Environmental Impact Assessment Report
Volume 3, Appendix 23.2: Habitats and Vegetation Survey Report

MarramWind Offshore Wind Farm

December 2025

MarramWind

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Approved by:	MarramWind Limited

Contents

1. Introduction

1.1 Purpose of this baseline report

1.1.1.1 This Appendix presents baseline habitat information relevant to the Project. This Appendix should be read in conjunction with **Volume 1, Chapter 4: Project Description** for full details of the Project.

1.1.1.2 Baseline data has been collected from a desk-based review of existing information and by carrying out field surveys. Specifically, this Appendix presents the methods and results of the Phase 1 habitat survey in relation to the Onshore Red Line Boundary, confirmed in May 2025, plus a 250 metres (m) survey buffer. The combined areas assessed are hereafter referred to as the 'Ecological Survey Area' (ESA).

1.2 Supporting documents

1.2.1.1 This Appendix supports the Ecological Impact Assessment (**Volume 1, Chapter 23: Terrestrial Ecology and Ornithology**) in addition to the following Appendices:

- **Appendix 23.1: Ecological Desk Study**; and
- **Appendix 23.3: Protected Species Survey Report**.

1.2.1.2 This Appendix is supported by the following figures:

- **Figure 1: Ecological survey area**;
- **Figure 2: Phase 1 habitat survey results**; and
- **Figure 3: National Vegetation Classification (NVC) survey and Groundwater Dependent Terrestrial Ecosystems (GWDTE) results.**

2. Methodology

2.1 Desk study

2.1.1.1 This Appendix should be read in conjunction with **Appendix 23.1**, which provides detailed methodologies and results relating to the desk-based ecological study.

2.1.2 Aerially mapped Phase 1 habitat survey

2.1.2.1 Aerial mapping was collected in October 2022 at an early stage in the development of the Project. Specialist photogrammetric software was used to process the aerial imagery into a georeferenced ortho-mosaic, Digital Surface Model, and high-density point cloud. A remote-sensed digital Phase 1 habitat survey was undertaken to map habitat types using Phase 1 habitat criteria across the ESA. These data provided an early appraisal of the habitat types across the ESA.

2.1.2.2 The aerial mapping data was then ground-truthed to establish correct species composition and subsequent habitat classification, as detailed in the Phase 1 habitat survey in **Section 2.2**.

2.2 Field surveys

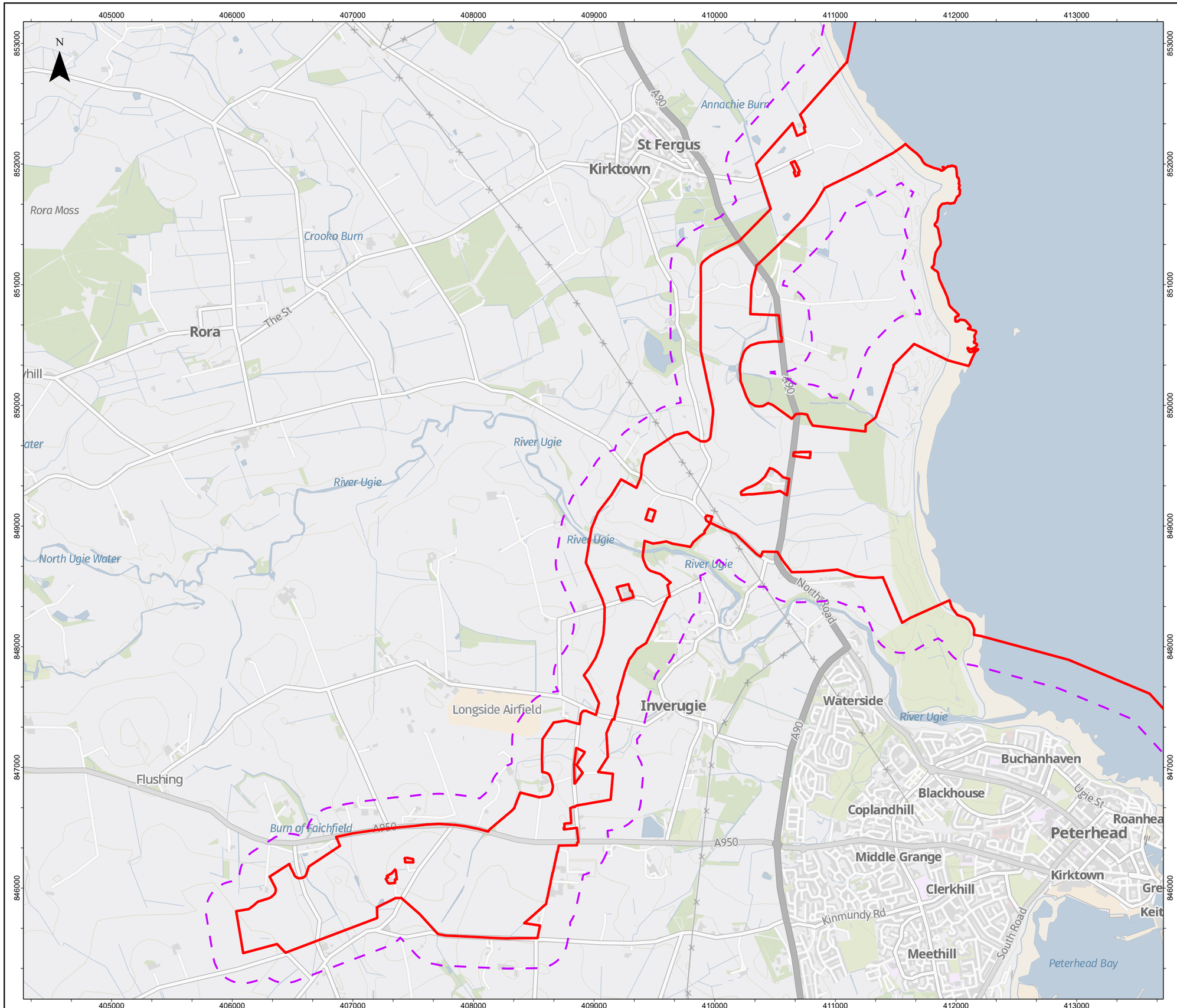
2.2.1 Phase 1 habitat survey

Survey area

2.2.1.1 Phase 1 habitat surveys, informed by the desk study and aerial mapping, were undertaken within the ESA (**Figure 1**).

2.2.1.2 The following zones for assessment are overlain on **Figure 1** and summary details of habitats and vegetation presence provided by zone in **Section 3.2**:

- Scotstown landfall zone and associated export cable corridor;
- Lunderton North landfall zone and associated export cable corridor;
- Lunderton South landfall zone and associated export cable corridor;
- onshore export cable corridor zone A;
- onshore substation zone; and
- onshore export cable corridor zone B.



Red Line Boundary

Ecological Survey Area (250m Buffer)

0 0.5 1 1.5 Kilometres

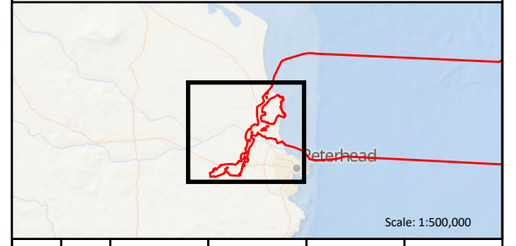


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Figure 1 Ecological Survey Area

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Overview

2.2.1.3 There were two components to the field surveys; the Phase 1 habitat survey and National Vegetation Classification (NVC) which also included identification of potential GWDTEs. The methods are outlined in detail below and follow best practice guidance produced by the Chartered Institute of Ecology and Environmental Management (CIEEM) (CIEEM, 2018) and the British Standards Institution (British Standards Institution, 2013).

2.2.1.4 Phase 1 habitat surveys were conducted between April 2023 and August 2024. Habitats were described and mapped following the standard Phase 1 habitat survey methodology prescribed by the Joint Nature Conservation Committee (JNCC) (JNCC, 2010). Phase 1 habitat survey is a standard technique for classifying and mapping British habitats. The dominant plant species are recorded, and habitats are classified according to their vegetation types.

2.2.1.5 Surveys were conducted in the field on foot, access permitting. Distinct habitats were mapped and identified, and any features of interest were subjected to a more detailed description in the form of a Target Note and recorded as individual point locations using Geographical Information System (GIS) software. Once recorded, the data was later quality assured utilising desktop GIS software.

2.2.1.6 The surveys were 'extended' to classify the suitability of terrestrial and aquatic habitats and to record any incidental signs of protected and priority species within the ESA (see **Appendix 23.3**).

2.2.1.7 All surveys were carried out by WSP ecologists of 'Capable' or above competency, as per the CIEEM Competency Framework (CIEEM, 2022).

2.2.1.8 The scientific names for plant species follow those in the New Flora of the British Isles (Stace, 2017), unless stated otherwise.

2.2.1.9 Following data collection, habitats were assessed for their potential to be Annex 1 habitats under The Habitats Directive (1992), Scottish Biodiversity List (SBL) (NatureScot, 2020) priority habitats and important habitats for biodiversity in the north-east of Scotland.

2.2.2 National Vegetation Classification survey

2.2.2.1 The NVC is a detailed classification system for mapping and recording vegetation communities using plant species presence and abundance. The NVC survey was carried out in accordance with standard methodology and guidelines (Rodwell, 1992; Rodwell, 1995, Rodwell, 2000; and Rodwell, 2006). During the survey, which was undertaken between 3-7 June 2024, NVC communities were mapped in the field by applying polygons around visible boundaries of homogenous vegetation. Where readily identifiable, stands were classified and mapped at sub-community level.

2.2.3 Groundwater Dependent Terrestrial Ecosystems

2.2.3.1 In addition, using the NVC survey data, a high-level assessment of recorded communities potential to indicate GWDTEs was undertaken, following Scottish Environmental Protection Agency (SEPA) Guidance (SEPA, 2025).

2.2.4 Limitations and assumptions

2.2.4.1 Ecological surveys are limited by factors which affect the presence of species, such as the time of year. The absence of species should not be taken as conclusive proof that the species is not present or that it will not be present in the future.

2.2.4.2 Due to land access restrictions small parcels within the ESA could not be surveyed and therefore no ecological information is available. However, by using desk study data, aerial imagery, existing datasets and surveys from nearby land parcels, it is considered that an accurate assessment of the habitats present within the ESA was possible.

3. Results

3.1 Phase 1 habitat field survey

3.1.1.1 Phase 1 habitat types within the ESA, recorded during the field surveys and review of aerial imagery, are illustrated on **Figure 2**.

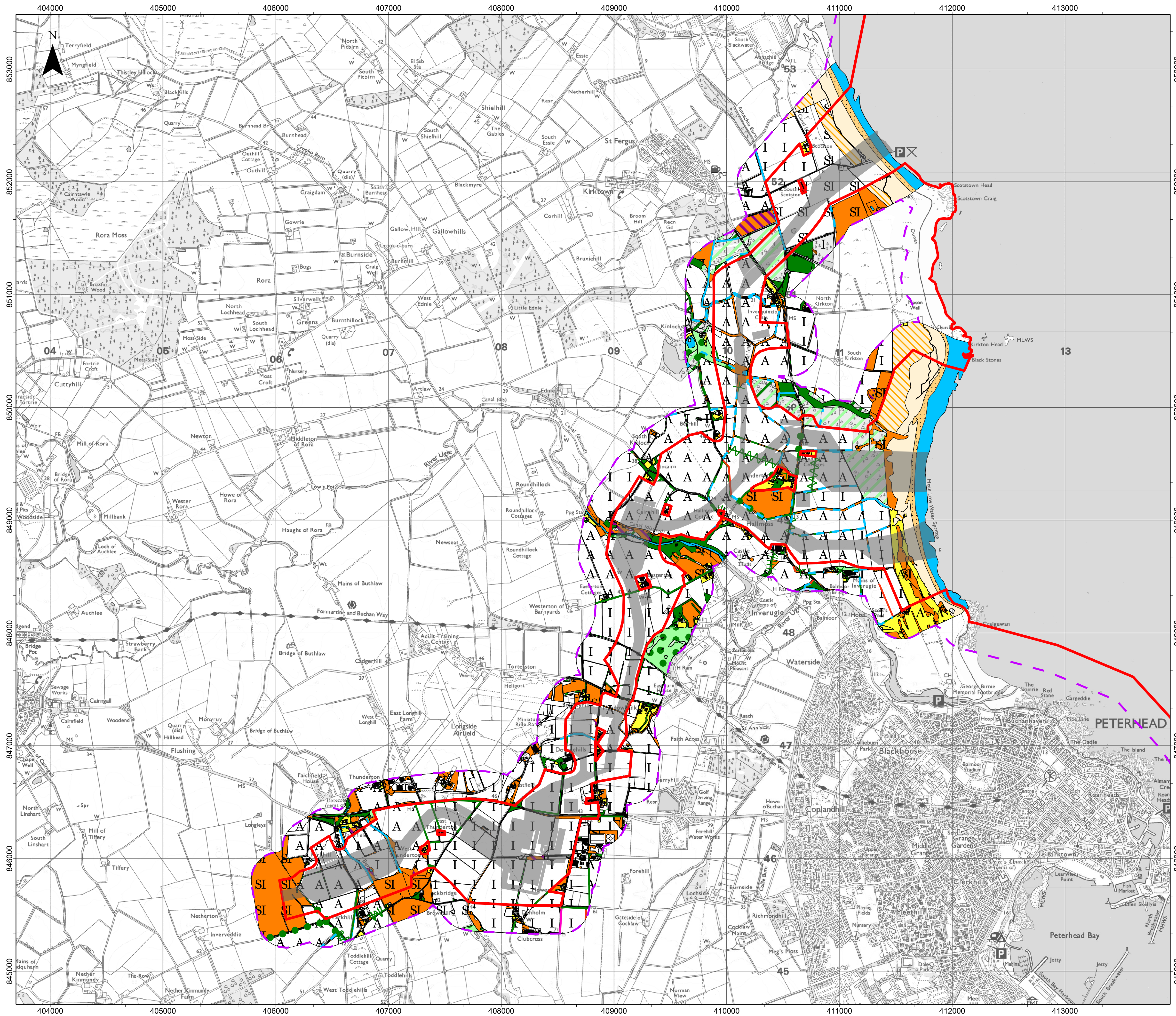
3.1.1.2 Target noted features recorded during surveys are presented in **Appendix A – Target Notes**.

3.1.2 Phase 1 habitat survey results – area-based calculations

3.1.2.1 A total of 28 habitats were recorded as area-based habitats across the ESA, which are listed in **Table 3.1**, along with the total area covered in the ESA by each habitat type and percentage of cover.

3.1.2.2 A high-level summary of habitats recorded within each zone is provided.

3.1.2.3 Full descriptions of the area-based habitats recorded within the ESA are also provided in **Table 3.1**, grouped into broad habitat categories and listed in order of their alpha-numeric codes, as depicted by the JNCC survey methodology.



Red Line Boundary
Project infrastructure
Ecology Study Area (250m Buffer)

Phase 1 Habitat (Area)

- A1.1.1: Broadleaved Woodland - Semi-natural
- A1.1.2: Broadleaved Woodland - Plantation
- A1.2.2: Coniferous Woodland - Plantation
- A1.3.1: Mixed Woodland - Semi-natural
- A1.3.2: Mixed Woodland - Plantation
- A2.1: Scrub- Dense/Continous
- A2.2: Scrub- Scattered
- A3.3: Parkland and Scattered Trees- Mixed
- A4.2: Recently-felled Woodland - Coniferous
- SI SI B2.2: Neutral Grassland - Semi-improved
- I I B4: Improved Grassland
- B5: Marsh/Marshy Grassland
- SI SI B6: Poor Semi-improved Grassland
- C3.1: Tall Ruderal
- F2.1: Marginal Vegetation
- G1: Standing Water
- G2: Running Water
- H1.1: Intertidal - Mud/Sand
- H6.5: Dune Grassland
- H6.8: Open Dune
- C C H8.4: Coastal Grassland
- A A J1.1: Arable
- A A J1.2: Amenity Grassland
- J1.3: Ephemeral/Short Serennial
- J3.6: Buildings
- J4: Bare Ground
- J5: Other Habitat

Phase1 Habitat (Linear)

- A2.1: Scrub- Dense/Continous
- A2.2: Scrub- Scattered
- A3.1: Parkland and scattered trees- broad-leaved
- A3.2: Parkland and scattered trees- coniferous
- A3.3: Parkland and scattered trees- mixed
- B4: Improved grassland
- F2.1: Margina vegetation
- G1: Standing water
- G2.1: Running water - eutrophic
- G2.2: Running water - mesotrophic
- G2: Running water
- J2.1.1: Intact hedge native species-rich
- J2.1.2: Intact hedge native species poor
- J2.2.1: Defunct hedge native species-rich
- J2.2.2: Defunct hedge native species poor
- J2.3.1: Hedge and trees native species-rich
- J2.3.2: Hedge and trees native species poor
- J2.4: Fence
- J2.5: Wall
- J2.6: Dry ditch
- Hardstanding

0 0.5 1 1.5 Kilometres

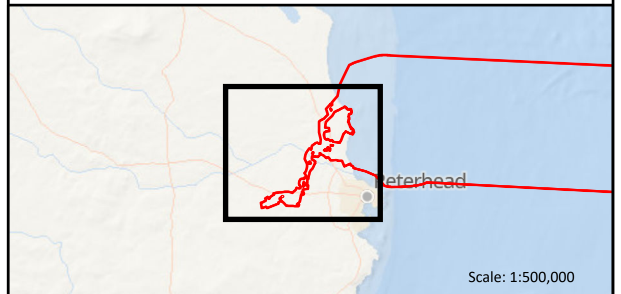


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Figure 2 Phase 1 Habitat Survey Results Overview

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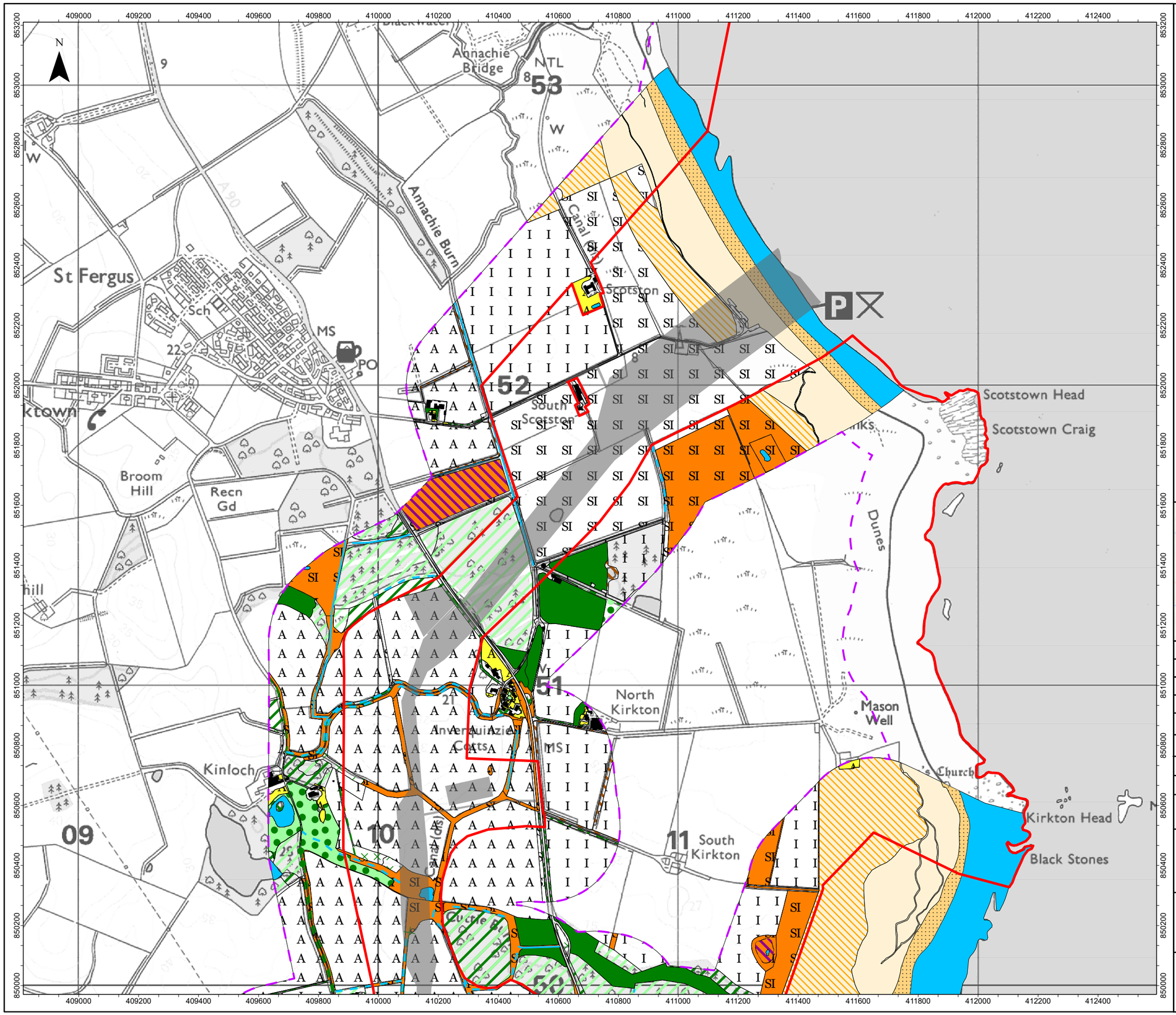

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Project infrastructure
Ecology Study Area (250m Buffer)

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- A2.2: Scrub- Scattered
- A3.3: Parkland and Scattered Trees- Mixed
- A4.2: Recently-felled Woodland - Coniferous
- B2.2: Neutral Grassland - Semi-improved
- B4: Improved Grassland
- B5: Marsh/Marshy Grassland
- B6: Poor Semi-improved Grassland
- C3.1: Tall Ruderal
- F2.1: Marginal Vegetation
- G1: Standing Water
- G2: Running Water
- H1.1: Intertidal - Mud/Sand
- H6.5: Dune Grassland
- H6.8: Open Dune
- H8.4: Coastal Grassland
- J1.1: Arable
- J1.2: Amenity Grassland
- J1.3: Ephemeral/Short Serennial
- J3.6: Buildings
- J4: Bare Ground
- J5: Other Habitat

Phase1 Habitat (Linear)

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- J2.4: Fence
- J2.5: Wall
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- Hardstanding

0 0.5 Kilometres

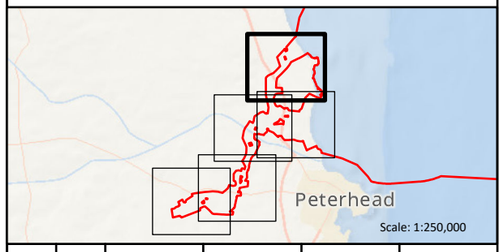

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Figure 2 Phase 1 Habitat Survey Results
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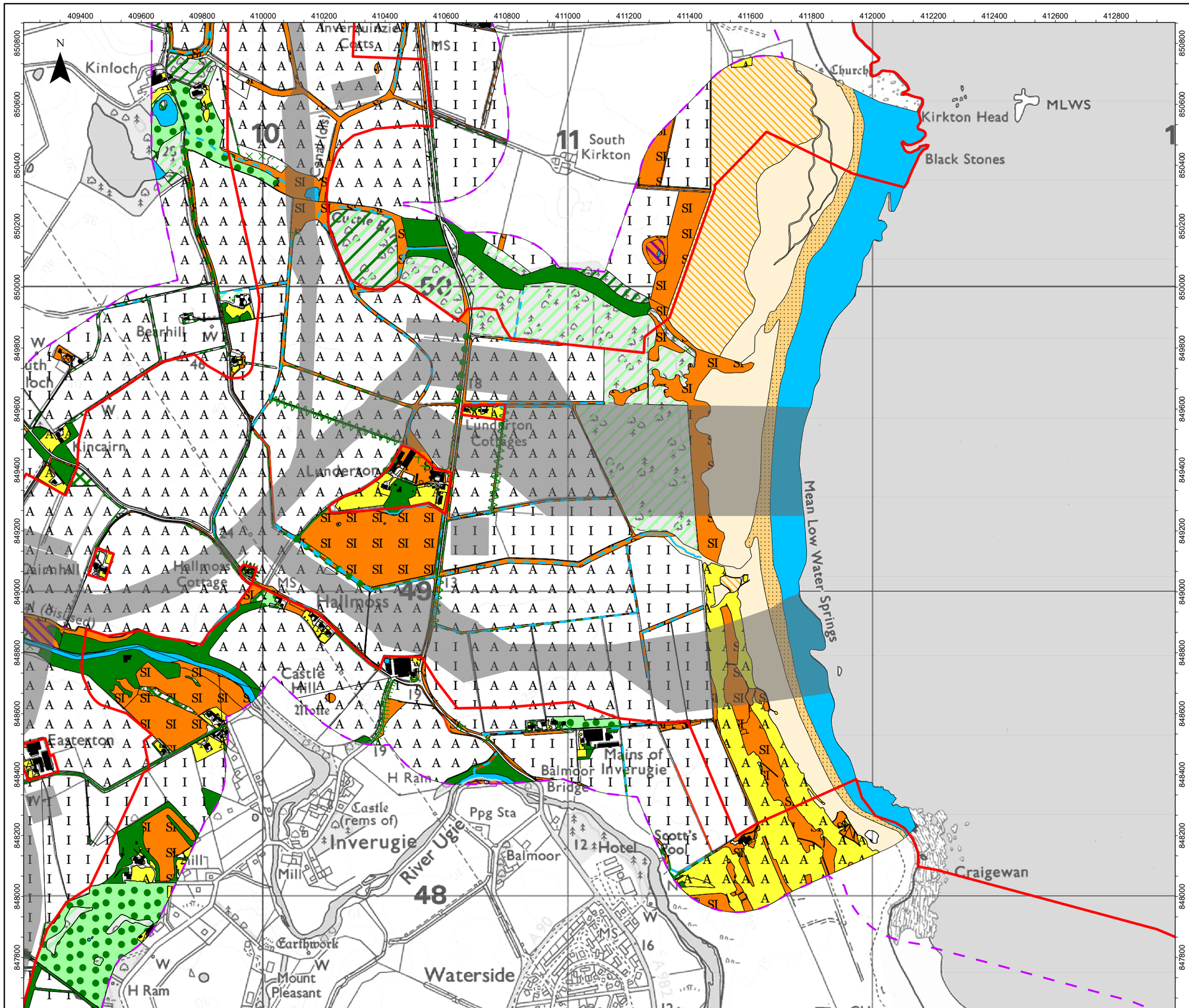

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- J2.4: Fence
- J2.5: Wall
- J2.6: Dry ditch
- Hardstanding

0 0.5 Kilometres

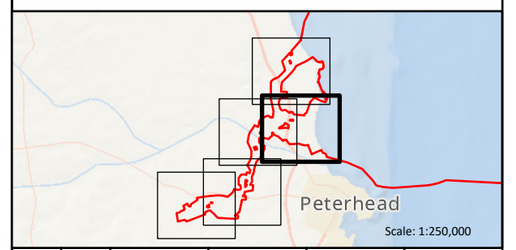

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Figure 2 Phase 1 Habitat Survey Results
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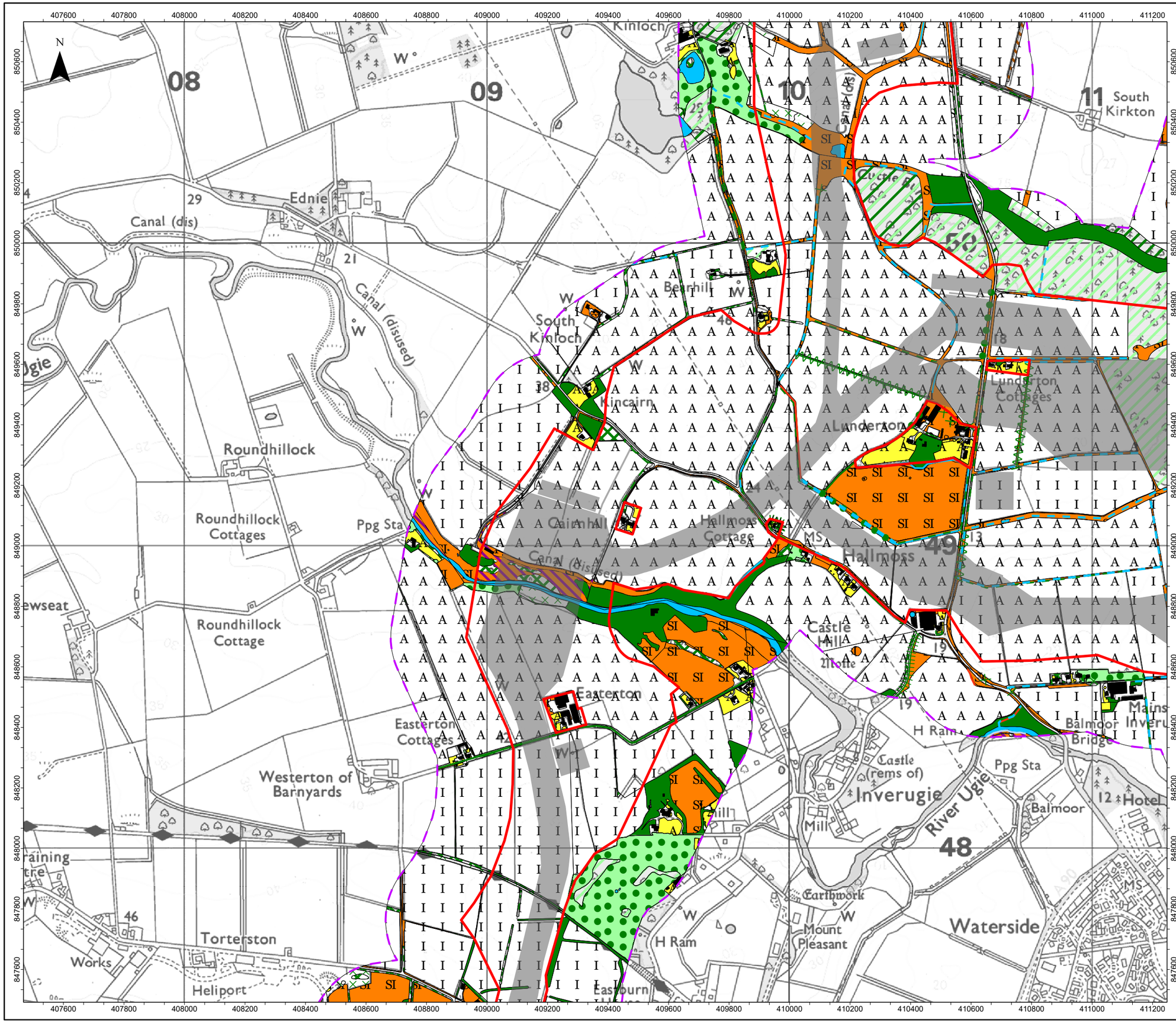

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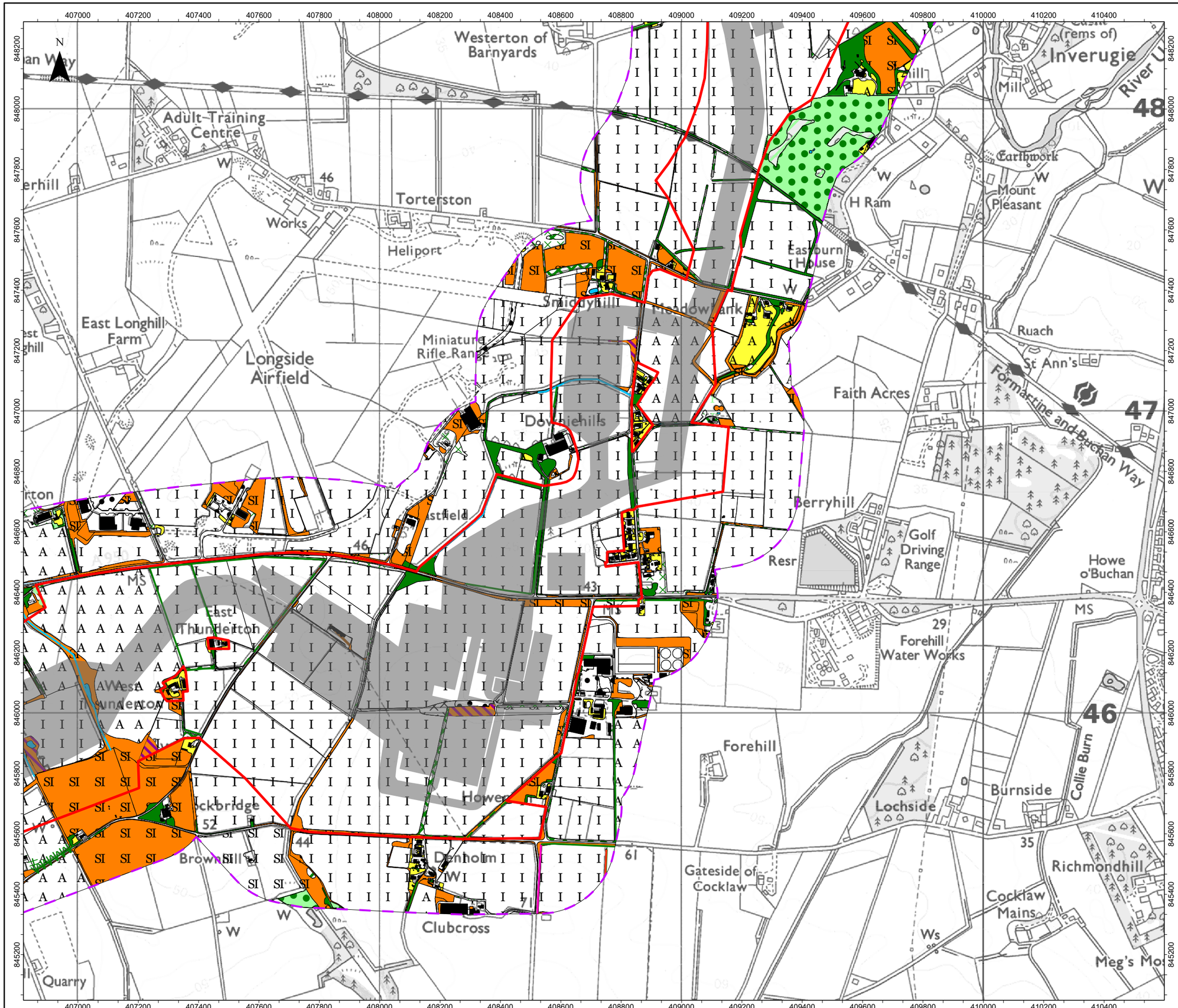

- Red Line Boundary
- Project infrastructure
- Ecology Study Area (250m Buffer)

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- A1.1.1: Broadleaved Woodland - Semi-natural
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- J4: Bare Ground
- J5: Other Habitat

Phase1 Habitat (Linear)

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0 — 0.5 Kilometres

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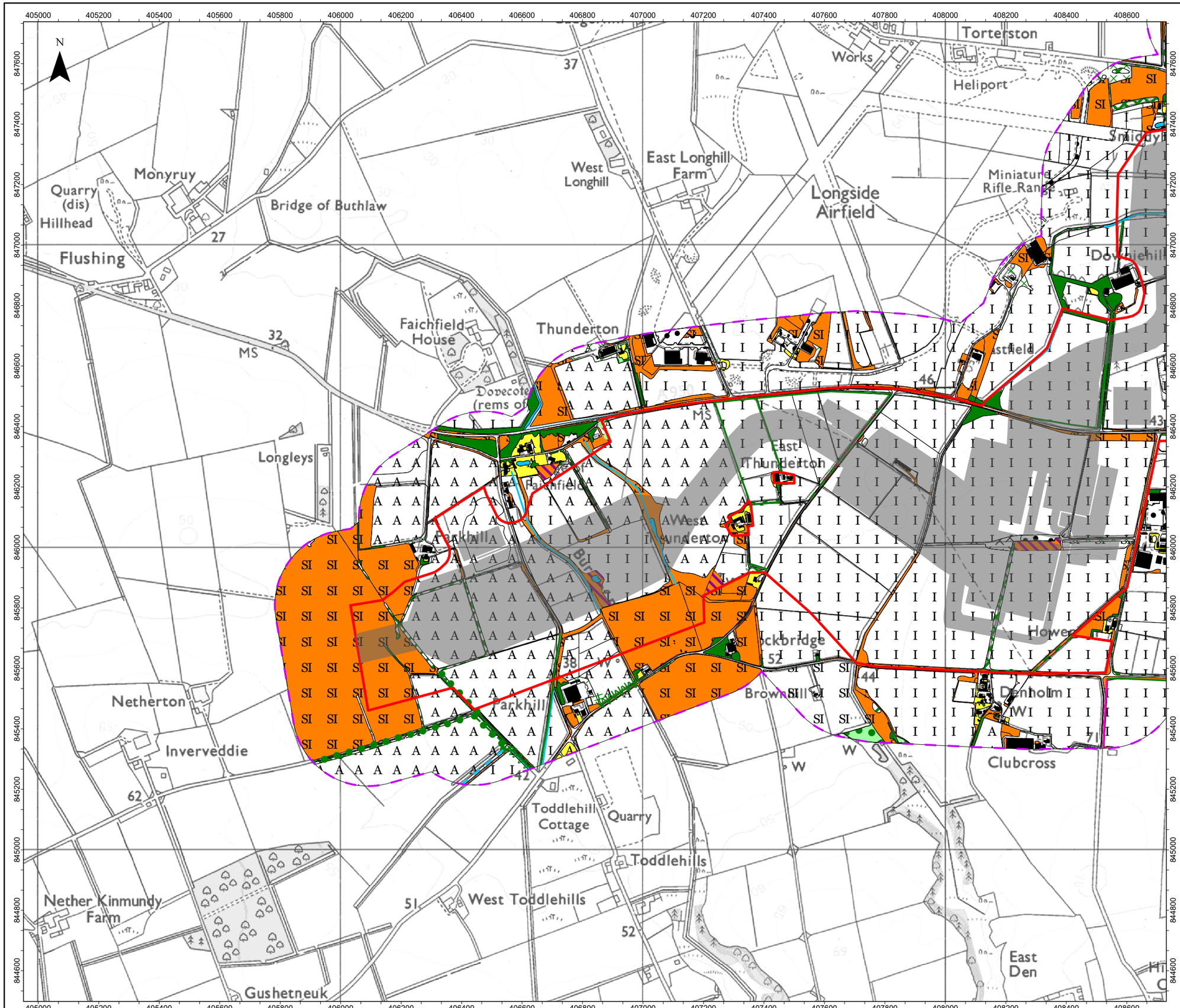

- Red Line Boundary
- Project infrastructure
- Ecology Study Area (250m Buffer)

Phase 1 Habitat (Area)

- A1.1.1: Broadleaved Woodland - Semi-natural
- A1.1.2: Broadleaved Woodland - Plantation
- A1.2.2: Coniferous Woodland - Plantation
- A1.3.1: Mixed Woodland - Semi-natural
- A1.3.2: Mixed Woodland - Plantation
- A2.1: Scrub- Dense/Continous
- A2.2: Scrub- Scattered
- A3.3: Parkland and Scattered Trees- Mixed
- A4.2: Recently-felled Woodland - Coniferous
- B2.2: Neutral Grassland - Semi-improved
- B4: Improved Grassland
- B5: Marsh/Marshy Grassland
- B6: Poor Semi-improved Grassland
- C3.1: Tall Ruderal
- F2.1: Marginal Vegetation
- G1: Standing Water
- G2: Running Water
- H1.1: Intertidal - Mud/Sand
- H6.5: Dune Grassland
- H6.8: Open Dune
- H8.4: Coastal Grassland
- J1.1: Arable
- J1.2: Amenity Grassland
- J1.3: Ephemeral/Short Serennial
- J3.6: Buildings
- J4: Bare Ground
- J5: Other Habitat

Phase1 Habitat (Linear)

- A2.1: Scrub- Dense/Continous
- A2.2: Scrub- Scattered
- A3.1: Parkland and scattered trees- broad-leaved
- A3.2: Parkland and scattered trees- coniferous
- A3.3: Parkland and scattered trees- mixed
- B4: Improved grassland
- F2.1: Margina vegetation
- G1: Standing water
- G2.1: Running water - eutrophic
- G2.2: Running water - mesotrophic
- G2: Running water
- J2.1.1: Intact hedge native species-rich
- J2.1.2: Intact hedge native species poor
- J2.2.1: Defunct hedge native species-rich
- J2.2.2: Defunct hedge native species poor
- J2.3.1: Hedge and trees native species-rich
- J2.3.2: Hedge and trees native species poor
- J2.4: Fence
- J2.5: Wall
- J2.6: Dry ditch
- Hardstanding

0 — 0.5 Kilometres

REV	REV DATE	GIS CREATOR	GIS REVIEWER	TECHNICAL CHECKER	TECHNICAL APPROVER
	dd/mm/yyyy	--	--	--	--
2	22/09/2025	EH	LT	AM	MW
1	25/07/2025	EH	LT	AM	MW

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MarramWind DRAWING NUMBER	MAR-GEN-ENV-MAP-WSP-000320
DATUM	OSGB 1936
PROJECTION	British National Grid
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PAGE SIZE	A3

PROJECT TITLE
MarramWind Offshore Wind Farm

DRAWING TITLE

Figure 2 Phase 1 Habitat Survey Results
Sheet 5
Environmental Impact Assessment Report
Appendix 23.2

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Table 3.1 Phase 1 habitat survey results for area-based habitats within 250m of the Onshore Red Line Boundary

Phase 1 habitat	Total area per habitat type (hectares)	Percentage cover per habitat type (%)
A1.1.1 Broadleaved woodland – semi natural	55.3	2.7%
A1.1.2 Broadleaved woodland – plantation	55.2	2.7%
A1.2.1 Coniferous woodland – semi natural	0.6	0.03%
A1.2.2 Coniferous woodland – plantation	4.5	0.2%
A1.3.1 Mixed woodland- semi natural	22.9	1.1%
A1.3.2 Mixed woodland – plantation	0.02	0.001%
A2.1 Dense / continuous scrub	17.6	0.9%
A2.2 Scattered scrub	15	0.7%
A3.3 Mixed parkland / scattered trees	2.6	0.1%
A4.2 Coniferous woodland – recently felled	0.45	0.02%
B4 Improved grassland	401	19.4%
B5 Marshy grassland	26.3	1.3%
B6 Poor semi-improved grassland	603	29.1%
C3.1 Tall ruderal	10.5	0.5%
G1 Standing water	58.7	2.8%
G2 Running water	5.1	0.2%
H1.1 Mud / Sand	25.9	1.3%
H6.5 Dune grassland	72.7	3.5%
H6.8 Open dune	0.67	0.03%
H8.4 Coastal grassland	48.4	2.3%
J1.1 Arable	479	23.1%
J1.2 Amenity grassland	52.1	2.5%

Phase 1 habitat	Total area per habitat type (hectares)	Percentage cover per habitat type (%)
J4 Bare ground	5.1	0.3%
J5 Hardstanding	86.7	4.2%

Scotstown landfall zone

3.1.2.4 The following broad habitat types dominate the Scotsown landfall zone. In the east, an intertidal area grades into open dune habitats, both mobile and vegetated, with occasional dune slack communities. Beyond the dunes, to the west, are improved and poor, semi-improved fields and mature commercial coniferous plantation. Smaller habitat parcels include a small area of broadleaved woodland on the periphery of the commercial conifer plantation and a series of small ditches / field drains. The Annochie Burn runs north to south through the landfall zone, through the conifer plantation parcels. Beyond the conifer plantations and to the west of the A90 are large arable or improved pasture fields, with occasional shelter belts.

Lunderton North landfall zone

3.1.2.5 The following habitat types dominate the Lunderton North landfall zone. In the east, an intertidal area grades into open dune habitats, both mobile and vegetated. Beyond the dunes, to the west, is a large and mature commercial coniferous plantation with broadleaf riparian woodland either side of the Cuttie Burn watercourse. North and south of the conifer plantation are large arable fields. Minor habitats include a small pocket of semi-improved grassland and a series of small field drains / ditches around fields to east and west of the A90.

Lunderton South landfall zone

3.1.2.6 The following broad habitat types dominate the Lunderton South landfall zone. In the east, an intertidal area grades into open dune habitats, both mobile and vegetated. Beyond the dunes, to the west are large improved or arable fields and a semi-improved field to the west of the A90, with occasional tree lined edges along roads or hedgerows. Minor habitats include a small pocket of broadleaved woodland and a series of small field drains / ditches to east and west of the A90. There is a large contiguous area of broadleaf and riparian woodland (including ancient woodland) and open areas of marshy grassland and semi-improved grassland (potentially groundwater dependent) along the River Ugie.

Onshore export cable corridor zone A

3.1.2.7 The onshore export cable corridor zone A is dominated by habitats associated with the intensive agricultural land management of the ESA. Arable crop land dominated, with smaller areas of improved grassland also recorded. Field boundaries are largely comprised of species-poor hawthorn hedgerows in various states of intactness. Occasional shelter belts and tree lined fields were also recorded.

3.1.2.8 The main area of ecological diversity is the River Ugie and its associated riparian broadleaved wood and scrub, as discussed under the Lunderton South landfall zone.

Onshore substation zone

3.1.2.9 The onshore substation zone is dominated by habitats associated with the intensive agricultural land management of the ESA, comprising improved grassland. Small strips of semi-improved grassland, ruderal vegetation or marshy grassland are present along the boundary, in addition to species-poor hawthorn hedgerows in various states of intactness. As marshy grassland has potential for groundwater dependency, these areas were classified to NVC level.

Onshore export cable corridor zone B

3.1.2.10 The onshore export cable corridor zone B is dominated by habitats associated with the intensive agricultural land management of the ESA, comprising improved grassland or arable fields. Small strips of semi-improved grassland, ruderal vegetation or marshy grassland are present along the boundary, in addition to species-poor hawthorn hedgerows in various states of intactness, as well as occasional treelines along field boundaries. As marshy grassland has potential for groundwater dependency, these areas were classified to NVC level.

Habitat descriptions

Open dune

3.1.2.11 An immobile / fore dune habitat was recorded between the North Sea and the fixed dune habitat further inland. Lyme grass (*Leymus arenarius)* and sand couch (*Sporobolus virginicus*) were recorded as abundant, while sea rocket (*Cakile maritima)* and marram grass (*Ammophila arenaria)* were recorded as occasional.

3.1.2.12 Fixed dune habitat was recorded further inland. Marram grass was dominant, while cock's-foot and common knapweed (*Centaurea nigra*) were recorded as abundant. Common bird's-foot trefoil (*Lotus corniculatus)*, common yarrow, white clover (*Trifolium repens)*, twisted moss (*Syntrichia ruralis)* and lady's bedstraw (*Galium verum)* were recorded as frequent. Mouse-eared chickweed (*Cerastium fontanum), (Pleurozium schreberi)*, ribwort plantain and hawkbit (*Leontodon spp*.) were recorded as occasional, and lesser meadow-rue (*Thalictrum minus)*, hawthorn (*Crataegus monogyna)*, meadow vetchling (*Lathyrus pratensis*), heath bedstraw (*Galium saxatile*), harebell (*Campanula rotundifolia)*, cow parsley (*Anthriscus sylvestris)* and primrose (*Primula vulgaris*) were rare.

Woodland and scrub

Scrub – dense / continuous

3.1.2.13 This habitat type was recorded throughout the ESA along field boundaries and was dominated by gorse (*Ulex sp*.)

Scrub – scattered

3.1.2.14 This habitat type was recorded throughout the ESA along field boundaries and was dominated by gorse, bramble (*Rubus fruticosus agg*.) and hawthorn.

Parkland and scattered trees – broadleaved

3.1.2.15 This habitat type was recorded throughout the ESA along field boundaries and was dominated by ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*), hawthorn, willow

(*Salix sp.*), elm (*Ulmus sp.*), alder (*Alnus glutinosa)*, rowan (*Sorbus aucuparia)* and beech (*Fagus sylvatica)*.

Swamp, marginal and inundation

Marginal vegetation

3.1.2.16 One small strip of marginal vegetation was recorded along the bank top of the River Ugie. Other small strips were recorded along ditches in the north of the ESA.

Open water

Running water

3.1.2.17 Ditches with water recorded throughout the ESA were recorded as running water.

Boundaries

Intact hedge native species-rich

3.1.2.18 This habitat type was recorded twice along field boundaries in the northern ESA along field boundaries and was dominated by hawthorn, beech, elm, blackthorn (*Prunus spinosa)*, elder (*Sambucus nigra)* and ash. Ground flora included common nettle (*Urtica dioica)* and cleavers (*Galium aparine)*. These hedgerows were recorded with few gaps and measured approximately 1.5m high and 1m wide.

Intact hedge native species-poor

3.1.2.19 This habitat type was recorded throughout the ESA along field boundaries and was dominated hawthorn and blackthorn. These hedgerows were recorded with few gaps and measured approximately 1.5m high and 1-3m wide. Signs of management, such as recent flailing, was recorded frequently.

Defunct hedge native species-rich

3.1.2.20 This habitat type was recorded twice in the northern ESA along field boundaries and was dominated by hawthorn, elm, blackthorn and ash. These hedgerows were recorded with gaps and measured approximately 5m high and 5m wide.

Defunct hedge native species-poor

3.1.2.21 This habitat type was recorded throughout the ESA along field boundaries and was dominated by hawthorn and blackthorn. These hedgerows were recorded with gaps and measured on average approximately 1.5m high and 1-4m wide. Signs of management, such as recent flailing, and cattle poaching was recorded frequently.

Wall

3.1.2.22 Dry stone walls were recorded along field boundaries.

Dry ditch

3.1.2.23 Dry ditches were recorded frequently across the ESA along field boundaries.

Woodland and scrub

Broad-leaved woodland – semi-natural

3.1.2.24 Broadleaved woodland was recorded along the length of the River Ugie, a large contiguous stretch of which was identified as Ancient Woodland (see **Appendix 23.1**).

3.1.2.25 Mature sycamore *Acer pseudoplatanus*, ash and beech were recorded as abundant, while cock's-foot, common nettle and Yorkshire fog were recorded as frequent. Elm *Ulmus procera*, wood avens (*Geum urbanum)*, bramble (R*ubus fruticosus)*, cleavers, green alkanet (*Pentaglottis sempervirens)* and foxglove (*Digitalis spp*.) were occasional. Whitebeam and larch (*Larix decidua)* were rare.

Broad-leaved woodland – plantation

3.1.2.26 A small stand of broadleaved plantation woodland was recorded within the coniferous woodland plantation located to the east of the A90. It was dominated by alder with abundant cock's-foot (*Dactylis glomerata)* and Yorkshire fog (*Holcus lanatus)*. Common nettle and cow parsley (*Anthriscus sylvestris)* were recorded as frequent and whitebeam was occasional. The trees within this area were immature, and many were still contained within plastic planting tubes.

Coniferous woodland – plantation

3.1.2.27 Several stands of commercial coniferous plantation woodland were recorded within the ESA, most of which comprised sitka spruce.

3.1.2.28 A large plantation separated the open dune system at the Cuttie Burn from the agricultural pasture to the east of the A90. The plantation woodland was dominated by Sitka spruce *Picea sitchensis* with rare Scot's pine (*Pinus sylvestris)* and lodgepole pine (*Pinus contorta)*. This main stand was noted to be species-poor and lacking in ground vegetation.

Mixed woodland – semi natural

3.1.2.29 Small mixed woodland stands, often comprising shelter belts, were recorded across the ESA. Species comprised beech, oak (*Quercus sp*.), alder, ash, hazel (*Corylus avellana*) and sycamore.

Mixed woodland – plantation

3.1.2.30 Small mixed woodland plantation stands, often comprising shelter belts, were recorded across the ESA. Species comprised beech, oak, alder, ash and sycamore.

Dense / continuous scrub

3.1.2.31 Dense scrub was dominated by hawthorn, bramble and common nettle.

Scattered scrub

3.1.2.32 Scattered scrub was dominated by hawthorn, young sycamore and willow.

Coniferous woodland – recently felled

3.1.2.33 One parcel of felled woodland, located in the centre of the ESA, was mapped from aerial imagery.

Grassland and marsh

Neutral grassland – poor semi-improved

3.1.2.34 A common habitat throughout the ESA between agricultural fields, along roadside verges and adjacent woodland parcels.

3.1.2.35 This habitat was found to be dominated by cock's-foot, false oat grass, timothy, hogweed, with occasional common nettle, gorse, tufted-hair grass *(Deschampsia caespitosa)*, knapweed, meadow vetchling, cow parsley and cleavers. Occasional species included soft rush (*Juncus effusus)*, redshank (*Persicaria maculosa)* and Yorkshire fog. Most of this habitat was recorded as grazed pasture fields.

3.1.2.36 Many fields were also dominated by perennial rye-grass (*Lolium perenne*) with frequent cover of common ragwort (*Jacobaea vulgaris)* and creeping thistle (*Cirsium arvense)*.

3.1.2.37 Small mosaics of neutral and marshy grassland were recorded along the embankments of the River Ugie and within field parcels. Due to the potential presence of GWDTE habitats, this area was subject to a detailed NVC survey. One NVC community was recorded along the banks of the River Ugie:

- MG10 *Holcus lanatus-Juncus effusus* rush-pasture: This is damp grassland in which tussocks of soft rush Juncus effusus stand out in species-poor swards of Yorkshire fog and other grasses. The rushes are generally taller than the matrix of grasses and forbs, unless the community is heavily grazed.

Improved grassland

3.1.2.38 The habitat was a common habitat throughout the ESA as grazed pasture fields and was found to be dominated by rye-grass, broad-leaved dock (*Rumex obtusifolius*), creeping thistle and white clover.

Marsh / marshy grassland

3.1.2.39 This habitat was recorded throughout the ESA adjacent to watercourses and was dominated by common reed (*Phragmites australis*), with frequent rosebay willowherb (*Chaemaenerion angustofolium*), gorse, common nettle and hogweed. Bittersweet (*Solanum dulcamara)*, broad-leaved dock and cock's-foot were also recorded occasionally.

Tall herb and fern

Other tall herb and fern – ruderal

3.1.2.40 This habitat type was recorded throughout the ESA along field boundaries and was dominated by common nettle, hogweed and rosebay willowherb.

Marginal and inundation vegetation – marginal vegetation

3.1.2.41 Marginal vegetation habitat was recorded along the edge of the River Ugie. Due to the potential presence of GWDTE habitat, this area was subject to a detailed NVC survey. One NVC community was recorded along the bank of the River Ugie:

- S28 *Phalaris arundinacea* tall-herb fen: This NVC community was dominated by reed canary grass *Phalaris arundinacea* which formed a dense canopy 1-1.5m tall. There was little underlying vegetation, and so this community was recorded as species-poor.

Open water

3.1.2.42 Areas of sea ware recorded as open water, restricted to the northeastern boundary of the ESA.

Standing water

3.1.2.43 Ponds throughout of the ESA were recorded as standing water.

Running water

3.1.2.44 The River Ugie was mapped as an area-based habitat as running water.

Coastland

Mud / sand

3.1.2.45 Sand associated with the beach along the north-eastern boundary of the ESA.

Miscellaneous

Arable

3.1.2.46 Crop fields were abundant throughout the ESA due to agricultural nature of the local area.

Amenity grassland

3.1.2.47 Areas of amenity grassland were recorded within the ESA as gardens and a golf course.

Ephemeral / short perennial

3.1.2.48 This habitat was recorded where the ground had patchy vegetation cover, particularly in arable and pasture fields.

Buildings

3.1.2.49 Several buildings were recorded within the ESA, with associated gardens, farm buildings, sheds, and driveways.

Bare ground

3.1.2.50 This habitat was recorded where the soil was bare due to heavy machinery use, particularly in arable and pasture fields.

Other habitat

3.1.2.51 Other habitat consisted of hardstanding associated with roads, tracks and areas of concrete, in various states of use throughout the ESA.

3.2 National Vegetation Classification overview

3.2.1.1 A total of eight NVC vegetation types were identified within the ESA, as shown in **Figure 3.** These NVC communities are listed in **Table 4.1** and described in the following below.

3.2.2 Rush pasture

3.2.2.1 Several small, waterlogged parcels within improved pasture fields, comprise damper MG10a *Holcus lanatus – Juncus effusus* rush-pasture community. Growing through the tussocks there is usually and typically variable amounts of Yorkshire fog, creeping bent (*Agrostis stolonifera*), creeping buttercup (*Ranunculus repens), common sorrel (Rumex acetosa)* and white clover. More occasional and only in some stands there were additional floristics of ragwort, creeping thistle, marsh thistle *(Cirsium palustre),* broad-leaved dock, field horsetail *(Equisetum arvense),* crested-dog's-tail (*Cynosurus cristatus),* primrose and dandelion (*Taraxacum officinale agg*.)

3.2.3 Tall herb fen

3.2.3.1 A parcel of S28 *Phalaris arundinacea* tall-herb fen was recorded alongside the River Ugie. This NVC community was dominated by reed canary grass (*Phalaris arundinacea)*, which formed a dense canopy 1m to 1.5m tall. There was little underlying vegetation, and so this community was recorded as species-poor.

3.2.4 Sand dune

3.2.4.1 Sand and sand dune system habitats are located at the eastern section of the ESA at the proposed landfall locations. Communities comprise a mosaic of the following.

Mobile dune communities

3.2.4.2 Many of the sand dune habitats are characteristically mobile, such as, SD5b, SD6a and SD6e. SD5b consists of blue lyme-grass (*Leymus arenarius*) which is a foredune community. SD6a and SD6e are communities of marram dune systems found between embryonic dunes to the seaward and fixed dunes to the landward.

Plate 3.1 Mobile dune communities (Scotstown, 4 June 2024)

Fixed dune communities:

3.2.4.3 SD7 *Ammophila eranaria-Festuca rubra* semi-fixed dune community is the major vegetation type across the dune system. Marram is normally prominent in the vegetation but is less vigorous than in the more mobile foredunes. The smaller grasses, especially red fescue (*Festuca rubra*), are more abundant. Several mosaic communities comprise SD7 with SD8 or ruderal vegetation.

3.2.4.4 SD8a is the *Festuca rubra-Galium verum* community that consists of dune vegetation in which red fescue and a variety of other grasses, dicotyledons and mosses make up a generally closed short sward, and sometimes closely cropped to a short, tussocky turf. Several mosaic communities comprise SD8 with ruderal vegetation and MG7.

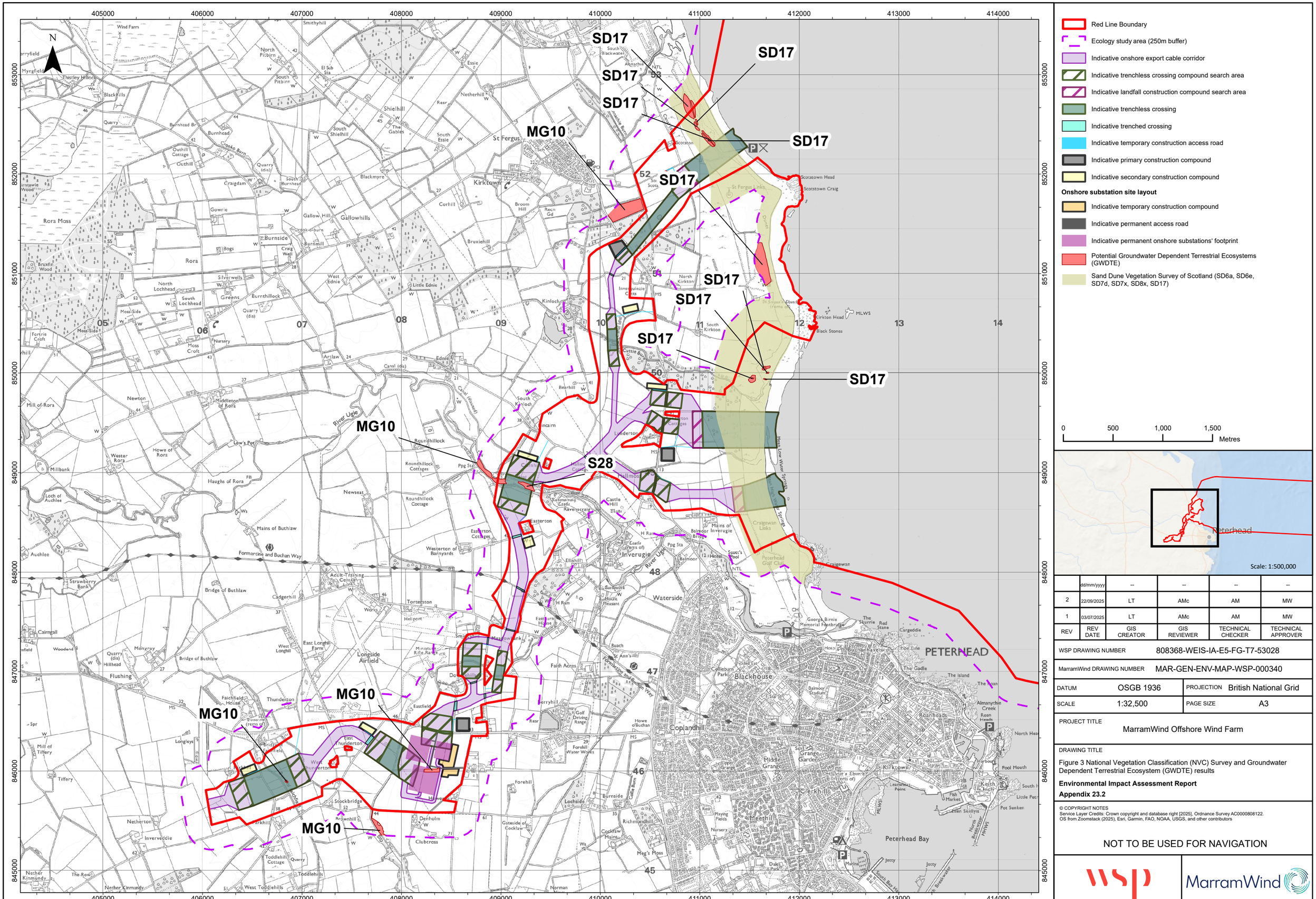
3.2.4.5 The SD9a is part of the fixed dune vegetation communities which occurs mainly on large dune systems, with the width to allow this habitat to develop. It typically occurs inland of the zone dominated by marram grass (*Ammophila arenaria*) on coastal dunes and represents the vegetation that replaces marram as the dune stabilises and the organic content of the sand increase. The SD9a community is located in a strand between the mobile dune systems of SD5b, SD6a & SD6e and the more landward fixed SD8a dune system. Marram grass remains common overall, but it is no longer a constant feature of the vegetation (as with SD9a) and is only occasional. Red fescue is abundant, and is the typical dominant species in the sward. There is a golf course on the landward side of the dunes with MG7 grassland.

Plate 3.2 Fixed dune communities with rich dune grassland (Scotstown, 4 June 2024)

Dune slack communities

3.2.4.6 The SD17a *Potentilla anserina-Carex* nigra dune-slack community is recorded in small pockets within the dune system, comprising short, closed swards up to 10 centimetres in height, dominated by mixtures of grasses, sedges and rosette or mat-forming herbs. Especially distinctive is the combination of creeping bent and common sedge (*Carex nigra)* with silverweed (*Potentilla anserina)*, each of these are sometimes present in abundance and the last particularly striking when dominating in a ground carpet.

Plate 3.3 Dune slack communities (Scotstown, 4 June 2024)



Red Line Boundary
Ecology study area (250m buffer)
Indicative onshore export cable corridor
Indicative trenchless crossing compound search area
Indicative landfall construction compound search area
Indicative trenchless crossing
Indicative trenched crossing
Indicative temporary construction access road
Indicative primary construction compound
Indicative secondary construction compound

Onshore substation site layout

Indicative temporary construction compound
Indicative permanent access road
Indicative permanent onshore substations' footprint
Potential Groundwater Dependent Terrestrial Ecosystems (GWDTE)
Sand Dune Vegetation Survey of Scotland (SD6a, SD6e, SD7d, SD7x, SD8x, SD17)

0 500 1,000 1,500 Metres

REV	REV DATE	GIS CREATOR	GIS REVIEWER	TECHNICAL CHECKER	TECHNICAL APPROVER
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2	22/09/2025	LT	AMc	AM	MW
1	03/07/2025	LT	AMc	AM	MW

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MarramWind DRAWING NUMBER	MAR-GEN-ENV-MAP-WSP-000340
DATUM	OSGB 1936
PROJECTION	British National Grid
SCALE	1:32,500
PAGE SIZE	A3

PROJECT TITLE
MarramWind Offshore Wind Farm

DRAWING TITLE
Figure 3 National Vegetation Classification (NVC) Survey and Groundwater Dependent Terrestrial Ecosystem (GWDTE) results

Environmental Impact Assessment Report

Appendix 23.2

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3.3 Groundwater dependent terrestrial ecosystems

3.3.1.1 Potential GWDTEs are illustrated in **Figure 3**.

3.3.1.2 The rush pasture MG10a community is identified as being potentially moderately dependent on groundwater depending on their hydrogeological setting (SEPA, 2025). However, the distribution of MG10a communities were closely linked to poor drainage from unnamed field drains and are likely to be coincident with areas of surface water flooding. Therefore, the combination of poor permeable geology, inadequate drainage and land primarily used for cattle / livestock grazing would suggest that the area is unable to sustain GWDTEs.

3.3.1.3 SD17 dune-slack communities are shallow depressions behind dunes that are flooded in the winter and damp in the summer. The damp conditions and nutrient-rich soil influence the composition of these communities.

4. Summary of Nature Conservation Interest

4.1.1.1 This Section summarises the value of habitats recorded and described within the ESA.

4.1.1.2 The NVC communities recorded during the field survey can be compared with several classifications systems to assess their nature conservation interest and potential groundwater dependency. These classifications include:

- Annex I habitats listed under Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (The European Commission, 1992);
- Priority habitats detailed within the SBL (NatureScot, 2020);
- Priority habitats listed within the North East Scotland Biodiversity Partnership (NESBIP, 2025); and
- Potentially GWDTEs as defined by SEPA (SEPA, 2025).

4.1.1.3 **Table 4.1** provides a summary of the nature conservation interest and potential groundwater dependency of each NVC community identified during the field survey.

4.1.2 Annex I habitats

4.1.2.1 Two NVC communities that were identified during the field survey correspond to habitats listed within Annex 1 of Council Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora (the Habitats Directive). Those listed in Annex 1 are natural habitat types whose conservation requires the designation of Special Areas of Conservation and are generally regarded as being of European importance. **Table 4.1** identifies which of the NVC communities recorded during the field survey correspond to Annex I habitat types. Those identified include:

- H2120: Shifting dunes along the shoreline with Marram grass (*Ammophila arenaria)* ('white dunes'); and
- H2190: Humid dune slacks.

4.2 Scottish Biodiversity List habitats and Local Biodiversity Action Plan habitats

4.2.1.1 The SBL is a list of animals, plants and habitats which the Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland. The purpose of the list is to identify species and habitats which are the highest priority for conservation in Scotland, of which are termed 'priority habitats'.

4.2.1.2 The majority of the habitats recorded within the ESA are common and widespread in Aberdeenshire. However, a number of them are included within the SBL (NatureScot, 2020) and the NESBIP (NESBIP, 2025):

- five Scottish Biodiversity List habitats: Lowland Mixed Deciduous Woodland, Purple Moor Grass and Rush Pasture, Coastal Sand Dunes; and
- four Local Biodiversity Action Plan habitats: Woodlands, Grasslands, Wetlands, and Marine and Coastal.

4.2.1.3 It is worth noting that, although habitats such as coniferous woodland and amenity grassland are listed within the North East Scotland Biodiversity Partnership, these habitats typically hold little intrinsic ecological value.

4.3 Groundwater dependent terrestrial ecosystems

4.3.1.1 Communities within the ESA identified as potential GWDTEs based on SEPA (2025) guidance, were considered for assessment.

4.3.1.2 'Potential' GWDTE habitat within the ESA included:

- MG10 *Holcus lanatus-Juncus effusus* rush-pasture; and
- SD17: *Potentilla anserina-Carex nigra* dune-slack community.

4.3.1.3 NVC survey is only able to identify communities that are potentially groundwater dependant and in practice some of the communities above may not represent GWDTEs. GWDTEs tend to be small linear features, therefore communities that cover large areas are not considered likely to be GWDTE, even if they match one of the above NVC communities. Current SEPA guidance recommends that NVC communities should however be treated as GWDTE unless information can be provided to demonstrate that they are not groundwater dependant.

4.4 Invasive non-native plants

4.4.1.1 Himalayan balsam (*Impatiens glandulifera)* was recorded within the ESA. This species is listed within Schedule 9 of the Wildlife and Countryside Act as invasive and non-native.

Table 4.1 NVC communities and corresponding EUNIS, Annex 1, SBL, BAP habitats and GWDTE status

Habitat type	NVC Code	NVC Community	EUNIS	Annex 1	SBL Priority habitat	North East Scotland Biodiversity Partnership	GWDTE Status
Broadleaf woodland	-	-	-	-	Lowland Mixed Deciduous Woodland.	Woodland	n/a
Marshy grassland / rush pasture	MG10a	*Holcus lanatus-Juncus effusus* rush-pasture.	E3.44	None	Purple moor-grass and rush pasture.	Grassland	**Potential**
Tall herb fen	S28	*Phalaris arundincaea* tall herb fen.	C3.26	None	Lowland Fens.	Wetlands	**n/a**
Fixed dunes and dune grassland	SD6a	*Ammnophila arenaria* mobile dune community, *Elymus farctus* sub-community.	B1.32	H2120	Coastal Sand Dunes.	Marine and Coastal.	n/a
	SD6e	*Ammophila arenaria* mobile dune community, *Festuca rubra*					n/a

Habitat type	NVC Code	NVC Community	EUNIS	Annex 1	SBL Priority habitat	North East Scotland Biodiversity Partnership	GWDTE Status
		sub-community.					
	SD6x	*Ammophila arenaria* mobile dune, *Brachythecium albicans* sub-community.					n/a
	SD7d	*Ammophila arenaria-Festuca rubra semi-fixed dune: Tortula ruralis ssp. ruraliformis sub-community.*	B1.41				n/a
	SD7x	*Ammophila arenaria-Festuca rubra* semi-fixed dune community, *Hylocomum splendens* sub-community.					n/a

Habitat type	NVC Code	NVC Community	EUNIS	Annex 1	SBL Priority habitat	North East Scotland Biodiversity Partnership	GWDTE Status
	SD17	*Potentilla anserina-Carex nigra* dune-slack community.	B1.84	H2190			**Potential**

5. References

British Standards Institution, (2013). *BS 42020:2013. Biodiversity — Code of practice for planning and development*. London. BSI.

Chartered Institute of Ecology and Environmental Management (CIEEM), (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3.* Chartered Institute of Ecology and Environmental Management, Winchester.

Chartered Institute of Ecology and Environmental Management (CIEEM), (2022). *Competency Framework*. [online] Available at: https://cieem.net/resource/competency-framework/ [Accessed: 9 June 2025].

Joint Nature Conservation Committee (JNCC), (2010). *Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit*. Joint Nature Conservation Committee, Peterborough.

NatureScot, (2020). *Scottish Biodiversity List*. [online] Available at: https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy/scottish-biodiversity-list [Accessed: 3 July 2025].

North East Scotland Biodiversity Partnership (NESBIP), (2025). *Important Habitats for Biodiversity – our Local Biodiversity Action Plan.* [online] Available at: https://www.nesbiodiversity.org.uk/biodiversity-information-for-developers/important-habitats-for-biodiversity-in-the-north-east-of-scotland/ [Accessed: 20 July 2025].

Rodwell, J.S., (1992). *British Plant Communities. Vol 3. Grasslands and Montane Communities*. Cambridge University Press. Cambridge.

Rodwell, J.S., (1995). *British Plant Communities. Vol 4. Aquatic Communities, swamps and tall-herb fens*. Cambridge University Press. Cambridge.

Rodwell, J.S., (2000). *British Plant Communities. Vol 5. Maritime communities and vegetation of open habitats*. Cambridge University Press. Cambridge.

Rodwell, J.S., (2006). *NVC Users' Handbook*. ISBN 978 1 86107 574 1.

Scottish Environment Protection Agency (SEPA), (2025). *Guidance on Assessing the Impacts of Developments on Groundwater Dependent Terrestrial Ecosystems. Version 2.*

Stace, C.A., (2019). *New Flora of the British Isles*, Edition 4. C&M Floristics.

The European Commission, (1992). *Directive 92/43/EEC The Habitats Directive*. [online] Available at: https://environment.ec.europa.eu/topics/nature-and-biodiversity/habitats-directive_en [Accessed: 3 July 2025].

Wildlife and Countryside Act 1981. (c.69). [online] Available at: https://www.legislation.gov.uk/ukpga/1981/69/schedule/9 [Accessed: 4 July 2025].

6. Glossary of Terms and Abbreviations

6.1 Abbreviations

Acronym	Definition
CIEEM	Chartered Institute of Ecology and Environmental Management
ESA	Ecological Survey Area
GIS	Geographical Information System
GWDTE	Groundwater Dependent Terrestrial Ecosystem
JNCC	Joint Nature Conservation Committee
NESBIP	North East Scotland Biodiversity Partnership
NVC	National Vegetation Classification
SBL	Scottish Biodiversity List
SEPA	Scottish Environmental Protection Agency

6.2 Glossary of terms

Term	Definition
Ecological Impact Assessment	The process through which the potential impacts resulting from a project are identified, quantified and assessed through appropriate ecology surveys.
Environmental Impact Assessment Report	The outcome of the Environmental Impact Assessment (EIA) process is reported within a document called an EIA Report.
Geographical Information System	A system that captures, stores, analyses, manages and presents data linked to location. It links spatial information to a digital database.
Joint Nature Conservation Committee	The public body that advises the UK Government and devolved administrations on UK-wide and international nature conservation.
Scottish Environment Protection Agency	A non-departmental public body of the Scottish Government, responsible for environmental regulation. This includes ensuring that the environment and human health are protected, and that Scotland's natural resources and services are used as sustainably as possible and contribute to sustainable economic growth.

Appendix A Target Notes

Ref no.	Grid reference	Description	Photos
1	NK 11069 52584	Edge of shifting and fixed dune communities looking south from St Fergus.	
2	NK 11494 51645	Edge of fixed dune communities and cattle and sheep grazed fields looking north at Scotstown.	

Ref no.	Grid reference	Description	Photos
3	NK 11055 51888	Newly planted trees in guards along field boundary at Scotstown.	
4	NK 10894 51838	No ditch is present here and has likely previously been filled in along field boundary at Scotstown.	

Ref no.	Grid reference	Description	Photos
5	NK 10956 51566	Ditch is absent along field boundary at Scotstown	
6	NK 10574 52135	Cow field with abundant ragwort cover in field south of St Fergus	

Ref no.	Grid reference	Description	Photos
7	NK 10596 51579	No pond is present here and appears to have previously been filled in (adjacent to Annochie Burn south of St Fergus)	
8	NK 11220 52195	Gravel track continues north but does not extend south near car park at Scotstown	

Ref no.	Grid reference	Description	Photos
9	NK 10495 49613	Track between arable fields, no margins. To the south of the Cuttie Burn (west of the A90)	
10	NK 10450 49494	Hawthorn dominated hedgerow along field margin. North of Lunderton Cottage (west of the A90)	
11	NK 11410 49154	Plantation woodland. South of the Cuttie Burn conifer plantation at Lunderton South	

Ref no.	Grid reference	Description	Photos
12	NK 11106 49126	Dry ditch. South west of the Cuttie Burn conifer plantation at Lunderton South	
13	NK 10569 49111	Drainage ditch along field margin, approximately 5m wide, mainly meadow sweet, cocks foot, reed canary grass. South of Lunderton Cottages and immediately west of the A90	
14	NK 10529 48692	Semi-improved margin at road verge, with cocks-foot, yorkshire fog, false oat grass, ribwort plantain, meadow vetchling, common knapweed, ribwort plantain, bramble, ground elder, Dock, ragwort, hawkweed sp. Far western field extent at Mains of Inverugie,	

Ref no.	Grid reference	Description	Photos
		immediately east of A90.	
15	NK 10276 49077	Grassland bordering edge of arable fields dominated by perennial rye grass with dock, willowherb, scentless mayweed, white clover, mouse-ear, chickweed, redshank, creeping buttercup, spear-thistle and oil seed rape.	
16	NK 10189 49089	Small area of standing water within field interior south of Lunderton Cottage	

Ref no.	Grid reference	Description	Photos
17	NK 10114 49194	Watercourse absent here. Crop field recorded, within field interior south of Lunderton Cottage	
18	NK 08683 46908	Cow fields at Downie hills Farm, south west of Inverugie	

Ref no.	Grid reference	Description	Photos
19	NK 08838 46891	Dry stone wall through scattered scrub adjacent to Tortorston Road, south west of Inverugie	
20	NK 08778 45763	Bramble scrub with hawthorn tree line – typical field margin within this area, north of Hillead of Cocklaw	

Ref no.	Grid reference	Description	Photos
21	NK 07433 44241	Old broadleaf woodland with management evident includes mature beech trees and pockets of native pine woodland. Pockets of spruce plantation with marshy grassland and tree planting visible. Overall woodland appears managed with deer stalking posts and deer feeders, as well as old disused cage structures. East of the Burn of Faichfield at West Dens.	

MarramWind