maura*). Macro algal cover on the western shoreline includes a range of fucoid species typical of a high-energy rocky shore, i.e. serrated wrack (*Fucus serratus*) on the lower shore grading to bladder wrack (*Fucus vesiculosus*) mid-shore. Other typical algal species include green algae, such as gut weed (*Enteromorpha intestinalis*), on more sheltered parts of the upper shore and reds, such as the coralline alga (*Corallina officinalis*), on the lower and mid-shore. The bladder wrack growth is generally larger/longer on the more sheltered eastern shore, with egg/knotted wrack (*Ascophyllum nodosum*) also part of the species mix. Kelp species (*Laminaria* spp.) are present on the rocks beyond the low tide line on both sides of the island.

4.2.1.8 Sea cliffs

Cliffs are a common feature of both the east and western coastlines of the island. The foreshore and intertidal zones beyond the cliffs frequently include tidal boulders and rocks.

4.2.1.9 Exposed rock (inland)

A section of exposed rock was identified inland from the western shore, north of the marshy grassland in the centre of the Site (see TN24).

4.2.1.10 Stone wall

A drystone wall is present around the north of the island, between the Holm of Faray causeway and the northern field of semi-improved grassland (see TN25).

4.2.1.11 Fencing

Post and wire and electric fencing covers much of the centre of the island (see TN26), following the fringes of the south and east of the island and also crossing the island east to west in two places. Fencing also surrounds many of the structures on the island and is used for managing the livestock.

4.2.1.12 Dry ditch

A dry ditch is located in the southern semi-improved grassland.

4.2.1.13 Buildings

There are 10 general groups of buildings on the island (see TN27-41), in various states of repair, from roof-less walls through to an old school building with secure corrugated sheet metal roof and a plastic-roofed wooden lean-to shed on its northern side. Seven buildings were recorded as having part of or all of the roofing present; several of the older structures have parts of the original stone slab roofs in place to a certain degree (from c.25% to 90% coverage), while in addition to the old school building (used for storing farm equipment), there are a further three structures with sound roofs – one with corrugated metal sheeting and two apparently with corrugated cement fibre panels. Vegetation around these structures typically comprises a mix of grasses and abundant common nettle, broad-leaved dock and silverweed.

4.2.1.14 Graveyard

A walled graveyard is located on the western side of the island, at the bottom of a slope, west of the marshy grassland (see TN42).

4.2.1.15 Track

A grassed-over track, effectively connecting the majority of the buildings, runs from the south-east of the island in a northerly direction until it reaches the beginning of the mosaic of improved and semi-improved acid grassland at the north of the Site (see TN43).

4.2.2 Fauna

4.2.2.1 Otter

The shoreline surrounding the island was identified as providing suitable habitat for otter. The presence of freshwater on the island is also an important consideration for otter use; with both standing and running water identified, the overall island habitat is generally very suitable, despite the disturbance caused by livestock. This suitability was demonstrated, by feeding remains and other otter field signs which were found to be widespread along the island fringes, most notably the northwest corner of the island (see TN44).

4.2.2.2 Seals

No seals were recorded during the survey; however, both grey and harbour seals are known to be in the area. Much of the shoreline is suitable for use as haul-outs.

4.2.2.3 Bats

Four structures have competent roofing (see TNs 31, 32, 40, 41), but this is all in the form of corrugated sheeting, which is unsuitable for bat roosting purposes. While the stone slabs used to roof some of the older ruined cottages are still partially in place in a number of locations, these are not considered suitable for use as shelter, due being open to the elements. However, all structures on the island have apertures within their walls that could potentially be used by roosting bats. In the case of the majority of these buildings, the walls are dry-coursed and double-skinned. It has not been possible to establish if these walls have a rubble-filled core; however, the apertures do give some access further into the walls. Those buildings with evidence of pointing also have multiple apertures, where pointing has fallen out (with particular reference to the old school and the other fully-roofed buildings).

Bat foraging habitat is considered to be limited, and only the limited species found on Orkney, such as Soprano Pipistrelle, that use open space are likely to forage within the site, as there is a lack of suitable features for species commuting along linear habitats, such as hedges. This is further exacerbated by the physical separation of Faray from the surrounding islands (though commuting is not impossible from either Eday or Westray, following the topographical features).

5. Discussions and Conclusions

5.1 Nature Conservation Designations

The north, west and south of the Site partly overlaps with the Faray and Holm of Faray SAC/SSSI, which is designated for breeding grey seals. The breeding season for Scottish grey seal colonies occurs during the autumn and can extend over eight to ten weeks. A commitment has already been made not to undertake any wind farm construction works during the breeding season and significant construction phase impacts on the SAC population are therefore unlikely. However, a potential exists for indirect construction phase impacts, e.g. from changes to habitats, as well as operation phase impacts, such as if maintenance works are required within the breeding season which could result in significant disturbance.

Given the distance to the other three nature conservation designations (Wyre and Rousay Sounds, Muckle and little Green Holm and Rousay), it is deemed unlikely that development of the Site will have any direct negative impact on the qualifying interests of these designated sites. It is, however, possible that any seal movements caused by the Proposed Development, as discussed above, may have impacts on the grey seal population of the Muckle and Little Green Holm SSSI.

The Braehead LNCS (located c.1.31 km east of the Site, on the west of Eday) and Resting Hill LNCS (located c.1.66 km east of the Site, and adjacent to Braehead LNCS), as land-based designations on Eday, are also buffered from works on Faray by the Sound of Faray and have no direct habitat connectivity. It is considered unlikely that development of a wind farm on Faray will have any direct negative impact on the designated interests of these sites.

5.2 Habitats

The island habitats generally comprise fairly simple agricultural grasslands, with a small freshwater resource present (including associated marshy grassland areas). The marshy grassland of the M28 mire type that consists mainly of yellow iris, silverweed and a number of grass species is considered under SEPA (2017) guidance to be potentially moderately groundwater-dependant. If confirmed as groundwater-dependent, this vegetation could be susceptible to drying impacts if located within 250 m of deep (>1m) excavations or within 100 m of shallow (<1 m) excavations (SEPA, 2017), and this should be considered in the design of the windfarm.

The grasslands are heavily grazed over much of the island and the range of plant species is relatively limited, although these grasslands do provide suitable nesting habitat for birds, as do the walls and structures on the island also provide good nesting habitat for a range of seabirds and passerines (see Appendix 7.1 Avian Baseline Report for details). The structures were identified as having roosting potential for bat species.

In addition, the grassland, in particular the semi-improved grassland areas, contain locally important plant species such as ragged robin, marsh marigold and yellow rattle, as outlined in the Orkney LBAP (Orkney's Biodiversity Steering Group, 2018).

The surrounding shoreline is a mix of primarily hard substrate, though both sand and shingle are present in places; these habitats provide both nesting, resting and foraging habitat for the island's fauna.

5.3 Fauna

The desk study indicated the likely presence of otter using the island. The extended Phase 1 habitat survey confirmed the suitability of the island's coastline to support otter, providing a range of options for shelter and with easy access to freshwater (used to remove salt from fur; MOG, undated), both running and standing water. Otters are strictly protected as European Protected Species (EPS) and are also listed as conservation priorities on the Scottish Biodiversity List (SBL) and the Orkney LBAP. A range of ground-nesting birds appear to be present, taking advantage of a general lack of common mammalian predator species, although, as an opportunistic predator, otters may on occasion take birds, particularly during the peak bird breeding season (Chanin, 1981; Clavero, *et al*., 2003). An otter survey was conducted to ascertain otter use of the island (see Appendix 8.2).

As discussed above, the island is a known breeding site for grey seals and seal surveys were undertaken in order to assess the presence of seals outwith the breeding season, which extends approximately from mid-September to the end of November (see Appendix 8.3). The data collected outwith the breeding season will be used to compliment on-going research of breeding seals on the island with the aim to establish the potential effects on breeding seals caused by the Proposed Development.

Bat roost potential was identified within the wall structures of the buildings on Site. However, assessment of potential foraging habitat in line with BCT guidance (Collins, 2016) concluded that this is marginal. No bat records were identified in the desk study, though low numbers of bats have been recorded on the Orkney mainland and Hoy. All bat species within the UK are EPS and are protected accordingly. While bat presence on the island was considered unlikely, following discussions with NatureScot (formerly Scottish Natural Heritage, SNH) on 23 July 2019, further survey work, comprising bat activity surveys, was conducted with the aim of confirming the absence of roosting bats (see Appendix 8.4 for further details).

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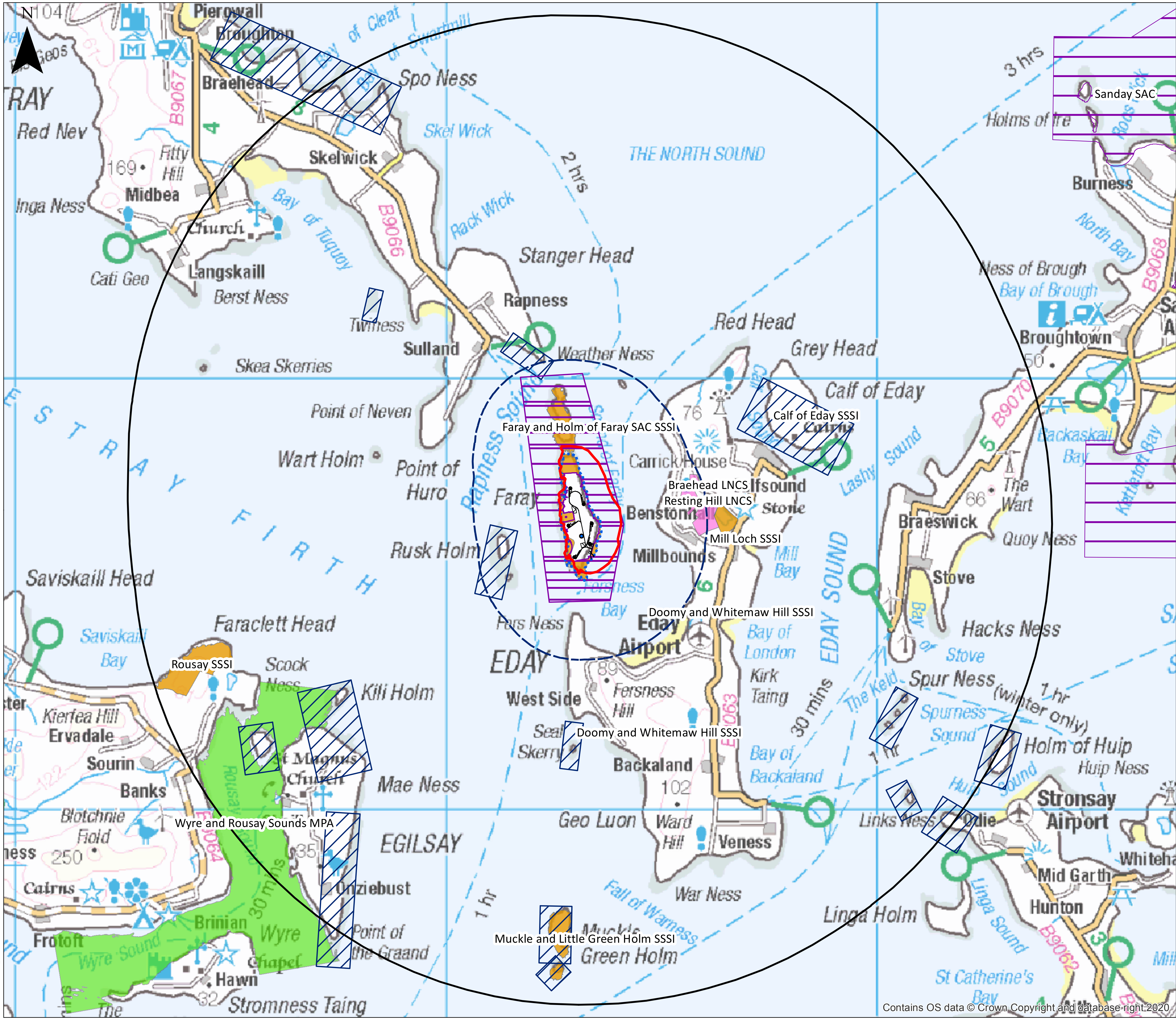
Figures

Figure 1: Site Location and Designations



KEY

- Site Boundary
- Proposed Development Area
- Buffer (2km)
- Buffer (10km)
- Turbine
- Indicative Met Mast Location
- Infrastructure
- Special Area of Conservation (SAC)
- Marine Protected Areas (MPA)
- Site of Special Scientific Interest (SSSI)
- Local Nature Conservatin Site (LNCS)
- Seal Haul-Out Sites

0 2 4 km

Scale 1:85,000 @ A3

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Orkney's Community Wind Farm Project - Faray

Figure TA8.1.1

Nature Conservation Designations

Date:	Drawn by:	Checked by:	Version:
31/05/2021	AG	MB	V1

Project Number: EDI_1678

Figure 2: Phase 1 Habitat Survey

N

Sheepfold
Point of Dogs Bones
Lavey Sound
The Point of Ring
Outflow Geo
Ferry
North A
Sound of Faray
Muller Geo
Point of Tobar
Skibbie Geo
Natural Ar
Surrie Geo
Starry Geo
Cave
Djubi Geo
Ringie Geo
The Nev
Faray
Blue Geo
Gave
Langie Geos
Gangstaiths
Well Geo
Torhellia Geo
Bight of Sandbister
Muckle Skerry
Scammalin
Little Skerry
Point of Scaraber
Geo of Crowb
Banks of Yarphey
Stack of Yarphey
Greenan Nev
Rusk Holm
Fort of Rusk Holm
Outer Skerry of
West Rinch
MHWS
MLWS

KEY

- Site Boundary
- Survey Area
- Target Note

Phase 1 Habitats

- Semi-improved acid grassland (B1.2)
- Improved acid grassland (B4)
- Marshy grassland (B5)
- Standing water (G1)
- Running Water (G2)
- Intertidal mud/sand (H1.1)
- Intertidal boulders/rocks (H1.3)
- Hard Cliff (H8.1)
- Exposed rock (inland) (I1.4.2)
- Fence (J2.4)
- Wall (J2.5)
- Dry ditch (J2.6)
- Building (J3.6)
- Road (J5)
- Graveyard

0 0.3 0.6 km

Scale 1:12,000 @ A3

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Orkney's Community Wind Farm Project - Faray

Figure TA8.1.2

Phase 1 Habitat Survey

Date:	Drawn by:	Checked by:	Version:
26/01/2021	AG	MF	V1

Project Number: EDI 1678

Annexes

Annex A: Policy Framework

Scottish Planning Policy

The Scottish Planning Policy (SPP) (Scottish Government, 2014) superseded National Planning Policy Guideline (NPPG) 14 (Natural Environment) and forms the basis for planning system decisions with respect to conserving and enhancing the natural environment.

Under 'Landscape and Natural Heritage', the SPP sets out, in addition to other points, how planning authorities should take a strategic, broader approach to landscape and natural heritage than just conserving designated or protected sites and species, by taking into account ecosystems and natural processes in the area.

In addition to the above, the SPP also outlines how planning authorities should place emphasis on the prevention of "*… further habitat fragmentation or isolation of habitats and identify opportunities to restore links which have been broke' and 'seek benefits for species and habitats from new development including the restoration of degraded habitats.*"

With regards to protected species, the SPP outlines that "*… although the presence of legally protected species is an important consideration in planning decision, they are not necessarily an absolute block on development with mitigation often needed. If protected species are on site or are likely to be affected by a proposed development their presence must be established and the requirements of the species factored in to the planning and design of the development along with any likely impact fully considered prior to the determination of the planning application.*"

The SPP concludes by stating that, "*… planning permission must not be granted for a development that would be likely to have an adverse effect on a European Protected species unless the planning authority is satisfied that there is no satisfactory alternative and the development is required for preserving public or public safety or for other imperative reasons overriding public interest (including social, economic and beneficial for the environment).*"

Planning Advice Notes (PANs) 60

National planning policy on landscape and natural heritage is supported by Planning Advice Note (PAN) 60 Planning for Natural Heritage (Scottish Government, 2008), the key elements include:

- Taking a broader approach to landscape and natural heritage than just conserving designated or protected sites and species, taking into account ecosystems and natural processes.
- Facilitating positive landscape change whilst maintaining and enhancing distinctive character.
- Seeking benefits for species and habitats from new development including the restoration of degraded habitats.
- Siting and design of development should be informed by local landscape character.
- Encouraging connectivity between habitats, through green networks.
- Protecting internationally and nationally designated habitats and species.
- Protecting and enhancing woodland and trees of high nature conservation value.

Local Development Plan

The Orkney Local Development Plan (LDP) 'sets out a vision and spatial strategy for the development of land in Orkney over the next ten to twenty years. The Plan contains the land use planning policies which Orkney Islands Council will use for determining applications' (OIC, 2017a).

The following policies from the LDP are of relevance to the Site.

Policy 9: Natural Heritage and Landscape.

"*This policy seeks to protect Orkney's natural environment from the detrimental effects of development, ensuring the conservation of this rich natural heritage for the benefit of future generations. Steps must be taken to minimise the impacts of a development on natural heritage sites and protected species during the construction, lifetime and decommissioning of any development. Where the impacts of a development on either a nationally or internationally designated natural heritage site or a protected species are uncertain, but there is sound evidence that significant irreversible damage could occur, a precautionary approach will always apply*."

Policy 12: Coastal Development.

"*The Plan supports an integrated approach to terrestrial and marine planning and the Pentland Firth and Orkney Waters Pilot Marine Spatial Plan, and any subsequent Regional Marine Plan, which will form part of the statutory marine planning regime under the Marine (Scotland) Act 2010, will be adopted as Planning Policy Advice. The Plan promotes the settlements as the focus of development requiring a coastal location and specific industrial and business allocations have been designated in close proximity to Orkney's three largest ports (Hatston, Copland's Dock and Lyness). In line with other policies in the Plan, there must be a specific locational requirement for any proposal outwith the settlements and it must be demonstrated that any environmental impacts can be satisfactorily addressed*."

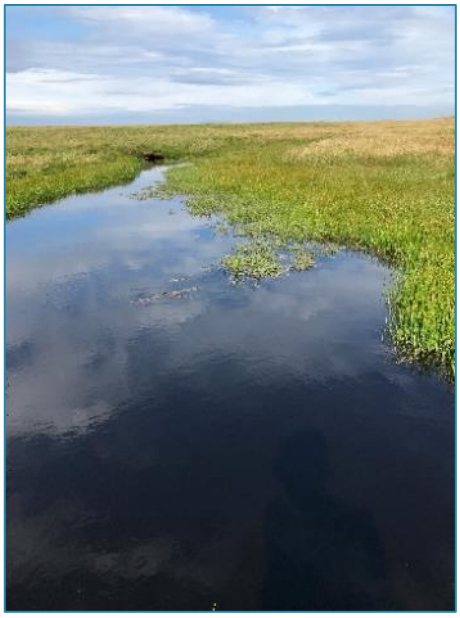
Annex B: Target Notes

Target Note	Grid Reference	Description
1	352928 1037964	 Areas of MG11 semi-improved acid grassland in the north of the Site. Yorkshire fog, creeping bent and common bent are the dominant grass species. Tufted hair-grass, purple moor-grass and mat-grass are locally frequent. Frequent forbs include silverweed, common nettle, Devil's-bit scabious, tormentil and white clover. Yarrow, marsh orchid (where this occurs, vegetation gains character of MC10 (no s/c) – but lacks range of plantains and red fescue) and common sedge were also noted in sections
2	353480 1036321	As TN1 but located in the south of the Site
3	353142 1035856	As TN1 but located in the east of the Site
4	352996 1037706	 MG11 Improved grassland which is heavily grazed by sheep. Perennial rye-grass is the dominant grass species. Associates include locally frequent Yorkshire fog, sea mayweed, silverweed, daisy, broad-leaved dock, white clover and common nettle. Areas of this section display characteristics of semi-improved grassland as in TN1

Target Note	Grid Reference	Description
5	352842 1036751	  Area of marsh/marshy grassland present close to the centre of the island and following drainage ditches to the west coast of the island; yellow iris present
6	352920 1035956	 Area of marsh/marshy grassland. Reed canary-grass is the dominant graminoid species recorded. Associates include abundant yellow iris and tufted hair-grass

Target Note	Grid Reference	Description
7	352923 1037907	 Drainage channels and pools in the north section of the island
8	352753 1037826	 Channels draining areas in the west of the island; spike-rush present
9	352782 1037749	Small pool at the north-western end of the island, just within the improved grassland - No photograph available

Target Note	Grid Reference	Description
10	352943 1037567	 Pool in the island centre, just east of the main track
11	353513 1036491	 Area of small pools at the base of the slope/top of cliffs in the east of the island

Target Note	Grid Reference	Description
12-13	353064 1035579 & 353120 1035590	 Area of pools and drainage channels in the southern end of the island
14	353052 1035740	 Large pool in the south of the island

Target Note	Grid Reference	Description
15	353065 1035797	 Additional pools in the southwest of the island
16	352928 1036199	 Small pool on the western slope of the island
17	352876 1036765	Small wetland area in marshy grassland (fed by one of the springs) - No photograph available

Target Note	Grid Reference	Description
18	353032 1036755	 Drainage ditch – one of two cutting across the island east to west
19	352964 1036625	Drainage ditch in the centre of the island, draining to the western shore
20	353083 1035645	 Drainage channel, overgrown with silverweed and other grassland species

Target Note	Grid Reference	Description
21	353255 1035730	 Sandy beach in the southeast of the island. A further area of sand is located on the west of the island
22	352838 1036062	 Sandy beach on south-west of island
23	352856 1038195	

Target Note	Grid Reference	Description
		 Cliffs and Rocky outcrops follow much of the island perimeter – including a number of inlets
24	352896 1036868	 Rocky outcrop in the island centre/west
25	352822 1038067	 Stone wall running around the northern edge of the island

Target Note	Grid Reference	Description
26	353073 1037168	 Wire fencing.
27	352952 1037669	 “Quoy”, at north end of island; stone slabbed roof c25% intact; dry-coursed thick stone walls
28-29	352975 1037621 & 352983 1037532	

Target Note	Grid Reference	Description
		 "Cott", >90% of stone slab roof still in place; wooden eaves/trusses degrading; dry-coursed thick stone walls
30	352999 1037271	Ruined structure south of TN28-29
31	353080 1037061	  "School", 100% coverage with metal roof to stone-built building; plastic corrugated sheet roof to wooden lean-to shed. School pointing is "gappy", leaving many apertures between the stone coursing. Building appears to be used as a store

Target Note	Grid Reference	Description
32	353110 1036953	 "Hamar", 100% coverage by corrugated (cement fibre) sheeting; pointing missing in many places, with dry-coursed stone construction
33	353123 1036753	 "Roadside", c.50% of roofing present, stone slabs; mixture of pointing and open dry-coursed walls
34	353263 1036822	Small stone structure/farm outbuilding – no roof building disused. -No photographs available
35	352995 1036767	Small roofless stone structure/farm outbuilding opposite roadside (YN33). No photograph available
36, 37, 38	352909 1036569 & 352854 1036565 & 352822 1036561	 'Windywall' – a number of ruined buildings with no complete roofing

Target Note	Grid Reference	Description
39	352890 1036302	 Ruined, roof-less building in the southwest of the island
40	353330 1035877	 Building near jetty, at south-eastern end of island; 100% coverage by rusting corrugated sheeting roof; some pointing, but mainly dry-coursed stone construction with many apertures
41	353295 1035910	 “Ness”, 100% coverage by corrugated (possibly cement fibre) sheeting; pointing missing in places, with many apertures

Target Note	Grid Reference	Description
42	352842 1036751	 Farm track run north to south through the island centre, generally grassed
43	352723 1036692	 Walled graveyard
44	352745 1037931	 Otter feeding remains

Annex C: Species List

Common Name	Scientific Name
Annual meadow grass	*Poa annua*
Bird's-foot-trefoil	*Lotus corniculatus*
Bog asphodel	*Narthecium ossifragum*
Bogbean	*Menyanthes trifoliata*
Bottle sedge	*Carex rostrata*
Broad-leaved dock	*Rumex obtusifolius*
Common bent	*Agrostis capillaris*
Common daisy	*Bellis perennis*
Common dandelion	*Taraxacum officinale* agg.
Common nettle	*Urtica dioica*
Creeping bent	*Agrostis stolonifera*
Creeping thistle	*Cirsium arvense*
Cuckoo flower	*Cardamine pratensis*
Curled dock	*Rumex crispus*
Horsetail	*Equisetum* sp.
Marsh grass of Parnassus	*Parnassia palustris*
Marsh marigold	*Caltha palustris*
Marsh ragwort	*Jacobaea aquatica*
Mat-grass	*Nardus stricta*
Northern marsh orchid	*Dactylorhiza purpurella*
Perennial ryegrass	*Lolium perenne*
Primrose	*Primula vulgaris*
Purple moor-grass	*Molinia caerulea*
Ragged-robin	*Silene flos-cuculi*
Reed canary-grass	*Phalaris arundinaeca*
Sea mayweed	*Matricaria maritima*
Silverweed	*Potentilla anserina*
Sphagnum (aka bog-moss)	*Sphagnum* sp.
Spike-rush	*Eleocharis* sp.
Spring squill	*Scilla verna*
Sweet vernal-grass	*Anthoxanthum odoratum*
Thrift	*Armeria maritima*
Tormentil	*Potentilla erecta*
Tufted hair-grass	*Deschampsia caespitosa*
White clover	*Trifolium repens*
Yellow rattle	*Rhinanthus minor*

Common Name	Scientific Name
Yellow iris	*Iris pseudacorus*
Yorkshire fog	*Holcus lanatus*
Intertidal species	
Tar lichen	*Verrucaria maura*
Bladder wrack	*Fucus vesiculosus*
coralline alga	*Corallina officinalis*
Egg or knotted wrack	*Ascophyllum nodosum*
Gut weed	*Enteromorpha intestinalis*
Kelp species	*Laminaria sp.*
Serrated wrack	*Fucus serratus*

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