



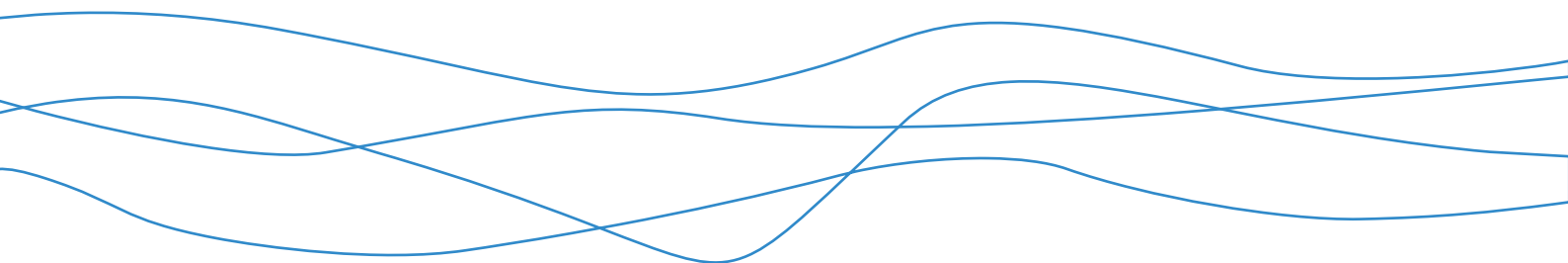
**THISTLE WIND**  
PARTNERS

## **Bowdun Offshore Wind Farm**

Onshore Environmental Impact Assessment  
Report: Chapter 7: Biodiversity, Terrestrial  
Ecology and Ornithology

Ref No.

TWP-BOW-JCB-ENV-RPT-00003 | November 2025



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## **7 Biodiversity, Terrestrial Ecology and Ornithology**

### **7.1 Introduction**

7.1.1 This Onshore EIA Report Chapter of the Onshore Environmental Impact Assessment (EIA) Report presents the findings of the onshore ecology and ornithology EIA work undertaken for the onshore elements of the Bowdun Offshore Wind Farm (the 'Project'). For ease of reference the onshore elements of the Project, landward of Mean Low Water Springs (MLWS), are referred to as the Proposed Development.

7.1.2 This Onshore EIA Report Chapter considers the potential impacts and effects of the Proposed Development on onshore ecology and ornithology during the construction, operation and maintenance (O&M), and decommissioning phases.

7.1.3 The specific objectives of this Onshore EIA Report Chapter are to:

- set out the existing and future environmental baseline conditions, established from desk studies, surveys and consultation undertaken ;
- presents the potential environmental impacts and effects on onshore ecology and ornithology arising from the Proposed Development, based on the information gathered and the analysis and assessments undertaken ;
- identifies assumptions and limitations encountered in compiling the environmental information; and
- highlights necessary monitoring and/or mitigation measures that could prevent reduce or offset the possible environmental effects identified in the EIA process.

7.1.4 The assessment presented is informed by the following technical appendices, with supporting confidential annexes:

- Volume 2, Technical Appendix 7.1: Habitats and Protected Species Survey (2024);
- Volume 2, Technical Appendix 7.2: UKHab, NVC for GWDTE and Protected Species Survey (2025) (2025);
- Volume 2, Technical Appendix 7.3: Onshore Ornithology.

7.1.5 A separate Biodiversity Net Gain (BNG) Metric Assessment will be prepared to identify opportunities for biodiversity enhancements and to inform landscape proposal that will be incorporated into the Proposed Development at the Matters Subject to Condition (MSC) stage.

7.1.6 In addition, a Habitats Regulations Appraisal (HRA) has been undertaken to ascertain if the Proposed Development could give rise to a Likely Significant Effect (LSE) on a European Site; and to inform the need for an appropriate assessment. The findings of this HRA are presented in section 7.157.14.4.

### **7.2 Onshore Ecology and Ornithology Study Areas**

7.2.1 A Study Area has been established to identify important ecological and ornithology features that could be significantly affected by the Proposed

Development. The Study Area encompasses the Zones of Influence (ZoIs) within which baseline information was gathered to inform the impact assessment presented in this Onshore EIA Report Chapter, based on the Proposed Development (Volume 1, Chapter 2: The Proposed Development) and Data Sources presented in section 7.5.

### **Onshore Ecology Study Area**

7.2.2 The Onshore Ecology Study Area (Figure 7.1 in Annex – Figures) relating to designated sites comprised the PPP Application Boundary and the following ZoIs:

- 10 km for ecosystems and protected areas designated by international legislation and conventions (i.e. Ramsar sites and Special Areas of Conservation (SACs));
- 5 km for ecosystems and protected areas designated by national legislation (i.e. Sites of Special Scientific Interest (SSSIs) and Local Nature Reserves (LNRs));
- 2 km for areas designated under regional planning policy (i.e. Local Nature Conservation Sites (LNCS)); and
- Ancient Woodland Inventory (AWI) sites and protected trees within the PPP Application Boundary.

7.2.3 The Onshore Ecology Survey Area (Figure 7.2 in Annex – Figures) was based on emerging design information and ZoIs described in NatureScot standing advice (NatureScot, 2025), good practice guidelines from CIEEM (CIEEM, 2023) consultation responses in the Scoping Opinion received from Aberdeenshire Council (Volume 2, Technical Appendix 1.1: Scoping Opinion); as well as the professional judgement of ERM ecology specialists:

- Habitat survey of accessible land within the PPP Application Boundary;
- Detailed botanical survey of accessible land within, and up to 250 m from, the PPP Application Boundary for wetland habitats that could support National Vegetation Classification (NVC) communities indicating the potential presence of Groundwater Dependent Terrestrial Ecosystems (GWDTE); and
- Protected species survey of accessible land within, and up to 50 m from the PPP Application Boundary for all species, and extended up to respective individual protected species search buffers as detailed in Volume 2, Technical Appendix 7.1: Habitats and Protected Species Survey (2024),

### **Onshore Ornithology Study Area**

7.2.4 The Onshore Ornithology Study Area (Figure 7.3 in Annex – Figures) relating to designated sites comprised the PPP Application Boundary and the following ZoIs:

- 10 km for ecosystems and protected areas designated by international and national legislation and conventions (i.e. Ramsar sites, Special Protection Areas (SPAs) and Sites of Special Scientific Interest (SSSIs)),

extending up to 20 km for SPAs where migratory geese are a qualifying feature of the designation, as per NatureScot guidelines; and

- 2 km for other sites designated under relevant legislation and/or planning policy (i.e. Local Nature Conservation Sites).

7.2.5 The Onshore Ornithology Survey Area (Figures 7.4 in Annex – Figures) were based on emerging design information and Zols described in NatureScot standing advice and consultation responses; as well as the professional judgement of RPS ornithology specialists:

- foraging goose survey of accessible land within and adjoining the PPP Application Boundary that occurred within 20 km of the Montrose Basin SPA and Ramsar Site; and
- intertidal survey of accessible land within, and up to 250 m from, the Landfall at Haughs Bay.

### 7.3 Legislative and Policy Context

7.3.1 A summary of relevant nature conservation legislation and biodiversity policy relating to this Onshore EIA Report Chapter is provided below:

#### Nature Conservation Legislation

- Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat 1971 (Ramsar Convention);
- European Directive 92/43/EEC on Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) ('Habitats Directive');
- European Directive 2009/147/EC on the Conservation of Wild Birds ('Birds Directive');
- The Conservation (Natural Habitats &c.) Regulations 1994 (as amended) (The Habitats Regulations);
- The Wildlife and Natural Environment (Scotland) Act 2011;
- The Wildlife and Countryside Act 1981;
- The Nature Conservation (Scotland) Act 2004; and
- The Protection of Badgers Act 1992 (as amended).

#### Biodiversity Planning Policy

- National Planning Framework 4 (NPF4) (Scottish Government, 2023);
- Scottish Biodiversity Strategy to 2045 (Scottish Government, 2024).

7.3.2 Scottish Government Draft Planning Guidance: Biodiversity (Scottish Government, 2023);

7.3.3 Planning Advice Note 51: Planning, Environmental Protection and Regulation (Scottish Government, 2006);

- Planning Advice Note 60: Planning for Natural Heritage (Scottish Government, 2000);

- Planning Advice Note 1/2013: Environmental Impact Assessment (Scottish Government, 2013);
- UK Post-2010 Biodiversity Framework (JNCC and DEFRA, 2012);
- Aberdeenshire Local Development Plan 2023 (Aberdeenshire Council, 2023);
- Securing positive effects for biodiversity in new development Planning advice PA2023-10 (Aberdeenshire Council, 2023).

## **7.4 Consultation**

7.4.1 The approach to consultation for the Proposed Development is set out in Volume 1, Chapter 3: EIA Methodology. A summary of consultation responses received to date that relate to onshore ecology and ornithology is presented in Table 7.1, together with how these issues have been considered in the production of this assessment. Further detail is presented within the PAC Report and associated PAC Appendices (TWP, 2025).

7.4.2 The Proposed Development with the subject of a pre-application consultation with Aberdeenshire Council In March 2024 and Pre-scoping meeting in June 2024, with Pre-application advice received from Aberdeenshire Council in July 2024. Thistle Wind Partners Limited (TWP) also submitted and Onshore Scoping Report (TWP, 2024) to Aberdeenshire Council in September 2024.

**Table 7.1 Summary of Key Consultation Issues Raised for Onshore Ecology and Ornithology**

<b>Date</b>	<b>Consultee (Type of Consultation)</b>	<b>Summary of Issue(s) Raised</b>	<b>Response to Issue Raised and/or Where Considered in this Onshore EIA Report Chapter</b>
<b>21 March 2024</b>	NatureScot Operations Officer- North (Pre-application)	The scope and methodology for surveys is generally acceptable. However, we [NatureScot] normally recommend that two years of surveys are completed for this type of project, unless it can be demonstrated that a shorter period is sufficient. We [NatureScot] are happy to look at the results of the year one data, once this is available, to confirm whether a second year is necessary. We [NatureScot] would also recommend that goose foraging surveys are continued for the remainder of the season.	The acceptability of survey scope and methodology to NatureScot was noted and is welcome. In relation to a second year of surveys, this was given detailed consideration by the ornithology team. The data from the desk study (which incorporated many years of records) plus the results from the Year 1 survey revealed the low conservation value of the great majority of species present, and therefore led the team to conclude that, when considered in combination with the small Zone of Influence of effects from the Proposed Development, the very small and linear construction footprint, and, other than the sub-station itself, the reversible nature of all potential effects on birds, and the predominance of low conservation value intensively farmed habitats and conifer plantation within the Study Area, the desk study and single year of survey data were sufficient to robustly inform the assessment of effects, including on all designated sites. Furthermore, the Embedded Mitigation measures for the Proposed Development also included the commitment to undertake pre-commencement bird and protected species surveys (therefore providing additional fully up-to-date information on the birds present) for use by the Ecological Clerk of Works who would also be retained throughout the construction period. Therefore, the team has ensured the assessment is robust and

Date	Consultee (Type of Consultation)	Summary of Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Onshore EIA Report Chapter
			proportionate. The results from the desk study and surveys are presented in section 7.6.
<b>17 September 2024</b>	NESBReC GIS Officer (EIA Scoping Report)	NESBReC has provided [Aberdeenshire Council] a report containing records of protected or priority ecosystems, habitats and species that it holds within, and up to 100 m from, the Scoping Boundary.	Noted. Updated data request also obtained from NESBReC on 22 September 2025, which is presented in section 7.6.
<b>17 September 2024</b>	Scottish Environment Protection Agency Senior Planning Officer (EIA Scoping Report)	We [SEPA] welcome the commitment to undertake a national vegetation classification survey (NVC) survey. For further information on assessments please refer to LUPS- GU31,in particular sections 2.10 to 2.14. Good practice during wind farm construction. Naturescot also provides useful information on NVC survey method and mapping requirements. We highlight the presence of a Scottish Wetland Inventory sites at NO 80290 71907, NO 81531 77831, which should be avoided and given appropriate buffers.	<p>The presence of important habitats that could be affected by the Proposed Development has been established through habitat surveys, which are described in section 7.6.</p> <p>This included classifying and mapping NVC communities within relevant wetland habitat features to identify potential GWDTE, as per current SEPA guidelines.</p> <p>Scottish Wetland Inventory site at NO 81531 77831 is located approximately 1.3 km east of the PPP Application Boundary and 1.4 km east of the Onshore Export Cable Corridor. Scottish Wetland Inventory site at NO 80290 71907 is approximately 88 m west of the PPP Application Boundary and 460 m west of the indicative cable route alignment for the 220/275 kV cabler. Therefore, proposed works will be further away than the advised 250 m buffer, no impacts are predicted to occur to these sites.</p> <p>Further consideration and assessment of potential GWDTE are described in Volume 1, Chapter 10: Geology and Ground Conditions.</p>

Date	Consultee (Type of Consultation)	Summary of Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Onshore EIA Report Chapter
		<p>SEPA has nationally identified watercourses where riparian planting has been identified as a priority. We would welcome riparian planting as part of any biodiversity net gain proposals on the following watercourses: Burn of Benholm, Bervie Water, Forthie Water and Carron Water</p>	<p>Additional mitigation measures and opportunities for biodiversity enhancements are described in section 7.9. Furthermore, a separate Biodiversity Net Gain (BNG) Metric Assessment will be prepared to identify opportunities for biodiversity enhancements and to inform landscape proposal that will be incorporated into the Proposed Development at the Matters Subject to Condition (MSC) stage.</p>
<p><b>19 September 2024</b></p>	<p>Aberdeenshire Council                      Natural Environment Team                      (EIA Scoping Report)</p>	<p>Five Local Nature Conservation Sites (LNCS) are missing from the list of sites shown as being potentially impacted by the proposed development (Annie's Dam, Benholm, Elfill, Mergie, and Todhead Point to Johnshaven Coast).</p> <p>These sites are within the scoping boundary/search area and although all or part of some of the sites appear to be within the areas of constraint, not all are. Some of the sites contain wetland habitats which may be impacted on by changes to the local hydrology beyond the PPP Application Boundary. The coastal LNCS is within the landfall search area and although the cables will be brought ashore through HDD there may be an impact on this site from the necessary infrastructure requirements onshore and the</p>	<p>The presence of LNCS within 2 km of the PPP Application Boundary (and SSSI within 5 km) are presented in section 7.6, and includes the five LNCSs mentioned by Aberdeenshire Council, as well as Arbuthnott LNCS</p> <p>Consideration of any geological features that could be significantly affected by the Proposed Development are described in Volume 1, Chapter 10: Geology and Ground Conditions. This includes the Burn of Benholm SSSI, which is designated for geological features as opposed to biological features.</p>

Date	Consultee (Type of Consultation)	Summary of Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Onshore EIA Report Chapter
		<p>need for access by machinery and equipment.</p> <p>Benholm SSSI/GRC is currently scoped out as it is within an area identified as sensitive and therefore should not be impacted on by the proposed cable laying. Should this change the SSSI should be scoped back in to the EIA.</p>	
		<p>Table 8.3 (of the EIA Scoping Report) lists a number of legally protected species and Scottish Biodiversity List species but a much larger list of species of conservation importance are present within the scoping areas. Aberdeenshire Council together with North East Scotland Biodiversity Partnership (NESBiP) have identified lists of locally important species for certain groups including plants and fungi. A number of these species have been recorded within the scoping area and taken into account when</p>	<p>Historic records of protected or priority species (including invasive non-native species) obtained from NESBReC are presented in section 7.6.</p> <p>The presence of important habitats that could be affected by the Proposed Development have been established through habitat surveys, which are described in section 7.6.</p> <p>Predicted habitat losses are described in section 7.10.</p> <p>Additional mitigation measures and opportunities for biodiversity enhancements are described in section 0.</p>

Date	Consultee (Type of Consultation)	Summary of Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Onshore EIA Report Chapter
		<p>considering the impact of proposed works. Information on their known locations can be obtained from NESBReC. A list of nationally and locally important invertebrates and birds recorded within this area is also available from NESBReC.</p> <p>Invasive non-native species need to be taken into account as they can easily spread through ground works and the movement of machinery A number of INNS have been recorded within the search corridor and details are available from NESBReC.</p> <p>Table 8.3 (of the EIA Scoping Report) lists the habitats to be assessed as part of the EIA and includes those listed on Annex 1 of the EU Habitats Directive, ancient woodland, habitats listed on the Scottish Biodiversity List and others based on their sensitivity and replaceability. Although identifying biodiversity enhancement is not necessarily part of the EIA process, a full assessment of the impact on all habitats, including agricultural land, will be required in order to</p>	<p>Consideration of woodlands and forestry areas that could be significantly affected by the Proposed Development are described in Volume 1, Chapter 8: Landscape and Visual Impact Assessment and Volume 2, Technical Appendix 6.1: Forestry and Arboriculture Technical Report.</p>

Date	Consultee (Type of Consultation)	Summary of Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Onshore EIA Report Chapter
		<p>calculate the biodiversity loss associated with this development. This figure is needed to allow calculation of the requirements for biodiversity enhancement. A full assessment of the impact on woodlands and forestry of all descriptions will be required in order to assess the requirements for compensatory woodland/forest planting.</p>	
		<p>Todhead Point to Johnshaven Coast LNCS should be included within the ornithological sites to be considered. The wide intertidal zone between Gourdon and Johnshaven is a valuable area of importance to intertidal wetland birds (waders, ducks and gulls in particular). There have been some quite high counts here of various species and in hard weather it can be a well-used refuge. The wide breadth of the intertidal zone here is unusual in the context of North-East Scotland. Further details available from NESBReC and RSPB.</p>	<p>Historic records of protected or priority species (including invasive non-native species) obtained from NESBReC and RSPB are presented in section 7.6. The Todhead Point to Johnshaven Coast LNCS has been taken into account in the assessment, as requested, in section 7.6.</p>
		<p>An assessment of impact on trees protected by Tree Preservation Orders (TPO) will be required. TPO's are present at Lathallan</p>	<p>This assessment has been informed by the presence of protected trees within the PPP Application Boundary, which are presented in section 7.6.</p>

Date	Consultee (Type of Consultation)	Summary of Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Onshore EIA Report Chapter
		(just to the south of the landfall area of search) and Drumlithie.	
<b>24 September 2024</b>	NatureScot Operations Officer - North (EIA Scoping Report)	The Burn of Benholm SSSI overlaps with a Constrained Area within the Scoping Boundary. Please note that, unless it can be determined that the SSSI is excluded from the search area and won't be affected by the proposals, we advise that it should be scoped in.	This assessment has been informed by the presence of SSSI that are designated for biological features within 5 km of the PPP Application Boundary for ecology, and up to 10 km for ornithology which are presented in section 7.6.  Consideration of any geological features that could be significantly affected by the Proposed Development are described in Volume 1, Chapter 10: Geology and Ground Conditions and this includes the Burn of Benholm SSSI, which is designated for geological features as opposed to biological.
		The Scoping Boundary also includes a number of Local Nature Conservation Sites (LNCS), that should also be scoped in, and we understand that your Environment and Infrastructure Services team will be providing comments on these sites.	Noted. Six LNCS sites were identified in the desk study, three of which were scoped into the assessment of this Onshore EIA Report Chapter. Detailed are provided within section 7.6.
		The LNCS within the Scoping Boundary contain a number of sites on the Ancient Woodland Inventory (AWI). The Scoping Report notes the intention, specifically, of avoiding ancient woodland and, more generally, of reinstating native soils and the	Noted. No AWI is predicted to be lost as a result of the Proposed Development.

Date	Consultee (Type of Consultation)	Summary of Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Onshore EIA Report Chapter
		<p>landscape after development. It should be noted, where it is not possible to avoid loss of part of an ancient woodland site, carrying out woodland creation would not compensate for this loss.</p> <p>The Scoping Report mentions that habitats of particular value and sensitivity will be identified by their inclusion on Annex I of the EU Habitats Directive and are thus subject to retained EU law. Annex 1 habitats that are known to be found within the Scoping Boundary and should, therefore, be considered further in the EIA include 1220 Perennial vegetation of stony banks, found in the Todhead Point to Johnshaven Coast LNCS, and, potentially, 9180 Tilio-Acerion forests of slopes, screes and ravines and 91A0 Old sessile oak <i>Quercus petraea</i> woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles, in the woods. Scottish Biodiversity List species and habitats also need to be considered.</p>	<p>The presence of important habitats that could be affected by the Proposed Development has been established through habitat surveys, which are described in section 7.6.</p>

## 7.5 Data Sources

### Desk Study

7.5.1 Existing baseline information relating to the Onshore Ecology Study Area and Onshore Ornithology Study Area was collected through a review of publicly available resources and specific data requests, as summarised in Table 7.2.

Table 7.2 Summary of Key Data Sources

Title	Source	Relevant Field	Extent	Year	Author
<b>Bird Records Search</b>	RSPB	Ornithology	Provided information on scarce Schedule 1, SBL and amber/red listed Birds of Conservation Concern (BoCC) (Stanbury <i>et al.</i> 2021) within and up to 2 km from the PPP Application Boundary for 2020 to 2025.	2025	RSPB
<b>Ecological Records Search</b>	NESBReC	Ecology & Ornithology	Provided information on ecological records from the last 10 years up to 2 km from the PPP Application Boundary. Data included a compilation of records gathered from NESBReC themselves as well as obtained information through citizen science platforms and schemes such as Wetland Bird Survey (WeBS), BirdTrack, eBird, iRecord, etc.	2025	NESBReC
<b>Raptor Records Search</b>	NESRSG	Ornithology	Information on any scarce breeding birds up to 2 km (6 km for eagles) of the PPP Application Boundary from the last five years.	2025	NESRSG

Title	Source	Relevant Field	Extent	Year	Author
<b>Red Squirrel</b>	Saving Scotland's Red Squirrels (SSRS)	Ecology	Information on red squirrel <i>Sciurus vulgaris</i> distribution across Scotland	2025	SSRS
<b>Scottish Forestry Map Viewer</b>	The Scottish Government	Ecology & Ornithology	Interactive website displaying details of Scotland's woodlands and forests, including forestry activities.	2025	Scottish Forestry
<b>Native Woodland Survey of Scotland (NWSS) Data Explorer</b>	The Scottish Government	Ecology & Ornithology	Interactive website showing survey information about native, nearly native and ancient woodland in Scotland.	2025	Scottish Forestry
<b>Protected Bird Records</b>	FLS	Ornithology	FLS provided TWP with information on notable species at Fetteresso Forest in relation to the Proposed Development	2024	FLS
<b>Nightjar in North-East Scotland: a species at the edge of its range</b>	Scottish Birds (2024) Volume 44:4. pages 312–328	Ornithology	This research paper as well as specific sensitive records was passed on from Aberdeenshire Council on nesting nightjar <i>Caprimulgus europaeus</i> in North-East Scotland. The research to gain the information was conducted by Dr Knox.	2024	Knox (2024)
<b>National Heritage Zone (NHZ) Bird Population Estimates</b>	Scottish Windfarm Bird Steering Group (SWBSG)	Ornithology	Provides NHZ population estimates for 24 species of breeding birds and a further four species of wintering wildfowl, considered by the SWBSG to occur frequently in environmental impact	2015	Wilson, M. W., Austin, G. E., Gillings S. and Wernham, C. V.

Title	Source	Relevant Field	Extent	Year	Author
			Assessments.		
<b>Distribution of the pine marten (<i>Martes martes</i>) in southern Scotland in 2013</b>	NatureScot	Ecology	Commissioned report discussing pine marten distribution across southern Scotland in 2013, including Aberdeenshire.	2014	Croose, E., Birks, J.D.S., Schofield, H.W. & O'Reilly, C.
<b>Scotland's Environment</b>	The Scottish Government	Ecology & Ornithology	Interactive website displaying a wide range of environmental data for Scotland, including land cover, habitats, and historical land use.	N/a	The Scottish Government
<b>SiteLink</b>	NatureScot	Ecology & Ornithology	Online information about designated sites	N/a	NatureScot
<b>Obstacles to Fish Passage</b>	SEPA	Ecology	Web map service showing information on the location of barriers on the river network, whether they are natural or man-made and whether they are impassable or passable to fish under certain conditions	2025	SEPA

### Identification of Designated Sites

7.5.2 A three-step process was used to identify all designated sites within the Onshore Ecology Study Area and the Onshore Ornithology Study Area that could be affected by the construction, O&M, and decommissioning phases of the Proposed Development. This process is described below:

- Step 1: All designated sites of international, national, and local importance within the Onshore Ecology Study Area and Onshore Ornithology Study Area respectively, were identified using a number of sources. These sources included the NatureScot SiteLink portal and information provided

by NESBReC for both ecology and ornithology, as well as current NatureScot guidance on bird connectivity for ornithology.

- Step 2: Information was compiled on the relevant designated feature for each of these sites by assessing the historic information received from data requests in conjunction with the baseline site surveys.
- Step 3: Using the above information and professional judgement, sites were included for further consideration if:
  - a designated site directly overlaps with the Proposed Development and therefore has the potential to be directly affected by the Proposed Development; or
  - designated sites and associated qualifying interest features were located within the Onshore Ecology Study Area or Onshore Ornithology Study Area (Figure 7.1 and Figure 7.2 see Annex – Figures) for impacts associated with the Proposed Development (i.e. the designated sites were within the Zols of the Proposed Development because of an impact pathway, or potential connectivity between the SPA / Ramsar Site and the Proposed Development, based on NatureScot (SNH 2016) guidance).

### Site-Specific Surveys

7.5.3 A summary of site-specific surveys is given in Table 7.3.

Table 7.3 Summary of Site-Specific Survey Data

Title	Extent of Survey	Overview of Survey	Survey Contractor	Date
<b>Foraging Goose Surveys</b>	Accessible land within and adjoining the PPP Application Boundary plus a 2km buffer that occurred within 20 km of the Montrose Basin SPA / Ramsar Site.	To identify and map the presence of goose species (associated with the SPA / Ramsar Site) within accessible areas of the PPP Application Boundary.	RPS	September 2023 – May 2024
<b>Intertidal Surveys</b>	Intertidal habitats and 250 m buffer at the Landfall.	To identify and map the presence of foraging and roosting birds during the non-breeding season.	RPS	September 2023 – March 2024
<b>UKHab Survey</b>	(2024) Habitat survey of land areas that the Proposed Development could be sited within; as described in Volume 2, Technical Appendix 7.1: UKHab and Protected Species Survey (2024).	To classify and map the presence of UKHab communities within the 2024 survey area; and to collect condition assessment data to help inform any future BNG metric assessment.	ERM	August 2024 – November 2024
	(2025) Habitat survey of additional land areas identified that the Proposed			September 2025

Title	Extent of Survey	Overview of Survey	Survey Contractor	Date
	Development could be sited within; as described in Volume 2, Technical Appendix 7.2: UKHab, NVC for GWDTE and Protected Species Survey (2025).			
<b>Protected Species Surveys</b>	(2024) Protected species surveys of land areas that the Proposed Development could be sited within, locally extended into adjoining areas based on species-specific Zols; as described in Volume 2, Technical Appendix 7.1: UKHab and Protected Species Survey (2024).	To assess the suitability of habitats for protected species; search for signs of protected species.	ERM	August 2024 – November 2024
	(2025) Protected species surveys of additional land areas that the Proposed Development could be sited within, locally extended into adjoining areas based on species-specific Zols; as described in Volume 2, Technical Appendix 7.2: UKHab, NVC for GWDTE and Protected Species Survey (2025).			September 2025
<b>NVC for GWDTE Survey</b>	Detailed botanical survey of wetland habitats identified in 2024 that could be dependent on groundwater; as well as additional land areas that the Proposed Development could be sited within, locally extended to cover 250 m buffer from emerging onshore export cable route options; ; as described in Volume 2, Technical Appendix 7.2: UKHab, NVC for GWDTE and	To classify and map NVC communities in wetland habitats that could be dependent on groundwater, to inform further assessment of GWDTE.	ERM	September 2025

Title	Extent of Survey	Overview of Survey	Survey Contractor	Date
	Protected Species Survey (2025).			

7.5.4 No breeding bird surveys were proposed within the Onshore Ornithology Survey Area. The intensively farmed habitats that dominate the landscape (see sections 7.6.6. to 7.6.12 and Annex – Figures: 7.7.1 to 7.7.9) are extremely poor for birds (Francis *et al.* 2011) and are not likely to be regularly or widely utilised by protected or priority breeding birds, as evident by desk study data from RSPB, NESBReC and other sources (e.g. Sullivan 2023). In addition, prior to construction starting, a pre-commencement breeding bird survey would be undertaken, with survey methods and coverage agreed with NatureScot, and targeting Schedule 1, Annex 1, Red and Amber BoCC, such as corn bunting *Emberiza calandra*; following the survey method detailed in Perkins *et al.*, (2025), as well as other nesting birds.

7.5.5 Those survey results, combined with the current baseline, would inform a Bird Protection Plan (BPP), also to be agreed with NatureScot. On the basis that NatureScot did not request breeding bird surveys be carried out during pre-application consultation, or in their response to the EIA Scoping Report, and taking account of these Embedded Mitigation measures, existing desktop information relating to breeding birds is sufficient to inform this assessment.

## 7.6 Methodology for Assessment of Effects

### Overview

7.6.1 The impact assessment generally followed the methodology set out in Volume 1, Chapter 3: EIA Methodology. Specific to the Onshore Ecology and Ornithology, regard was also given to Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2024) and therefore deviated from a matrix based approach outlined in Volume 1, Chapter 3: EIA Methodology.

### Criteria for Assessment

7.6.2 When determining the significance of effects, a process is used which involves defining the sensitivity of the features and the magnitude of the potential impacts. This section describes the criteria applied in this Onshore EIA Report Chapter to assign the magnitude of potential impacts and the importance of the features. The terms used to define magnitude and sensitivity are based on those which are described in further detail in Volume 1, Chapter 3: EIA Methodology.

7.6.3 In accordance with CIEEM (2024), ecological and ornithological features considered to be important, and which could be affected by the Proposed Development, require detailed assessment for potential significant effects. For the purpose of this Onshore EIA Report Chapter, the ‘importance’ of a feature is synonymous with ‘sensitivity’, which were determined in section 7.6.

7.6.4 The assessment within this Onshore EIA Report Chapter includes consideration of potential impacts on each important feature from all phases of the Proposed Development (construction, operation and decommissioning).

7.6.5 The baseline environment associated with important features was examined to determine how they will change as a result of the Proposed Development, taking Embedded Mitigation measures into account. Potential impacts are characterised based on the definitions presented in Table 7.17.

**Table 7.4: Descriptions of Categories Related to EIA Impacts**

<b>Impact Categories</b>	<b>Description</b>
<b>Direct or Indirect</b>	<p>Direct - where the effect is a direct result (or primary effect) of the Proposed Development. An example of a direct impact would be the disturbance of a breeding Schedule 1 pair, or a protected species shelter, due to the construction of a temporary access track.</p> <p>Indirect - a knock-on effect which occurs within or between environmental components and may include effects on the environment which are not a direct result of the Proposed Development, often occurring away from the proposals or as a result of a complex biological or chemical pathway. An example of an indirect impact would be the excessive drying (or wetting) of a habitat as a result of installation of a steel lattice tower foundation leading to a change or loss of supporting habitat.</p>
<b>Adverse or Beneficial</b>	<p>Adverse – a change that reduces the quality of a feature and may include recommencement or acceleration of an existing decline in the quality of a feature.</p> <p>Beneficial – a change that improves the quality of a feature and may include halting or slowing an existing decline in the quality of a feature.</p>
<b>Reversible or Irreversible</b>	<p>Permanent – where the effect represents a long-lasting change for a defined feature. An example of a permanent impact is the loss of a supporting habitat within the footprint of a permanent access track.</p> <p>Temporary – where the effect occurs for a limited period of time and the change for a defined feature can be reversed. An example of a temporary impact is the disturbance resulting from construction activity at a lattice tower location.</p>
<b>Cumulative</b>	<p>Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location.</p> <p>Additive/incremental – multiple activities/projects may give rise to a significant effect due to their proximity in time and space. These may be additive or synergistic effects; and</p> <p>Ancillary – different aspects of an activity/project that may be authorised under different consent processes.</p>
<b>Transboundary</b>	When an impact has an effect on an area that falls within the boundary of another European Economic Area (EEA).
<b>Inter-related</b>	The potential effects of multiple impacts from the construction, O&M and decommissioning of the Proposed Development, affecting one feature.

7.6.6 The above characteristics were combined to form a qualitative description of impact magnitude, which are defined as:

- High (An impact that will almost always affect the integrity or conservation status of a feature. They are usually long-term and often permanent or irreversible);

- Medium (An impact that may in some circumstances affect the integrity or conservation status of a feature. They may be long-term but are potentially reversible);
- Low (An impact that does not usually affect the integrity or conservation status of a feature. They are often short-term and/or reversible); and
- Negligible (An impact resulting in no discernible change to the distribution and/or abundance of a habitat or species assemblage/community or population).

7.6.7 For the purposes of this Onshore EIA Report Chapter, a ‘significant’ effect is defined as an effect that either supports or undermines biodiversity conservation objectives of an important feature, or for biodiversity in general. Conservation objectives may be specific, broad and/or wide-ranging; therefore, effects can be considered as significant at a range of geographic contexts and require the application of professional judgement to consider the importance of a feature and the degree (magnitude) to which it may be affected.

7.6.8 CIEEM (2024) discourage the use of a matrix approach as significance thresholds cannot be clearly defined from combining value, importance and magnitude. Therefore, effects are identified as either significant or not significant following evidence-based judgements.

7.6.9 Impacts deemed not to be significant (including those where compliance with regulations or legislation is required) would be expected to be avoided or reduced through the implementation of a Construction Environmental Management Plan (CEMP) and good practice during construction. Measures to reduce unavoidable impacts judged to be significant through the assessment process will be recorded as specific mitigation and/or compensation.

7.6.10 Following the application of this additional mitigation, effects are reassessed and residual effects (effects remaining following application of mitigation or compensation) reported. This approach strives to make the EIA more transparent and demonstrate the adequacy / necessity of proposed additional mitigation.

## **7.7 Key Parameters for Assessment**

### **Maximum Design Scenario**

7.7.1 The Maximum Design Scenario (MDS) identified in Table 7 are those parameters expected to have the potential to result in the greatest effect on an identified feature. Any other development scenario within the Project Design Envelope (PDE), will result in the same, or less, level of environmental effect. The scenario has been selected from the details provided in Volume 1, Chapter 2: Proposed Development.

Table 7.5 Maximum Design Scenario (MDS) Considered to Inform Ecological Impact Assessment

Potential Impact	Phase			Maximum Design Scenario	Justification
	C	O&M	D		
<b>Temporary or permanent loss of or modification to habitats, and to those used by IEFs and IOFs for foraging, commuting, or refugia</b>	✓	x	✓	<p><u>Horizontal Directional Drilling (HDD)</u> with up to four Transition Joint Bay (TJB), four HDD cable ducts.                      Area of TJB – 20 m x 4 m.                      Anticipated maximum duration of works at HDDs – 12 months.                      Temporary construction compound including temporary access – 34,000 m<sup>2</sup>.                      Landfall HDD construction area – 100 m x 80 m.                      HDD Compounds, launch pit 70 m x 50 m, receiver pit 40 m x 50 m.  <u>Substation</u>                      Three main control buildings with a maximum height of 15 m.</p>	Habitats (including Priority habitats and Annex 1 habitats) used by ecological and ornithological receptors may be lost, damaged or modified, and may be affected by accidental contamination or pollution, due to construction and/or decommissioning of the Proposed Development.
<b>Disturbance to IEFs and IOFs through increased noise, light, and dust</b>	✓	x	✓	<p>Area of temporary construction compound of approximately 18.4 ha.                      Duration of works – 45 months.                      Permanent Substation switchyard footprint – approximately 10 ha.                      Permanent Substation site – approximately 18.4 ha (including permanent substation platform of 9.7 ha and landscaping, forestry replanting of 1.7 ha; as well as operational drainage).  <u>Onshore Export Cables</u>                      23.5 km long Onshore Export Cable Corridor.                      2.5 km long 400 kV Cable Corridor.                      Maximum 50 m wide construction corridor, including 7 m wide haul road.                      35 m wide permanent corridor as a permanent easement.                      Temporary construction compounds – 106,000 m<sup>2</sup>.                      HDD Compounds, launch pit 70 m x 50 m, receiver pit 40 m x 50 m.  <u>Decommissioning phase</u></p>	Protected species including birds could be disturbed whilst using the area for foraging, commuting, breeding or refuge
<b>Indirect impacts due to accidental pollution and/or contamination of habitats used by onshore ecological and ornithological features</b>	✓	x	✓	<p>23.5 km long Onshore Export Cable Corridor.                      2.5 km long 400 kV Cable Corridor.                      Maximum 50 m wide construction corridor, including 7 m wide haul road.                      35 m wide permanent corridor as a permanent easement.                      Temporary construction compounds – 106,000 m<sup>2</sup>.                      HDD Compounds, launch pit 70 m x 50 m, receiver pit 40 m x 50 m.  <u>Decommissioning phase</u></p>	
<b>Direct mortality of IEFs through contact with machinery</b>	✓	x	✓	<p>At the end of the operational lifetime of the Proposed Development (which is expected to be 30 years from date of full commissioning), it is anticipated that works will be the reverse of the construction sequence. This would involve the removal of any buildings and/or re-purposing for alternative uses. The Onshore Export Cables and 400 kV Cables will be removed via the TJBS to reduce the environmental disturbance during decommissioning, this will also be subject to specific land agreements with landowners. The structures of the TJBS and link boxes will be removed only if it is feasible with minimal environmental disturbance, or if their removal is required to return the land to agricultural use. Any waste arising from decommissioning would be disposed of, recycled or</p>	IEFs and IOFs have been identified in proximity to the Proposed Development. Without appropriate Embedded Mitigation measures during the construction and decommissioning phases there is the potential cause mortality to these.

Potential Impact	Phase			Maximum Design Scenario	Justification
	C	O&M	D		
<b>Accidental disturbance of nesting birds and/or damage or destruction of nests and/or eggs</b>	✓	x	✓	reused in accordance with relevant regulations. A Decommissioning Plan would be agreed with Aberdeenshire Council and key stakeholders as required at the time of decommissioning. Impacts during decommissioning are likely to be broadly similar to those in the construction phase (above), although it is not possible to predict precisely what activities would take place, or what protected species and habitats would be present, at that time.	All breeding birds and their nests/eggs are afforded protection. Without Embedded Mitigation measures, IOFs may be accidentally disturbed, damaged or destroyed during construction and/or decommissioning of the Proposed Development.

### Impacts Scoped Out of the Assessment

7.7.2 On the basis of the baseline environment and the Proposed Development (Volume 1, Chapter 2: The Proposed Development), a number of impacts are scoped out of the assessment for ecological and ornithological features (Table 7). Those agreed with key stakeholders through consultation are described in section 7.4.

Table 7Table 7.6 Potential impacts scoped out from further assessment (Tick Confirms the Impact is Scoped Out)

Potential Impact	Phase			Justification
	C	O&M	D	
<b>Operational impacts from the Onshore Export Cable on population-level effect for terrestrial protected species</b>	x	✓	x	As the Onshore Export Cables would be underground, operational maintenance is expected to be of limited scale (both spatially and temporally), there is not considered to be any potential for population-level effects on any terrestrial protected or priority species.
<b>Operational impacts on habitats of low ecological value</b>	x	✓	x	All habitats which are of low ecological value e.g., amenity grassland/arable are not considered to be significantly affected by the Proposed Development and therefore are scoped out of further assessment.
<b>Potential impacts affecting the Fowlsheugh SPA</b>	x	✓	x	It is proposed that potential impacts affecting the Fowlsheugh SPA are scoped out of the onshore assessment based on the qualifying interest species, as all are breeding seabird species and are not expected to make regular use of the Scoping Boundary for foraging. As such, there is not considered to be any pathway for effects between the Proposed Development site and the SPA. Potential impacts on the Fowlsheugh SPA from the offshore elements of the Project will be assessed in the Offshore EIA Report that will subsequently accompany the Offshore Section 36 and Marine Licence application(s) for the Project.
<b>Operational impacts on statutory designated sites &gt;10 km</b>	x	✓	x	Assessment of statutory designated sites (which have a qualifying feature) that are located outwith 10 km of the Proposed Development are scoped out, due to lack of connectivity between the designated site and the Proposed Development.
<b>Collision risk</b>	x	✓	x	As the Onshore Export Cables would be underground with no overhead lines proposed, there is no risk of significant collisions involving protected or priority species.

## 7.8 Baseline Environment

### Onshore Ecology - Overview of Baseline Environment

7.8.1 The following sections provide a summary of baseline information relating to onshore ecology. The following technical reports, supported by an Onshore Ecology Confidential Annex (2024/2025), include full details of survey methodology, limitations and findings:

- Volume 2, Technical Appendix 7.1: Habitats and Protected Species Survey (2024)
- Volume. 2, Technical Appendix 7.2: Habitats and Protected Species Survey (2025).
- Volume 2, Technical Appendix 7.1-7.2: Confidential Annex (2025).

### Onshore Ecology - Designated Sites

7.8.2 Four statutory designated site have been identified within the Onshore Ecology Study Area; as summarised in and shown in Figure 7.5 (see Annex – Figures). Whilst the Burn of Benholm SSSI is also located in the western extent of the Ecology Study Area towards Muirton, the SSSI is designated for geodiversity features and not considered further in this Onshore EIA Report chapter (refer to Volume 1, Chapter 10: Geology and Ground Conditions).

7.8.3 A total of six non-statutory designated sites were identified within the Onshore Ecology Study Area, which are summarised in and shown in Figure 7.5 (see Annex – Figures).

**Table 7.7 Designated Sites and Relevant Qualifying Features for Ecology**

Designation	Name	Proximity (km)	Description
<b>SAC</b>	Garron Point	Within the Onshore Ecology Study Area near Stonehaven	As described by JNCC, the SAC supports important populations of Narrow-mouthed whorl snail ( <i>Vertigo angustior</i> ).
<b>SAC</b>	Red Moss of Netherley	Within the Onshore Ecology Study Area near Netherley	As described by JNCC, the SAC supports active raised bogs and degraded raised bogs still capable of natural regeneration; and represents one of the largest remaining raised bogs in north-east Scotland.
<b>SAC</b>	River Dee	Within the Onshore Ecology Study Area along the Burn of Sheeoch near Lochton	As described by JNCC, the SAC supports important populations of freshwater pearl mussel, Atlantic salmon and otter.
<b>SSSI</b>	Den of Finella	Within the Onshore Ecology Study Area near Bridgeton Castle	As described by NatureScot, the Den of Finella, is a small, wooded gorge. The woodland comprises mixed broad-leaved trees and a species-rich field layer containing a range of fern species and tall herbaceous plants. The rocks exposed in the gorge are andesites of Old Red Sandstone age that have weathered to give base-rich soils. Among the more notable plants found here are Hart's-tongue fern <i>Phyllitis</i>

Designation	Name	Proximity (km)	Description
			<i>Scolopendrium</i> , wood garlic <i>Allium ursinum</i> , pendulous sedge <i>Carex pendula</i> , hard shield-fern <i>Polystichum aculeatum</i> and wood false-brome <i>Brachypodium sylvaticum</i> .
<b>LNCS</b>	Annies Dam	Within the Onshore Ecology Study Area at Upper Knox	As described by Aberdeenshire Council, The LNCS comprises of a wet area created by a dam. Birch <i>Betula</i> sp. woodland, wet woodland, rush pasture and acid grassland. Good diversity of plants with locally uncommon sedges.
<b>LNCS</b>	Arbuthnott	Within the Onshore Ecology Study at Bervie Water, Arbuthnott	As described by Aberdeenshire Council, this site lies along the Bervie Water and supports valuable semi-natural woodland and riparian habitats. A good diversity of woodland and wetland plants are present with locally important species such as blue water-speedwell <i>Veronica anagallis-aquatica</i> .
<b>LNCS</b>	Elfhill	Within the Onshore Ecology Study Area near Cuttiesouter	As described by Aberdeenshire Council, this small site forms a steep sided river valley, with seminatural broadleaved woodland, gorse <i>Ulex europaeus</i> scrub and acid grassland. Good diversity of plant species and particularly important for the native bluebell <i>Hyacinthoides non-scripta</i> .
<b>LNCS</b>	Todhead Point to Johnshaven Coast	Within the Onshore Ecology Study Area at Haughs Bay	As described by Aberdeenshire Council, the LNCS comprises old Red Sandstone which has weathered to give a broad wave cut platform with a large intertidal zone which is locally important for wading birds dependent on the rock shore, and for sea ducks offshore. Locally interesting plants.
<b>LNCS</b>	Benholm	Within the Onshore Ecology Study Area at Benholm	As described by Aberdeenshire Council, the LNCS is an important geological site for establishing the sequence of glacial events, ice movement patterns and environmental

Designation	Name	Proximity (km)	Description
			changes that occurred in northeast Scotland during the Late Quaternary. Base rich lowland woodland. Extension of boundary to the north to include wetland and grassland.
<b>LNCS</b>	Mergie	Within the Onshore Ecology Study Area near the Cowie Water	As described by Aberdeenshire Council, the site consists of neutral and acid grassland, broadleaved and coniferous woodland, wet heath, scrub, bracken, bog, pond, rivers and rush pasture alongside the Cowie Water. Locally important species such as lesser twayblade <i>Neottia cordata</i> and bog myrtle <i>Myrica gale</i> .

7.8.4 The AWI provides a provisional guide to the location of ancient woodlands in Scotland. It contains three categories of woodland that are likely to be of value for their biodiversity and cultural value by virtue of their antiquity:

- Ancient Woodland (categories 1a and 2a): defined as semi-natural woodlands identified from 1750 Roy Military Survey Maps (Category 1a) or 1860 OS First Edition Maps (Category 2a) and continuously woodland to the present day. Where these areas are planted with non-native species during the 20th century they are referred to as Plantations on Ancient Woodland Sites (PAWS).
- Long-established Woodland of Plantation Origin (LEPO) (Categories 1b and 2b): defined as plantations from 1750 Roy Military Survey Maps (Category 1b) or 1860 OS First Edition Maps (Category 2b) and continuously wooded since. Many of these sites have developed semi-natural characteristics semi-natural characteristics, especially the oldest stands, which may be as rich as ancient woodland.
- Other Roy woodland sites (Category 3): identified on 1750 Roy Military Survey Maps but un-wooded on the 1860 OS First Edition Maps. These woodlands have only had a short break in continuity of woodland cover and may still retain features of ancient woodland.

7.8.5 A total of six AWI sites were identified within the Onshore Ecology Study Area; as detailed in Table 7.8. However, these AWI blocks were situated on and only slightly overlapping the PPP Application Boundary. These areas were typically characterised as edges to more extensive woodland areas, or isolated woodland blocks, near Benholm, Bervie Water, Glenbervie and Fetteresso Forest; as shown on Figure 7.5 (see Annex – Figures) Figure 7.5 Onshore Ecology - Designated Sites.

7.8.6 No protected trees were identified within the Onshore Ecology Study Area.

Table 7.8 AWI Sites Present within Onshore Ecology Study Area

AWI Category	Number of Stands
<b>1b – Long-established (of plantation origin)</b>	1
<b>2b – Long-established (of plantation origin)</b>	5

### Onshore Ecology - Protected or Priority Species Records

7.8.7 NESBReC provided records of protected or priority species within the Onshore Ecology Study Area, from within last 10 years; as shown in Table 7.9.

Table 7.9 Protected or Priority Species within Onshore Ecology Study Area (NESBReC)

Species	Number of Records
<b>Mammals</b>	
Badger <i>Meles meles</i>	39
Brown hare <i>Lepus europaeus</i>	133
Hedgehog <i>Erinaceus europaeus</i>	8
Otter <i>Lutra lutra</i>	4
Pine marten <i>Martes martes</i>	82
Red squirrel <i>Sciurus vulgaris</i>	40
<b>Bats</b>	
Bat spp.	2
Brown long-eared bat <i>Plecotus auritus</i>	3
Common pipistrelle <i>Pipistrellus pipistrellus</i>	15
Daubenton's bat ( <i>Myotis daubentonii</i> )	3
Myotis spp.	1
Natterer's bat <i>Myotis nattereri</i>	1
Pipistrelle spp.	2
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	19
<b>Reptiles</b>	
Common lizard <i>Zootoca vivipara</i>	8
<b>Amphibians</b>	
Common toad <i>Bufo bufo</i>	2
<b>Invertebrates</b>	
Knot grass <i>Acrionicta rumicis</i>	1
Ear moth <i>Amphipoea oculea</i>	3
Dusky brocade <i>Apamea remissa</i>	3
Garden tiger <i>Actia caja</i>	2
Small pearl-bordered fritillary <i>Boloria selene</i>	2
Haworth's minor <i>Calaena haworthii</i>	1
Latticed heath <i>Chiasmia clathrata</i>	2
Sallow <i>Cirrhia icteritia</i>	1
Northern damselfly <i>Coenagrion hastulatum</i>	1
Small heath <i>Coenonympha pamphilus</i>	22
Autumnal rustic <i>Eugnorisma glareosa</i>	1
Narrow-bordered bee hawk-moth <i>Hemaris tityus</i>	1
Rosy rustic <i>Hydraecia micacea</i>	1
Rosy minor <i>Litoligia literosa</i>	3
Red mason bee <i>Osmia bicornis</i>	1
Shaded broad-bar <i>Scotopteryx chenopodiata</i>	1
Heath rustic <i>Xestia agathina</i>	1
Neglected rustic <i>Xestia castanea</i>	2
<b>Flora</b>	
Cornflower <i>Centaurea cyanus</i>	1
Heath cudweed <i>Gnaphalium sylvaticum</i>	2
Charlock <i>Sinapis arvensis</i>	1
Wild pansy <i>Viola tricolor</i>	2
Agrimony <i>Agrimonia eupatoria</i>	3
Bur chervil <i>Anthriscus caucalis</i>	2
Brown sedge <i>Carex brunnea</i>	1
Hairy sedge <i>Carex hirta</i>	2
Wild basil <i>Clinopodium vulgare</i>	1
Bluebell <i>Hyacinthoides non-scripta</i>	5
Field scabious <i>Knautia arvensis</i>	1

Species	Number of Records
Early-purple orchid <i>Orchis mascula</i>	1
Celery-leaved buttercup <i>Ranunculus sceleratus</i>	5
Blue-water speedwell <i>Veronica anagallis-aquatica</i>	2
<b>INNS of plant</b>	
Japanese knotweed <i>Reynoutria japonica</i>	22
Himalayan balsam <i>Impatiens glandulifera</i>	5
American skunk-cabbage <i>Lysichiton americanus</i>	1
Rhododendron spp.	2

7.8.8 No records of migratory (or resident) fish or freshwater pearl mussel within the Onshore Ecology Study Area were provided by NESBReC. Table 7 Based on a review of SEPA’s webmap service, migratory salmonid species are present within the Onshore Ecology Study Area with Atlantic salmon *Salmo salar* known to occur in the Cowie Water (as far upstream as the Hill of Hobseat), the Carron Water (as far upstream as the East Croft of Carmont) and Bervie Water (as far upstream as Drumlithie). None of these watercourses are designated as, or connected to, an SAC. Therefore, there is potential for Atlantic salmon (and other migratory salmonid species) and freshwater pearl mussel to utilise suitable aquatic habitat features within these watercourses.

**Onshore Ecology - Field Surveys (UKHab)**

7.8.9 Cropland was the most prevalent broad habitat encountered, accounting for over 44.40% of the Habitat Survey Area. These areas were characterised by extensive field systems containing monocultures of wheat, barley, oats and winter stubble; as well as rye-grass and clover leys and non-cereal crops (cabbage, chard, pea, potato, etc.).

7.8.10 Grassland areas were also common and widespread, accounting for approximately 28.48 % of the Habitat Survey Area. These areas were characterised by modified grasslands and neutral grasslands, which were typically species-poor and dominated by palatable species that rely on the addition of nutrients and fertilisers.

7.8.11 Woodland and forests accounted for approximately 16.17 % of the Habitat Survey Area. Of this, coniferous woodland amounted to approximately 14.45 % of the Habitat Survey Area, the majority of which was situated within Fetteresso Forest. In these areas, coniferous woodlands were characterised by dense plantations of Sitka spruce *Picea sitchensis* or Norway spruce (*Picea abies*), with more open woodland areas containing larch *Larix decidua* and Scot’s pine *Pinus sylvestris*.

7.8.12 A summary of all UKHab communities recorded within the Habitat Survey Area are summarised in Table 7.10; and shown on Figure 7.7.1 to Figure 7.7.11, Annex – Figures. The proportion of each UKHab community recorded is expressed as a percentage of the total Habitat Survey Area. It should be noted that intertidal habitats were not accessed as no physical works are proposed in this area. In addition, tracks within Fetteresso Forest were not accessed as these areas are included in the PPP Application Boundary to show servitudes of access and no physical works are proposed in these areas. Detailed descriptions of UKHab communities are presented in Volume 2, Technical Appendix 7.1 and Technical Appendix 7.2.

Table 7.10 Habitats Identified Within the footprint of the PPP Application Boundary

<b>Broad Habitat Type</b>	<b>UKHab Classification</b>	<b>Area (ha)</b>	<b>Proportion of Habitat Survey Area (%)</b>	<b>Length within Site (km)</b>
<b>Cropland</b>	c1 - Arable and horticultural	6.26	0.78	
	c1b - Temporary grass and clover leys	8.21	1.02	
	c1b5 - Rye-grass and clover ley	32.80	4.07	
	c1b6 - Legume-rich ley	0.34	0.04	
	c1b7 - Herb-rich ley	0.06	0.01	
	c1c - Cereal crops	4.78	0.59	
	c1c5 - Winter stubble	47.68	5.91	
	c1c7 - Other cereal crops	230.45	28.58	
	c1d8 - Other non-cereal crops	27.44	3.40	
<b>Wetland</b>	f2b - Purple moor-grass and rush pastures	1.21	0.15	
	f2f - Other wetlands	0.24	0.03	0.28
<b>Grassland</b>	g1b6 - Other upland acid grassland	11.97	1.48	
	g1c - Bracken	0.42	0.05	
	g3 - Neutral grassland	0.00	0.00	
	g3c - Other neutral grassland	21.14	2.62	
	g3c5 - Arrhenatherum neutral grassland	10.53	1.31	
	g3c6 - Lolium-Cynosurus neutral grassland	0.61	0.08	
	g3c7 - Deschampsia neutral grassland	0.45	0.06	
	g3c8 - Holcus-Juncus neutral grassland	0.97	0.12	
	g4 - Modified grassland	183.58	22.77	
<b>Heathland and Shrub</b>	h2a6 - Other native hedgerow	0.18	0.02	0.76
	h2a - Native hedgerow			0.16
	h3 - Dense scrub	0.10	0.01	0.37
	h3e - Gorse scrub	3.99	0.49	1.55
	h3h - Mixed scrub	1.07	0.13	0.08
<b>Rivers and Lakes</b>	r1g - Other standing water	0.33	0.04	2.47
	r1 - Standing open water and canals			0.22
	r2a - Rivers (priority habitat)	0.62	0.08	1.19
	r2b - Other streams and rivers	0.02	0.00	15.98
<b>Sparsely Vegetated Land</b>	s3b - Coastal vegetated shingle	0.86	0.11	
<b>Urban</b>	u1 - Built-up areas and gardens	1.48	0.18	
	u1b - Developed land; sealed surface	1.05	0.13	0.43

Broad Habitat Type	UKHab Classification	Area (ha)	Proportion of Habitat Survey Area (%)	Length within Site (km)
	u1b5 - Buildings	0.07	0.01	
	u1b6 - Other developed land	0.26	0.03	
	u1c - Artificial unvegetated; unsealed surface	2.00	0.25	0.33
	u1d - Suburban mosaic of developed and natural surface	0.00	0.00	
	u1e - Built linear features	7.34	0.91	5.57
<b>Woodland</b>	w1b - Upland mixed ashwoods	0.10	0.01	
	w1d - Wet woodland	1.90	0.24	
	w1d5 - Alder woodland on floodplains (H91E0)	1.61	0.2	
	w1f7 - Other Lowland mixed deciduous woodland	0.03	0.00	
	w1g - Other broadleaf woodland	5.33	0.66	0.45
	w1h - Other woodland; mixed	0.89	0.11	
	w1h5 - Other woodland; mixed; mainly broadleaved	0.47	0.06	
	w1h6 - Other woodland; mixed; mainly conifer	1.84	0.23	
	w2b - Other Scot's Pine woodland	1.64	0.20	
	w2c - Other coniferous woodland	116.56	14.45	

### Onshore Ecology - Field Surveys (NVC)

7.8.13 A total of 10 wetland habitats that could be dependent on groundwater were found to be locally present within the NVC Survey Area, represented by three NVC communities:

- M23 *Juncus effusus/ acutiflorus*-*Galium palustre* rush pasture;
- M27 *Filipendula ulmaria*-*Angelica sylvestris* mire; and
- W1 *Salix cinerea*-*Galium palustre* woodland.

7.8.14 These NVC communities were small in scale (typically less than 0.1 ha in size) and mostly found in low-lying areas adjoining surface water features at the Benholm Castle, Temple Hill, Bervie Water and Carron Water. The only exception to this was a small area of M23b *Juncus effusus* sub-community was recorded at a historic sheep wash near Gyratesmyre, where a series of land drains connect in an area enclosed by stock-proof fencing before flowing downslope and into the Forthie Water.

7.8.15 The location of NVC communities that may be groundwater dependent are shown in Figure 7.8.; and full descriptions of NVC communities are presented in Volume 2, Appendix 7.2: Habitats and Protected Species Survey (2025) .

### Onshore Ecology - Field Surveys (Protected Species)

- 7.8.16 The results of the protected species field surveys are summarised in Table 7.11; and shown on Figure 7.9 in Annex – Figures. Full details are provided in Volume 2, Technical Appendix 7.1: Habitats and Protected Species Survey (2024) and Technical Appendix 7.2: Habitats and Protected Species Survey (2025).
- 7.8.17 Sensitive information relating to roosting bats and badger are described in Volume 4, Technical Appendix 7.3.

**Table 7.11 Summary of Protected Species Survey Results within the Onshore Ecology Survey Area**

Species	Survey Results
<b>Bats</b>	A total of 12 individual trees, groups of trees or woodland areas within the Onshore Ecology Survey Area were found to contain potential roost features (PRFs); and an additional 16 individual trees, groups of trees or woodland areas within the Onshore Ecology Survey Area were classified as requiring further assessment to confirm the presence of any PRFs that may be present. One building within the Onshore Ecology Survey Area was classified as being of High suitability for roosting bats, with a two seven buildings or structures classified as being of Moderate suitability; and two buildings or structures classified as being of Low suitability. In addition, one suspected maternity bat roost within a dwelling house was reported, details of which are described in the supporting Onshore Ecology Confidential Annex (2024/2025).
<b>Badger</b>	A total of seven badger setts were recorded within the Onshore Ecology Survey Area: as described in the supporting Onshore Ecology Confidential Annex (2024/2025).
<b>Otter</b>	Two otter footprints, one spraint and one location of potential feeding remains were recorded at across the Burn of Benholm and an associated tributary within the Onshore Ecology Survey Area. No confirmed holts or resting sites were recorded but suitable habitat features present in bankside areas could be utilised as resting sites.
<b>Pine marten</b>	The presence of pine marten was confirmed at two locations in Fetteresso Forest within the Onshore Ecology Survey Area through environmental DNA analysis of scats. No confirmed denning sites were recorded but suitable habitat features are present across Fetteresso Forest.
<b>Red squirrel</b>	A single red squirrel was sighted in Fetteresso Forest, and three potential dreys were recorded within the Onshore Ecology Survey Area in woodlands near Forthie Water and Bervie Water; and Fetteresso Forest contains suitable habitat for squirrel to establish dreys within.
<b>Water vole</b>	Water vole feeding signs were recorded on two occasions on the Forthie Water within the Onshore Ecology Survey Area, as well as one location containing potential burrows, with the watercourse appearing suitable throughout. Potential feeding signs were also recorded on one occasion on a tributary to the Burn of Benholm and potential, washed latrines on the Burn of Annamuick. Other watercourses and wetland habitats within the Onshore Ecology Survey Area were considered to be of extremely limited suitability to water vole.
<b>Wildcat</b>	Habitats within the Onshore Ecology Survey Area are of limited suitability to wildcat. Areas of commercial forestry comprise extensive monocultures of Sitka spruce or Norway spruce that, combined with a lack significant understorey, are typically devoid of features that wildcat could establish breeding dens within.

### **Important Ecological Features (IEFs)**

- 7.8.18 Table 7.12 sets out the IEFs scoped in for further detailed assessment, taking cognisance of the baseline environment relating to Onshore Ecology; and current guidelines (CIEEM 2024) relating to the determination of importance:
- International (e.g. ecosystems and habitats protected by European law, and species occurring in numbers that exceed 1 % of biogeographic populations);
  - National (e.g. ecosystems and habitats protected by National law, and species occurring in numbers than exceed 1 % of national populations);
  - Regional (e.g. habitats and species designated and/or recognised under biodiversity planning policy for Aberdeenshire);
  - Local (e.g. semi-natural habitats and species that contribute to the maintenance and restoration of biodiversity at a local level); and
  - Less than local (e.g. habitats and species that are not connected to, or meet the criteria of, the above geographic contexts).
- 7.8.19 Table 7.13 lists ecological features that are not considered to be IEFs and provides justification as to why they have been scoped out of this assessment.
- 7.8.20 Where legally protected species are present, and there is potential for a breach in legislation, those species are considered 'important' features.

**Table 7.12 Ecological features scoped in for further assessment**

<b>Feature</b>	<b>Baseline</b>	<b>Conservation Status</b>	<b>Importance</b>
<b>Arbuthnott LNCS</b>	Presumption against development within LNCS except where public benefits [of development] clearly outweigh the nature conservation value of the LNCS. This LNCS is approximately 44 ha in size and lies along a section of the Bervie Water; and supports valuable semi-natural woodland and riparian habitats. A good diversity of woodland and wetland plants are present with locally important species such as blue water-speedwell. The PPP Application Boundary overlaps with both the LNCS and the Bervie Water, which flows through the LNCS.	Aberdeenshire Local Development Plan	Regional
<b>Annies Dam LNCS</b>	Presumption against development within LNCS except where public benefits [of development] clearly outweigh the nature conservation value of the LNCS. This LNCS is approximately 23 ha in size and comprises a wet area created by a dam. As per the Aberdeenshire Council description, the site contains birch woodland, wet woodland, rush pasture and acid grassland and good diversity of plants with locally uncommon sedges. The PPP Application Boundary overlaps with the LNCS.	Aberdeenshire Local Development Plan	Regional
<b>Elfhill LNCS</b>	Presumption against development within LNCS except where public benefits [of development] clearly outweigh the nature conservation value of the LNCS. This LNCS is approximately 16 ha in size and comprises a steep sided river valley, with semi-natural broadleaved woodland, gorse scrub and acid grassland. Good diversity of plant species and particularly important for the native bluebell. The PPP Application Boundary overlaps with both the LNCS and the Carron Water, which flows through the LNCS.	Aberdeenshire Local Development Plan	Regional
<b>Pine Marten</b>	In Scotland, the species is considered to be ‘Least Concern’ based on the IUCN Red List; and of favourable conservation status. Scotland’s population is estimated to be 3,700 adult pine marten (approximately 99% of the known UK population). The species is classed a favourable	Wildlife and Countryside Act SBL priority species	Local

Feature	Baseline	Conservation Status	Importance
	<p>with increasing population size and range. No population estimates available for Aberdeenshire.</p> <p>Pine marten present within Fetteresso Forest. In this area, habitat features present that could be utilised for denning, but no denning sites were recorded. Habitats elsewhere are of limited suitability for pine marten.</p>		
<b>Otter</b>	<p>In Scotland, the species is considered to be ‘Vulnerable’ based on the IUCN Red List; and of favourable conservation status. Scotland’s population is estimated to be around 8,000 otter (approximately 73 % of the UK population). The species is classed a favourable with increasing population size and range. No population estimates available for Aberdeenshire.</p> <p>Evidence of otter activity, and suitable habitat features present, along the Bervie Water, Carron Water, Burn of Annamuick and tributary to the Burn of Benholm. Habitat features are present that could be utilised for shelter or protection, but no holts or resting sites were recorded. Other watercourses could be utilised by individuals seasonally, and for moving between suitable habitats in the surrounding landscape.</p>	Habitats Regulations SBL priority species	Local
<b>Badger</b>	<p>In Scotland, the species is considered to be ‘Least Concern’ based on the IUCN Red List. Scotland’s population is estimated to be around 115,000 (approximately 20 % of the UK population). The species is considered to have an increasing population and a stable range. Recent studies also report a moderate increase in population based on between 10,290 and 15,864 main setts recorded across Scotland (based on 2022-2025 levels), an increase of between 3.7 % and 7.9 % from 2006-2009 levels. No population estimates available for Aberdeenshire.</p> <p>Badger is present within the Onshore Ecology Survey Area.</p>	Protection of Badgers Act	Local
<b>Red Squirrel</b>	<p>In Scotland, the species is considered to be ‘Near Threatened’ based on the IUCN Red List. Scotland’s population is estimated to be around 239,000 (approximately 83% of the UK population). The species is considered to have a decreasing population and a stable</p>	Wildlife and Countryside Act SBL priority species	Local

Feature	Baseline	Conservation Status	Importance
	<p>range. No population estimates available for Aberdeenshire.</p> <p>Red squirrel sighted in Fetteresso Forest, which contains extensive woodland areas that the species could establish dreys within. Potential dreys also recorded in woodlands near Forthie Water, Bervie Water and the Burn of Annamuick.</p>		
<b>Water Vole</b>	<p>In Scotland, the species is considered to be ‘Near Threatened’ based on the IUCN Red List. Scotland’s population is estimated to be around 50,000 (approximately 38 % of the UK population). The species is considered to have a decreasing population and increasing range. No population estimates available for Aberdeenshire.</p> <p>Evidence of water vole activity, and suitable habitat features present, along the Forthie Water and Carron Water. Habitats elsewhere within the Onshore Ecology Survey Area are of extremely limited suitability for water vole.</p>	Wildlife and Countryside Act SBL priority species	Local
<b>Bats</b>	<p>The Onshore Ecology Survey Area is within the current range of Daubenton’s bat and brown long-eared bat; as well as both common pipistrelle and soprano pipistrelle. In Scotland, each species is considered to be of ‘Least Concern’ based on the IUCN Red List; and of favourable conservation status. The Onshore Ecology Survey Area are also in close proximity to the current range of Natterer’s bat and Nathusius pipistrelle <i>Pipistrellus nathusii</i>, and ‘Least Concern’ and ‘Vulnerable’ respectively, based on the IUCN Red List.</p> <p>Suitable year-round roosting habitat is present in the Onshore Ecology Survey Area, within individual trees, groups of trees and woodland containing PRF or of a size and nature that could support PRFs. In addition, a small number of buildings and structures containing PRFs were also recorded, primarily in private dwelling houses and farms. One suspected maternity bat roost is reported within the Onshore Ecology Survey Area.</p>	Habitats Regulations SBL priority species	Local

Feature	Baseline	Conservation Status	Importance
	The majority of habitats within the Onshore Ecology Survey Area are of limited suitability to foraging and commuting bats, which comprise extensive arable fields with low-lying and narrow hedgerow boundary features. Permanent pasture (particularly where these adjoin woodlands, vegetated river corridors and woodland rides/ glades) provide greater suitability for foraging and commuting bats in the locality – particularly where these are accessible from roost sites.		

Table 7.13 Ecological features scoped out from further assessment

Feature	Rationale	Conservation Status	Importance
<b>Garron Point SAC</b>	The PPP Application Boundary is situated approximately 8.3 km west of the SAC. Based on distance and intervening land-use, habitats within and adjoining the PPP Application Boundary are not likely to be utilised by SAC qualifying features; and are not connected to any habitats within the SAC. On the basis of the above, the SAC will not be affected by the Proposed Development.	Habitats Regulations	Less than local
<b>Red Moss of Netherley SAC</b>	The PPP Application Boundary is situated approximately 7.8 km south-west of the SAC. Based on distance and intervening land-use, habitats within the SAC are not connected to any habitats within or adjoining the PPP Application Boundary and will not be affected by the Proposed Development.	Habitats Regulations	Less than local
<b>River Dee SAC</b>	The PPP Application Boundary is situated approximately 3.6 km south of the SAC. The PPP Application Boundary overlaps with catchment areas associated within the Bervie Water and Kincardine and Angus Coastal. Therefore, watercourses within or connected to the PPP Application Boundary are not connected to the River Dee and as such the River Dee SAC will not be affected by the Proposed Development.	Habitats Regulations	Less than local

<b>Feature</b>	<b>Rationale</b>	<b>Conservation Status</b>	<b>Importance</b>
<b>Den of Finella SSSI</b>	The PPP Application Boundary is situated approximately 4.9 km north-east of the SSSI. Based on distance and intervening land-use, habitats within the SSSI are not connected to any habitats within or adjoining the PPP Application Boundary and will not be affected by the Proposed Development.	Nature Conservation Act	Less than local
<b>Benholm LNCS</b>	<p>Presumption against development within LNCS except where public benefits [of development] clearly outweigh the nature conservation value of the LNCS.</p> <p>This LNCS is approximately 50 ha in size and recognised as an important geological site for establishing the sequence of glacial events, ice movement patterns and environmental changes that occurred in northeast Scotland during the Late Quaternary. The LNCS also includes base rich lowland woodland; and an extension of boundary to the north include wetlands and grasslands.</p> <p>Whilst the LNCS is situated within the Onshore Ecology Study Area, closest habitats within the LNCS are located some 200 m west of the PPP Application Boundary; and unlikely to have any significant connectivity with habitats in the PPP Application Boundary.</p>	Aberdeenshire Local Development Plan	Local

Feature	Rationale	Conservation Status	Importance
<b>Mergie LNCS</b>	<p>Presumption against development within LNCS except where public benefits [of development] clearly outweigh the nature conservation value of the LNCS.</p> <p>This LNCS is approximately 98 ha in size and contains neutral and acid grassland, broadleaved and coniferous woodland, wet heath, scrub, bracken, bog, pond, rivers and rush pasture alongside the Cowie Water. Locally important species such as lesser twayblade and bog myrtle. Whilst the LNCS is situated within the Onshore Ecology Study Area, closest habitats within the LNCS are located some 500 m north of the PPP Application Boundary, beyond the Cowie Water, and unlikely to have any significant connectivity with habitats in the PPP Application Boundary.</p>	Aberdeenshire Local Development Plan	Local
<b>Todhead Point to Johnshaven Coast LNCS</b>	<p>Presumption against development within LNCS except where public benefits [of development] clearly outweigh the nature conservation value of the LNCS.</p> <p>This LNCS is approximately 2,897 ha in size and comprises Old Red Sandstone that has weathered to give a broad wave cut platform with a large intertidal zone which is locally important for wading birds dependent on the rock shore, and for sea ducks offshore; and plants of local interest. Whilst the PPP Application Boundary overlaps with the LNCS near Haughs Bay, the Proposed Development does not involve any work within any intertidal or coastal grassland habitat. Therefore, non-avian attributes to the LNCS are scoped out from further assessment.</p>	Aberdeenshire Local Development Plan	Local

Feature	Rationale	Conservation Status	Importance
<b>Other habitats</b>	Habitats within the Habitat Survey Area are dominated by cropland and grasslands that have been largely improved for agricultural purposes. Collectively, these habitats account for approximately 73 % of the PPP Application Boundary. In addition, woodland habitats account for approximately 15 % of the PPP Application Boundary, the majority of which comprises conifer plantation that is actively managed as commercial forestry. Other recorded habitats include other grasslands, wetlands, heathland and scrub; however, these are limited in distribution and extent (less than 5 % of the PPP Application Boundary); and are not representative of any protected or priority habitat. Effects on GWDTE in relation to impacts on groundwater are considered in Volume 1, Chapter 10 Geology and Ground Conditions.	SBL priority habitat LBAP habitat	Local
<b>Ancient woodlands</b>	Ancient semi-natural woodland is an irreplaceable resource and there is a presumption against the removal of such woodland. Whilst AWI sites have been identified within the Onshore Ecology Study Area, none are located within the PPP Application Boundary.	Scottish planning policy	Less than local
<b>Protected trees</b>	Trees protected by a Tree Preservation Order (TPO) are subject to special protection measures that prevent works affecting trees, which support protected or priority species. Whilst TPOs have been identified within the Onshore Ecology Study Area near Drumlithie, none are located within the PPP Application Boundary.	Town and Country Planning	Less than local

Feature	Rationale	Conservation Status	Importance
<b>Atlantic salmon</b>	<p>Globally, the Atlantic salmon <i>Salmo salar</i> is classed as ‘Near Threatened’, based on the IUCN Red List, with a decreasing trend in population size attributed to climate change, in-stream barriers and disease. In Scotland, populations have declined by some 30-50 % from the 1970’s, with current estimates of approximately 400,000 individual salmon returning to Scottish rivers each year. No population estimates available for Aberdeenshire. Whilst a number of watercourses that could contain migratory fish (and resident trout) are present within the Onshore Ecology Study Area (notably the Cowie Water, Carron Water and Bervie Water) Embedded Mitigation measures for the Proposed Development include implementation of CEMP, ECoW oversight and trenchless techniques for rivers, thus limiting in-stream working to small burns and field drains. As such, in-stream aquatic habitats are not likely to be affected by the Proposed Development.</p>	SBL priority species	Local
<b>Freshwater pearl mussel</b>	<p>Globally, the freshwater pearl mussel <i>Margaritifera margaritifera</i> is classed as ‘Endangered’, based on the IUCN Red List, with a decreasing trend in population size attributed to those identified for Atlantic salmon; as well as illegal pearl fishing, reductions in water quality and habitat loss from in-stream engineering works. Whilst a number of watercourses that could contain freshwater pearl mussel are present within the Onshore Ecology Study Area (notably the Cowie Water, Carron Water and Bervie Water) Embedded Mitigation measures for the Proposed Development include implementation of CEMP, ECoW oversight and trenchless techniques for rivers, thus limiting in-stream working to small burns and field drains. As such, in-stream aquatic habitats are not likely to be affected by the Proposed Development.</p>	Wildlife and Countryside Act SBL priority species	Local

Feature	Rationale	Conservation Status	Importance
<b>Great crested newt</b>	<p>In Scotland, the species is considered to be of ‘Least Concern’ based on the IUCN Red List, with a decreasing population trend.</p> <p>NatureScot indicate that great crested newts are typically found in central and southern parts of Scotland.</p> <p>The Onshore Ecology Survey Area is outside the known range for the great crested newt, and no records of the species have been identified within the Onshore Ecology Study Area. Therefore, the species is assumed to be absent.</p>	Habitats Regulations SBL priority species	Less than local
<b>Other amphibian species</b>	<p>Habitats within the Onshore Ecology Survey Area are unsuitable for natterjack toad and of limited suitability for other amphibian species, with open ground dominated by cropland and grazing pasture. It is likely that widespread species of amphibians (including common toad) may be locally present in suitable ponds and ephemeral wetland habitat features; however, such these are not extensive within or adjoining the PPP Application Boundary. Therefore, habitats within and adjoining the PPP Application Boundary are unlikely to be regularly utilised by significant populations of amphibians.</p>	Habitats Regulations (natterjack toad only) SBL priority species (common toad only)	Local (common toad only)  Less than local (other amphibian species)
<b>Reptiles</b>	<p>Habitats within the Onshore Ecology Survey Area are of limited suitability for reptiles, with open ground dominated by cropland and grazing pasture. It is likely that reptiles may be locally present in areas of rough grassland and heathland where this occurs next to cover (e.g. scrub, hedgerows, woodlands); however, such habitats are not extensive within or adjoining the PPP Application Boundary. Therefore, habitats within and adjoining the PPP Application Boundary are unlikely to be regularly utilised by significant populations of reptiles.</p>	Wildlife and Countryside Act SBL priority species	Local

Feature	Rationale	Conservation Status	Importance
<b>Wildcat</b>	<p>In Scotland, the species is considered to be ‘Critically Endangered’ based on the IUCN Red List; and of ‘bad’ conservation status. Scottish wildcat are considered to be functionally extinct due to hybridization with domestic cats. Scotland’s population is estimated to be less than 400 animals (approximately 100 % of the UK population). The species is considered to have a decreasing population and decreasing range; although, reintroduction programme underway in an effort to restore populations. No population estimates available for Aberdeenshire.</p> <p>The majority of the Onshore Ecology Survey Area was considered to be of extremely limited suitability to wildcat for foraging, commuting and denning due to the dominance of arable land and pasture; and monoculture of commercial forestry. The species is considered to be absent from the Onshore Ecology Survey Area.</p>	Habitats Regulations SBL priority species	Less than local
<b>Brown hare</b>	<p>Globally, the brown hare is classed as ‘Least Concern, based on the IUCN Red List, with a decreasing trend in population size attributed to land-use change. Scotland’s population is estimated to be around 87,700 (approximately 15 % of the UK population) with a stable range. No population estimates available for Aberdeenshire. Suitable habitat is locally present within the Onshore Ecology Survey Area, whilst areas of open ground are dominated by cropland and grassland, field margins are typically narrow and more substantial year-round cover (e.g. scrub) is locally present. Therefore, habitats within and adjoining the PPP Application Boundary are unlikely to be regularly utilised by a significant population of brown hare.</p>	SBL priority species	Local

<b>Feature</b>	<b>Rationale</b>	<b>Conservation Status</b>	<b>Importance</b>
<b>Hedgehog</b>	Habitats within the Onshore Ecology Survey Area are of limited suitability for hedgehog, with open ground dominated by cropland and grazing pasture and low-lying boundary features; as well as extensive areas of conifer plantation managed as commercial forestry. It is likely that hedgehog may be locally present; however, rank grasslands (where summer nests can be established) and broadleaved woodlands (where winter nests can be established for hibernation) are not extensive within or adjoining the PPP Application Boundary. Therefore, habitats within and adjoining the PPP Application Boundary are unlikely to support important populations of hedgehog.	SBL priority species	Local
<b>Invertebrates</b>	Habitats within the Onshore Ecology Survey Area are of limited suitability for invertebrates, with open ground dominated by cropland and grazing pasture. It is likely that invertebrates may be locally present in areas of semi-natural; however, potential habitat features are not extensive within or adjoining the PPP Application Boundary. Therefore, habitats within and adjoining the PPP Application Boundary are unlikely to support important populations and/or assemblages of invertebrates.	SBL priority species	Local

### Onshore Ornithology - Overview of Baseline Environment

7.8.21 The following sections provide a summary of baseline information relating to onshore ornithology. The following technical report, supported by an Onshore Ornithology Confidential Annex) includes full details of relevant methodologies, limitations and findings in Volume 2, Technical Appendix 7.3: Onshore Ornithology Survey report.

### Onshore Ornithology - Designated Sites

7.8.22 Designated sites identified within the Onshore Ornithology Study Area, and relevant qualifying interest features, are summarised in Table 7.14; and shown in Figure 7.6 in Annex – Figures.

Table 7.14 Designated Sites and Relevant Qualifying Features for Ornithology

Designation	Name	Proximity (km)	Description
<b>SPA and Ramsar Site</b>	Montrose Basin	14.5 km south-west of the PPP Application Boundary	SPA and Ramsar Site regularly support important populations of migratory greylag goose ( <i>Anser anser</i> ) and pink-footed goose ( <i>Anser brachyrhynchus</i> ), wigeon ( <i>Mareca Penelope</i> ), eider ( <i>Somateria mollissima</i> ), shelduck ( <i>Tadorna tadorna</i> ) and dunlin ( <i>Calidris alpina</i> ), knot ( <i>Calidris canutus</i> ), oystercatcher ( <i>Haematopus ostralegus</i> ) and redshank ( <i>Tringa tetanus</i> ).
<b>SPA and Ramsar Site</b>	Loch of Skene	17.4 km north of the PPP Application Boundary	SPA and Ramsar Site regularly support important populations of migratory greylag goose.
<b>SPA</b>	Fowlsheugh	6.4 km north-east of the PPP Application Boundary	SPA supports breeding populations of fulmar ( <i>Fulmaris glacialis</i> ), guillemot ( <i>Uria aalge</i> ), herring gull ( <i>Larus argentatus</i> ), kittiwake ( <i>Rissa tridactyla</i> ), razorbill ( <i>Alca torda</i> ) and seabird assemblage.
<b>SSSI</b>	Fowlsheugh	7.9 km north-east of the PPP Application Boundary	The SSSI is designated for breeding populations of fulmar, guillemot, herring gull, kittiwake, razorbill, seabird assemblage and breeding puffin ( <i>Fratercula arctica</i> ).
<b>SSSI</b>	St Cyrus and Kinnaber Links	6.3 km south-west of the PPP Application Boundary	Breeding bird assemblage of ~ 60 regular breeding species, including fulmar, shelduck, eider, curlew <i>Numenius arquata</i> , redshank, ringed plover <i>Charadrius hiaticula</i> , oystercatcher, sedge warbler <i>Acrocephalus schoenobaenus</i> , grasshopper warbler <i>Locustella naevia</i> , wheatear

Designation	Name	Proximity (km)	Description
			<i>Oenanthe oenanthe</i> , stonechat <i>Saxicola rubicola</i> , whinchat <i>Saxicola rubetra</i> , kestrel <i>Falco tinnunculus</i> , buzzard <i>Buteo buteo</i> , sparrowhawk <i>Accipiter nisus</i> and peregrine <i>Falco peregrinus</i> . A fluctuating breeding colony of little terns <i>Sternula albifrons</i> was present on the sand and shingle up to the 1980s.
<b>LNCS</b>	Todhead Point to Johnshaven Coast	Partially within the PPP Application Boundary	Old Red Sandstone has weathered to give a broad wave cut platform with a large intertidal zone which is important for wading birds dependent on the rock shore, and for sea ducks offshore.

### Onshore Ornithology - Protected or Priority Species Records

- 7.8.23 NESBReC and RSPB provided records of protected or priority species within the Onshore Ornithology Study Area, which are summarised in Table 7.15. Non-Schedule 1-listed passerines are excluded from Table 7.
- 7.8.24 NERSG confirmed they hold no records for raptors within the Onshore Ornithology Study Area.
- 7.8.25 Information relating to nesting sites for nightjar *Caprimulgus europaeus* and goshawk *Astur gentilis* within the Onshore Ornithology Study Area have been provided by Aberdeenshire Council and FLS, which are described in the Onshore Ornithology Confidential Annex.

Table 7.15 Desk-based Study of Protected and Priority Species Records from the last 5-years (2019 inclusive) within 2 km of the Proposed Development

Species	No. of Records	Most Recent Record	Conservation status
<b>Arctic Tern <i>Sterna paradisaea</i></b>	2	2020	Amber, Annl, SBL
<b>Barn Owl <i>Tyto alba</i></b>	47	2024	Green, Sch1.1, SBL
<b>Black-headed Gull <i>Chroicocephalus ridibundus</i></b>	68	2024	Amber; SBL
<b>Canada Goose <i>Branta canadensis</i></b>	2	2022	Green
<b>Common Scoter <i>Melanitta negra</i></b>	6	2024	Red, Sch 1.1, SBL
<b>Common Tern <i>Sterna hirundo</i></b>	25	2022	Amber, Annl, SBL
<b>Cuckoo <i>Cuculus canorus</i></b>	14	2024	Red, SBL
<b>Curlew</b>	113	2024	Red, SBL
<b>Dunlin</b>	22	2023	Red, SBL, Annl
<b>Eider</b>	61	2024	Amber
<b>Golden Plover <i>Pluvialis apricaria</i></b>	10	2024	Amber, Annl, SBL
<b>Goldeneye <i>Bucephala clangula</i></b>	4	2022	Red, SBL, Sch 1.2
<b>Goshawk</b>	15	2023	Amber, Sch 1.1, Annl
<b>Great Northern Diver <i>Gavia immer</i></b>	1	2021	Amber, Sch 1.1, Annl, SBL
<b>Green Sandpiper <i>Tringa ochropus</i></b>	1	2021	Amber, Sch 1.1, SBL
<b>Grey Partridge <i>Perdix perdix</i></b>	16	2024	Red, Annl, SBL
<b>Greylag Goose</b>	3	2022	Amber, Sch1.2
<b>Hen Harrier <i>Circus cyaneus</i></b>	1	2023	Red, Sch 1.1, Annl, SBL
<b>Herring Gull</b>	115	2024	Red, SBL

Species	No. of Records	Most Recent Record	Conservation status
<b>Hooded Crow <i>Corvus cornix</i></b>	2	2024	Green, SBL
<b>Kestrel</b>	12	2023	Amber, SBL
<b>Kingfisher <i>Alcedo atthis</i></b>	13	2023	Amber, Sch 1.1, Annl, SBL
<b>Lapwing <i>Vanellus vanellus</i></b>	15	2024	Red, SBL
<b>Light-bellied Brent Goose <i>Branta bernicla</i></b>	1	2020	Green
<b>Merlin <i>Falco columbarius</i></b>	2	2019	Red, Sch 1.1, Annl, SBL
<b>Osprey <i>Pandion haliaetus</i></b>	1	2020	Amber, Sch 1.1, Annl, SBL
<b>Peregrine</b>	6	2024	Green, SBL, Sch1.1, Annl
<b>Pink-footed Goose</b>	9	2024	Amber
<b>Purple Sandpiper <i>Calidris maritima</i></b>	11	2024	Red, Sch 1.1, SBL
<b>Red Kite <i>Milvus milvus</i></b>	4	2024	Green, SBL, Sch1.1, Annl
<b>Redshank</b>	84	2024	Amber
<b>Red-throated Diver <i>Gavia stellata</i></b>	12	2024	Amber, Sch 1.1, Annl, SBL
<b>Sandwich Tern <i>Thalasseus sandvicensis</i></b>	16	2024	Amber, SBL
<b>Short-eared Owl <i>Asio flammeus</i></b>	2	2022	Amber, Annl, SBL
<b>Snipe <i>Gallinago gallinago</i></b>	8	2023	Amber
<b>Snow Bunting <i>Plectrophenax nivalis</i></b>	1	2021	Amber, Sch 1.1, SBL
<b>Swift <i>Apus apus</i></b>	14	2024	Red, SBL
<b>Wood Sandpiper <i>Tringa glareola</i></b>	1	2023	Amber, Sch 1.1, Annl, SBL
<b>Woodcock <i>Scolopax rusticola</i></b>	17	2025	Red, SBL

**Key:**

**Red/Amber/Green - Red, Amber or Green listed on the Birds of Conservation Concern 5 List**

**Sch1.1 / Sch1.2 - Schedule 1 part 1 or Schedule 1 part 2 of the Wildlife and Countryside Act 1981 (as amended)**

**SBL - Scottish Biodiversity List species**

**Annl - Listed on Annex I of The Birds Directive**

### Onshore Ornithology - Field Surveys (Foraging Geese)

- 7.8.26 The results of the September 2023 to May 2024 foraging goose surveys are shown in Annex – Figures: Figure 7.10.1 to 7.10.8 (no figures have been produced for September 2023 or May 2024 as no pink-footed or greylag geese were recorded foraging or roosting those months).
- 7.8.27 No pink-footed geese were recorded during these surveys foraging or roosting in the PPP Application Boundary within 20 km of the Montrose Basin SPA / Ramsar Site in the whole September 2023 to May 2024 period. As shown summarised in Volume 2, Technical Appendix 7.3: Onshore Ornithology, the only pink-footed geese recorded during the foraging goose surveys were recorded beyond the 20 km buffer. Even for the pink-footed geese recorded outside the 20 km buffer, the birds were only recorded infrequently, in or adjacent to the PPP Application Boundary out of the nine months of monitoring.
- 7.8.28 Greylag goose was only recorded on one occasion, approximately 200 m west of the PPP Application Boundary in mid-April 2024, comprising a single bird within an area of cropland adjoining the Bervie Water at Corbie Haugh.

### Onshore Ornithology - Field Surveys (Intertidal)

- 7.8.29 A total of 38 species were recorded during the intertidal surveys, with a similar number and range of species recorded between counts at low tide (29 species) and high tide (31 species).
- 7.8.30 Peak counts of each species were typically less than 50 birds across the non-breeding season; although, oystercatcher, lapwing, black-headed gull, herring gull and lesser black-backed gull *Larus fuscus* had peak counts exceeding 100 individuals.
- 7.8.31 Sightings of most species were recorded across the intertidal survey area between September and March. All registrations were of foraging or resting birds.
- 7.8.32 During low tide counts black-headed gull, curlew, eider, redshank, oystercatcher, herring gull were the species most frequently recorded, followed by lapwing.
- 7.8.33 Turnstone *Arenaria interpres*, redshank, oystercatcher, lapwing, herring gull and curlew were the species most frequently recorded during high tide counts. A single observation of dunlin (one bird) was noted during the intertidal surveys. This occurred in March at high tide.
- 7.8.34 There was also an incidental record of five dead birds (four razorbill and a probable auk species) washed up on the shore during the low tide survey in late October 2023. Results from surveys are provided in further detail in the Volume 2, Technical Appendix 7.3: Onshore Ornithology.

### Important Ornithological Features (IOFs)

- 7.8.35 Table 7 sets out the IOFs scoped in for further detailed assessment, taking cognisance of the baseline environment relating to Onshore Ornithology; and current guidelines (CIEEM 2024) relating to the determination of importance against defined geographic contexts:
- International (e.g. ecosystems and habitats protected by European law, and species occurring in numbers that exceed 1 % of biogeographic populations);
  - National (e.g. ecosystems and habitats protected by National law, and species occurring in numbers than exceed 1 % of national populations);
  - Regional (e.g. habitats and species designated and/or recognised under biodiversity planning policy for Aberdeenshire);
  - Local (e.g. semi-natural habitats and species that contribute to the maintenance and restoration of biodiversity at a local level); and
  - Less than local (e.g. habitats and species that are not connected to, or meet the criteria of, the above geographic contexts).
- 7.8.36 Table 7.17 lists ornithological features that are not considered to be IOFs and provides justification as to why they have been scoped out of this assessment.

**Table 7.16 Ornithological features scoped in for further assessment**

<b>Feature</b>	<b>Rationale</b>	<b>Conservation Status</b>	<b>Importance</b>
<b>Montrose Basin SPA and Ramsar Site</b>	The PPP Application Boundary is situated within 20 km of the Montrose Basin SPA / Ramsar Site, which regularly supports important populations of migratory pink-footed goose and migratory greylag goose. During the non-breeding season, pink-footed geese have been recorded utilising habitats within and adjoining the Onshore Ornithology Survey Area. During the non-breeding season, greylag geese have not been recorded regularly utilising habitats within and adjoining the Onshore Ornithology Survey Area.	Ramsar convention Birds Directive Habitats Regulations Ramsar convention	International
<b>Nightjar (breeding)</b>	Records of nightjar were returned during the desk study, including confidential nest locations. They are assumed to be breeding in the area.	Wildlife and Countryside Act SBL priority species Red list BoCC	Regional
<b>Goshawk (breeding)</b>	Records of goshawk were returned during the desk study, including a confidential nest location that was active in 2024. They are assumed to be breeding in the area.	Wildlife and Countryside Act (Schedule 1)	Regional
<b>Breeding birds</b>	No specific breeding bird surveys have been undertaken in relation to the PPP Application Boundary; therefore, the presence of other Schedule 1 species or other breeding birds of conservation concern (including important breeding assemblages) cannot be ruled out.	Wildlife and Countryside Act SBL priority species Red list BoCC Amber list BoCC	Regional

**Table 7.17 Ornithological features scoped out from further assessment**

<b>Feature</b>	<b>Rationale</b>	<b>Conservation Status</b>	<b>Importance</b>
<b>Fowlsheugh SPA</b>	The PPP Application Boundary is situated approximately 6.6 km south-west of the SPA, which regularly supports a seabird colony in excess of 20,000 individual birds. Based on the lack of suitable habitat for these species in the terrestrial part of the Ornithology Survey Area, there is no significant connectivity, and the intertidal and nearshore habitat are not optimum habitat or regularly used by SPA qualifying features in significant numbers.	Birds Directive Habitats Regulations	Less than local

<b>Feature</b>	<b>Rationale</b>	<b>Conservation Status</b>	<b>Importance</b>
<b>Loch of Skene SPA and Ramsar Site</b>	The PPP Application Boundary is situated within 17 km south of the SPA/Ramsar Site, which regularly supports important populations of migratory greylag goose. During the non-breeding season, greylag geese have not been recorded regularly utilising habitats within and adjoining the Onshore Ornithology Survey Area.	Birds Directive Habitats Regulations Ramsar convention	Less than local
<b>Montrose Basin SPA and Ramsar Site</b>	The PPP Application Boundary is situated approximately 15 km north-east of the SPA/Ramsar Site, which regularly supports important populations of migratory pink-footed goose and migratory greylag goose. During the non-breeding season, greylag geese have not been recorded regularly utilising habitats within and adjoining the Onshore Ornithology Survey Area.	Birds Directive Habitats Regulations Ramsar convention	Less than local
<b>St Cyrus and Kinnaber Links SSSI</b>	The PPP Application Boundary is situated approximately 6.28 km north-east of the SSSI, which supports an important breeding bird assemblage. Based on distance, and extent of similar habitats in the intervening areas between the Onshore Ornithology Survey Area and SSSI, there is no significant connectivity to nesting sites or supporting habitats that would be regularly utilised by SSSI interest features in significant numbers.	Nature Conservation Act	Less than local
<b>Fowlsheugh SSSI</b>	The PPP Application Boundary is situated approximately 6.6 km south-west of the SSSI, which regularly supports a seabird colony in excess of 20,000 individual birds. Based on distance, and extent of similar habitats in the intervening areas between the Onshore Ornithology Survey Area and SSSI, there is no significant connectivity to nesting sites or supporting habitats that would be regularly utilised by SSSI interest features in significant numbers.	Nature Conservation Act	Less than local
<b>Todhead Point to Johnshaven Coast LNCS</b>	Presumption against development within LNCS except where public benefits [of development] clearly outweigh the nature conservation value of the LNCS. This LNCS is approximately 2,897 ha in size and comprises Old Red Sandstone that has weathered to give a broad wave cut platform with a large intertidal zone which is important for wading birds dependent on the rock shore, and for sea ducks offshore. Locally interesting plants.	Aberdeenshire Local Development Plan	Local

<b>Feature</b>	<b>Rationale</b>	<b>Conservation Status</b>	<b>Importance</b>
	Whilst the PPP Application Boundary overlaps with the LNCS near Haughs Bay, the Proposed Development does not involve any work within any intertidal or coastal grassland habitat. Therefore, avian attributes to the LNCS are scoped out from further assessment.		

### Future Baseline Scenario

- 7.8.37 The EIA Regulations require that ‘a description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the project as far as natural changes from the baseline scenario can be assessed with reasonable effort, on the basis of the availability of environmental information and scientific knowledge’ is included within the Onshore EIA Report Chapter.
- 7.8.38 If the Proposed Development does not come forward, an assessment of the ‘without development’ future baseline conditions has also been carried out and is described within this section.
- 7.8.39 Scotland’s Environment (2024) predicts that the changes in climate that Scotland is already experiencing are projected to continue and intensify, noting that:
- Average temperatures will increase across all seasons;
  - Typical summers will be warmer and drier;
  - Typical winters will be milder and wetter;
  - Intense, heavy rainfall events will increase in both winter and summer;
  - Sea levels will rise;
  - Reduced frost and snowfall; and
  - Weather will remain variable and may become more variable.
- 7.8.40 For ecology and ornithology changes in climate and weather patterns will likely result in a variety of effects. Wetter, warmer winters and extreme rainfall events in all seasons may lead to a reduced viability for some areas of forestry. Hotter, drier summers may lead to exacerbated drying of wetland / peat forming habitats and other GWDTEs. Extreme rainfall during the nesting period may result in reduced breeding success for birds if foraging ability is affected or if eggs or young become wet and cold resulting in mortality. Temperature changes may affect the timing of insect prey availability for some species, resulting in a lack of food for adults or young and resulting in lower breeding success. Species composition may change as birds from hotter climates are able to colonise areas further north.
- 7.8.41 As the dominant land use across the Study Areas is agriculture, the other main influence on habitats and species in the PPP Application Boundary will be farming practices. These are heavily influenced by the subsidy regime implemented by elected government. This is difficult to predict but foreseeable broad trends are set out in government policy and strategy and include the growing need to protect high quality arable land for food production, protection of water resources (for example through the adoption of regenerative farming), and support for habitats and wildlife from targeted agri-environment schemes (Scottish Government 2022).
- 7.8.42 The conifer plantation within the Proposed Development would continue to be managed mainly for commercial timber, and subject to the FLS process of forest design planning. No substantial deviations are anticipated to habitat and landcover as a result, other than the adherence to modern planting standards,

including increased open space provision and a degree of expansion of native or other broadleaf tree establishment.

- 7.8.43 Several studies have attempted to model the impacts of climate change on the distribution of habitats and species within the UK (e.g. Berry, *et al.* 2008, and Wilson & Pescott 2023). While climate change is undoubtedly influencing distributions, and will continue to do so, the habitats within the Site are primarily farmland and commercial forestry which are subject to intensive management which is expected to have a greater impact on species presence and abundance than climate change. Nevertheless, it is likely that some typically southern species (e.g. nightjar), will increase in the region, although their presence and distribution will be dictated by forestry management.

#### **Data Limitations and Assumptions**

- 7.8.44 Any survey limitations encountered along when conducting the habitat and protected species surveys across the Proposed Development are reported in Volume 2, Technical Appendix 7.1 to Technical Appendix 7.3.
- 7.8.45 The distribution of species varies naturally due to population fluctuations. Fluctuations may take place over short or long temporal phases. Surveys are a sample, and this Onshore EIA Report Chapter is based on species found or likely to be found, based on their known distribution and habitat availability present within the Onshore Ecology Survey Area.
- 7.8.46 It is assumed that percussive piling and blasting will not be required, as such, standard disturbance distances for protected species have been used.
- 7.8.47 No surveys relating to fish or freshwater pearl mussel were proposed on the basis that in-stream working would be limited to burns and field drains, and the adoption of trenchless techniques for watercourses crossings.
- 7.8.48 Where field signs were considered inconclusive, for example, in relation to the presence of a protected species shelter (e.g. bedding, feeding remains, etc.), the assessment has taken a precautionary approach and assumed presence.

## **7.9 Embedded Mitigation**

- 7.9.1 As part of the Proposed Development design process, a number of Embedded Mitigation measures have been proposed to reduce the potential for impacts on onshore ecology and ornithology (Table 7.18). They are considered at every stage of the Proposed Development through design and best practice and, as there is a commitment to implementing these measures, these have been considered in the assessment presented in section 7.10 (i.e. the determination of magnitude and therefore significance assumes implementation of these measures). These embedded measures are considered standard industry practice for this type of development and are applied in addition to the overarching design principles as outlined in Volume 1, Chapter 2: The Proposed Development.

**Table 7.18 Embedded Measures Adopted as Part of the Proposed Development**

Reference	Embedded Mitigation Measures	Justification
<b>GEN1</b>	Design Principles	A series of design principles were embedded within the iterative design process to guide the decision-making relating to safety, electrical, engineering and environmental requirements; as described in Volume 1, Chapter 2: The Proposed Development. Specific design principles were identified for Designated Sites and Biodiversity to avoid protected sites, habitats, species and sensitive areas of conservation importance. This included consideration of open water, wetlands or land within a flood risk area; as well as priority peatlands and ancient woodlands.
<b>GEN2</b>	Outline CEMP	In order to assist with the implementation of design principles, an Outline CEMP has been prepared to set out produced for the Proposed Development; as described in Volume 2, Technical Appendix 2.2: Outline Construction Management Plan. It is proposed that a detailed CEMP will be produced at the MSC stage, based on the information contained in the Outline CEMP, demonstrating a commitment to good practice and safeguarding the environment. The Outline CEMP identifies the requirement for an Ecological Clerk of Work (ECoW) to be appointed and to provide advice and support to the Principal Contractor with the implementation of the detailed CEMP.
	Undertaking pre-construction surveys and investigations	Pre-construction surveys will be conducted for a number of reasons including to check for protected species, breeding birds and nests. The investigations will also include targeted monitoring and assessment of the Groundwater levels and flows beneath the Proposed Development. These surveys will be completed as close to the commencement of the construction phase as possible. This is to enable checks for any new signs/evidence of presence that may have occurred after the baseline surveys, and to ensure the measures proposed to reduce impacts on protected species remain appropriate.
	Appointment of Ecological Clerk of Works (ECoW)	An ECoW will be employed to monitor the site throughout the construction phase of the works. The role of the ECoW will be to provide advice and support on environmental legislation and ecological mitigation of works in relation to habitats and protected species throughout the construction phase.

Reference	Embedded Mitigation Measures	Justification
	Biodiversity Enhancement Plan	In accordance with NPF4, the final layout of the Proposed Development will incorporate measures to achieve biodiversity enhancement. This will ensure the Proposed Development both mitigates impacts on biodiversity and contributes positively to the enhancement of local ecosystems. This will utilise the Department for Environment Food and Rural Affairs Biodiversity Metric to provide a quantitative assessment of biodiversity gain from recommended enhancements and habitat creation. A Biodiversity Net Gain assessment will be undertaken at the MSC stage when detailed design is known. In addition, the indicative Substation landscape plan provides opportunities for biodiversity enhancement to be met on the Substation site.
	Surface Water Management	Requirements for surface water management during construction will be documented in the detailed CEMP at the MSC stage. The purpose of surface water management will be to reduce the potential for pollution to the water environment through appropriate measures including temporary drainage and silt management, which will reduce the potential for harm to aquatic ecology.
	Site Waste Management Plan (SWMP)	Preparation and agreement of a Site Waste Management Plan will be prepared as a supporting document to the detailed CEMP at the MSC stage. The purpose of the Site Waste Management will be to reduce, control and dispose of waste at construction sites, which will reduce the potential to cause invasive non-native species (INNS) of plant to spread into the wild.
	Dust Management Plan (DMP)	Preparation and agreement of a Dust Management Plan will be prepared as a supporting document to the detailed CEMP at the MSC stage. The purpose of the Dust Management Plan will be to reduce dust emission during the construction phase through appropriate measures such as wheel cleaning, lorry sheeting measures, road sweeping, avoidance of dust-generating activities on hard standing, dust suppression (water dampening) and enforcement of site speed limit, which will reduce the potential for smothering of vegetation, pollution to the water environment and animal road mortality through collisions with moving vehicles and plant.
	Construction Noise and Vibration Management Plan	Preparation and agreement of a Construction Noise and Vibration Management Plan will be prepared as a supporting

Reference	Embedded Mitigation Measures	Justification
		document to the detailed CEMP at the MSC stage. The purpose of the Construction Noise and Vibration Management will be to reduce noise and vibration on sensitive receptors, including a specific requirement to coordinate with the ECoW in relation to noise and vibration generating activities within 1 km of a designated site, which will reduce the potential for disturbance to protected or priority species.
<b>GEN3</b>	Production of a Bird Protection Plan (BPP)	A detailed BPP will be implemented to avoid the destruction or disturbance of any nest site, and with species-specific temporal and spatial restrictions around construction works should any active nest be located. This will be prepared as a supporting document to the CEMP at the MSC stage. No works will be permitted within the exclusion zone and no personnel or vehicles will be allowed to enter or pass through it until the ECoW has confirmed that no breeding has occurred or that breeding attempts have concluded. The BPP will also include measures to avoid or minimise disturbance to foraging pink-footed and greylag geese in the non-breeding season,
	Production of Species Protection Plans (SPP)	Preparation and agreement of SPPs will be prepared as a supporting document to the detailed CEMP at the MSC stage. SPPs will be implemented during the construction phase to protect protected species and will include precautionary mitigation and good practice procedures. These will include, but are not limited to, badgers, bats and otter.
<b>ECO1</b>	Commitment to apply for development/mitigation licences	If required, and where necessary, development licences will be sought from NatureScot for the relevant protected species.

- 7.9.2 In some cases, particularly where likely significant environmental effects are identified, there may be further mitigation measures required that are not ‘embedded’ to the Proposed Development design ahead of the assessment (additional mitigation). These are to be discussed in the sections on ‘Additional Mitigation and Residual effect’ and ‘Future Monitoring’ sections below.

## 7.10 Assessment of Significance

- 7.10.1 An assessment of the likely significance of the effects of the Proposed Development on the IEFs during the construction and decommissioning phases is given below with any significant effects highlighted. The assessment is summarised in Table 7.19.

### Construction phase

#### *Temporary or permanent loss of or modification to habitats, and to those used by onshore ecology and ornithology features for foraging, commuting, or refugia*

##### Montrose Basin SPA and Ramsar Site

- 7.10.2 The SPA / Ramsar Site is approximately 14.5 km from the Proposed Development and there will be no direct loss of habitat or disturbance to birds within the SPA / Ramsar Site.
- 7.10.3 Pink-footed goose was recorded regularly and in large numbers throughout field surveys. Birds originating from the SPA / Ramsar Site may be temporarily displaced from feeding areas in agricultural fields during construction of the Proposed Development. However, only one record of 220 pink-footed geese were recorded on ground within the PPP Application Boundary. Moreover, only eight pink-footed goose records made during the foraging goose surveys, were recorded within the 600 m NatureScot advised disturbance distance buffer for non-breeding pink-footed goose, from the Onshore Export Cable Corridor, with a peak count of 2,000 birds.
- 7.10.4 In addition, the majority of habitat loss associated with the Proposed Development will be of conifer plantation, which is not typically used for foraging by pink-footed goose. Small-scale, short-term loss of foraging and roosting habitat may occur during construction, outside the plantation. However construction activity will take place in discrete areas of the Proposed Development footprint at any one time, and there is abundant suitable alternative foraging habitat with any displaced birds will be able to utilise if temporarily displaced. Therefore, with Embedded Mitigation measures in place (outlined in Table 7.18), impacts to the Montrose Basin SPA / Ramsar Site from habitat loss and disturbance and displacement on associated pink-footed goose, are judged to be of low adverse magnitude and not significant.

##### Arbuthnott LNCS

- 7.10.5 The design of the Proposed Development runs directly through the east of the LNCS with 1.64 ha of the LNCS could be affected by temporary works including open cut trenching and establishment of launch/receiving pits to enable HDD under the Bervie Water. Habitat loss would equate to approximately 3.66 % of the LNCS; losses would likely be limited to open grassland with woodland and

riparian habitats retained through trenchless techniques. However, with Embedded Mitigation measures in place (outlined in Table 7.18) impacts to the Arbuthnott LNCS from temporary or permanent habitat loss from the Proposed Development are predicted to be of low adverse magnitude and not significant.

Annies Dam LNCS

- 7.10.6 Although the LNCS is overlapped by the PPP Application Boundary of the Proposed Development, the Onshore Export Cable Corridor does not overlap with the LNCS and so no habitat within the site will be directly lost. Moreover, the site is designated for its habitat and flora assemblage, and there is no designated fauna species associated to the site which could be impacted through disturbance or displacement. Therefore, with Embedded Mitigation measures in place (outlined in Table 7.18), impacts to Annies Dam LNCS from temporary or permanent habitat loss from the Proposed Development are predicted to be of low adverse magnitude and not significant.

Elfhill LNCS

- 7.10.7 Although the LNCS is overlapped by the PPP Application Boundary of the Proposed Development, the Onshore Export Cable Corridor does not overlap with the LNCS and so no habitat within the site will be directly lost. Moreover, the site is designated for its habitat and flora assemblage, and there is no designated fauna species associated to the site which could be impacted through disturbance or displacement. Therefore, with Embedded Mitigation measures in place (outlined in Table 7.18), impacts to Elfhill LNCS from temporary or permanent habitat loss from the Proposed Development are predicted to be of low adverse magnitude and not significant.

Alder Woodland on Floodplains

- 7.10.8 Alder woodland on floodplains is an Annex I habitat, an uncommon and protected type of wet woodland that is difficult to reinstate. However, field surveys determined that the woodland present was not strictly on a floodplain and was not well-developed for a true wet woodland. Moreover, construction of the Proposed Development is only predicted to result in a loss of < 0.1 ha of this habitat, which accounts for approximately 2.5 % of the total coverage of this habitat within the PPP Application Boundary. Therefore, given the small percentage of habitat to be lost, with Embedded Mitigation measures in place (outlined in Table 7.18), impacts to Alder Woodland on Floodplains habitat from temporary or permanent habitat loss from the Proposed Development are predicted to be of low adverse magnitude and not significant

Badger

- 7.10.9 The significance of effects on badger, a common and widespread protected species in Scotland, from the Proposed Development are limited to temporary construction related disturbance.
- 7.10.10 Badger signs including latrines, snuffle holes, and confirmed setts were recorded throughout the Onshore Ecology Survey Area; and badger are known to be present in the locality. The desk study and field surveys have confirmed

that badgers actively use the habitats throughout the Onshore Ecology Survey Area.

- 7.10.11 Based on the current baseline, no setts would be directly affected; although, foraging habitat and linear features used for commuting may be affected by temporary works. Impacts are predicted to be of low adverse magnitude and not significant.

Otter

- 7.10.12 Otter signs including spraints and footprints were recorded throughout the Onshore Ecology Survey Area, with no confirmed holts or resting places. Additionally, otter records for the area were returned during the desk study.
- 7.10.13 The majority of the area within the Onshore Ecology Survey Area comprises cropland, grassland, and woodland and forests intersected by watercourses that are suitable for foraging, commuting, and resting otters. The Proposed Development involves HDD under watercourses that may support foraging and commuting otter. The methodology for watercourse crossings will be designed such that no aquatic habitat will be lost or damaged during construction. However, multiple habitats that support otter holts may be damaged or lost during the cable laying process and as such, otters may be subjected to temporary or permanent loss of or modification to habitats associated with them.
- 7.10.14 Based on the current baseline, no holts or resting sites would be directly affected; although, foraging habitat and linear features used for commuting may be affected by temporary works. Impacts are predicted to be of low adverse magnitude and not significant.

Water Vole

- 7.10.15 Suitable habitat and water vole activity was recorded across the Onshore Ecology Survey Area, with some sections of watercourses being classified as having 'Optimal' suitability for the species. However, the majority of watercourses throughout the Onshore Ecology Survey Area were classified as being of negligible habitat suitability, with no evidence of water vole activity. Additionally, no water vole records were returned during the desk study.
- 7.10.16 The Proposed Development involves HDD under watercourses that may support water vole populations. All watercourse crossings will be designed such that no aquatic habitats will be lost or damaged, though due to confirmed presence of water vole through field signs, and some limited habitat suitability, this species will be subjected to small-scale temporary or permanent loss of or modification to habitats associated with them e.g. the riparian zone of any watercourse.
- 7.10.17 Based on the current baseline, no burrows would be directly affected; although, foraging habitat may be affected by temporary works. Impacts are predicted to be of low adverse magnitude and not significant.

Pine Marten

- 7.10.18 Signs of pine marten were recorded within the northern extent of the Onshore Ecology Survey Area, and records of pine marten were returned during the desk study.
- 7.10.19 The woodlands within the Onshore Ecology Survey Area are considered to be of limited suitability as pine marten denning habitat due to general homogeneity, lack of understory, and limited structural and species diversity. There are small pockets of potential foraging and denning habitat, though overall the area within the Proposed Development Boundary is generally unsuitable and of low value for pine marten.
- 7.10.20 Due to the confirmed presence of pine marten through scat, and some limited habitat suitability, this species will be subjected to temporary or permanent loss of or modification to habitats associated with them.
- 7.10.21 Based on the current baseline, no dens would be directly affected; although, foraging habitat and linear features used for commuting may be affected by temporary works. Impacts are predicted to be of low adverse magnitude and not significant.

Red Squirrel

- 7.10.22 Red squirrel presence was confirmed within the Onshore Ecology Survey Area through one sighting of an individual as well as several dreys. Additionally, 40 records were returned during the desk study providing further indication of presence of the species.
- 7.10.23 The woodlands within the northern extent of the Onshore Ecology Survey Area, notably in Fetteresso Forest, provide suitable squirrel drey habitat. They are connected to other extensive forestry areas which are capable of providing a year-round supply of food for red squirrel. As such, the forest may be important to the local red squirrel population. The primary felling area associated with the Proposed Development is located within Fetteresso Forest, which contains suitable habitat for red squirrel, which have been observed in the locality. Fetteresso Forest is one of three extensive forestry blocks within FLS's Mearns Land Management Plan (LMP) area, providing a contiguous forest area of approximately 6,666 ha (Forestry and Land Scotland, 2025). Whilst the Proposed Development could result in the permanent loss of approximately 11.45 ha of coniferous woodland in Fetteresso Forest this would be limited to an area that is subject to commercial forestry activities, this would equate to approximately 0.17 % of commercial forestry from the Mearns region. Tree felling would be subject to Embedded Mitigation measures involving pre-constriction surveys, SPP and oversight from a site-based ECoW; therefore, impacts are predicted to be of low adverse magnitude and not significant.

Bats

- 7.10.24 Individual trees, groups of trees, and woodland areas were classified as PRFs, as well as multiple buildings or structures being classified as having high, moderate, or low suitability for roosting bats. Details of one suspected roost identified within the Onshore Ecology Survey Area is described in Volume 2,

Technical Appendix 7.1: Habitats and Protected Species Survey (2024). Desk study results returned records of seven species of bats using the area, and further records of unidentified bat species.

- 7.10.25 Habitats throughout the Onshore Ecology Survey Area vary in suitability for foraging bats, though suitable habitat is frequent throughout the area. Numerous watercourses are present that are tree-lined and provide suitable habitat for foraging and commuting bats, as well as connectivity to the wider landscape.
- 7.10.26 Buildings will be retained by the Proposed Development; and trees containing PRFs and/or requiring further assessment are situated in areas beyond open fields where most temporary works would be located. Trees within Fetteresso Forest were found to be of limited suitability to roosting bats. Impacts are predicted to be of low adverse magnitude and not significant.

Goshawk

- 7.10.27 Goshawk records were returned during the desk study and breeding status was confirmed through nest records as described in the Onshore Ornithology Confidential Annex. Whilst Embedded Mitigation would prevent disturbance to nesting goshawk (through the pre-construction breeding bird survey, the deployment of an ECoW and exclusion of construction activity within a suitable buffer, as part of the Bird Protection Plan), it is predicted that breeding goshawk could be directly impacted by felling operations, with the loss of 11.45 ha of suitable habitat (including a nest location and part of this territory's foraging range).
- 7.10.28 To assess the significance of the displacement of one territory, desk study sources were considered to determine the regional population, and the likelihood of the displaced pair being able to find a new nest site with sufficient foraging habitat to be viable. The NESRSG confirmed its members do not monitor the area of the Proposed Development, and as reported in Peniche *et al.* (2023), no goshawk records were submitted to the Scottish Raptor Monitoring Scheme by the NESRSG in 2023, for example. However, from the RSPB and NESBRec data, there do appear to be a number of territories within the data search area. The estimate of 14 breeding pairs given for the whole North East Coastal Plain Natural Heritage Zone by Wilson (2015) is therefore considered an under-estimate, not least given the estimated population for Scotland as of 2022 was 315 pairs (Eaton *et al.* 2024). Given that the species is therefore likely to be widespread in the region (albeit under-recorded), it is not predicted that the potential temporary displacement of one breeding pair will significantly affect the local or regional population.
- 7.10.29 The likelihood of the birds being lost to regional population is considered low in any case. Suitable goshawk habitat extends throughout the wider local area and Fetteresso has good connectivity to other areas of woodland, providing opportunity for displaced breeding pairs to find suitable habitat nearby. As NatureScot notes in its 31 January 2025 response letter to SSEN's Hurlie 400 kV substation planning application (APP/2024/1951), 'based on the literature, goshawk only defend a comparatively small territory around the nest site and

have overlapping feeding territories. Research has shown that home range sizes and density are based on prey availability and nests have been found 750 m apart where there is no line of sight between them and 1,200 m apart where there is line of sight’.

- 7.10.30 On the basis of this desk study evidence, it is concluded that birds displaced from the immediate vicinity of the sub-station are likely to resettle with the Fetteresso Forest and not be lost to the NHZ population. It is therefore considered that the impact will be temporary rather than permanent.
- 7.10.31 Finally, it is also worth noting that the Applicant is required to replant woodland equal to the amount lost due to the Proposed Development, thereby replacing the plantation habitat in the long run (Volume 2, Technical Appendix: Forestry and Arboricultural Technical Report). Furthermore, through FLS’ normal process of forest management planning and the need to comply with wildlife legislation and the UK Woodland Assurance Scheme, suitable habitat for nesting goshawk will be maintained in the long term.
- 7.10.32 Based on the current baseline therefore, a single nest and the birds’ territory could be directly affected. However, alternative nesting sites of similar quality are extensive in the surrounding landscape. Therefore, based on these habitat considerations along with evidence of territory requirements, impacts are predicted to be of low adverse magnitude and not significant.

Nightjar

- 7.10.33 Nightjar have been recorded within the Onshore Ornithology Survey Area and nests have been recorded within the PPP Application Boundary as described in the Onshore Ornithology Confidential Annex. Further insights on the species in the region are also described by Knox (2024).
- 7.10.34 Whilst Embedded Mitigation would prevent disturbance to nesting nightjar (through the pre-construction breeding bird survey, the deployment of an ECoW and exclusion of construction activity within a suitable buffer, as part of the Bird Protection Plan), it is predicted that breeding nightjar could be directly impacted by potential loss of suitable foraging habitat. The extent of that loss depends on whether the operational footprint of the Proposed Development would occupy nightjar’s preferred habitat. This is recently felled/young restock or conifer regeneration, as these provide higher prey availability, as well as nesting sites. Closed canopy conifer plantation is less suitable because of lower prey abundance and the trees creating a barrier to effective foraging. The Fetteresso Forest is a continuously evolving mosaic of suitable, unsuitable and sub-optimal habitats, determined by the rotational felling and restocking regime implemented by FCS (Volume 2, Technical Appendix: Forestry and Arboricultural Technical Report). FLS is required to manage the plantation to accommodate this Amber-listed species. Suitable foraging and nesting nightjar habitat areas therefore occur throughout Fetteresso Forest, with sufficiently good connectivity to other areas of woodland, providing opportunity for displaced breeding pairs to find suitable habitat nearby. It is therefore considered that the impact should be temporary rather than permanent.

7.10.35 Therefore, impacts are predicted to be of low adverse magnitude and not significant.

Breeding birds

7.10.36 Desk study results for breeding bird species are detailed in Table 7, which indicate that species of conservation significance could be present in suitable habitat within and adjoining the PPP Application Boundary. This primarily includes hedgerows and field margins, rather than the open fields themselves, which are largely devoid of breeding bird interest.

7.10.37 It is predicted that breeding birds could be directly impacted by construction activities and felling operations during the breeding season. However, the extent of habitat loss is small scale, highly localised and reversible. In addition, suitable habitat extends throughout the wider local area, providing opportunity for displaced breeding pairs to find suitable habitat nearby. On the basis that site clearance would seek to avoid the nesting bird season, combined with Embedded Mitigation (particularly nest checks and management of disturbance risk by the ECoW), impacts are predicted to be of low adverse magnitude and not significant.

***Disturbance to onshore ecology and ornithology features through increased noise, light, and dust***

Montrose Basin SPA and Ramsar Site

7.10.38 The SPA / Ramsar Site is approximately 14.5 km from the Proposed Development and there will be no direct loss of habitat or disturbance to birds within the SPA / Ramsar Site.

7.10.39 Pink-footed goose was recorded regularly and in large numbers throughout field surveys. Birds originating from the SPA / Ramsar site may be temporarily displaced from feeding areas in agricultural fields during construction of the Proposed Development. However, only one record of 220 pink-footed geese were recorded on ground within the PPP Application Boundary. Moreover, only eight pink-footed goose records made during the foraging goose surveys, were recorded within the 600 m NatureScot advised disturbance distance buffer for non-breeding pink-footed goose, from the PPP Application Boundary, with a peak count of 2,000 birds. Therefore, with Embedded Mitigation measures in place (outlined in Table 7.18), impacts to pink-footed geese potentially connected with Montrose Basin SPA / Ramsar Site from disturbance is considered to be of low adverse magnitude and not significant.

Arbuthnott LNCS

7.10.40 Due to the largely exposed nature of the PPP Application Boundary and prevailing climate, habitats within the LNCS are unlikely to experience significant changes from dust drift in regard to short-term reduction of photosynthesis and/or negligible changes in soil chemistry. Increased light and noise will not affect the feature. Impacts are predicted to be of negligible magnitude and not significant.

Annies Dam LNCS

- 7.10.41 Due to the largely exposed nature of the PPP Application Boundary and prevailing climate, habitats within the LNCS are unlikely to experience significant changes from dust drift in regard to short-term reduction of photosynthesis and/or negligible changes in soil chemistry. Increased light and noise will not affect the feature. Impacts are predicted to be of negligible and not significant.

Todhead Point to Johnshaven Coast LNCS

- 7.10.42 Due to the largely exposed nature of the PPP Application Boundary and prevailing climate, habitats within the LNCS are unlikely to experience significant changes from dust drift in regard to short-term reduction of photosynthesis and/or negligible changes in soil chemistry. Increased light and noise will not affect the feature. Impacts are predicted to be of negligible and not significant.

Alder Woodland on Floodplains

- 7.10.43 Due to the largely exposed nature of the PPP Application Boundary and prevailing climate, alder woodland is unlikely to experience significant changes from dust drift in regard to short-term reduction of photosynthesis and/or negligible changes in soil chemistry. Increased light and noise will not affect the feature. Impacts are predicted to be of negligible and not significant.

Badger

- 7.10.44 Given that badger is a predominantly nocturnal species, it is anticipated that foraging and commuting individuals in the locality could be disturbed by tree felling and construction activities undertaken between dusk and dawn in close proximity to boundary features (e.g. woodland edge, hedgerows and scrub). However, construction activities would be informed by Embedded Mitigation measures including pre-constriction surveys, SPP and oversight from a site-based ECoW. Due to the largely exposed nature of the PPP Application Boundary and prevailing climate, foraging and commuting habitats are unlikely to be affected by emissions and deposition of dust/particulates. Impacts are predicted to be of low adverse magnitude and not significant.

Otter

- 7.10.45 Given that otter is a predominantly nocturnal species, it is anticipated that foraging and commuting individuals in the locality could be disturbed by tree felling and construction activities undertaken between dusk and dawn in close proximity to rivers and connected watercourses. However, construction activities would be informed by Embedded Mitigation measures including pre-constriction surveys, SPP and oversight from a site-based ECoW. Due to the largely exposed nature of the PPP Application Boundary and prevailing climate, wetland habitats are unlikely to be affected by emissions and deposition of dust/particulates. Impacts are predicted to be of low adverse magnitude and not significant.

Water Vole

- 7.10.46 It is anticipated that water vole in the locality could be disturbed by tree felling and construction activities in proximity to suitable wetland habitats, particularly those connected to Forthie Water where evidence of water vole activity has been recorded. However, construction activities would be informed by Embedded Mitigation measures including pre-constriction surveys, SPP and oversight from a site-based ECoW. Due to the largely exposed nature of the PPP Application Boundary and prevailing climate, wetland habitats are unlikely to be affected by emissions and deposition of dust/particulates. Impacts are predicted to be of low adverse magnitude and not significant.

Pine Marten

- 7.10.47 Given that pine marten is a predominantly nocturnal species, it is anticipated that foraging and commuting individuals in the locality could be disturbed by tree felling and construction activities undertaken between dusk and dawn, particularly within (and adjoining) coniferous woodlands. However, construction activities would be informed by Embedded Mitigation measures including pre-constriction surveys, SPP and oversight from a site-based ECoW. Due to the largely exposed nature of the PPP Application Boundary and prevailing climate, foraging and commuting habitats are unlikely to be affected by emissions and deposition of dust/particulates. Impacts are predicted to be of low adverse magnitude and not significant.

Red Squirrel

- 7.10.48 It is anticipated that red squirrel in the locality could be disturbed by tree felling activities undertaken in coniferous woodlands, particularly Fetteresso Forest. However, construction activities would be informed by Embedded Mitigation measures including pre-constriction surveys, SPP and oversight from a site-based ECoW. Due to the largely exposed nature of the PPP Application Boundary and prevailing climate, foraging habitats are unlikely to be affected by emissions and deposition of dust/particulates. Impacts are predicted to be of low adverse magnitude and not significant.

Bats

- 7.10.49 Given that pine marten is a predominantly nocturnal species, it is anticipated that foraging and commuting individuals in the locality could be disturbed by tree felling and construction activities generating noise and light spill dawn in close proximity to linear features (e.g. woodland edge, hedgerows and scrub; as well as watercourses supporting bankside vegetation). However, construction activities would be informed by Embedded Mitigation measures including pre-constriction surveys, SPP and oversight from a site-based ECoW. Due to the largely exposed nature of the PPP Application Boundary and prevailing climate, foraging habitats (including aquatic habitats) are unlikely to be affected by emissions and deposition of dust/particulates. Impacts are predicted to be of low adverse magnitude and not significant.

ALL IOFs

- 7.10.50 It is anticipated that breeding birds in the locality could be disturbed by tree felling and construction activities undertaken during the breeding season and in proximity to suitable nesting habitat. However, construction activities would be informed by Embedded Mitigation measures including pre-construction surveys, SPP and oversight from a site-based ECoW. Due to the largely exposed nature of the PPP Application Boundary and prevailing climate, foraging habitats are unlikely to be affected by emissions. Impacts are predicted to be of low adverse magnitude and not significant.

***Indirect impacts due to accidental pollution and/or contamination of habitats used by onshore ecology and ornithology features***

Montrose Basin SPA and Ramsar Site

- 7.10.51 The SPA / Ramsar Site is approximately 14.5 km from the Proposed Development and there is no significant hydrological connectivity between the PPP Application Boundary and aquatic habitats in the SPA / Ramsar Site.
- 7.10.52 Whilst pink-footed geese were regularly recorded and in large numbers during field surveys, the species was typically observed utilising cropland more than 600 m from the PPP Application Boundary. There are no significant hydrological pathways connecting the Proposed Development to habitats utilised more routinely by large numbers of pink-footed geese. Impacts are predicted to be of low adverse magnitude and not significant.

ALL LNCS

- 7.10.53 Whilst there is potential for accidental pollution events to occur during construction, temporary works will be undertaken in accordance with good practice and a CEMP. Impacts are predicted to be of low adverse magnitude and not significant.

Alder Woodland on Floodplains

- 7.10.54 Whilst there is potential for accidental pollution events to occur during construction, temporary works will be undertaken in accordance with good practice and a CEMP. Impacts are predicted to be of low adverse magnitude and not significant.

Badger

- 7.10.55 Whilst there is potential for accidental pollution events to occur during construction, temporary works will be undertaken in accordance with good practice and a CEMP. Impacts are predicted to be of low adverse magnitude and not significant.

Otter

- 7.10.56 Whilst there is potential for accidental pollution events to occur during construction, which could affect wetland habitats utilised by foraging and commuting otter in the locality, temporary work will be undertaken in accordance with good practice and a CEMP. Impacts are predicted to be of low adverse magnitude and not significant.

Water Vole

- 7.10.57 Whilst there is potential for accidental pollution events to occur during construction, which could affect wetland habitats utilised by water vole in the locality, temporary works will be undertaken in accordance with good practice and a CEMP. Impacts are predicted to be of low adverse magnitude and not significant.

Pine Marten

- 7.10.58 Whilst there is potential for accidental pollution events to occur during construction, temporary works will be undertaken in accordance with good practice and a CEMP. Impacts are predicted to be of low adverse magnitude and not significant.

Red Squirrel

- 7.10.59 Whilst there is potential for accidental pollution events to occur during construction, temporary works will be undertaken in accordance with good practice and a CEMP. Impacts are predicted to be of low adverse magnitude and not significant.

Bats

- 7.10.60 Whilst there is potential for accidental pollution events to occur during construction, which could affect wetland habitats utilised by foraging bats in the locality, temporary works will be undertaken in accordance with good practice and a CEMP. Impacts are predicted to be of low adverse magnitude and not significant.

All IOFs

- 7.10.61 Whilst there is potential for accidental pollution events to occur during construction, which could affect wetland habitats utilised by breeding birds in the locality, temporary works will be undertaken in accordance with good practice and a CEMP. Impacts are predicted to be of low adverse magnitude and not significant.

***Increased mortality of onshore ecology and ornithology features through collision with moving vehicles and plant***

Montrose Basin SPA and Ramsar Site

- 7.10.62 The SPA / Ramsar Site is approximately 14.5 km from the Proposed Development and will be excluded from temporary works areas associated with the Proposed Development.
- 7.10.63 Whilst pink-footed geese were regularly recorded and in large numbers during field surveys, the species was typically observed utilising cropland more than 600 m from the PPP Application Boundary. Temporary compounds will be located within the PPP Application Boundary and movement between temporary compounds and temporary works areas will be subject to site speed limits and designated access points and working corridors, within the PPP Application Boundary, outlined in the CEMP as described in Embedded Mitigation measures, and national speed limits on public roads. Impacts are predicted to be of negligible magnitude and not significant.

All LNCS

- 7.10.64 Temporary compounds will be located within the PPP Application Boundary and movement between temporary compounds and temporary works areas will be subject to site speed limits and designated access points and working corridors within the PPP Application Boundary, outlined in the CEMP as described in Embedded Mitigation measures, and national speed limits on public roads. Impacts on protected or priority species within LNCS are predicted to be of negligible magnitude and not significant.

Alder Woodland on Floodplains

- 7.10.65 Temporary compounds will be located within the PPP Application Boundary and movement between temporary compounds and temporary works areas will be subject to site speed limits and designated access points and working corridors within the PPP Application Boundary, outlined in the CEMP as described in Embedded Mitigation measures, and national speed limits on public roads. Impacts on protected or priority species within alder woodland on floodplains are predicted to be of negligible magnitude and not significant.

Badger

- 7.10.66 Temporary compounds will be located within the PPP Application Boundary and movement between temporary compounds and temporary works areas will be subject to site speed limits and designated access points and working corridors within the PPP Application Boundary, outlined in the CEMP as described in Embedded Mitigation measures, and national speed limits on public roads. Impacts are predicted to be of negligible magnitude and not significant.

Otter

- 7.10.67 Temporary compounds will be located within the PPP Application Boundary and movement between temporary compounds and temporary works areas will be subject to site speed limits and designated access points and working corridors within the PPP Application Boundary, outlined in the CEMP as described in Embedded Mitigation measures, and national speed limits on public roads. Impacts are predicted to be of negligible magnitude and not significant.

Water Vole

- 7.10.68 Temporary compounds will be located within the PPP Application Boundary and movement between temporary compounds and temporary works areas will be subject to site speed limits and designated access points and working corridors within the PPP Application Boundary, outlined in the CEMP as described in Embedded Mitigation measures, and national speed limits on public roads. Impacts are predicted to be of negligible magnitude and not significant.

Pine Marten

- 7.10.69 Temporary compounds will be located within the PPP Application Boundary and movement between temporary compounds and temporary works areas will be subject to site speed limits and designated access points and working corridors within the PPP Application Boundary outlined in the CEMP as described in

Embedded Mitigation measures, and national speed limits on public roads. Impacts are predicted to be of negligible magnitude and not significant.

Red Squirrel

- 7.10.70 Temporary compounds will be located within the PPP Application Boundary and movement between temporary compounds and temporary works areas will be subject to site speed limits and designated access points and working corridors within the PPP Application Boundary, outlined in the CEMP as described in Embedded Mitigation measures, and national speed limits on public roads. Impacts are predicted to be of negligible magnitude and not significant.

Bats

- 7.10.71 Temporary compounds will be located within the PPP Application Boundary and movement between temporary compounds and temporary works areas will be subject to site speed limits and designated access points and working corridors within the PPP Application Boundary, outlined in the CEMP as described in Embedded Mitigation measures, and national speed limits on public roads. Impacts are predicted to be of negligible magnitude and not significant.

Goshawk

- 7.10.72 Temporary compounds will be located within the PPP Application Boundary and movement between temporary compounds and temporary works areas will be subject to site speed limits and designated access points and working corridors within the PPP Application Boundary, outlined in the CEMP as described in Embedded Mitigation measures, and national speed limits on public roads. Impacts are predicted to be of negligible magnitude and not significant.

Nightjar

- 7.10.73 Temporary compounds will be located within the PPP Application Boundary and movement between temporary compounds and temporary works areas will be subject to site speed limits and designated access points and working corridors within the PPP Application Boundary, outlined in the CEMP as described in Embedded Mitigation measures, and national speed limits on public roads. Impacts are predicted to be of negligible magnitude and not significant.

Breeding birds

- 7.10.74 Temporary compounds will be located within the PPP Application Boundary and movement between temporary compounds and temporary works areas will be subject to site speed limits and designated access points and working corridors within the PPP Application Boundary, outlined in the CEMP as described in Embedded Mitigation measures, and national speed limits on public roads. Impacts are predicted to be of negligible magnitude and not significant.

Table 7.19 Summary of Impact Assessment and Significance Residual Effects

Potential Impact	Phase			Feature	Embedded Mitigation Measures	Importance	Magnitude	Significance	Mitigation	Residual effects
	C	O	D							
<b>Temporary or permanent loss of or modification to habitats used by onshore ecology and ornithology features</b>	✓	x	✓	Montrose Basin SPA / Ramsar Site	Design principles OCEMP (inc. surface water management, DMP, CVNMP and SWMP) ECoW Pre-construction survey SPP (inc. mitigation licensing) BBPP Biodiversity Enhancement Plan	International	Low adverse	Not significant	None	Not significant
				Arbuthnott LNCS		Regional	Low adverse	Not significant	None	Not significant
				Annies Dam LNCS		Regional	Low adverse	Not significant	None	Not significant
				Elfhill LNCS		Regional	Low adverse	Not significant	None	Not significant
				Alder woodland on floodplains		Regional	Low adverse	Not significant	None	Not significant
				Badger		Local	Low adverse	Not significant	None	Not significant
				Otter		Local	Low adverse	Not significant	None	Not significant
				Water Vole		Local	Low adverse	Not significant	None	Not significant
				Pine Marten		Local	Low adverse	Not significant	None	Not significant
				Red Squirrel		Local	Low adverse	Not significant	None	Not significant
				Bats		Local	Low adverse	No significant	None	Not significant
				Goshawk (breeding)		Regional	Low adverse	Not significant	None	Not significant
				Nightjar (breeding)		Regional	Low adverse	Not significant	None	Not significant
				Breeding birds		Regional	Low adverse	Not significant	None	Not significant
<b>Disturbance to onshore ecology and ornithology features through increased noise, light, and dust</b>	✓	x	✓	Montrose Basin SPA / Ramsar Site	Design principles OCEMP (inc. surface water management, DMP, CVNMP and SWMP) ECoW Pre-construction survey SPP (inc. mitigation licensing) BBPP Biodiversity Enhancement Plan	International	Low adverse	Not significant	None	Not significant
				Arbuthnott LNCS		Regional	Negligible	Not significant	None	Not significant
				Annies Dam LNCS		Regional	Negligible	Not significant	None	Not significant
				Elfhill LNCS		Regional	Negligible	Not significant	None	Not significant
				Alder woodland on floodplains		Regional	Negligible	Not significant	None	Not significant
				Badger		Local	Low adverse	Not significant	None	Not significant
				Otter		Local	Low adverse	Not significant	None	Not significant
				Water Vole		Local	Low adverse	Not significant	None	Not significant

Potential Impact	Phase			Feature	Embedded Mitigation Measures	Importance	Magnitude	Significance	Mitigation	Residual effects
	C	O	D							
				Pine Marten		Local	Low adverse	Not significant	None	Not significant
				Red Squirrel		Local	Low adverse	Not significant	None	Not significant
				Bats		Local	Low adverse	Not significant	None	Not significant
				All IOFs		Regional	Low adverse	Not significant	None	Not significant
<b>Indirect impacts due to accidental pollution and/or contamination of habitats used by onshore ecology and ornithology features</b>	✓	x	✓	Montrose Basin SPA / Ramsar Site	Design principles OCEMP (inc. surface water management, DMP, CVNMP and SWMP) ECoW Pre-construction survey SPP (inc. mitigation licensing) BBPP Biodiversity Enhancement Plan	International	Low adverse	Not significant	None	Not significant
				Arbuthnott LNCS		Regional	Low adverse	Not significant	None	Not significant
				Annies Dam LNCS		Regional	Low adverse	Not significant	None	Not significant
				Elfhill LNCS		Regional	Low adverse	Not significant	None	Not significant
				Alder woodland on floodplains		Regional	Low adverse	Not significant	None	Not significant
				Badger		Local	Low adverse	Not significant	None	Not significant
				Otter		Local	Low adverse	Not significant	None	Not significant
				Water Vole		Local	Low adverse	Not significant	None	Not significant
				Pine Marten		Local	Low adverse	Not significant	None	Not significant
				Red Squirrel		Local	Low adverse	Not significant	None	Not significant
				Bats		Local	Low adverse	Not significant	None	Not significant
				Goshawk (breeding)		Regional	Low adverse	Not significant	None	Not significant
				Nightjar (breeding)		Regional	Low adverse	Not significant	None	Not significant
				Breeding birds		Regional	Low adverse	Not significant	None	Not significant
<b>Direct mortality of onshore ecology and ornithology features from moving vehicles and operational plant</b>	✓	x	✓	Montrose Basin SPA / Ramsar Site	Design principles OCEMP (inc. surface water management, DMP, CVNMP and SWMP) ECoW Pre-construction survey SPP (inc. mitigation licensing) BBPP Biodiversity Enhancement Plan	International	Negligible	Not significant	None	Not significant
				Arbuthnott LNCS		Regional	Negligible	Not significant	None	Not significant
				Annies Dam LNCS		Regional	Negligible	Not significant	None	Not significant
				Elfhill LNCS		Regional	Negligible	Not significant	None	Not significant
				Alder woodland on floodplains		Regional	Negligible	Not significant	None	Not significant
				Badger		Local	Negligible	Not significant	None	Not significant

Potential Impact	Phase			Feature	Embedded Mitigation Measures	Importance	Magnitude	Significance	Mitigation	Residual effects
	C	O	D							
				Otter	ECoW Pre-construction survey SPP (inc. mitigation licensing) Biodiversity Enhancement Plan	Local	Negligible	Not significant	None	Not significant
				Water Vole		Local	Negligible	Not significant	None	Not significant
				Pine Marten		Local	Negligible	Not significant	None	Not significant
				Red Squirrel		Local	Negligible	Not significant	None	Not significant
				Bats		Local	Negligible	Not significant	None	Not significant
				Goshawk (breeding)	Design principles OCEMP (inc. surface water management, DMP, CVNMP and SWMP) ECoW Pre-construction survey BBPP Biodiversity Enhancement Plan	Regional	Negligible	Not significant	None	Not significant
				Nightjar (breeding)		Regional	Negligible	Not significant	None	Not significant
				Breeding birds		Regional	Negligible	Not significant	None	Not significant

### **Decommissioning phase**

- 7.10.75 At the end of the operational lifetime of the Proposed Development (which is expected to be 30 years from date of full commissioning), it is anticipated that works will be the reverse of the construction sequence. This would involve the removal of any buildings and/or re-purposing for alternative uses.
- 7.10.76 The Onshore Export Cables and 400 kV Cables will be removed via the TJBS to reduce the environmental disturbance during decommissioning, this will also be subject to specific land agreements with landowners. The structures of the TJBS and link boxes will be removed only if it is feasible with minimal environmental disturbance, or if their removal is required to return the land to agricultural use. Any waste arising from decommissioning would be disposed of, recycled or reused in accordance with relevant regulations.
- 7.10.77 A Decommissioning Plan would be agreed with Aberdeenshire Council and key stakeholders as required at the time of decommissioning. Impacts during decommissioning are likely to be broadly similar to those in the construction phase (above), although it is not possible to predict precisely what activities would take place, or what protected species and habitats would be present, at that time.
- 7.10.78 Decommissioning activities are equal to or less than those carried out during the construction phase. For the purpose of the assessment, it is assumed that the level of disturbance and potential impacts on each IEF and IOF are likely to be similar to those described for the construction phase.

## **7.11 Proposed Monitoring**

- 7.11.1 No significant effects have been identified and, through the application of design principles and Embedded Mitigation measures, the potential for significant effects have been reduced and/or avoided through the design development process.
- 7.11.2 As described in the Outline CEMP (Volume 2, Technical Appendix 2.2), an ECoW will be appointed to oversee the implementation of good practice and construction-stage mitigate measures (including Embedded Mitigation measures). The ECoW will undertake regular inspections of temporary compounds, temporary works areas and sensitive environmental features (e.g. nesting bird exclusion zones) to monitor compliance of construction-stage activities against relevant mitigation.
- 7.11.3 Habitat creation, restoration and enhancement areas will be developed at the MSC stage, which will take account of detailed design for the Proposed Development and landscaping proposal. The aims and objectives of habitat creation, restoration and enhancement will be described in a detailed Biodiversity Enhancement Plan. It is likely that habitat creation, restoration and enhancement will be subject to routine monitoring by an ecology and/or ornithology professional to evaluate the effectiveness of such measures against the aims and objectives described in the detailed Biodiversity Enhancement Plan.

## 7.12 Inter-Related Effects

7.12.1 For Onshore Ecology and Ornithology, the following potential impacts have been considered within the inter-related assessment:

- Temporary elevations in noise and vibration during construction affecting habitats utilised by a protected or priority species;
- Temporary reductions in water quality from a pollution incident affecting downstream aquatic habitats;
- Temporary elevations in vehicle/plant emissions and deposition of dust/particulates during construction leading to localised changes in soil chemistry, smothering and natural processes (e.g. photosynthesis);
- Increased vehicle movements during construction could affect protected or priority species through increased animal road mortality from vehicle collisions;
- Compaction of soils and excavations leading to changes in vegetation structure and habitat classification as a result of increased flooding or downslope droughting;
- Changes in land use and forestry could affect the extents and/or quality of prevailing habitats; as well as the suitability of habitat features for protected or priority species; and
- Landscape proposals used to integrate the Proposed Development into its setting would give greater variety and provide increased opportunities for biodiversity and habitat.

7.12.2 Table 7.20 lists the inter-related effects (project lifetime effects) that are predicted to arise during the construction, and decommissioning of the Proposed Development and also the inter-related effects (receptor-led effects) that are predicted to arise for Onshore Ecology and Ornithology features. No effects are anticipated during the O&M phase.

7.12.3 As noted above, effects on Onshore Ecology and Ornithology also have the potential to have secondary effects on other receptors and these effects are fully considered in the topic-specific chapters. These receptors and effects are:

- Land Use, Agriculture and Public Access:
  - Changes in land use and forestry could affect the extents and/or quality of prevailing habitats; as well as the suitability of habitat features for protected or priority species.
- Landscape and Visual Impact Assessment:
  - Landscape proposals used to integrate the Proposed Development into its setting would give greater variety and provide increased opportunities for biodiversity and habitat.
- Noise and Vibration:
  - Temporary elevations in noise and vibration during construction affecting habitats utilised by a protected or priority species.
- Traffic and Transport:

- Increased vehicle movements during construction could affect protected or priority species through increased animal road mortality from vehicle collisions.
- Geology and Ground Conditions
  - Compaction of soils and excavations leading to changes in vegetation structure and habitat classification as a result of increased flooding or downslope droughting.
- Water Quality and Flood Risk:
  - Temporary reductions in water quality from a pollution incident affecting downstream aquatic habitats.
- Air Quality
  - Temporary elevations in vehicle/plant emissions and deposition of dust/particulates during construction leading to localised changes in soil chemistry, smothering and natural processes (e.g. photosynthesis).

Table 7.20 Summary of Likely Significant Inter-Related Effects for Onshore Ecology and Ornithology from Individual Effects Occurring Across the Construction, O&M and Decommissioning Phase of the Proposed Development (Project Lifetime Effects) and from Multiple Effects Interacting Across all Phases (Receptor-led Effects)

Description of Impact	Phase			Likely Significant Inter-Related Effects
	C	O&M	D	
<b>Project Lifetime Effects</b>				
<b>Temporary or permanent loss of or modification to habitats, and to those used by onshore ecology and ornithology features for foraging, commuting, or refugia</b>	✓	x	✓	Following the implementation of Embedded Mitigation measures set out for the Proposed Development, the significance of project lifetime effects are unlikely to exceed those stated in section 7.107.10 for any individual phase. Decommissioning effects, given the timeframe intervening, will also be unlikely to have significant inter-related effects above those identified for construction phase, although the baseline at that time will require careful review to ensure that receptors currently identified are still relevant at that time. During operation, repairs and maintenance will be limited to areas of hardstanding; and requirements for habitat loss needed to enable inspections and repairs will be will extremely localised and short-term; and carried out in line with relevant regulations.
<b>Disturbance to onshore ecology and ornithology features through increased noise, light, and dust</b>	✓	x	✓	Following the implementation of Embedded Mitigation measures set out for the Proposed Development, the significance of project lifetime effects are unlikely to exceed those stated in section 7.107.10 for any individual phase. Decommissioning effects, given the timeframe intervening, will also be unlikely to have significant inter-related effects above those identified for construction phase, although the baseline at that time will require careful review to ensure that receptors currently identified are still relevant at that time. During operation, repairs and maintenance will be limited to areas of hardstanding; and requirements for habitat loss needed to enable inspections and repairs will be will extremely localised and short-term; and carried out in line with relevant regulations.
<b>Indirect impacts due to accidental pollution and/or contamination of habitats used by onshore ecology and ornithology features</b>	✓	x	✓	Following the implementation of Embedded Mitigation measures set out for the Proposed Development, the significance of project lifetime effects are unlikely to exceed those stated in section 7.10 for any individual phase. Decommissioning effects, given the timeframe intervening, will also be unlikely to have significant inter-related effects above those identified for construction phase, although the baseline at that time will require careful review to ensure that receptors currently identified are still relevant at that time. During operation, repairs and maintenance will be limited to areas of hardstanding; and carried out in line with relevant regulations.
<b>Increased mortality of onshore ecology and ornithology features through collision with moving vehicles and plant</b>	✓	x	✓	Following the implementation of Embedded Mitigation measures set out for the Proposed Development, the significance of project lifetime effects are unlikely to exceed those stated in section 7.107.10 for any individual phase. Decommissioning effects, given the timeframe intervening, will also be unlikely to have significant inter-related effects above those identified for construction phase, although the baseline at that time will require careful review to ensure that receptors currently identified are still relevant at that time. During operation, repairs and maintenance will be limited to areas of hardstanding; and carried out in line with relevant regulations.
<b>Receptor-led Effects</b>				
<b>Inter-related effects between ecological receptors and other environmental disciplines are anticipated primarily during the construction phase. The combined and sequential nature of these effects could lead to short-term habitat degradation, disturbance to species and/or changes to ecosystem processes. However, through the application of Embedded Mitigation measures during construction, long-term impacts are expected to be limited and potentially offset by opportunities for habitat creation, restoration and enhancement.</b>				

## **7.13 Cumulative Effects Assessment**

### **Methodology**

- 7.13.1 The Cumulative Effects Assessment (CEA) assesses the impact associated with the Proposed Development together with other relevant projects and activities. Cumulative effects are defined as the effect of the Proposed Development in combination with the effects from a number of different projects, on the same receptor or resource. Further details on CEA methodology are provided in Volume 1, Chapter 3: EIA Methodology.
- 7.13.2 Table 7 outlines the other projects relevant to the CEA, and the cumulative effects assessed within the context of Biodiversity, Terrestrial Ecology and Ornithology are outlined in Table 7.22.

Table 7.21 List of Other Projects Considered within the CEA for Onshore Ecology and Ornithology

Development Name and Application Reference(s)	Status	Distance from PPP Application Boundary	Description	Dates of Construction/Operation	Overlap with the Proposed Development
<b>Grains Of Fetteresso Indoor Play Area</b> APP/2025/0058	Under Consideration	~ 1.4 km east of northern part of cable corridor and ~1.4 km south east of Substation Search Area	Part change of use of existing agricultural building to Class 11 (assembly and leisure) indoor play area, installation cabin (reception/handwash area) and formation of car park. Located at Grains Of Fetteresso, Stonehaven.	No specific dates are available for the development.	No physical overlap during construction. Operation and maintenance phases may overlap temporally.
<b>Tealing to Kintore 400 kV OHL</b> ENQ/2024/1397, ECU00005225	Decided - EIA Opinion Adopted	Within PPP Application Boundary and ~450 m south of Substation Search Area	Construction and operation of new a 400 kV Overhead Line, extending approximately 106 km between Kintore and Tealing, connecting into a new 400 kV substation site at Fetteresso Forest known as Hurlie. Associated substations and ancillary development including access, constructions compounds, etc. are also included in this application.	Current estimated construction period from 2026 to 2029 with operation from 2030 onwards.	Physical and temporal overlap during construction and operation.
<b>Hurlie 400 kV Substation</b> APP/2024/1951, ENQ/2024/1176, ENQ/2024/0146	Under Consideration	Within PPP Application Boundary and ~450 m south of Substation Search Area	Construction and operation of a new 400 kV Air Insulated Substation, formation of associated earthworks, access, drainage, landscaping, security, creation of temporary construction compounds and set-down, equipment and materials storage areas. Located on land at Fetteresso Forest, Stonehaven.	No specific dates are presently available for the project; however, it is an element of SSEN's 'Pathway to 2030' and so it is assumed that if approved construction will commence with a view to development being completed as soon as possible. Current estimated construction period from January 2026 to September 2029 with operation from 2029 onwards.	Physical and temporal overlap during construction and operation.
<b>Glendye Wind Farm 132 kV OHL</b> ENQ/2024/1818	Decided - EIA Opinion Adopted	~540 m west of northern part of cable corridor and ~1.3 km south west of Substation Search Area	Construction and operation of a new 132 kV Overhead Line from Glendye Wind Farm Substation approximately 8 km north west of Fettercairn, to the existing Fetteresso substation, 6.5 km west of Stonehaven.	No specific dates are available for the development.	No physical overlap during construction. Operation and maintenance phases may overlap temporally.
<b>The Waters BESS</b> ENQ/2024/1615, ENQ/2024/1830	Under Consideration	~170 m west of northern part of cable corridor	Installation of a grid battery energy storage facility (up to 50 MW) and associated infrastructure. Located on land at The Waters, Glenbervie, Stonehaven.	No specific dates are available for the development.	Potential physical proximity during construction. Operation and maintenance phases may overlap temporally.
<b>Bridgend Farm BESS</b> ENQ/2024/0747, APP/2025/0089	Decided - EIA Opinion Adopted	~860 m east of southern part of cable corridor and ~3.5 km south west of Substation Search Area	Installation of 49.9 MW battery electricity storage system and associated infrastructure. Located on land at Bridgend Farm, Arbuthnott, Laurencekirk.	No specific dates are available for the development.	No physical overlap during construction. Operation and maintenance phases may overlap temporally.
<b>Quithel 50 MW BESS</b> ENQ/2023/1713	Decided - EIA Opinion Adopted	~700 m north of northern part of cable corridor and ~3 km south west of Substation Search Area	Construction of battery energy storage system with a capacity in exceedance of 50 MW. Located on land to south Of Fetteresso Forest, Stonehaven.	No specific dates are available for the development.	No physical overlap during construction. Operation and maintenance phases may overlap temporally.
<b>Northeast Of Drumlithie BESS</b> ENQ/2023/0093	Decided - EIA Opinion Adopted	~600 m east of northern part of cable corridor and ~5 km south of Substation Search Area	Installation of up to 49.9 MW battery energy storage facility. Located on land ~400 m to the northeast of Drumlithie, Stonehaven.	No specific dates are available for the development.	No physical overlap during construction. Operation and maintenance phases may overlap temporally.
<b>East Coast Viners Solar Storage Project</b> APP/2022/1701	Decided - Approved	~750 m east of northern part of cable corridor and ~6 km south of Substation Search Area	Installation of 9.2 MW ground mounted solar array and battery energy storage units and associated infrastructure. Located on land adjacent to East Coast Viners Animal Nutrition, Drumlithie, Stonehaven.	No specific dates are available for the development.	No physical overlap during construction. Operation and maintenance phases may overlap temporally.
<b>Fetteresso 132 kV Substation Upgrade</b> ENQ/2025/1103, ENQ/2025/1000	Under Consideration	~540 m west of northern part of cable corridor and ~1.3 km south west of Substation Search Area	Upgrade to the existing 132 kV Fetteresso Substation, including the installation of a combined Gas Insulated Switchgear (GIS) and control building and ancillary works, means of access, site drainage, landscaping and other associated operations.	No specific dates are presently available for the project; however, if consented, construction is expected to take place between early 2027 to late 2029.	No physical overlap during construction. Operation and maintenance phases may overlap temporally.

<b>Development Name and Application Reference(s)</b>	<b>Status</b>	<b>Distance from PPP Application Boundary</b>	<b>Description</b>	<b>Dates of Construction/Operation</b>	<b>Overlap with the Proposed Development</b>
<b>Droop Hill Solar Park</b> ENQ/2025/0368, APP/2025/0560	Decided - EIA Opinion Adopted	~2 km west of southern part of cable corridor and ~6.5 km south west of Substation Search Area	Installation of a ground mounted solar park of approximately 3.15 MW. Located on land adjacent to Droop Hill, Glenbervie.	No specific dates are available for the development.	No physical overlap during construction. Operation and maintenance phases may overlap temporally.
<b>Glenskinnan Renewable Energy Park</b> ENQ/2025/0960	Awaiting Decision	~8.5 km west of northern part of cable corridor and Substation Search Area	Erection of 14 wind turbines (up to 220 m to blade tip) and associated Infrastructure. Located approximately 3.8 km south of Banchory and 1.7 km south-east Of Strachan.	No specific dates are presently available for the project; however, if consented, construction is expected to take place from 2031, with operation commencing in 2033.	No physical or temporal overlap during construction. Operation may overlap temporally.
<b>Craigneil Wind Farm</b> ENQ/2024/0640	Awaiting Decision	~3 km north of northern part of cable corridor and Substation Search Area	Erection of up to seven 180 m to blade tip wind turbines, access tracks, hardstandings, substation, control building, met mast, borrow pit, associated infrastructure and temporary construction compound. Located on land to the north and north east of hillside at Rickarton, Stonehaven.	No specific dates are available for the development.	No physical overlap during construction. Operation and maintenance phases may overlap temporally.
<b>Meetlaw Farm Battery Energy Storage System,</b> APP/2022/2676	Decided – Approved	~2.5 km to the east of mid-section of cable corridor and ~6 km south of Substation Search Area	Installation of Battery Energy Storage System with an installed capacity of up to 49.9MW. Grid coordinates - 381837, 781197	No specific dates are available for the development.	No physical overlap during construction. Operation and maintenance phases may overlap temporally.
<b>S36 Windfarm, Fetteresso Forest,</b> ECU00001851, APP/2019/1341	Consented Following Appeal	~6 km west of northern part of cable corridor and ~8km west of Substation Search Area	Wind farm extension to existing Mid Hill Wind Farm consisting of 10 turbines ranging from 149 m to 200 m tip height. (National Grid Coordinates 372154 786488)	No specific dates available for commencement of construction.	No physical overlap during construction. Operation and maintenance phases may overlap temporally.

### **Maximum Design Scenario**

- 7.13.3 The MDS identified in Table 7 have been selected as those having the potential to result in the greatest effect on an identified feature. The cumulative effects presented and assessed in this section have been selected from the details provided in Volume 1, Chapter 2: The Proposed Development as well as the information available on other projects presented in Volume 1, Chapter 3: EIA Methodology to inform a ‘maximum design scenario’. Any other development scenario within the Project Design Envelope (PDE), will result in in the same, or less, level of environmental effect.

Table 7.22 Maximum Design Scenario Considered for Each Impact as part of the Assessment of Likely Significant Cumulative Effects on Onshore Ecology and Ornithology

Potential Cumulative Effect	Phase*	Tier	Maximum Design Scenario
<b>Temporary or permanent loss of or modification to habitats, and to those used by onshore ecology and ornithology features for foraging, commuting, or refugia</b>	C	<b>Tier 1 &amp; 2</b>	Up to 1,135 km <sup>2</sup> temporary construction area across approximately 22 km Onshore Export Cable Corridor and 1.2 km 400 kV Cable Corridor; habitat clearance including hedgerows, trees, and vegetation within working width of up to 50 m.
	D	<b>Tier 3 &amp; 4</b>	Removal of infrastructure may involve further habitat disturbance; reinstatement and restoration activities planned
<b>Disturbance to onshore ecology and ornithology features through increased noise, light, and dust</b>	C	<b>Tier 1 &amp; 2</b>	Construction activities involve heavy machinery, haul roads, and temporary compounds. Noise and dust generation expected, mitigated via insulated buildings, enclosed plant, and Outline CEMP measures.
	D	<b>Tier 3 &amp; 4</b>	Similar to construction phase in reverse; Equipment removal of infrastructure and site reinstatement may temporarily increase disturbance noise and dust levels.

Potential Cumulative Effect	Phase*	Tier	Maximum Design Scenario
<b>Indirect impacts due to accidental pollution and/or contamination of habitats used by onshore ecology and ornithology features</b>	C	<b>Tier 1 &amp; 2</b>	Risk from fuel spills, sediment runoff, and chemical use during construction activities; mitigated. Mitigated via Outline CEMP, Pollution Prevention and Control Plan, and Surface Water Quality Monitoring, and Controlled Activities Regulations (CAR) licensing for watercourse crossings.
	D	<b>Tier 3 &amp; 4</b>	Risk from decommissioning activities (e.g. fuel use, soil disturbance). Managed via Decommissioning Plan, Waste Management Plan, and regulatory compliance.
<b>Increased mortality of onshore ecology and ornithology features through collision with moving vehicles and plant</b>	C	<b>Tier 1 &amp; 2</b>	Risk during vegetation clearance, trenching, and compound setup. Mitigated via ecological surveys, timing outside nesting season, and Species Protection Plans.
	D	<b>Tier 3 &amp; 4</b>	Similar risks to construction phase; mitigated through phased decommissioning and ecological oversight.

\* Project Phase refers to construction (C) and decommissioning (D), note O&M is scoped out.

### **Cumulative Effects Assessment**

- 7.13.4 An assessment of the likely significance of the cumulative effects of the Proposed Development upon Ecological and Ornithological features arising from each identified impact is given below.

#### ***Temporary or permanent loss of or modification to habitats, and to those used by IEFs or IOFs for foraging, commuting, or refugia***

##### ***Construction and decommissioning phase***

###### Importance

- 7.13.5 The importance of onshore ecology and ornithology features are described in section 7.10.

###### Impact Magnitude

- 7.13.6 During construction, Tealing to Kintore 400 kV Overhead Line and Hurlie Substation will result in habitat loss within the PPP Application Boundary, primarily affecting areas of commercial forestry at Fetteresso Forest. In addition, Tealing to Kintore 400 kV Overhead Line would result in additional habitat loss within the PPP Application Boundary, comprising modified grasslands and croplands near the Hill of Tannachie. Other plans/projects identified in the locality are located outside the PPP Application Boundary and/or construction timeline for the Proposed Development.

- 7.13.7 Habitat losses within the PPP Application Boundary would be limited in extent during construction and irreversible; and largely limited to habitats that are common and widespread in Aberdeenshire. The magnitude is considered to be **low adverse**.

###### Significance of effect

- 7.13.8 No significant cumulative effects predicted.

###### Additional mitigation and residual effect

- 7.13.9 No Additional Mitigation required; and no significant residual effects are predicted.

##### ***Operation and maintenance phase***

###### Importance

- 7.13.10 The importance of onshore ecology and ornithology features are described in section 7.10.

###### Impact Magnitude

- 7.13.11 During operation, Tealing to Kintore 400 kV Overhead Line and Hurlie Substation will be subject to routine inspections, maintenance and repairs. These works will be largely limited to accessible areas around OHL footings and areas of permanent hardstanding. Localised vegetation removal may be required to provide safe access to temporary works areas. Other plans/projects identified in the locality are located outside the PPP Application Boundary.

- 7.13.12 During this time, operational activities relating to the Proposed Development will be largely contained within the Substation Compound Area or Indicative

Landfall Construction Area. Habitat losses would be limited in extent during construction and reversible in the short-term; and largely limited to habitats that are common and widespread in Aberdeenshire. The magnitude is considered to be **negligible**.

Significance of effect

7.13.13 No significant cumulative effects predicted.

Additional mitigation and residual effect

7.13.14 No additional mitigation required; and no significant residual effects are predicted.

***Disturbance to Onshore Ecology and Ornithology Features Through Increased Noise, Light, and Dust***

***Construction phase and decommissioning***

Importance

7.13.15 The importance of onshore ecology and ornithology features are described in section 7.10.

Magnitude of impact

7.13.16 During construction, Tealing to Kintore 400 kV Overhead Line and Hurlie Substation will likely generate emissions and dust that could affect habitats in the locality. Other plans/projects identified in the locality are located outside the PPP Application Boundary and/or construction timeline for the Proposed Development.

7.13.17 Due to the expose nature of the PPP Application Boundary, and prevailing climate, habitats and features utilised by protected or priority species are unlikely to be affected by emissions and deposition of dust/particulates. Impacts are predicted to be of low adverse.

Significance of effect

7.13.18 No significant cumulative effects predicted.

Additional mitigation and residual effect

7.13.19 No additional mitigation required; and no significant residual effects are predicted.

***Operation and maintenance phase***

Importance

7.13.20 The importance of onshore ecology and ornithology features are described in section 7.10.

Magnitude of impact

7.13.21 During operation, Tealing to Kintore 400 kV Overhead Line and Hurlie Substation will be subject to routine inspections, maintenance and repairs. These works will be largely limited to accessible areas around OHL footings and areas of permanent hardstanding. Other plans/projects identified in the locality are located outside the PPP Application Boundary.

7.13.22 During this time, operational activities relating to the Proposed Development will be largely contained within the Substation Compound Area or Indicative Landfall Construction Area. Activities that could generate emissions and dust within the PPP Application Boundary would be limited in extent, short-term and reversible in the short-term. The magnitude is considered to be **negligible**.

Significance of effect

7.13.23 No significant cumulative effects predicted.

Additional mitigation and residual effect

7.13.24 No additional mitigation required; and no significant residual effects are predicted.

***Indirect impacts due to accidental pollution and/or contamination of habitats used by onshore ecology and ornithology features***

***Construction phase and decommissioning***

Importance

7.13.25 The importance of onshore ecology and ornithology features are described in section 7.10.

Impact Magnitude

7.13.26 During construction, Tealing to Kintore 400 kV Overhead Line and Hurlie Substation will likely undertake works that could result in pollution to the water environment (e.g. fuel spills, sediment runoff, and chemical use during construction activities); although, these works would be subject to good practice and a detailed CEMP. Other plans/projects identified in the locality are located outside the PPP Application Boundary and/or construction timeline for the Proposed Development.

7.13.27 Activities that could affect the water environment (and associated aquatic, riparian and wetland habitats) within the PPP Application Boundary would be limited in extent, short-term and reversible in the short-term. The magnitude is considered to be low adverse.

Significance of effect

7.13.28 No significant cumulative effects predicted.

Additional mitigation and residual effect

7.13.29 No additional mitigation required; and no significant residual effects are predicted.

***Operation and maintenance phase***

Importance

7.13.30 The importance of onshore ecology and ornithology features are described in section 7.10.

Impact Magnitude

7.13.31 During operation, Tealing to Kintore 400 kV Overhead Line and Hurlie Substation will be subject to routine inspections, maintenance and repairs. These works

will be largely limited to accessible areas around OHL footings and areas of permanent hardstanding. Other plans/projects identified in the locality are located outside the PPP Application Boundary.

- 7.13.32 During this time, operational activities relating to the Proposed Development will be largely contained within the Substation Compound Area or Indicative Landfall Construction Area. Activities that could affect the water environment (and associated aquatic, riparian and wetland habitats) within the PPP Application Boundary would be limited in extent, short-term and reversible in the short-term. The magnitude is considered to be low adverse.

Significance of effect

- 7.13.33 No significant cumulative effects predicted.

Additional mitigation and residual effect

- 7.13.34 No additional mitigation required; and no significant residual effects are predicted.

***Direct mortality of Important Ecological Features (IEFs) through contact with machinery***

***Construction phase and decommissioning***

Importance

- 7.13.35 The importance of onshore ecology and ornithology features are described in section 7.10.

Impact Magnitude

- 7.13.36 During construction, Tealing to Kintore 400 kV Overhead Line and Hurlie Substation will likely require movement of vehicles and plant that could increase the risk of animal road mortality through vehicle collisions. Other plans/projects identified in the locality are located outside the PPP Application Boundary and/or construction timeline for the Proposed Development.

- 7.13.37 Vehicle movements between temporary compounds and temporary works areas will be subject to site speed limits and designated access points; and national speed limits on public roads. The potential for animal road mortality to occur during this time would be limited in extent, short-term and irreversible. The magnitude is considered to be low adverse.

Significance of effect

- 7.13.38 No significant cumulative effects predicted.

Additional mitigation and residual effect

- 7.13.39 No additional mitigation required; and no significant residual effects are predicted.

***Operation and maintenance phase***

Importance

- 7.13.40 The importance of onshore ecology and ornithology features are described in section 7.10.

Impact Magnitude

- 7.13.41 During operation, Tealing to Kintore 400 kV Overhead Line and Hurlie Substation will be subject to routine inspections, maintenance and repairs. These works will be largely limited to accessible areas around OHL footings and areas of permanent hardstanding. Other plans/projects identified in the locality are located outside the PPP Application Boundary.
- 7.13.42 Vehicle and plant movements would be subject to site speed limits and designated access points; and national speed limits on public roads. During this time, operational activities relating to the Proposed Development will be largely contained within the Substation Compound Area or Indicative Landfall Construction Area. The potential for animal road mortality to occur during this time would be limited in extent, short-term and irreversible. The magnitude is considered to be low adverse.

Significance of effect

- 7.13.43 No significant cumulative effects predicted.

Additional mitigation and residual effect

- 7.13.44 No additional mitigation required; and no significant residual effects are predicted.

## **7.14 Summary of Impacts, Mitigation, Likely Significant Environmental Effects and Monitoring**

- 7.14.1 Information on Onshore Ecology and Ornithology was collected through desktop review, site surveys and consultation, which is summarised in section 7.6.
- 7.14.2 Table 7.19 presents a summary of the potential impacts, Embedded Mitigation measures and likely significant effects in EIA terms in relation to Onshore Ecology and Ornithology. The impacts assessed include:
- Temporary or permanent loss of or modification to habitats, and to those used by onshore ecology and ornithology features for foraging, commuting, or refugia;
  - Disturbance to onshore ecology and ornithology features through increased noise, light, and dust;
  - Indirect impacts due to accidental pollution and/or contamination of habitats used by onshore ecology and ornithology features;
  - Increased mortality of onshore ecology and ornithology features through collision with moving vehicles and plant.
- 7.14.3 Overall, it is concluded that there will be no significant effects arising from the Proposed Development during the construction or decommissioning phases by implementing the Embedded Mitigation measures detailed in the impacts section. The magnitude of effects of the Proposed Development on important ecological and ornithological features both alone and in combination with other schemes were assessed in accordance with current professional standard for EIA; and are not considered to be significant in terms of the EIA Regulations.
- 7.14.4 It was also concluded that there will be no likely significant cumulative effects from the Proposed Development alongside other projects/plans, following the implementation of the Embedded Mitigation measures.

## **7.15 HRA Statement**

- 7.15.1 In accordance with the requirements of the Habitats Directive, where a project is likely to have a significant effect on a European Site (e.g. SAC / SPA/ Ramsar Site), while not connected with, or necessary to the nature conservation management of the SAC/ SPA/ Ramsar Site, that project will be subject to an appropriate assessment.
- 7.15.2 Three European Sites were identified within the Onshore Ecology Study Area: Garron Point SAC, Red Moss of Netherley SAC and the River Dee SAC. In addition, three European Sites were recorded within the Onshore Ornithology Study Area: Montrose Basin SPA / Ramsar Site, Loch of Skene SPA / Ramsar Site and Fowlsheugh SPA. The Proposed Development is not connected with, or necessary to the management of these European Sites and therefore subject to a Habitats Regulations Appraisal (HRA) to establish if the Proposed Development could have a likely significant effect (LSE) on a European Site.
- 7.15.3 The approach to HRA follows the guidance produced by the European Commission (EC) (e.g., 2011 , 2018) and DTA Habitats Regulations Handbook,

taking cognisance of relevant caselaw. The HRA process comprises four main stages as listed below:

- 7.15.4 The HRA process comprises four main stages as listed below:
- Stage 1: Screening to identify the likely effects of a plan or project on a European Site and/or Ramsar site and consider whether the effects are likely to be significant;
  - Stage 2: AA to determine whether the integrity of a European Site and/or Ramsar site will be adversely affected by a plan or project;
  - Stage 3: Assessment of Alternative Solutions to establish if there are any that will result in a less harmful effect on the European Site and/or Ramsar site; and
  - Stage 4: Imperative Reasons of Overriding Public Interest (IROPI) and Compensatory Measures to establish whether it is necessary for the plan or project to proceed despite the effects on the European Site and/or Ramsar site, and to confirm that necessary compensatory measures are in place to maintain the coherence of the European Site.
- 7.15.5 The potential effects of a plan or project are not always limited to its boundaries, and for a plan or project to have an effect outside of its boundary there needs to be a source of impact, a pathway, and a receptor. For example, a potential impact source may include a fuel spillage on a site, with a nearby stream providing an off-site pathway and a downstream watercourse becoming the receptor of the effects. The ‘source-pathway-receptor’ assessment has therefore been used in this Onshore EIA Report Chapter to determine the likely Zols of the Proposed Development. The Zols varies depending on the nature of the plan or project, as well as the qualifying features being considered potential effects of European Sites.
- 7.15.6 For floral and terrestrial habitat qualifying features, given the fixed nature of these features, potential effects are likely to be limited to those associated with direct impacts, such as construction related habitat loss, and pollution of habitats on, or directly adjacent to, or with direct connectivity to the Site (e.g., hydrological connections to the designated site). Whereas, for ornithological features, due to their mobile nature, as well as direct impacts, indirect impacts such as loss of supporting habitat used for foraging can also cause potential effects.
- 7.15.7 This Onshore EIA Report Chapter outlines the findings relating to HRA Stage 1 Screening, which are presented in Table 7.23.
- 7.15.8 As no LSE are predicted to arise from the Proposed Development either along or in-combination with other plans or projects, no further HRA-related assessment is required.

**Table 7.23 Habitats Regulations Appraisal: Stage 1 Screening Assessment**

<b>European Site</b>	<b>Qualifying Features</b>	<b>Screening Assessment</b>	<b>Potential LSE</b>
<b>Garron Point SAC</b>	The following Annex II species: narrow-mouthed whorl snail.	The PPP Application Boundary is situated approximately 8.3 km west of the SAC. Based on distance and intervening land-use, habitats within and adjoining the PPP Application Boundary are not likely to be utilised by SAC qualifying features; and are not connected to any habitats within the SAC. On the basis of the above, the SAC will not be affected by the Proposed Development.	No. No Further Assessment Required.
<b>Red Moss of Netherley SAC</b>	The following Annex I habitats: active raised bogs and degraded raised bogs still capable of natural regeneration.	The PPP Application Boundary is situated approximately 7.8 km south-west of the SAC. Based on distance and intervening land-use, habitats within the SAC are not connected to any habitats within or adjoining the PPP Application Boundary and will not be affected by the Proposed Development.	No. No Further Assessment Required.
<b>River Dee SAC</b>	The following Annex II species: Freshwater pearl mussel, Atlantic salmon and Otter.	The PPP Application Boundary is situated approximately 3.6 km south of the SAC. The PPP Application Boundary overlaps with catchment areas associated within the Bervie Water and Kincardine and Angus Coastal. Therefore, watercourses within or connected to the PPP Application Boundary are not connected to the River Dee, and as such the River Dee SAC will not be affected by the Proposed Development.	No. No Further Assessment Required.
<b>Montrose Basin SPA Ramsar Site</b>	Regularly supports populations of European importance of migratory pink-footed goose	The SPA / Ramsar Site is approximately 14.5 km from the Proposed Development and there will be no direct loss of habitat or disturbance to birds within the SPA / Ramsar Site. Furthermore, due to a lack of hydrological connectivity between the Proposed Development and the Montrose Basin SPA / Ramsar Site, there will be no impacts upon aquatic habitats associated with Montrose Basin SPA / Ramsar Site and therefore no LSE.  Pink-footed goose was recorded regularly and in large numbers throughout field surveys; although, no pink-footed goose were recorded to the north of the A90 trunk road. Only one record of 220 pink-footed geese was recorded on ground within the PPP Application Boundary. Moreover, only eight pink-footed goose records made during the foraging goose surveys, were	No. No Further Assessment Required.

European Site	Qualifying Features	Screening Assessment	Potential LSE
		<p>recorded within the 600 m NatureScot advised disturbance distance buffer for non-breeding pink-footed goose, from the PPP Application Boundary, with a peak count of 2,000 birds.</p> <p>In addition, permanent habitat loss associated with the Proposed Development will be almost entirely confined to coniferous woodland in Fetteresso Forest, which are not used for foraging by pink-footed goose.</p> <p>During construction, temporary works will result in small-scale loss of foraging and roosting habitat in cropland and grassland habitats between Fetteresso Forest and landward of MLWS. Upon completion of the construction activities, both cropland and grassland habitats will be reinstated, with prevailing agricultural activities resuming soon after. Therefore, no long-term loss of habitat or permanent displacement of pink-footed goose will occur; and LSE can be ruled out.</p> <p>Construction activities in cropland and grassland habitats will be undertaken in a phased and progressive manner. Whilst construction works during this time would result in temporary elevations in noise and vibration – as well as increases in site personnel and vehicle/plant movements – construction activities would be limited to localised temporary works areas within the PPP Application Boundary; as opposed to being undertaken concurrently along the full length and for the full duration of the construction phase.</p> <p>Most pink-footed goose were observed utilising cropland and grassland habitats more than 600 m from the Proposed Development. At this distance, birds are unlikely to experience significant disturbance, as construction activities are not likely to exceed ambient noise levels; and temporary elevations in vibration levels will likely be locally attenuated by adjoining ground</p>	

European Site	Qualifying Features	Screening Assessment	Potential LSE
		<p>conditions, access tracks and watercourses. In addition, natural visual screening from boundary features and variations to the intervening topography will limit line of sight between temporary works areas and habitats regularly utilised by large numbers of foraging/roosting pink-footed goose.</p> <p>In the event that individual, or groups, of pink-footed goose were disturbed by temporary works, there is an abundance of alternative cropland and grassland habitats in the surrounding landscape – of similar quality to those within and adjoining the PPP Application Boundary – that would not be affected by construction activities, which could absorb any temporarily displaced birds. Therefore, no significant disturbance is likely to occur during the construction phase; and LSE can be ruled out.</p> <p>Temporary compounds will be located within the PPP Application Boundary and movement of vehicles and equipment between temporary compounds and temporary works areas will be subject to site speed limits within the PPP Application Boundary; and national speed limits on public roads, therefore, the risk of mortality of pink-footed geese from collisions with moving/operational vehicles or equipment during construction and LSE can be ruled out.</p>	
<p><b>Loch of Skene SPA and Ramsar Site</b></p>	<p>Regularly supports populations of European importance of migratory greylag goose</p>	<p>During the non-breeding season, greylag geese have not been recorded regularly utilising habitats within and adjoining the Onshore Ornithology Survey Area, with only one greylag goose recorded. Therefore, it can be concluded that the PPP Application boundary does not support large populations of greylag goose associated with Loch of Skene SPA / Ramsar Site, and LSE can be ruled out.</p>	<p>No. No further assessment required.</p>

European Site	Qualifying Features	Screening Assessment	Potential LSE
<p><b>Fowlsheugh SPA</b></p>	<p>Regularly supports populations of the migratory species common guillemot and black-legged kittiwake, and nationally important populations of razorbill, Northern fulmar and herring gull.</p> <p>Fowlsheugh SPA also qualifies due to its seabird assemblage (in excess of 20,000 birds).</p>	<p>The qualifying features are restricted to marine and coastal environments, and habitats within the PPP Application Boundary for the onshore elements for these species are therefore not suitable to support these species in the breeding season. The one potential exception is herring gull, but with a mean maximum foraging range of 85.6 km (Woodward <i>et al.</i> 2019) and the wide ranging and diverse habitats the species has been shown to utilise from east coast Scottish colonies (O’Hanlon <i>et al.</i>, 2022) the localised short-term activity resulting from the Proposed Development would have negligible effect on the availability of foraging habitat for this SPA qualifying species. Therefore LSE can be ruled out.</p>	<p>No. No further assessment required.</p>

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## **Annex – Figures**

Figures supporting this chapter and presented in this Annex:

**Figure 7.1 Onshore Ecology Study Area**

**Figure 7.2 Onshore Ecology Survey Area**

**Figure 7.3 Onshore Ornithology Study Area**

**Figure 7.4 Onshore Ornithology Survey Area**

**Figure 7.5 Onshore Ecology - Designated Sites**

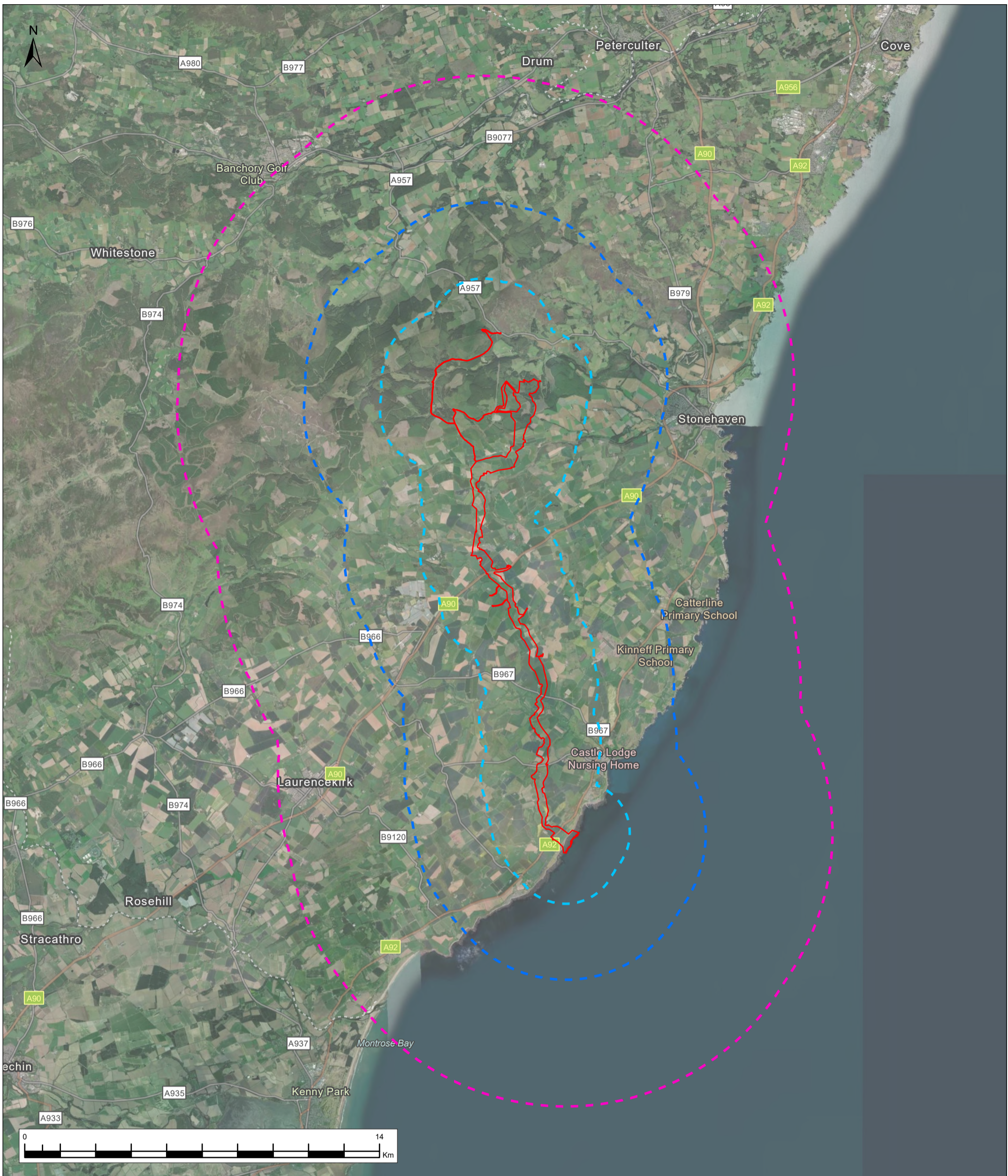
**Figure 7.6 Onshore Ornithology - Designated Sites**

**Figure 7.7 Onshore Ecology – UKHab Survey**

**Figure 7.8 Onshore Ecology – NVC Survey**

**Figure 7.9 Onshore Ecology – Protected Species Survey**

**Figure 7.10 Onshore Ornithology – Foraging Goose Survey**



**Legend**

- PPP Application Boundary
- PPP Application Boundary - 10 km Buffer
- PPP Application Boundary - 5 km Buffer
- PPP Application Boundary - 2 km Buffer

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Project	Bowdun Offshore Windfarm - Onshore Ecology	
Drawing Title	Onshore Ecology Study Area	
Aconnex Number		Drawing Status
Figure 7.1		



**Legend**

- PPP Application Boundary
- 2025 All Species Study Area (50 m)
- 2026 Badger Survey Area (100 m)
- 2025 Otter, Water Vole and Scottish Wildcat Survey Area (200 m)
- 2025 Pine Marten Survey Area (250 m)

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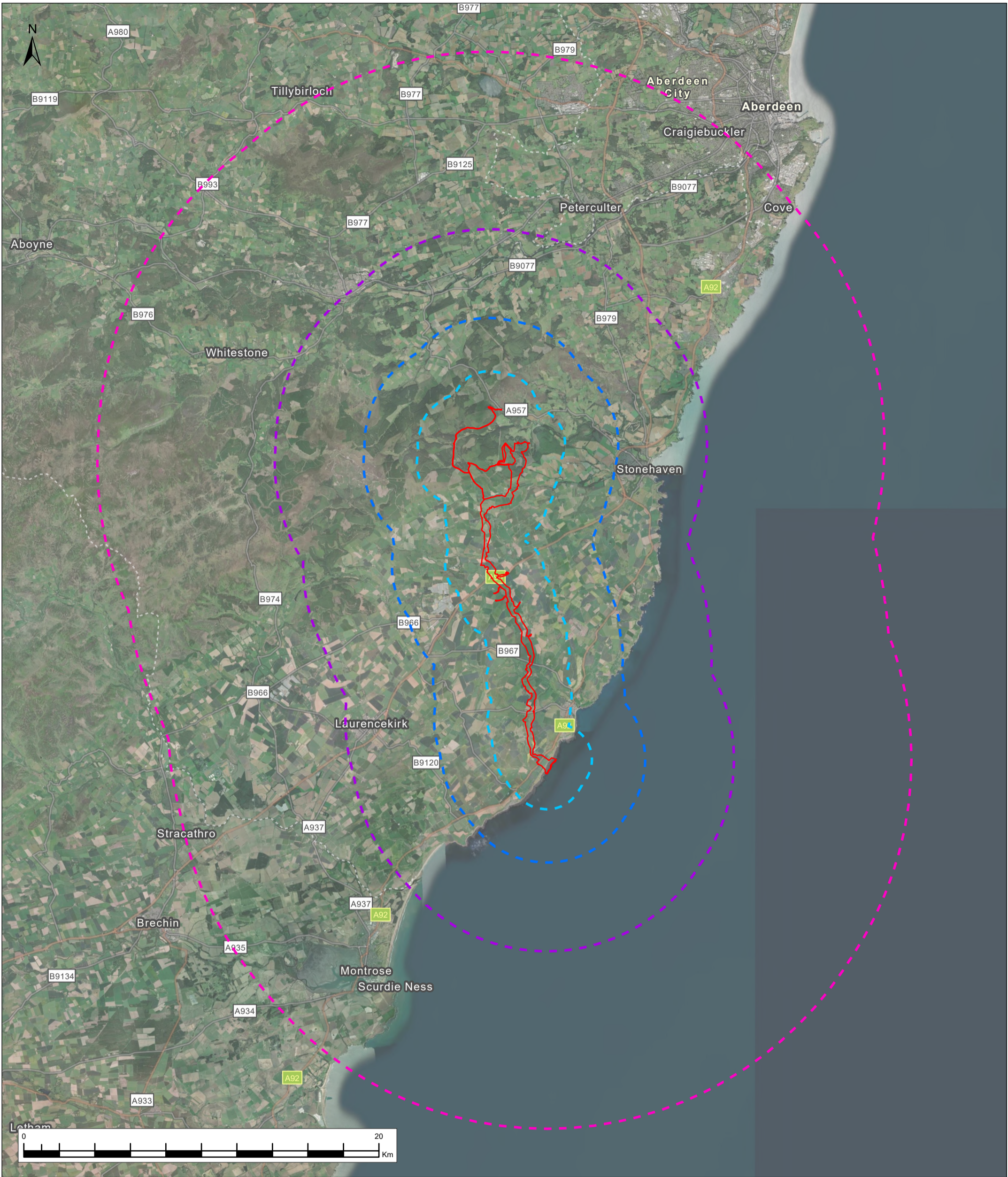
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Project  
Bowdun Offshore Windfarm - Onshore Ecology

Drawing Title  
Onshore Ecology Survey Area

Aconnex Number Drawing Status

Figure 7.2



**Legend**

- PPP Application Boundary
- PPP Application Boundary - 20 km Buffer
- PPP Application Boundary - 10 km Buffer
- PPP Application Boundary - 5 km Buffer
- PPP Application Boundary - 2 km Buffer

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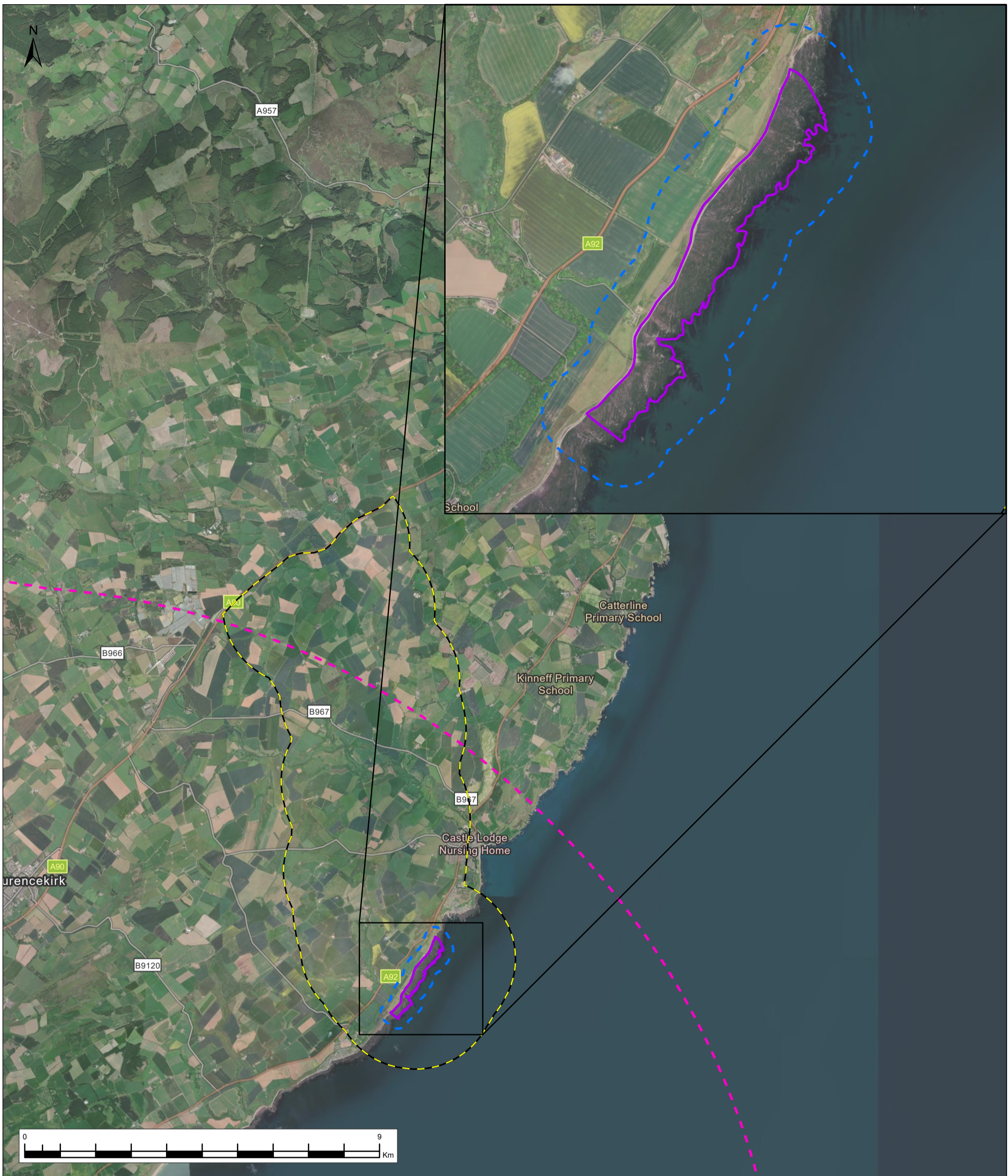
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Drawing Title	Onshore Ornithology Study Area	
Aconnex Number		Drawing Status
Figure 7.3		



**Legend**

- Montrose Basin SPA and Ramsar Site - 20 km Buffer
- Intertidal Study Area
- Intertidal Study Area - 250 m Buffer
- Foraging Goose Survey Area

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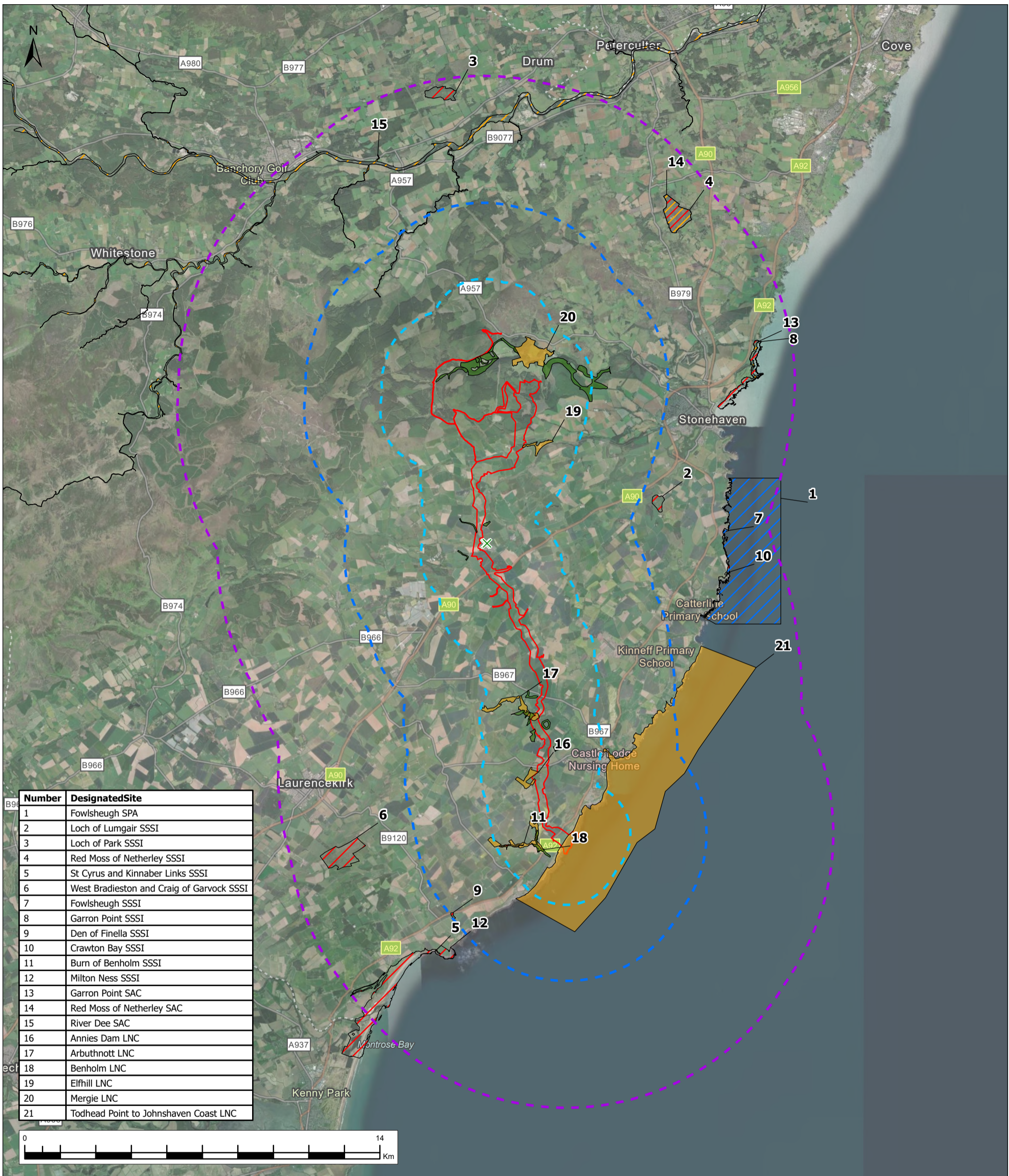
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Project **Bowdun Offshore Windfarm - Onshore Ecology**

Drawing Title **Onshore Ornithology Survey Area**

Aconnex Number Drawing Status

Figure 7.4



Legend

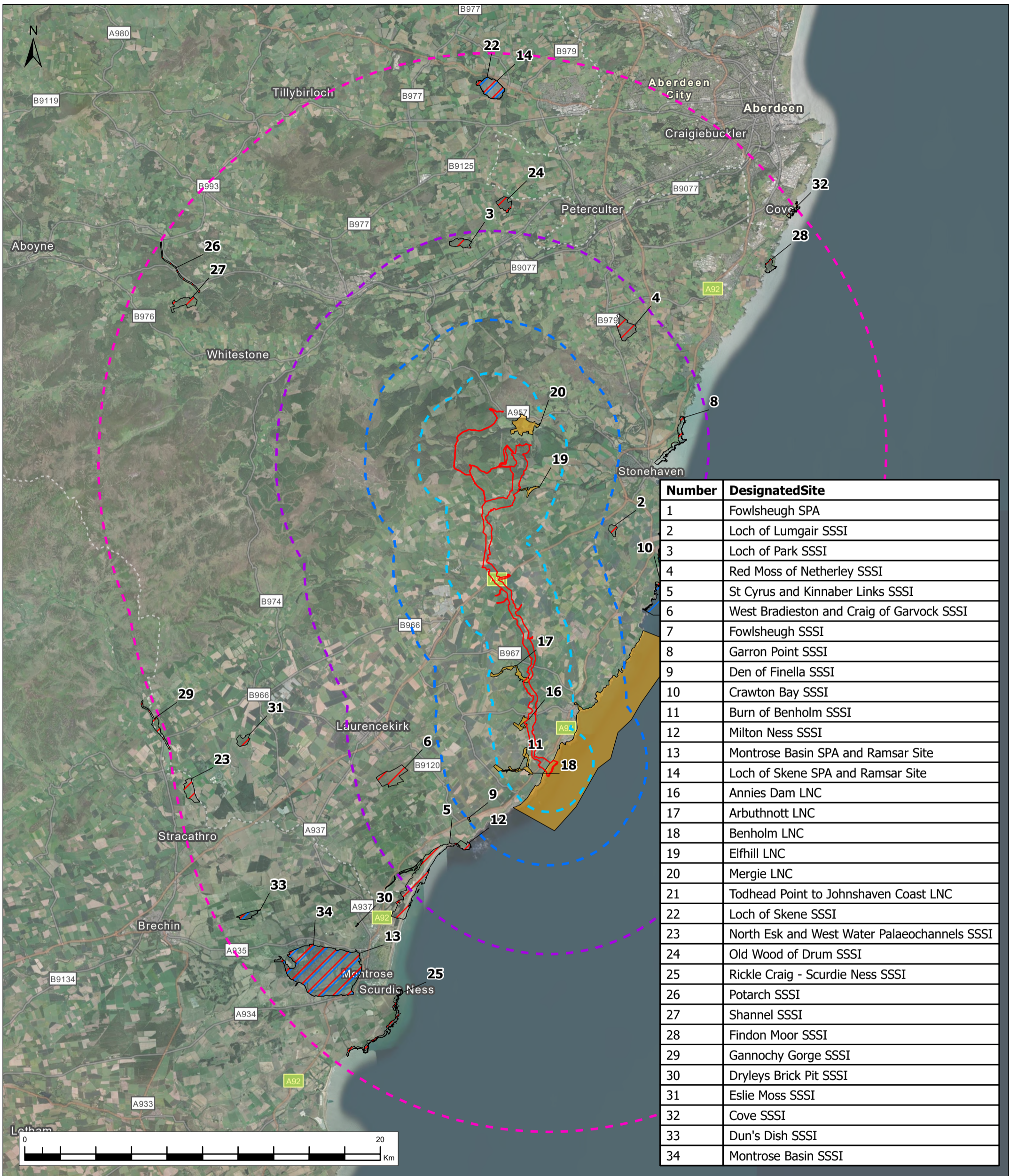
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- PPP Application Boundary - 2 km Buffer
- PPP Application Boundary - 5 km Buffer
- PPP Application Boundary - 10 km Buffer
- X Tree Preservation Orders (250 m)
- Ancient Woodland Inventory (250 m)
- Special Protection Areas (10 km)
- Sites of Special Scientific Interest (10 km)
- Special Areas of Conservation (10 km)
- Local Nature Conservation Sites (2 km)

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Client		
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Drawing Title	Onshore Ecology - Designated Sites	
Aconnex Number		Drawing Status
Figure 7.5		



Number	Designated Site
1	Fowlsheugh SPA
2	Loch of Lumgair SSSI
3	Loch of Park SSSI
4	Red Moss of Netherley SSSI
5	St Cyrus and Kinnaber Links SSSI
6	West Bradieston and Craig of Garvock SSSI
7	Fowlsheugh SSSI
8	Garron Point SSSI
9	Den of Finella SSSI
10	Crawton Bay SSSI
11	Burn of Benholm SSSI
12	Milton Ness SSSI
13	Montrose Basin SPA and Ramsar Site
14	Loch of Skene SPA and Ramsar Site
16	Annies Dam LNC
17	Arbuthnott LNC
18	Benholm LNC
19	Elfhill LNC
20	Mergie LNC
21	Todhead Point to Johnshaven Coast LNC
22	Loch of Skene SSSI
23	North Esk and West Water Palaeochannels SSSI
24	Old Wood of Drum SSSI
25	Rickle Craig - Scurdie Ness SSSI
26	Potarch SSSI
27	Shannel SSSI
28	Findon Moor SSSI
29	Gannochy Gorge SSSI
30	Dryleys Brick Pit SSSI
31	Eslie Moss SSSI
32	Cove SSSI
33	Dun's Dish SSSI
34	Montrose Basin SSSI

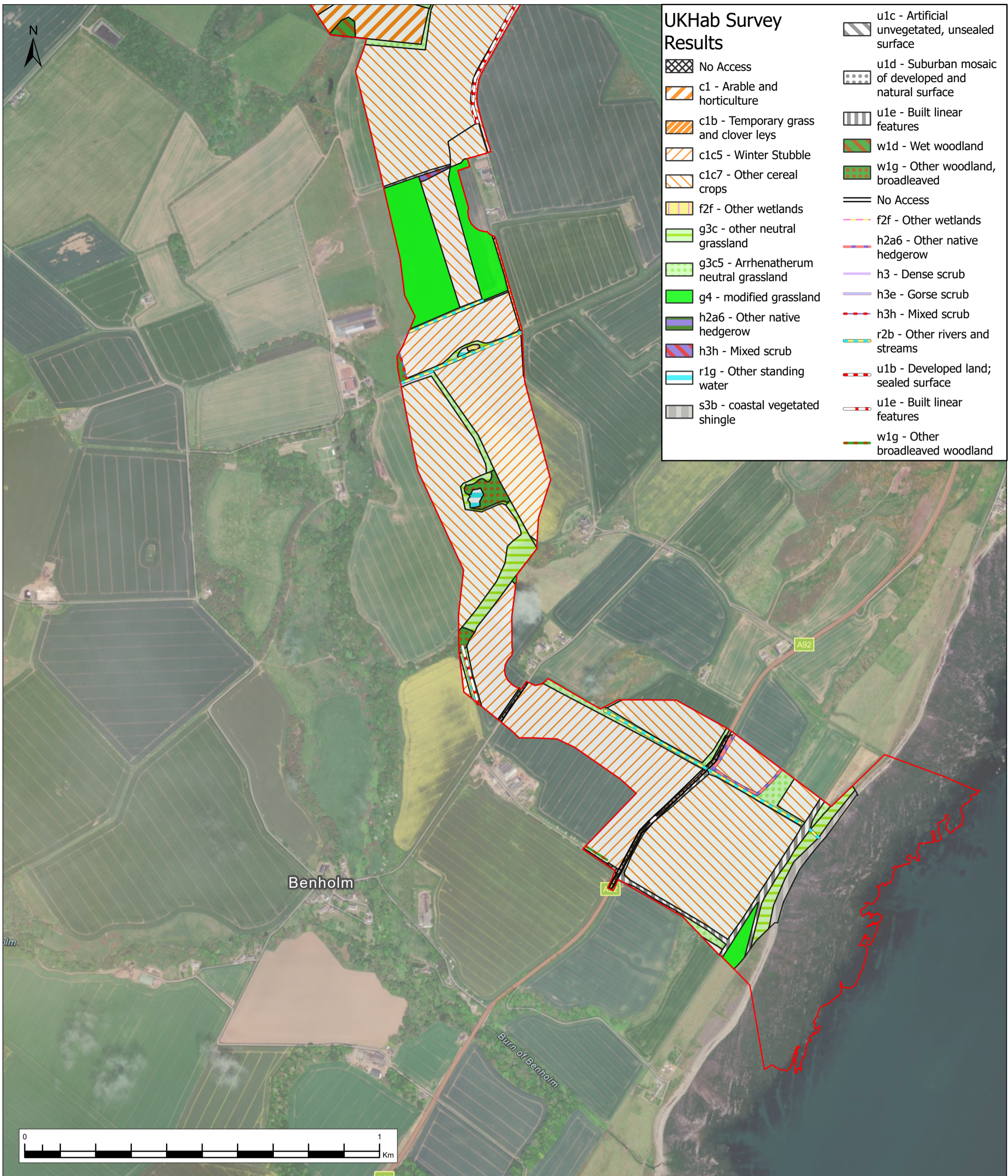
Legend	
	PPP Application Boundary
	PPP Application Boundary - 20 km Buffer
	PPP Application Boundary - 10 km Buffer
	PPP Application Boundary - 5 km Buffer
	PPP Application Boundary - 2 km Buffer
	Special Protection Areas (20 km)
	Sites of Special Scientific Interest (20 km)
	Local Nature Conservation Sites (2 km)

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Drawing Title		Onshore Ornithology - Designated Sites	
Aconnex Number	Drawing Status		
Figure 7.6			



### UKHab Survey Results

- No Access
- c1 - Arable and horticulture
- c1b - Temporary grass and clover leys
- c1c5 - Winter Stubble
- c1c7 - Other cereal crops
- f2f - Other wetlands
- g3c - other neutral grassland
- g3c5 - Arrhenatherum neutral grassland
- g4 - modified grassland
- h2a6 - Other native hedgerow
- h3h - Mixed scrub
- r1g - Other standing water
- s3b - coastal vegetated shingle
- u1c - Artificial unvegetated, unsealed surface
- u1d - Suburban mosaic of developed and natural surface
- u1e - Built linear features
- w1d - Wet woodland
- w1g - Other woodland, broadleaved
- No Access
- f2f - Other wetlands
- h2a6 - Other native hedgerow
- h3 - Dense scrub
- h3e - Gorse scrub
- h3h - Mixed scrub
- r2b - Other rivers and streams
- u1b - Developed land; sealed surface
- u1e - Built linear features
- w1g - Other broadleaved woodland

Legend  
 PPP Application Boundary



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 Bowdun Offshore Windfarm - Onshore Ecology

Drawing Title  
 Onshore Ecology - UKHab Survey

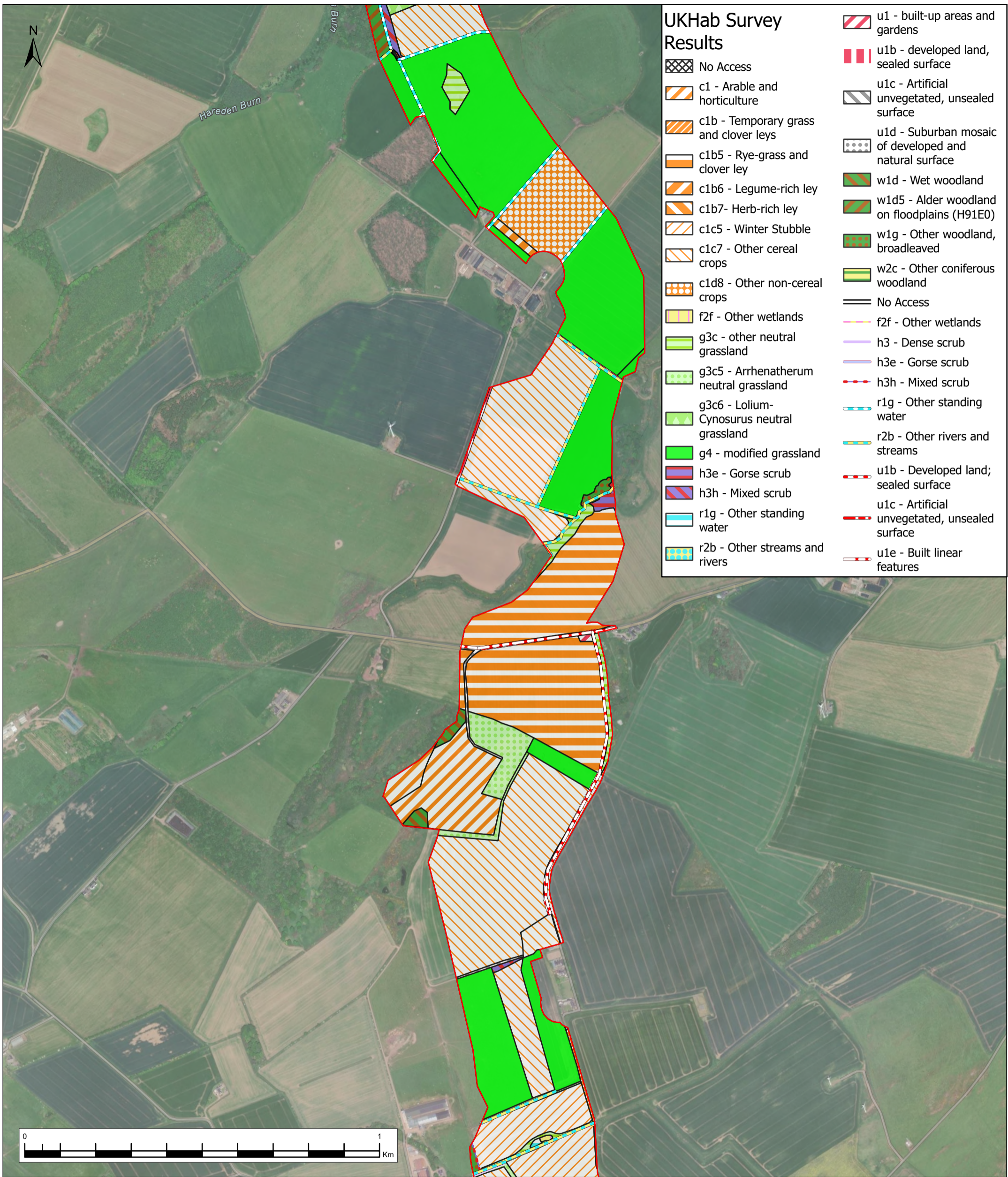
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Figure 7.7.1



### UKHab Survey Results

- No Access
- c1 - Arable and horticulture
- c1b - Temporary grass and clover leys
- c1b5 - Rye-grass and clover ley
- c1b6 - Legume-rich ley
- c1b7 - Herb-rich ley
- c1c5 - Winter Stubble
- c1c7 - Other cereal crops
- c1d8 - Other non-cereal crops
- f2f - Other wetlands
- g3c - other neutral grassland
- g3c5 - Arrhenatherum neutral grassland
- g3c6 - Lolium-Cynosurus neutral grassland
- g4 - modified grassland
- h3e - Gorse scrub
- h3h - Mixed scrub
- r1g - Other standing water
- r2b - Other streams and rivers
- u1 - built-up areas and gardens
- u1b - developed land, sealed surface
- u1c - Artificial unvegetated, unsealed surface
- u1d - Suburban mosaic of developed and natural surface
- w1d - Wet woodland
- w1d5 - Alder woodland on floodplains (H91E0)
- w1g - Other woodland, broadleaved
- w2c - Other coniferous woodland
- No Access
- f2f - Other wetlands
- h3 - Dense scrub
- h3e - Gorse scrub
- h3h - Mixed scrub
- r1g - Other standing water
- r2b - Other rivers and streams
- u1b - Developed land; sealed surface
- u1c - Artificial unvegetated, unsealed surface
- u1e - Built linear features

Legend  
 PPP Application Boundary



**Jacobs**  
**TWP THISTLE WIND PARTNERS**

Client  
 Project  
 Bowdun Offshore Windfarm - Onshore Ecology

Drawing Title  
 Onshore Ecology - UKHab Survey

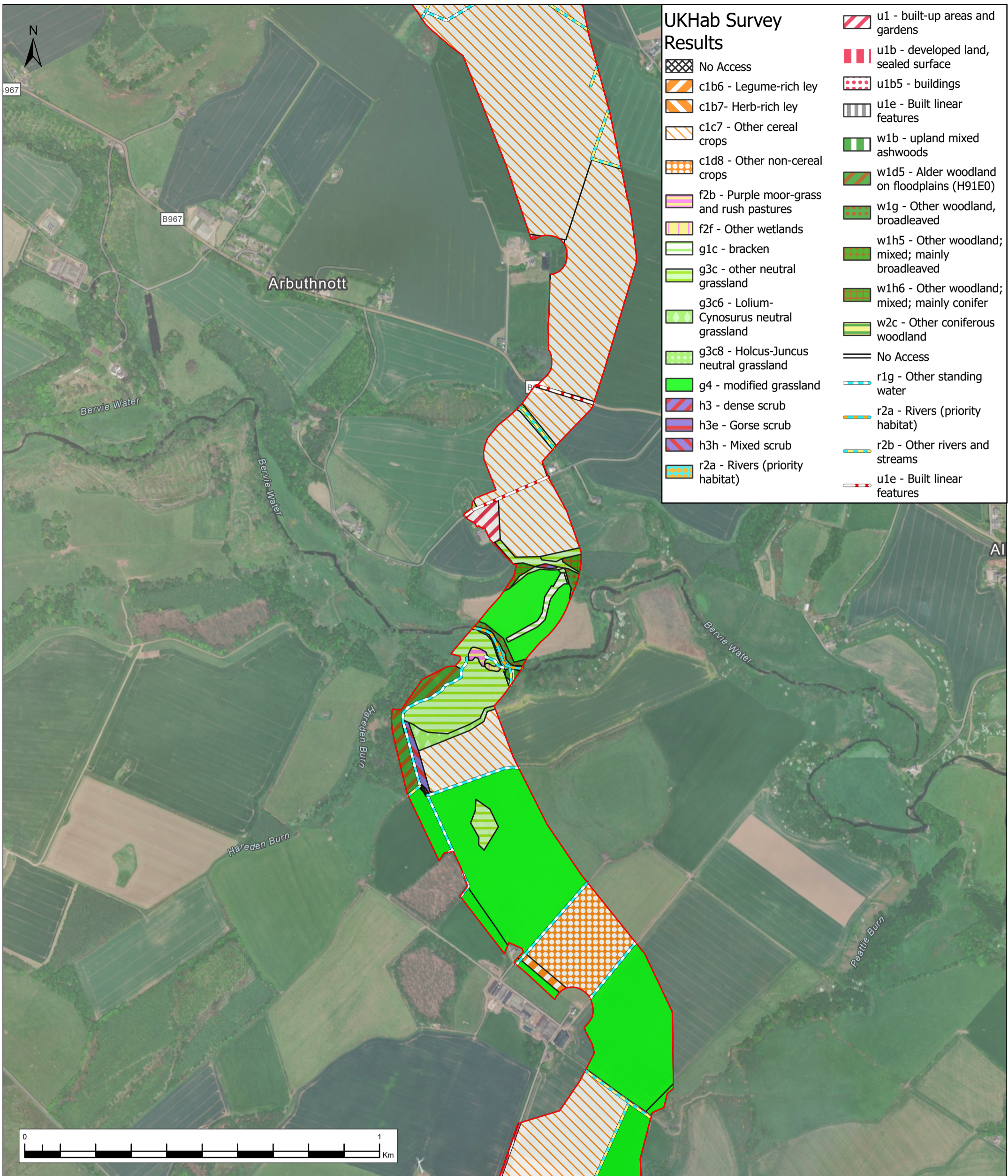
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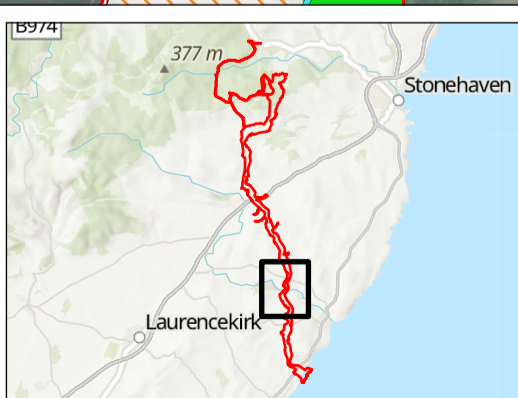
Figure 7.7.2



### UKHab Survey Results

	No Access		u1 - built-up areas and gardens
	c1b6 - Legume-rich ley		u1b - developed land, sealed surface
	c1b7 - Herb-rich ley		u1b5 - buildings
	c1c7 - Other cereal crops		u1e - Built linear features
	c1d8 - Other non-cereal crops		w1b - upland mixed ashwoods
	f2b - Purple moor-grass and rush pastures		w1d5 - Alder woodland on floodplains (H91E0)
	f2f - Other wetlands		w1g - Other woodland, broadleaved
	g1c - bracken		w1h5 - Other woodland; mixed; mainly broadleaved
	g3c - other neutral grassland		w1h6 - Other woodland; mixed; mainly conifer
	g3c6 - Lolium-Cynosurus neutral grassland		w2c - Other coniferous woodland
	g3c8 - Holcus-Juncus neutral grassland		No Access
	g4 - modified grassland		r1g - Other standing water
	h3 - dense scrub		r2a - Rivers (priority habitat)
	h3e - Gorse scrub		r2b - Other rivers and streams
	h3h - Mixed scrub		u1e - Built linear features
	r2a - Rivers (priority habitat)		

**Legend**  
 PPP Application Boundary



**Jacobs**  
**TWP THISTLE WIND PARTNERS**

Client  
 Project  
 Bowdun Offshore Windfarm - Onshore Ecology

Drawing Title  
 Onshore Ecology - UKHab Survey

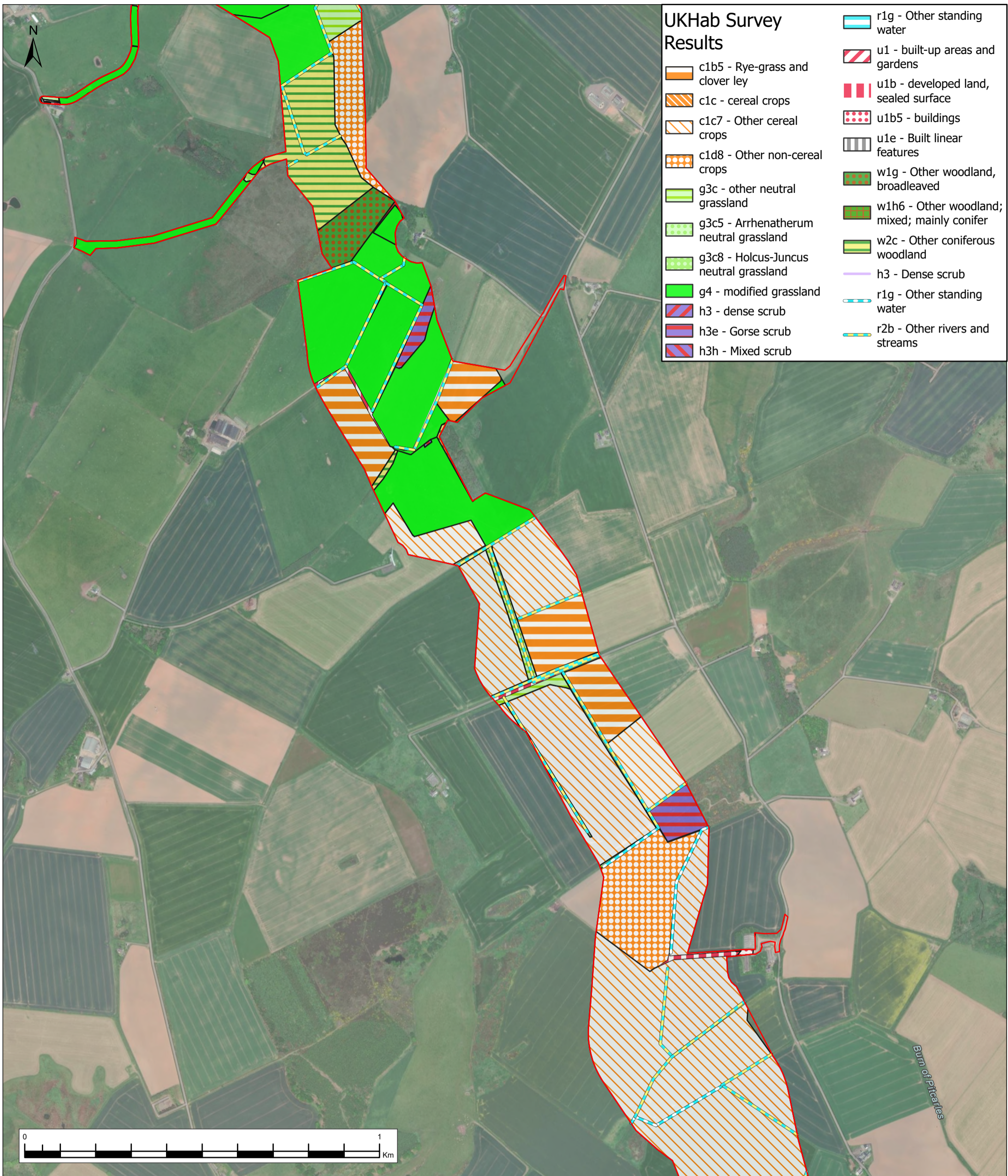
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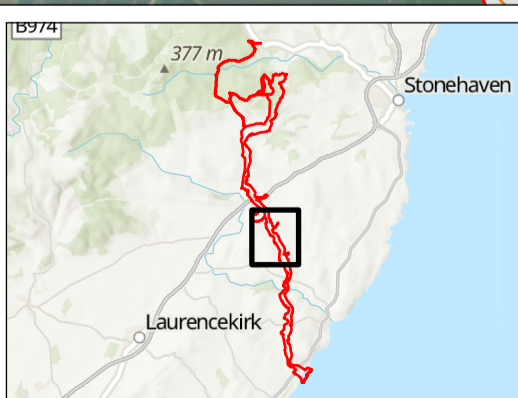
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Figure 7.7.3



- ### UKHab Survey Results
- c1b5 - Rye-grass and clover ley
  - c1c - cereal crops
  - c1c7 - Other cereal crops
  - c1d8 - Other non-cereal crops
  - g3c - other neutral grassland
  - g3c5 - Arrhenatherum neutral grassland
  - g3c8 - Holcus-Juncus neutral grassland
  - g4 - modified grassland
  - h3 - dense scrub
  - h3e - Gorse scrub
  - h3h - Mixed scrub
  - r1g - Other standing water
  - u1 - built-up areas and gardens
  - u1b - developed land, sealed surface
  - u1b5 - buildings
  - u1e - Built linear features
  - w1g - Other woodland, broadleaved
  - w1h6 - Other woodland; mixed; mainly conifer
  - w2c - Other coniferous woodland
  - h3 - Dense scrub
  - r1g - Other standing water
  - r2b - Other rivers and streams

**Legend**  
 PPP Application Boundary



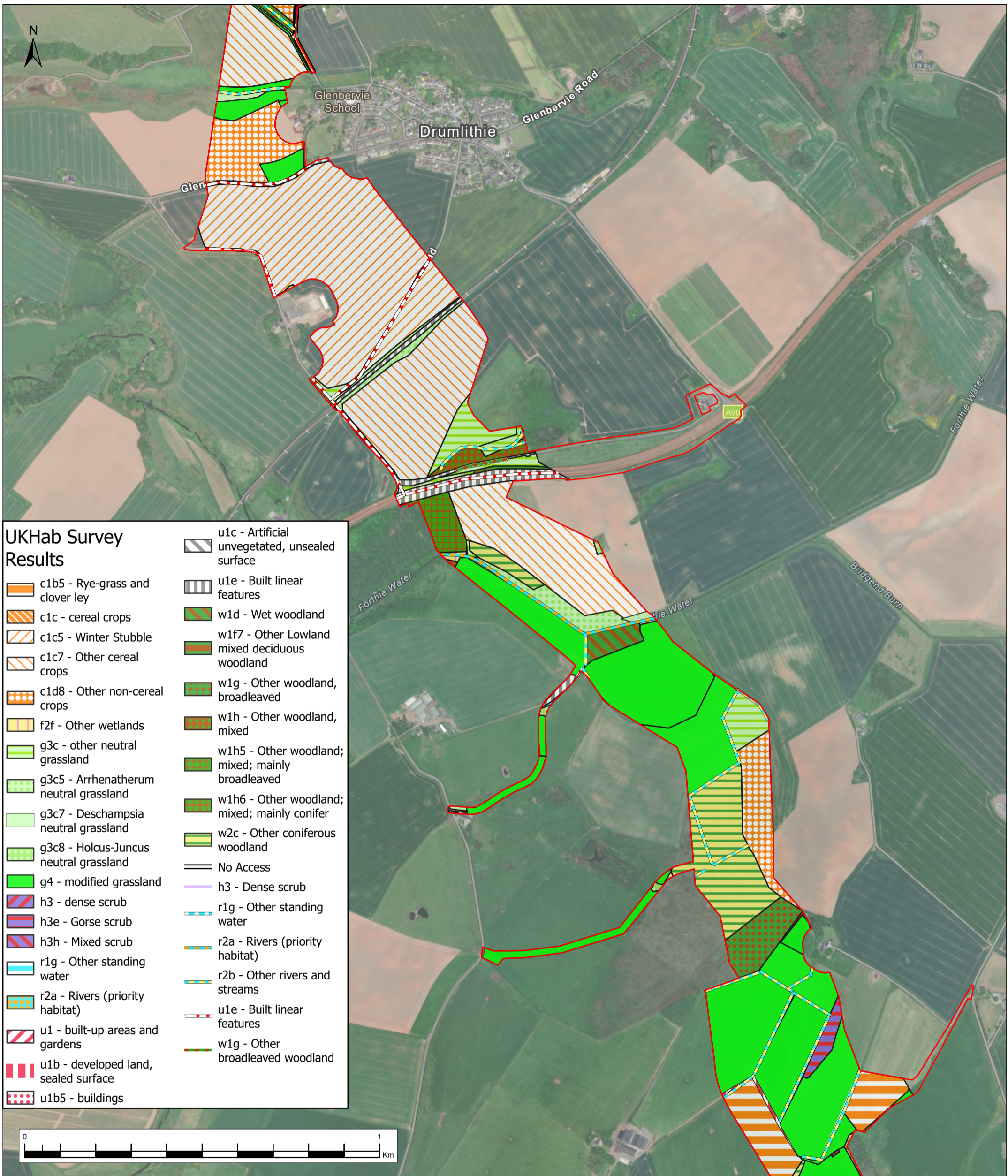
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### UKHab Survey Results

- c1b5 - Rye-grass and clover ley
- c1c - cereal crops
- c1c5 - Winter Stubble
- c1c7 - Other cereal crops
- c1d8 - Other non-cereal crops
- f2f - Other wetlands
- g3c - other neutral grassland
- g3c5 - Arrhenatherum neutral grassland
- g3c7 - Deschampsia neutral grassland
- g3c8 - Holcus-Juncus neutral grassland
- g4 - modified grassland
- h3 - dense scrub
- h3e - Gorse scrub
- h3h - Mixed scrub
- r1g - Other standing water
- r2a - Rivers (priority habitat)
- u1 - built-up areas and gardens
- u1b - developed land, sealed surface
- u1b5 - buildings
- u1c - Artificial unvegetated, unsealed surface
- u1e - Built linear features
- w1d - Wet woodland
- w1f7 - Other Lowland mixed deciduous woodland
- w1g - Other woodland, broadleaved
- w1h - Other woodland, mixed
- w1h5 - Other woodland; mixed; mainly broadleaved
- w1h6 - Other woodland; mixed; mainly conifer
- w2c - Other coniferous woodland
- No Access
- h3 - Dense scrub
- r1g - Other standing water
- r2a - Rivers (priority habitat)
- r2b - Other rivers and streams
- u1e - Built linear features
- w1g - Other broadleaved woodland

Legend  
 PPP Application Boundary



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Client  
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 Bowdun Offshore Windfarm - Onshore Ecology

Drawing Title  
 Onshore Ecology - UKHab Survey

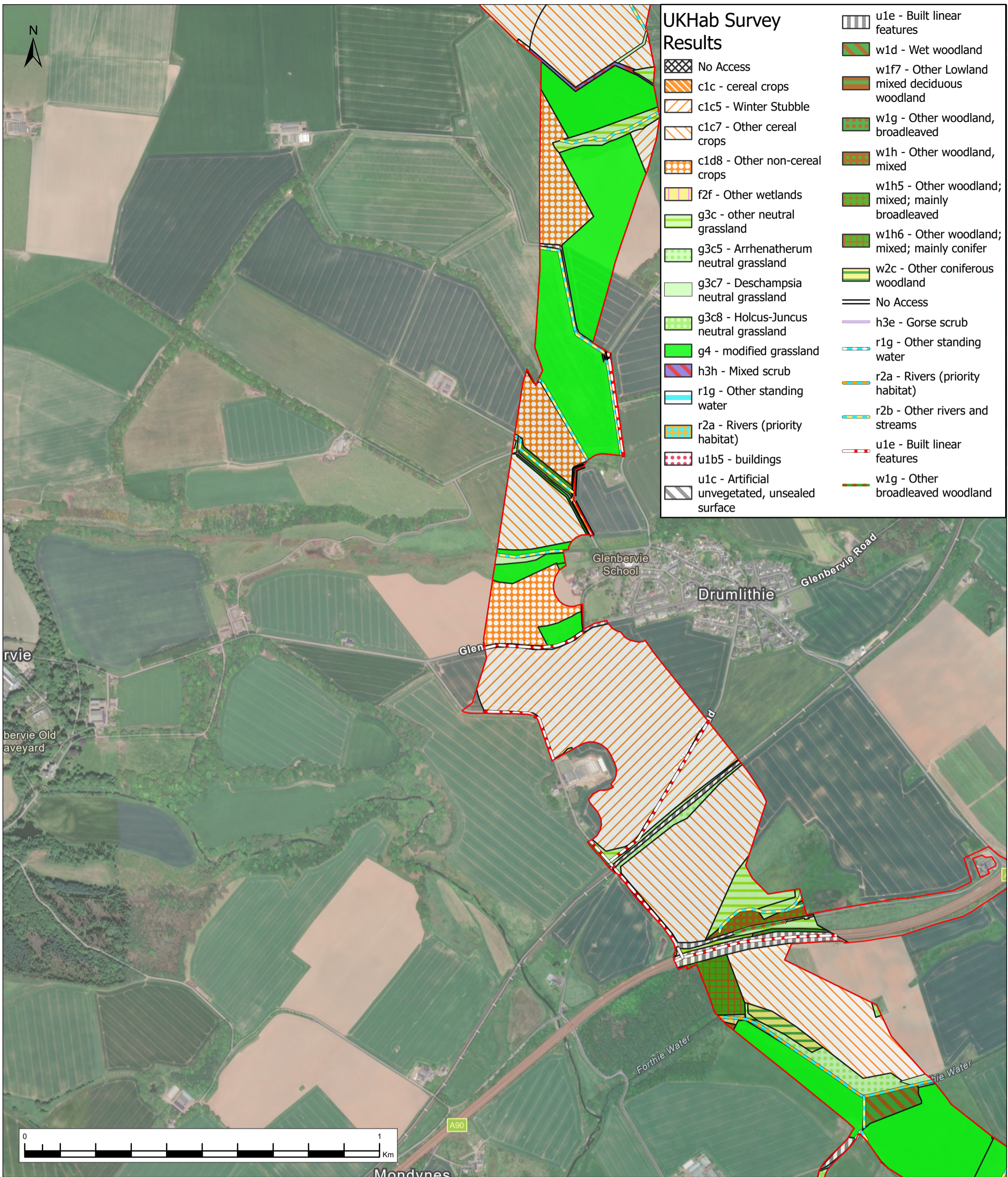
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Figure 7.7.5

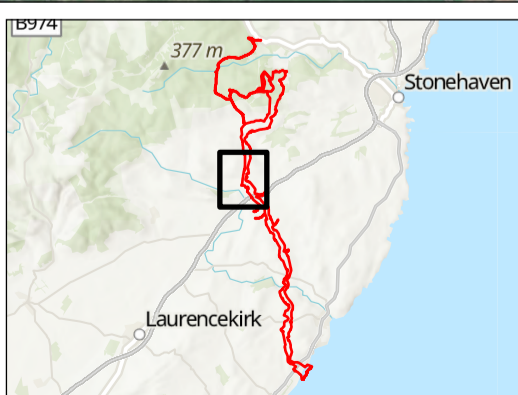


### UKHab Survey Results

	No Access		u1e - Built linear features
	c1c - cereal crops		w1d - Wet woodland
	c1c5 - Winter Stubble		w1f7 - Other Lowland mixed deciduous woodland
	c1c7 - Other cereal crops		w1g - Other woodland, broadleaved
	c1d8 - Other non-cereal crops		w1h - Other woodland, mixed
	f2f - Other wetlands		w1h5 - Other woodland; mixed; mainly broadleaved
	g3c - other neutral grassland		w1h6 - Other woodland; mixed; mainly conifer
	g3c5 - Arrhenatherum neutral grassland		w2c - Other coniferous woodland
	g3c7 - Deschampsia neutral grassland		No Access
	g3c8 - Holcus-Juncus neutral grassland		h3e - Gorse scrub
	g4 - modified grassland		r1g - Other standing water
	h3h - Mixed scrub		r2a - Rivers (priority habitat)
	r1g - Other standing water		r2b - Other rivers and streams
	r2a - Rivers (priority habitat)		u1e - Built linear features
	u1b5 - buildings		w1g - Other broadleaved woodland
	u1c - Artificial unvegetated, unsealed surface		

Legend

PPP Application Boundary



**Jacobs**

Client **TWP THISTLE WIND PARTNERS**

Project **Bowdun Offshore Windfarm - Onshore Ecology**

Drawing Title **Onshore Ecology - UKHab Survey**

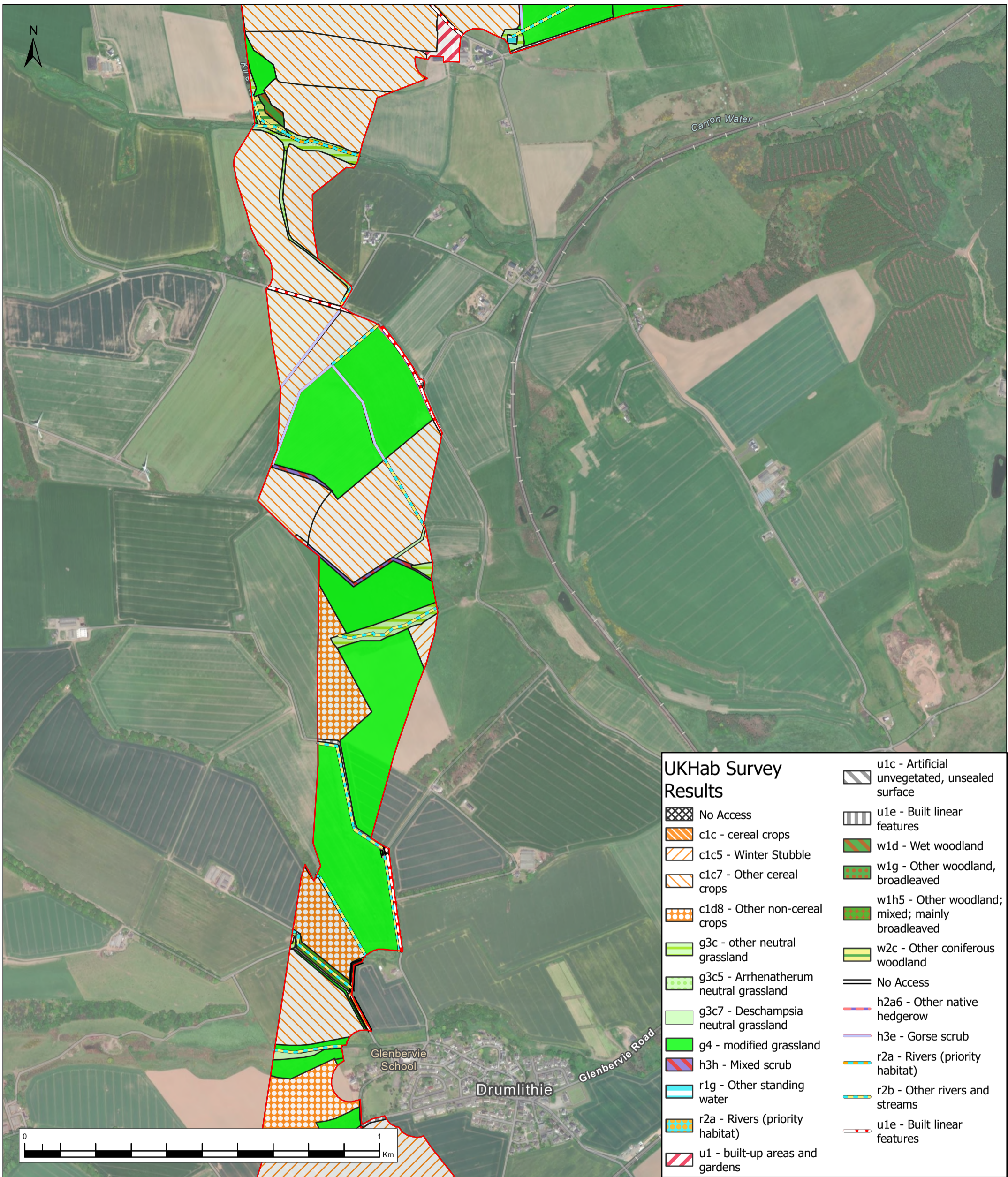
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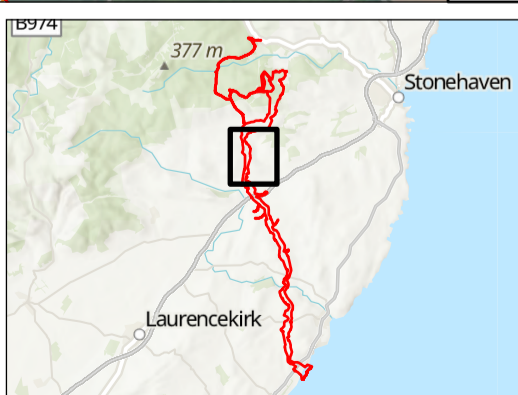
Figure 7.7.6



### UKHab Survey Results

	No Access		u1c - Artificial unvegetated, unsealed surface
	c1c - cereal crops		u1e - Built linear features
	c1c5 - Winter Stubble		w1d - Wet woodland
	c1c7 - Other cereal crops		w1g - Other woodland, broadleaved
	c1d8 - Other non-cereal crops		w1h5 - Other woodland; mixed; mainly broadleaved
	g3c - other neutral grassland		w2c - Other coniferous woodland
	g3c5 - Arrhenatherum neutral grassland		No Access
	g3c7 - Deschampsia neutral grassland		h2a6 - Other native hedgerow
	g4 - modified grassland		h3e - Gorse scrub
	h3h - Mixed scrub		r2a - Rivers (priority habitat)
	r1g - Other standing water		r2b - Other rivers and streams
	r2a - Rivers (priority habitat)		u1e - Built linear features
	u1 - built-up areas and gardens		

Legend  
 PPP Application Boundary



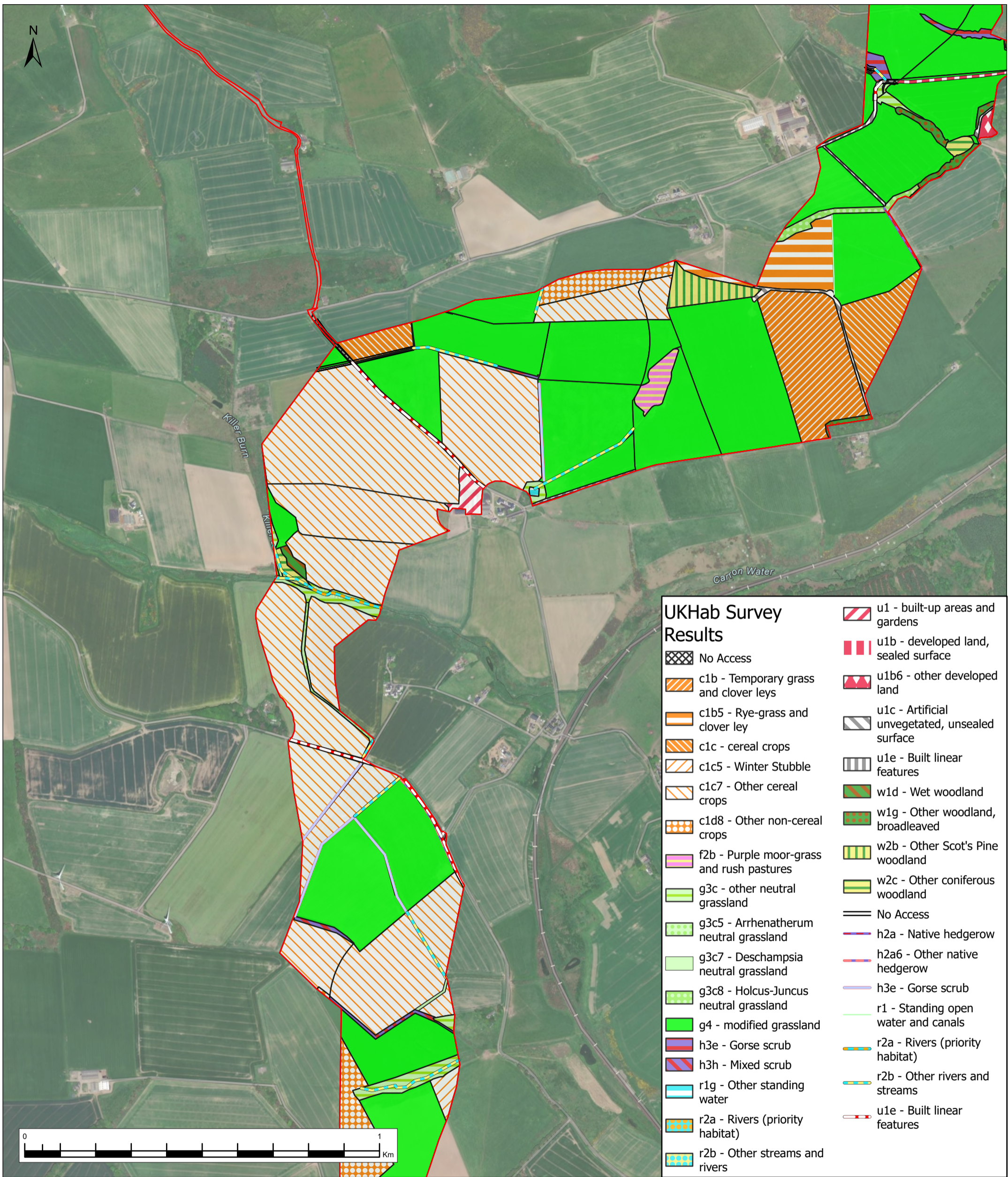
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Drawing Title	Onshore Ecology - UKHab Survey	
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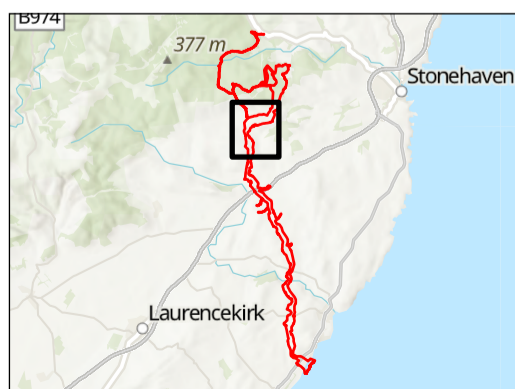
Figure 7.7.7



### UKHab Survey Results

	No Access		u1 - built-up areas and gardens
	c1b - Temporary grass and clover leys		u1b - developed land, sealed surface
	c1b5 - Rye-grass and clover ley		u1b6 - other developed land
	c1c - cereal crops		u1c - Artificial unvegetated, unsealed surface
	c1c5 - Winter Stubble		u1e - Built linear features
	c1c7 - Other cereal crops		w1d - Wet woodland
	c1d8 - Other non-cereal crops		w1g - Other woodland, broadleaved
	f2b - Purple moor-grass and rush pastures		w2b - Other Scot's Pine woodland
	g3c - other neutral grassland		w2c - Other coniferous woodland
	g3c5 - Arrhenatherum neutral grassland		No Access
	g3c7 - Deschampsia neutral grassland		h2a - Native hedgerow
	g3c8 - Holcus-Juncus neutral grassland		h2a6 - Other native hedgerow
	g4 - modified grassland		h3e - Gorse scrub
	h3e - Gorse scrub		r1 - Standing open water and canals
	h3h - Mixed scrub		r2a - Rivers (priority habitat)
	r1g - Other standing water		r2b - Other rivers and streams
	r2a - Rivers (priority habitat)		u1e - Built linear features
	r2b - Other streams and rivers		

Legend  
 PPP Application Boundary



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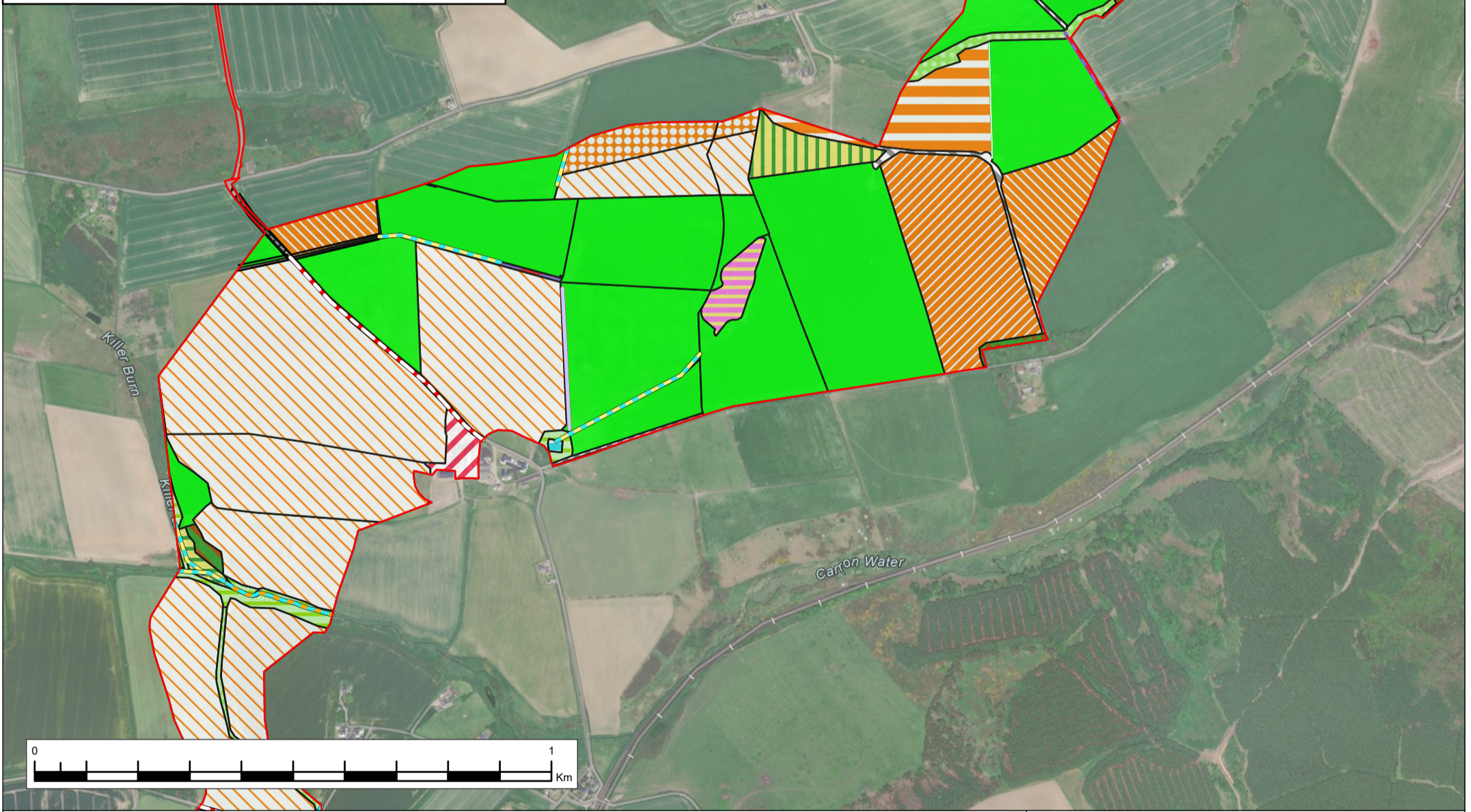
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Figure 7.7.8

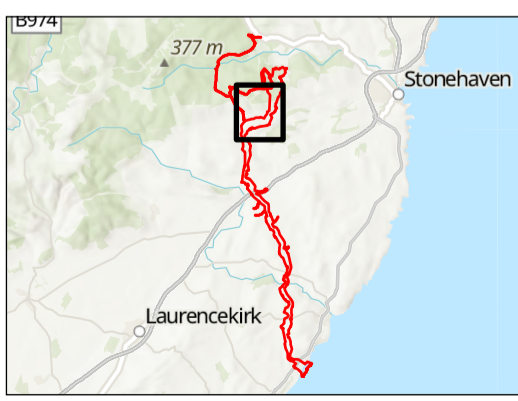


## UKHab Survey Results

- No Access
- c1b - Temporary grass and clover leys
- c1b5 - Rye-grass and clover ley
- c1c - cereal crops
- c1c7 - Other cereal crops
- c1d8 - Other non-cereal crops
- f2b - Purple moor-grass and rush pastures
- g1b6 - other upland acid grassland
- g3 - Neutral grassland
- g3c - other neutral grassland
- g3c5 - Arrhenatherum neutral grassland
- g3c8 - Holcus-Juncus neutral grassland
- g4 - modified grassland
- h3e - Gorse scrub
- r1g - Other standing water
- r2a - Rivers (priority habitat)
- r2b - Other streams and rivers
- u1 - built-up areas and gardens
- u1b - developed land, sealed surface
- u1b6 - other developed land
- u1c - Artificial unvegetated, unsealed surface
- u1e - Built linear features
- w1d - Wet woodland
- w1g - Other woodland, broadleaved
- w2b - Other Scot's Pine woodland
- w2c - Other coniferous woodland
- No Access
- h2a - Native hedgerow
- h3e - Gorse scrub
- r1 - Standing open water and canals
- r2a - Rivers (priority habitat)
- r2b - Other rivers and streams
- u1e - Built linear features



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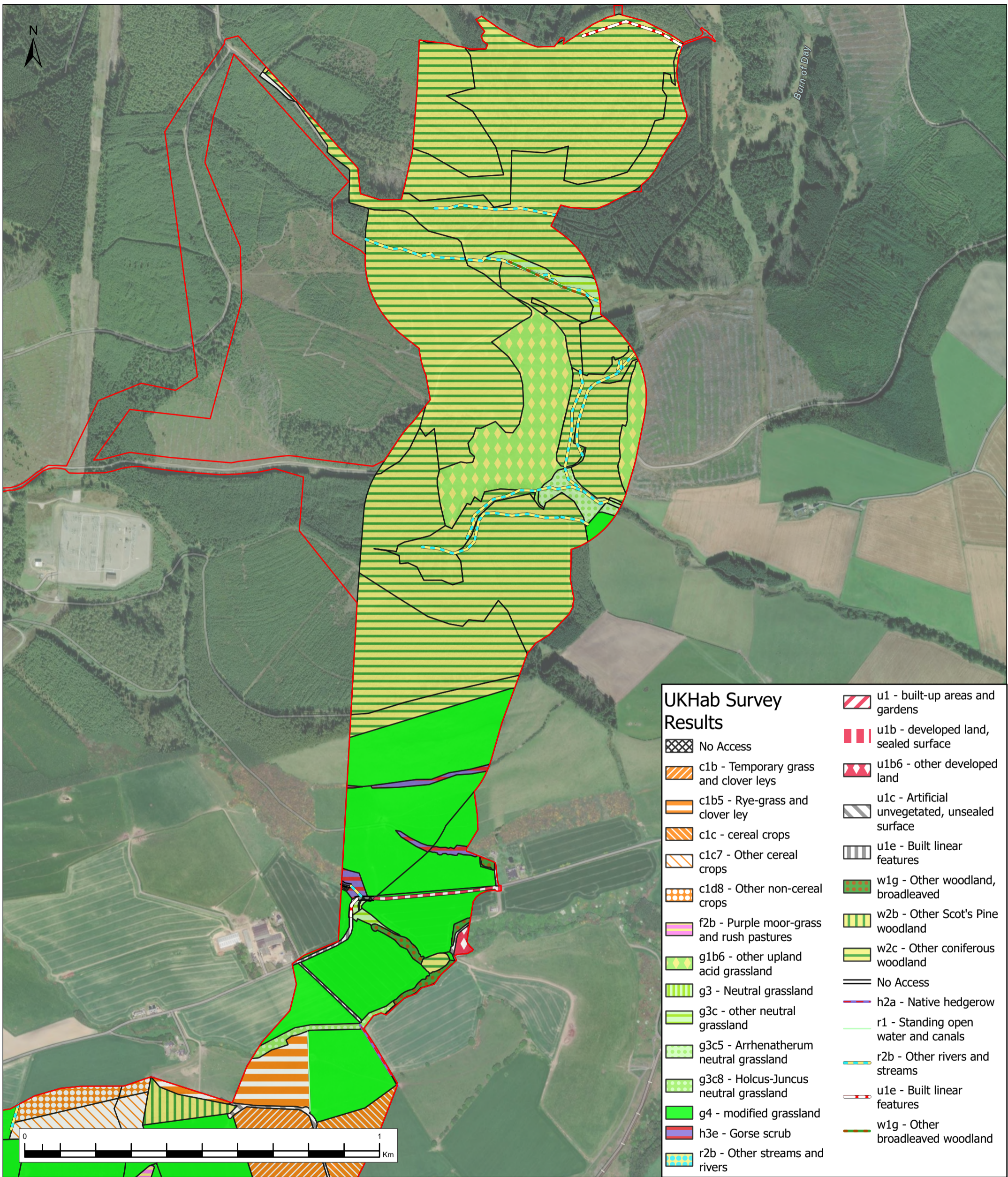


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 Project  
 Bowdun Offshore Windfarm - Onshore Ecology

Drawing Title  
 Onshore Ecology - UKHab Survey

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 Drawing Status

Figure 7.7.9



### UKHab Survey Results

- No Access
- c1b - Temporary grass and clover leys
- c1b5 - Rye-grass and clover ley
- c1c - cereal crops
- c1c7 - Other cereal crops
- c1d8 - Other non-cereal crops
- f2b - Purple moor-grass and rush pastures
- g1b6 - other upland acid grassland
- g3 - Neutral grassland
- g3c - other neutral grassland
- g3c5 - Arrhenatherum neutral grassland
- g3c8 - Holcus-Juncus neutral grassland
- g4 - modified grassland
- h3e - Gorse scrub
- r2b - Other streams and rivers
- u1 - built-up areas and gardens
- u1b - developed land, sealed surface
- u1b6 - other developed land
- u1c - Artificial unvegetated, unsealed surface
- u1e - Built linear features
- w1g - Other woodland, broadleaved
- w2b - Other Scot's Pine woodland
- w2c - Other coniferous woodland
- No Access
- h2a - Native hedgerow
- r1 - Standing open water and canals
- r2b - Other rivers and streams
- u1e - Built linear features
- w1g - Other broadleaved woodland

Legend  
 PPP Application Boundary



**Jacobs**  
**TWP** THISTLE WIND PARTNERS

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 Project  
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Drawing Title  
 Onshore Ecology - UKHab Survey

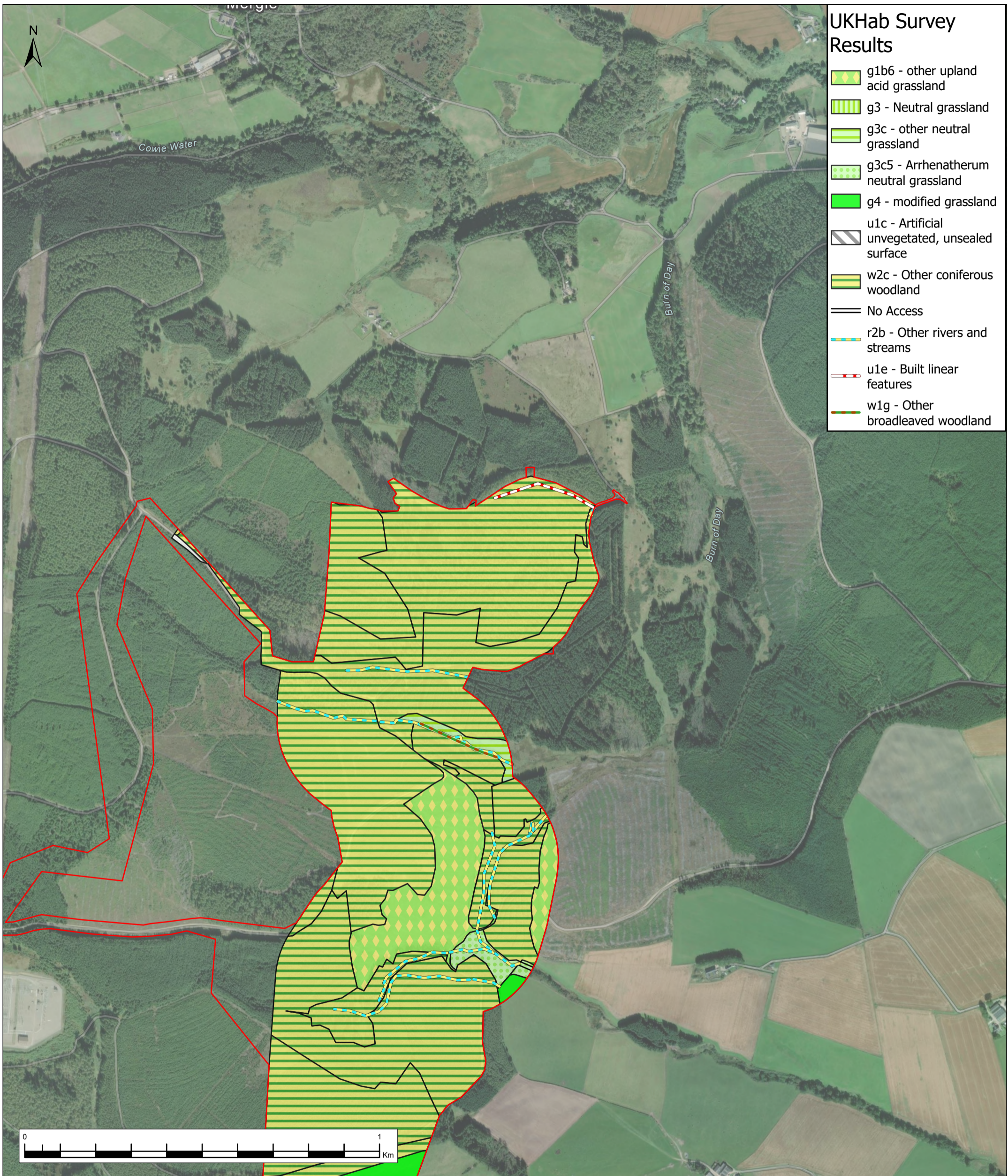
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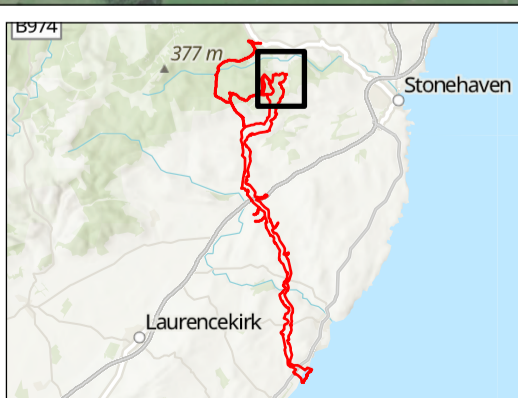
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Figure 7.7.10



- ### UKHab Survey Results
- g1b6 - other upland acid grassland
  - g3 - Neutral grassland
  - g3c - other neutral grassland
  - g3c5 - Arrhenatherum neutral grassland
  - g4 - modified grassland
  - u1c - Artificial unvegetated, unsealed surface
  - w2c - Other coniferous woodland
  - No Access
  - r2b - Other rivers and streams
  - u1e - Built linear features
  - w1g - Other broadleaved woodland

**Legend**  
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Drawing Title	Onshore Ecology - UKHab Survey	
Aconnex Number	Drawing Status	

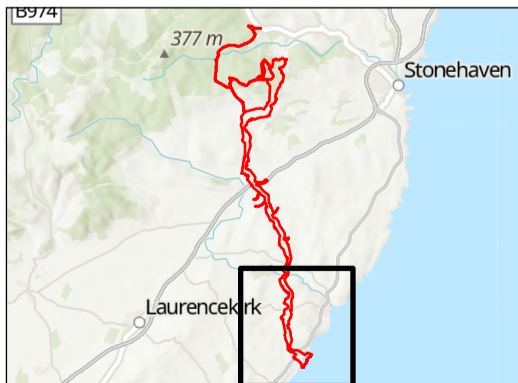
Figure 7.7.11



**Legend**  
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**NVC Code**  
 W1  
 M23  
 M27

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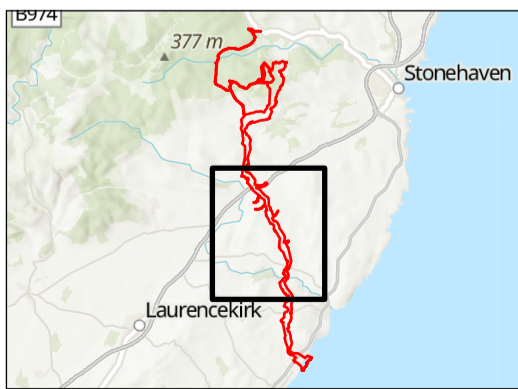
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<b>Client</b>		
<b>Project</b>	Bowdun Offshore Windfarm - Onshore Ecology	
<b>Drawing Title</b>	Onshore Ecology - NVC Survey	
<b>Aconnex Number</b>		<b>Drawing Status</b>
Figure 7.8.1		



- Legend**
- PPP Application Boundary
  - NVC Code**
  - W1
  - M23
  - M27

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**Jacobs**  
**TWP THISTLE WIND PARTNERS**

Client  
 Project  
 Bowdun Offshore Windfarm - Onshore Ecology

Drawing Title  
 Onshore Ecology - NVC Survey

Aconnex Number      Drawing Status

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Figure 7.8.2



Legend  
 PPP Application Boundary

NVC Code  
 W1  
 M23  
 M27

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**TWP** THISTLE WIND PARTNERS

Client  
 Project  
 Bowdun Offshore Windfarm - Onshore Ecology

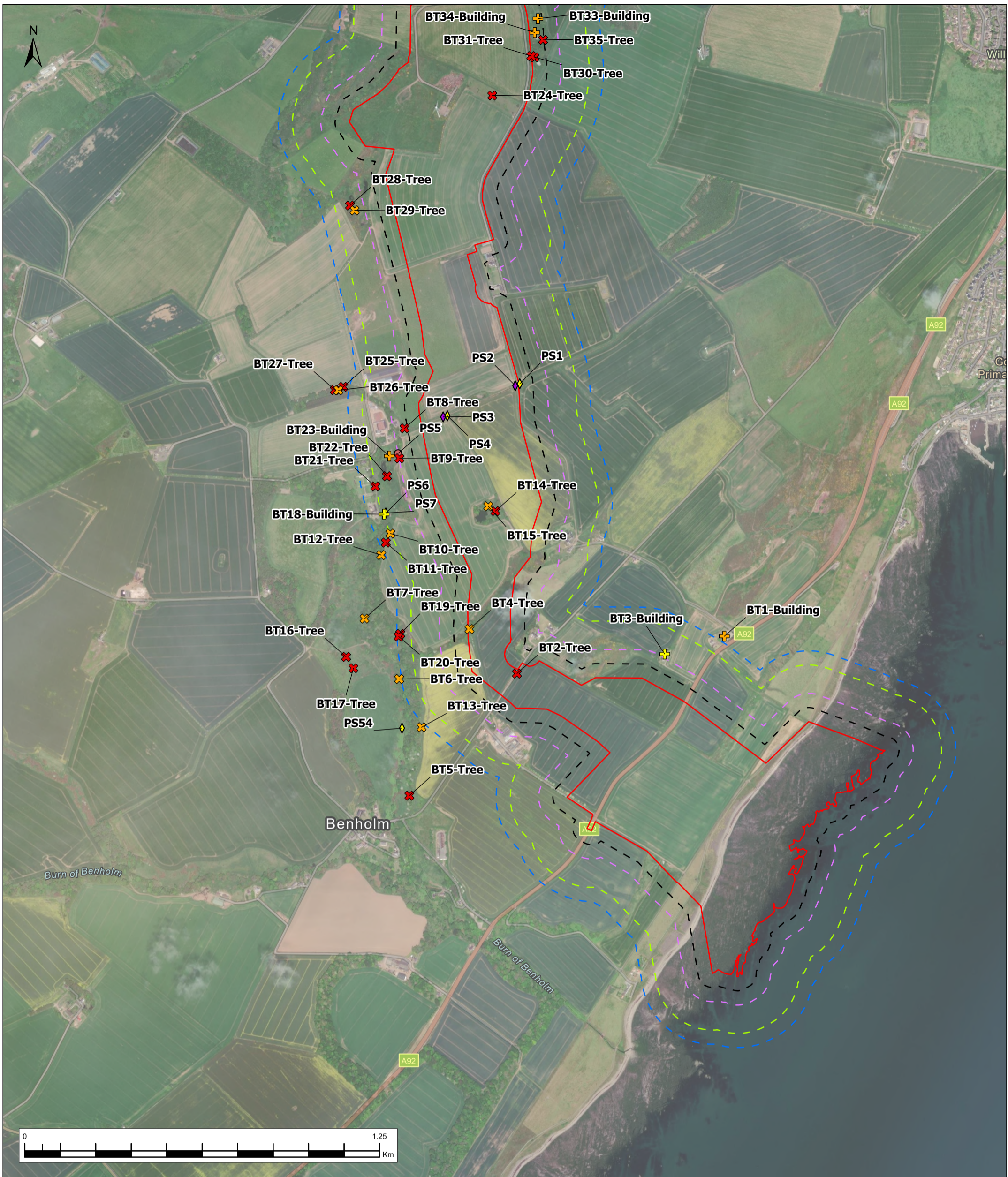
Drawing Title  
 Onshore Ecology - NVC Survey

Aconnex Number  
 Drawing Status

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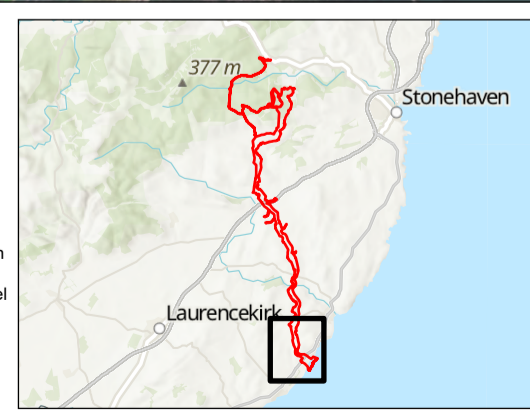
Figure 7.8.3



**Legend**

PPP Application Boundary	Negligible
<b>Protected Species Survey Buffers</b>	
2025 All Species Study Area (50 m)	PRF
2026 Badger Survey Area (100 m)	<b>Protected Species</b>
2025 Otter, Water Vole and Scottish Wildcat Survey Area (200 m)	Otter
2025 Pine Marten Survey Area (250 m)	Pine Marten
	Red Squirrel
	Water Vole
<b>Bat Roost Assessment</b>	
<b>Roost suitability</b>	
FAR	
High	
Low	
Moderate	
NONE	

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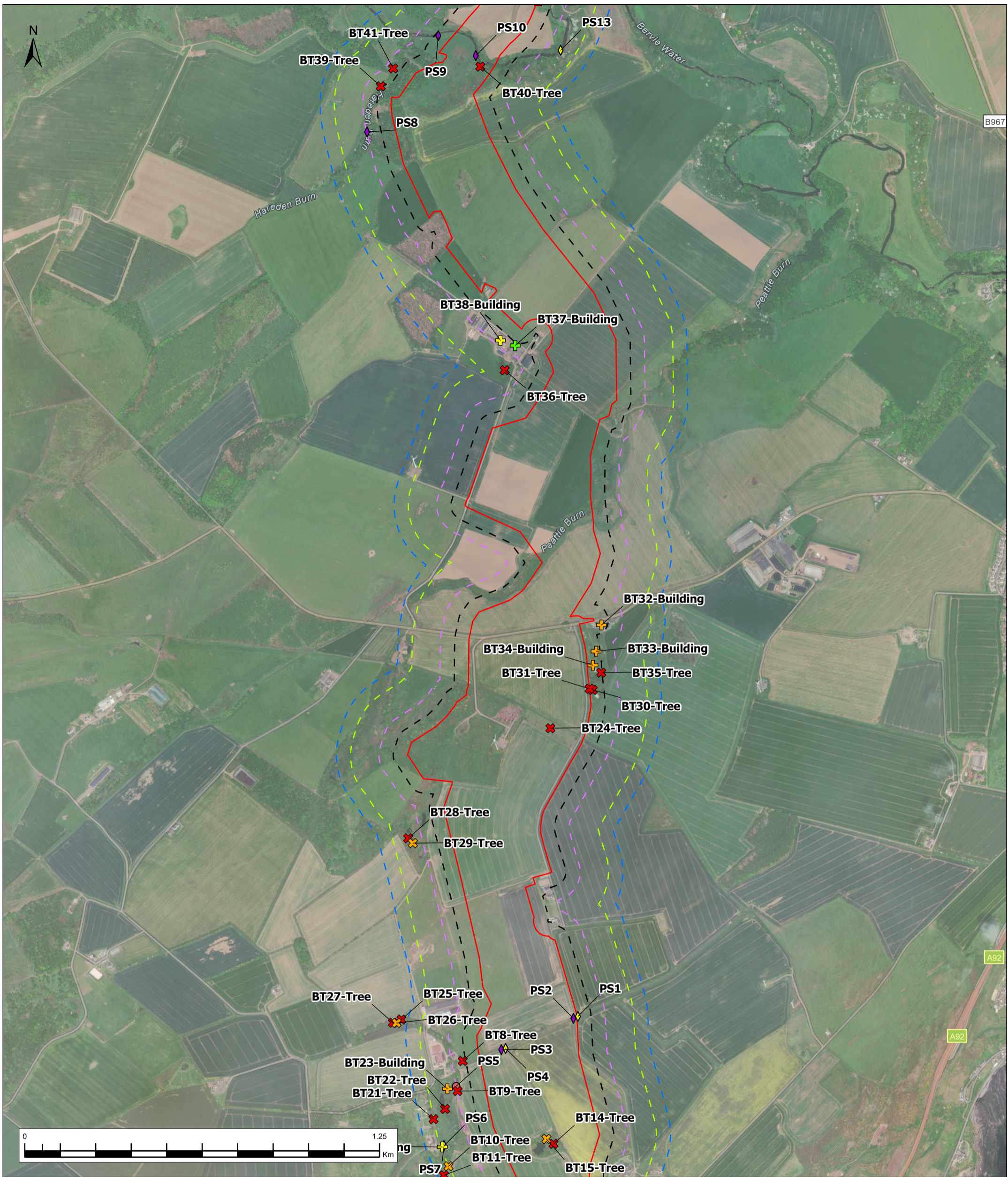


<b>Jacobs</b>	
Client	<b>TWP THISTLE WIND PARTNERS</b>
Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Protected Species Survey
Aconnex Number	Drawing Status

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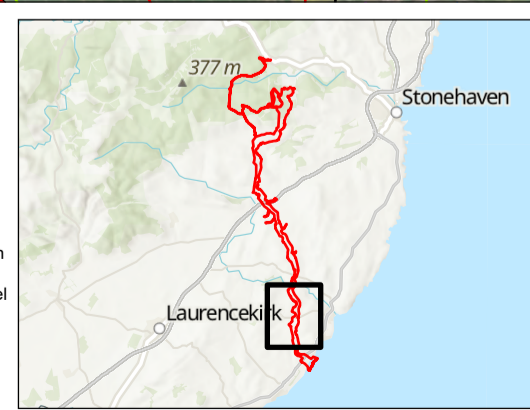
Figure 7.9.1



Legend

PPP Application Boundary	Negligible
Protected Species Survey Buffers	
2025 All Species Study Area (50 m)	PRF
2026 Badger Survey Area (100 m)	Protected Species
2025 Otter, Water Vole and Scottish Wildcat Survey Area (200 m)	Otter
2025 Pine Marten Survey Area (250 m)	Pine Marten
	Red Squirrel
	Water Vole
FAR	
High	
Low	
Moderate	
NONE	

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<b>Jacobs</b>	
Client	<b>TWP THISTLE WIND PARTNERS</b>
Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Protected Species Survey
Aconnex Number	Drawing Status

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Figure 7.9.2



**Legend**

PPP Application Boundary  
**Protected Species Survey Buffers**  
 2025 All Species Study Area (50 m)  
 2026 Badger Survey Area (100 m)  
 2025 Otter, Water Vole and Scottish Wildcat Survey Area (200 m)  
 2025 Pine Marten Survey Area (250 m)

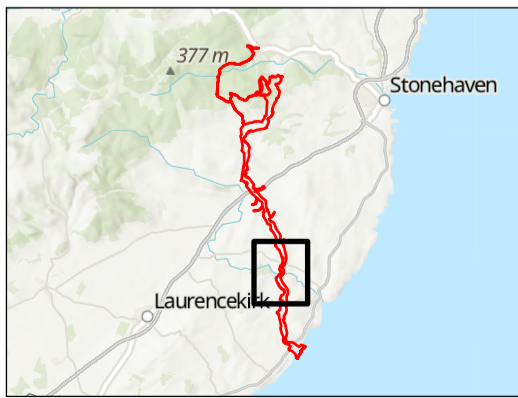
**Bat Roost Assessment**  
 Roost suitability  
✕ FAR  
■ High  
✕ Low  
✕ Moderate  
✕ NONE  
+ Negligible  
✕ PRF

**Protected Species**  
 Species  
◆ Otter  
● Pine Marten  
■ Red Squirrel  
◆ Water Vole

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Client	
Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Protected Species Survey
Aconnex Number	Drawing Status

Figure 7.9.3



Legend		Bat Roost Assessment				Protected Species			
	PPP Application Boundary		Negligible			Otter		Red Squirrel	
Protected Species Survey Buffers			FAR		PRF		Pine Marten		Water Vole
	2025 All Species Study Area (50 m)		High		Low		Pine Marten		
	2026 Badger Survey Area (100 m)		Moderate		NONE				
	2025 Otter, Water Vole and Scottish Wildcat Survey Area (200 m)		NONE						
	2025 Pine Marten Survey Area (250 m)								

2	14/11/25	Initial Issue	JS	AB	AB	AB
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Client	
Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Protected Species Survey
Aconnex Number	Drawing Status

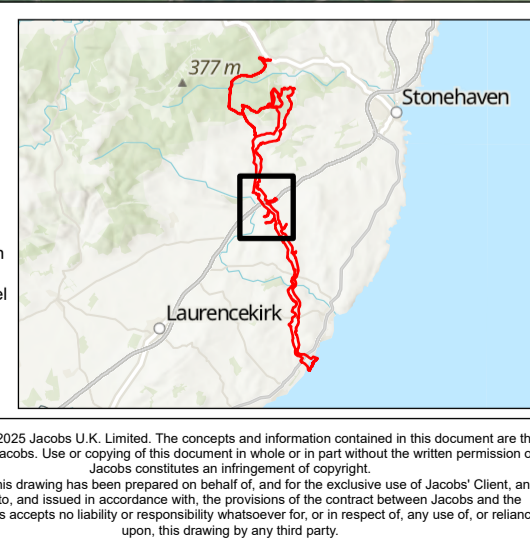
Figure 7.9.4

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**TWP** THISTLE WIND PARTNERS

Client	
Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Protected Species Survey
Aconnex Number	Drawing Status

Figure 7.9.5

**Legend**

PPP Application Boundary  
**Protected Species Survey Buffers**  
 2025 All Species Study Area (50 m)  
 2026 Badger Survey Area (100 m)  
 2025 Otter, Water Vole and Scottish Wildcat Survey Area (200 m)  
 2025 Pine Marten Survey Area (250 m)

**Bat Roost Assessment**  
 Roost suitability  
✖ FAR  
+ High  
+ Low  
+ Moderate  
✖ NONE  
+ Negligible  
✖ PRF

**Protected Species**  
 Species  
◇ Otter  
● Pine Marten  
■ Red Squirrel  
◇ Water Vole

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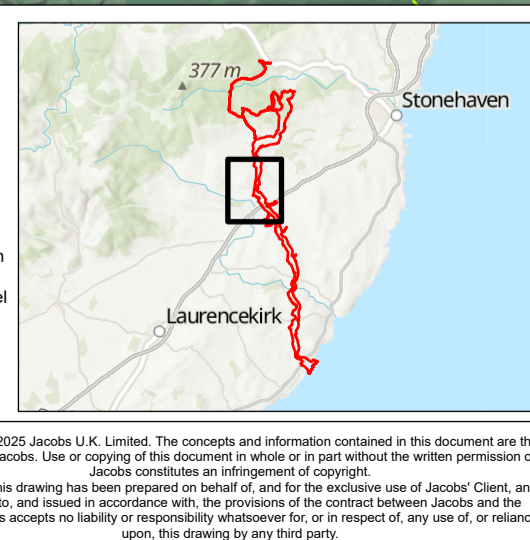
**Legend**

PPP Application Boundary  
 Protected Species Survey Buffers  
 2025 All Species Study Area (50 m)  
 2026 Badger Survey Area (100 m)  
 2025 Otter, Water Vole and Scottish Wildcat Survey Area (200 m)  
 2025 Pine Marten Survey Area (250 m)

<b>Bat Roost Assessment</b>	<span style="color: green;">+</span> Negligible
<b>Roost suitability</b>	<span style="color: orange;">x</span> PRF
<span style="color: red;">x</span> FAR	<b>Protected Species</b>
<span style="color: red;">+</span> High	<span style="color: orange;">+</span> Otter
<span style="color: yellow;">+</span> Low	<span style="color: red;">o</span> Pine Marten
<span style="color: orange;">+</span> Moderate	<span style="color: red;">■</span> Red Squirrel
<span style="color: green;">x</span> NONE	<span style="color: purple;">◆</span> Water Vole

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Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Protected Species Survey
Aconnex Number	Drawing Status
Figure 7.9.6	

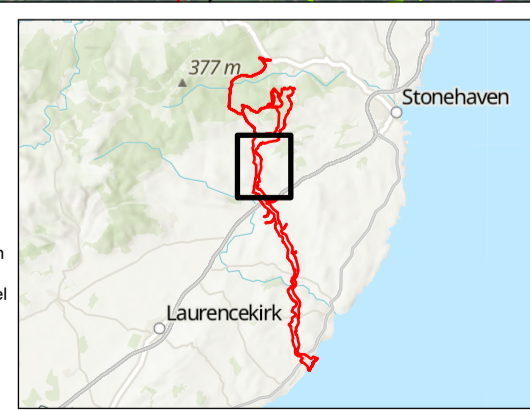
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**Legend**

PPP Application Boundary	<b>Bat Roost Assessment</b>	Negligible
<b>Protected Species Survey Buffers</b>	<b>Roost suitability</b>	PRF
2025 All Species Study Area (50 m)	FAR	<b>Protected Species</b>
2026 Badger Survey Area (100 m)	High	Otter
2025 Otter, Water Vole and Scottish Wildcat Survey Area (200 m)	Low	Pine Marten
2025 Pine Marten Survey Area (250 m)	Moderate	Red Squirrel
	NONE	Water Vole

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Drawing Title	Onshore Ornithology - Protected Species Survey
Aconnex Number	Drawing Status

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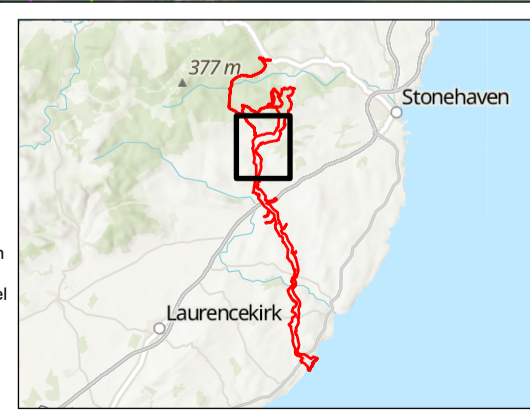
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Figure 7.9.7



Legend	
	PPP Application Boundary
Protected Species Survey Buffers	
	2025 All Species Study Area (50 m)
	2026 Badger Survey Area (100 m)
	2025 Otter, Water Vole and Scottish Wildcat Survey Area (200 m)
	2025 Pine Marten Survey Area (250 m)
Bat Roost Assessment	
	Negligible
	PRF
	FAR
	High
	Low
	Moderate
	NONE
Protected Species	
	Otter
	Pine Marten
	Red Squirrel
	Water Vole

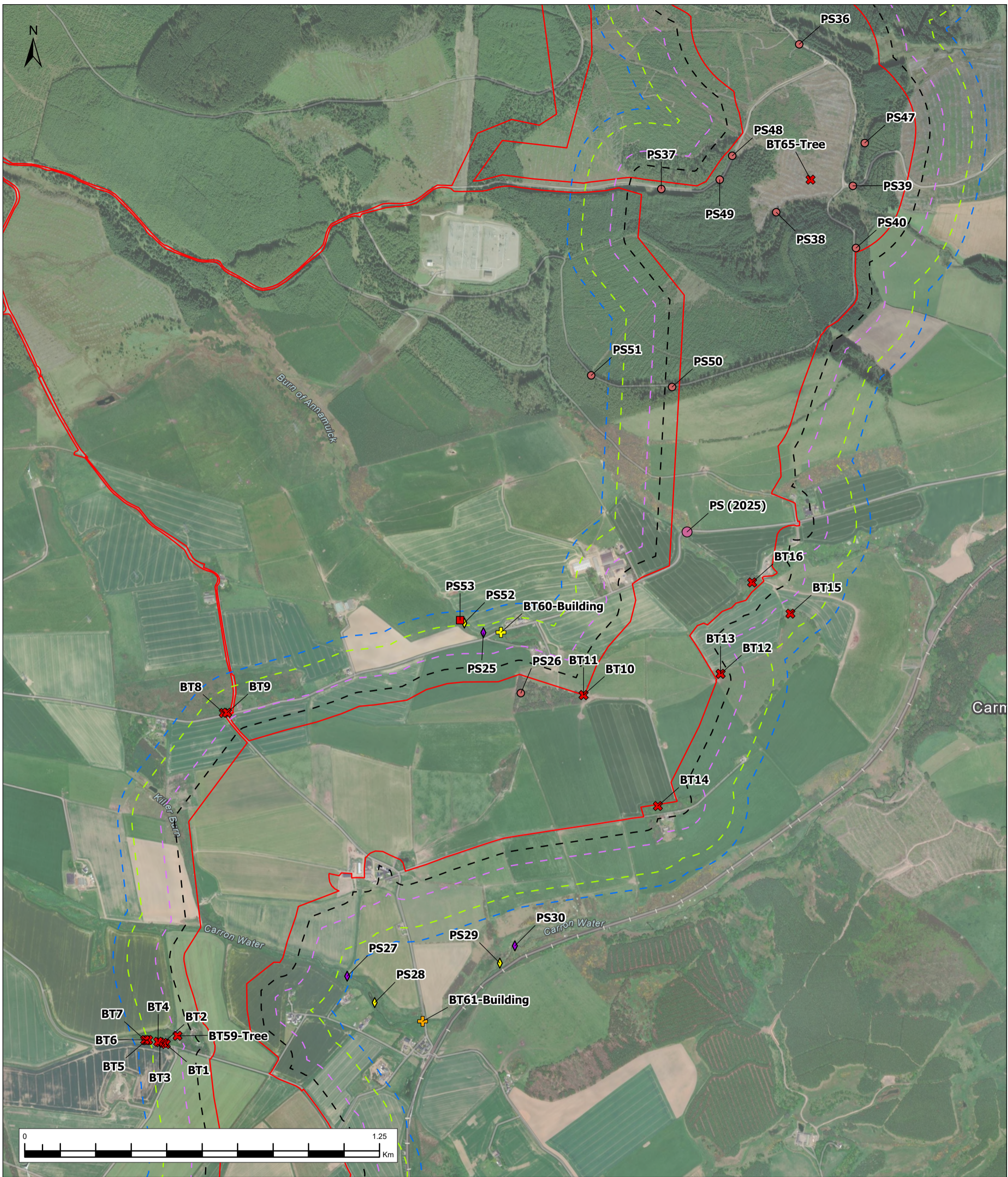
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Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Protected Species Survey
Aconnex Number	Drawing Status
Figure 7.9.8	



**Legend**

- PPP Application Boundary
- Protected Species Survey Buffers
  - 2025 All Species Study Area (50 m)
  - 2026 Badger Survey Area (100 m)
  - 2025 Otter, Water Vole and Scottish Wildcat Survey Area (200 m)
  - 2025 Pine Marten Survey Area (250 m)

**Bat Roost Assessment**

- Roost suitability
  - FAR
  - High
  - Low
  - Moderate
  - NONE

**Protected Species**

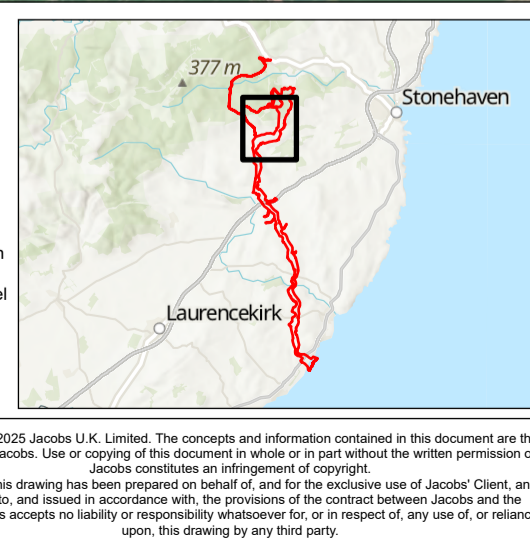
- Species
  - Otter
  - Pine Marten
  - Red Squirrel
  - Water Vole

**Bat Roost Assessment**

- Negligible
- PRF

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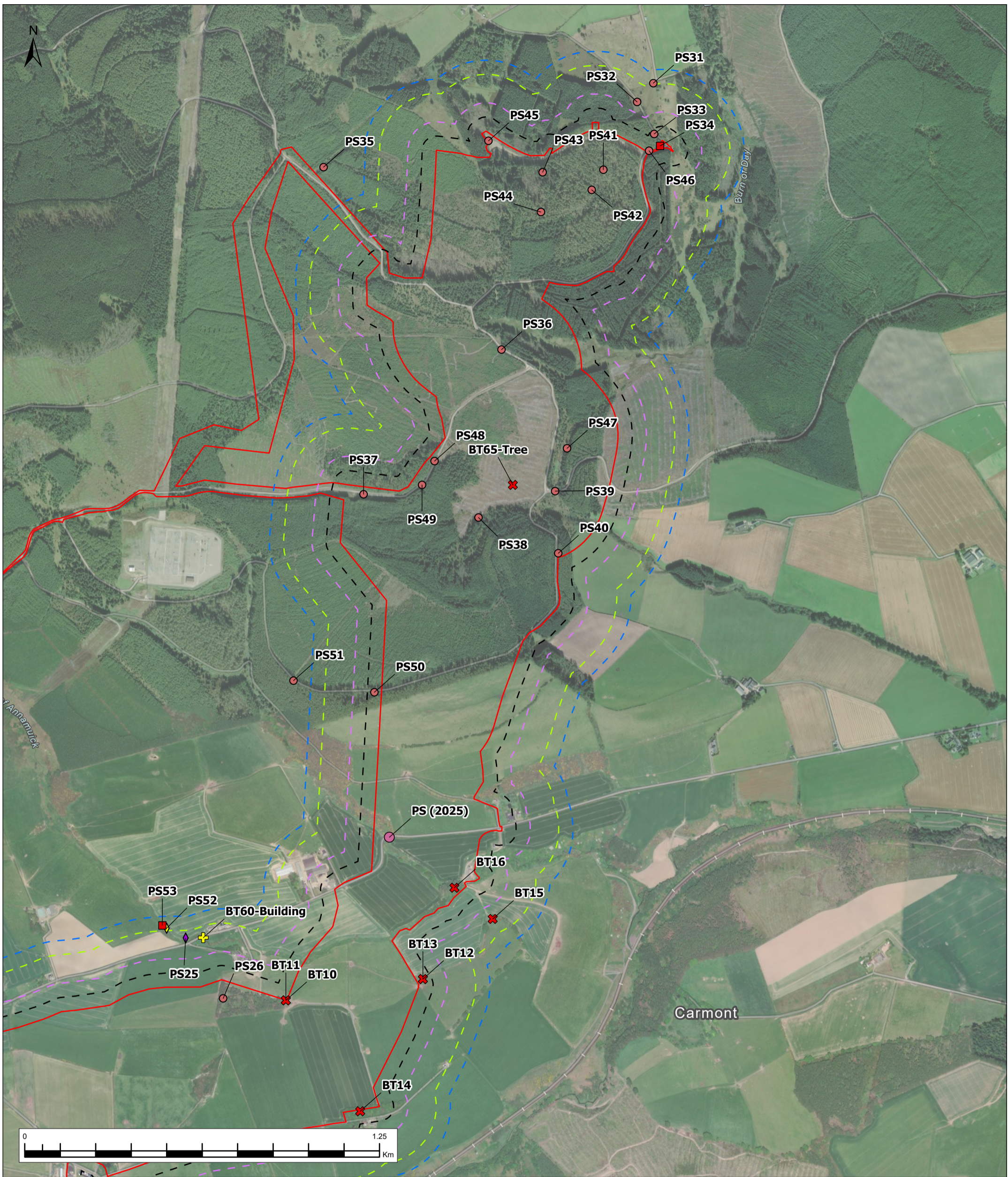
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**Jacobs**  
**TWP THISTLE WIND PARTNERS**

Client		
Project	Bowdun Offshore Windfarm - Onshore Ecology	
Drawing Title	Onshore Ornithology - Protected Species Survey	
Aconnex Number	Drawing Status	

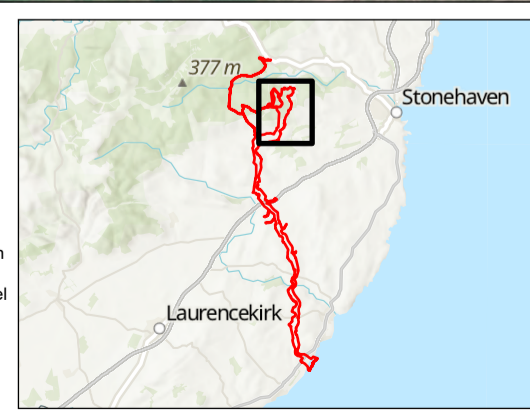
Figure 7.9.9



Legend

	PPP Application Boundary		Negligible
Protected Species Survey Buffers			PRF
	2025 All Species Study Area (50 m)	Protected Species	
	2026 Badger Survey Area (100 m)		Otter
	2025 Otter, Water Vole and Scottish Wildcat Survey Area (200 m)		Pine Marten
	2025 Pine Marten Survey Area (250 m)		Red Squirrel
			Water Vole
			FAR
			High
			Low
			Moderate
			NONE

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Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Protected Species Survey
Aconnex Number	Drawing Status

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Figure 7.9.10

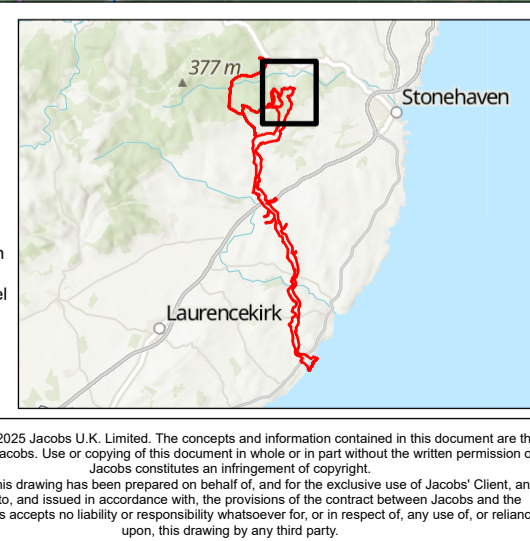


**Legend**

- PPP Application Boundary
- Protected Species Survey Buffers
  - 2025 All Species Study Area (50 m)
  - 2026 Badger Survey Area (100 m)
  - 2025 Otter, Water Vole and Scottish Wildcat Survey Area (200 m)
  - 2025 Pine Marten Survey Area (250 m)
- Bat Roost Assessment
  - Roost suitability
    - FAR
    - High
    - Low
    - Moderate
    - NONE
  - Negligible
  - PRF
- Protected Species
  - Otter
  - Pine Marten
  - Red Squirrel
  - Water Vole

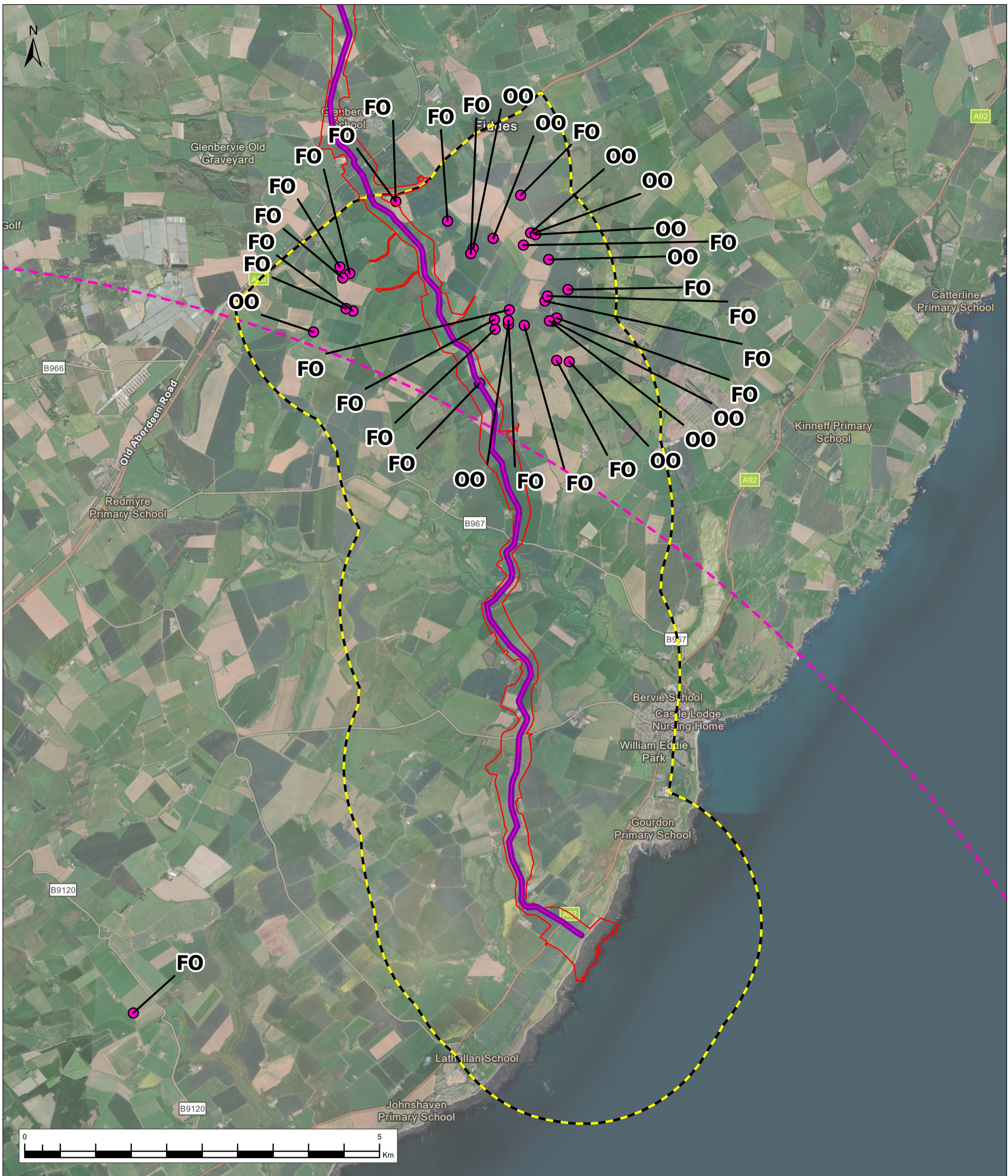
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Drawing Title	Onshore Ornithology - Protected Species Survey
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Figure 7.9.11	

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**Legend**

- PPP Application Boundary
- Foraging Goose Survey Area
- Montrose Basin SPA and Ramsar Site - 20 km Buffer

**Foraging Goose Survey Records**

**Species**

- PG: Pink-Footed Goose
- Onshore Export Cable Corridor

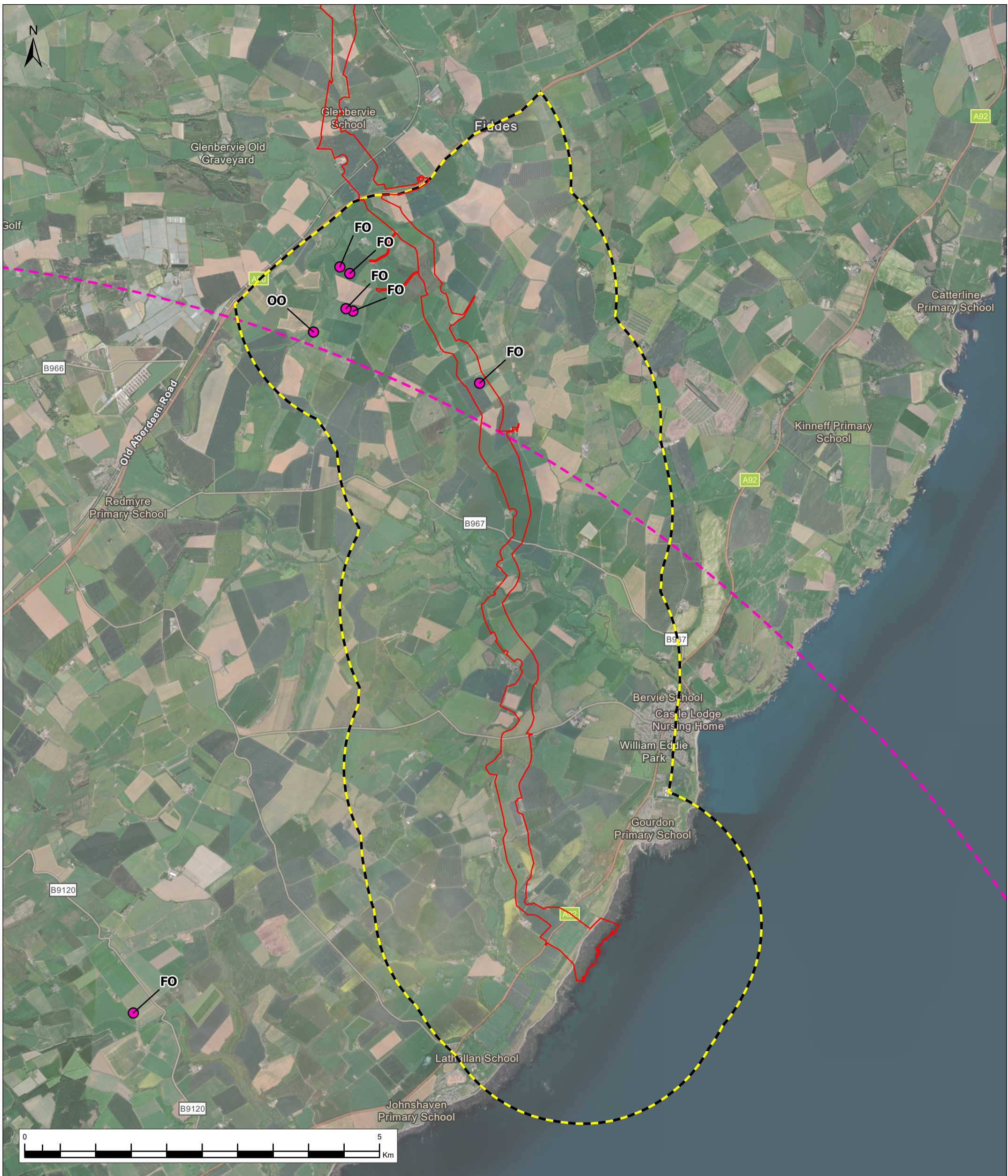
Activity Code	Behaviour
FO	Foraging
OO	Roosting / Loafing

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Client	TWP THISTLE WIND PARTNERS	
Project	Bowdun Offshore Windfarm - Onshore Ecology	
Drawing Title	Onshore Ornithology - Foraging Goose Survey Overview (October 2023 to May 2024)	
Aconnex Number	Drawing Status	
Figure 7.10.1		



**Legend**

- PPP Application Boundary
- Foraging Goose Survey Area
- Montrose Basin SPA and Ramsar Site - 20 km Buffer

**Foraging Goose Survey Records**

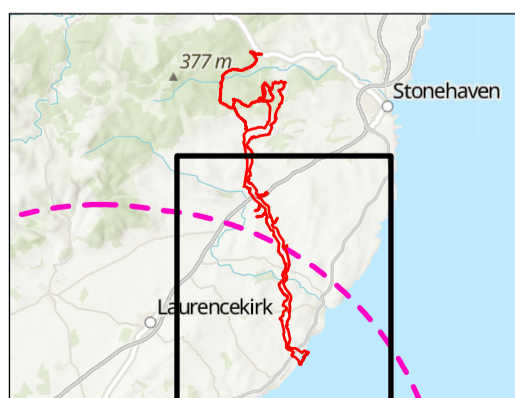
**Species**

- PG: Pink-Footed Goose

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Activity Code	Behaviour
FO	Foraging
OO	Roosting / Loafing

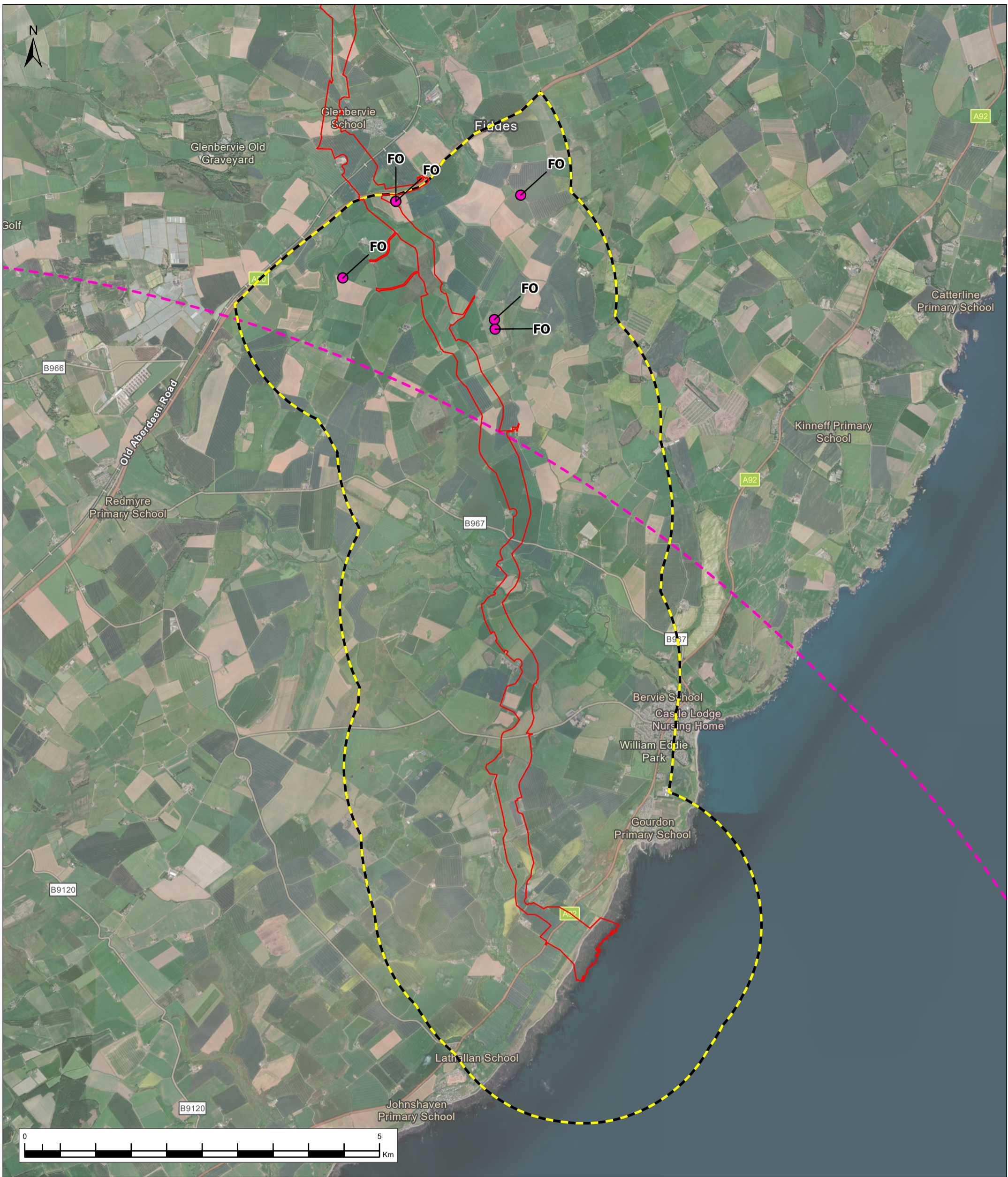


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Client	Jacobs <b>TWP</b> THISTLE WIND PARTNERS
Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Foraging Goose Survey (October 2023)
Aconnex Number	Drawing Status

Figure 7.10.2



**Legend**

- PPP Application Boundary
- Foraging Goose Survey Area
- Montrose Basin SPA and Ramsar Site - 20 km Buffer

**Foraging Goose Survey Records**

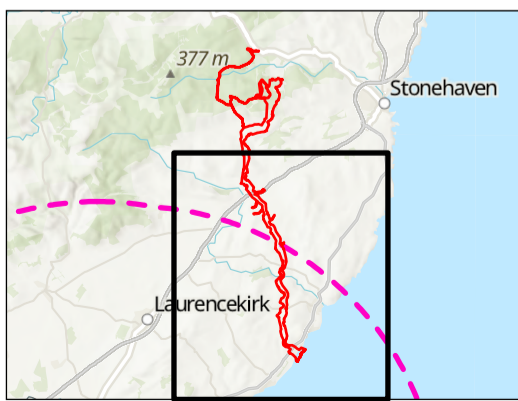
**Species**

- PG: Pink-Footed Goose

Source:  
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Jacobs No.						

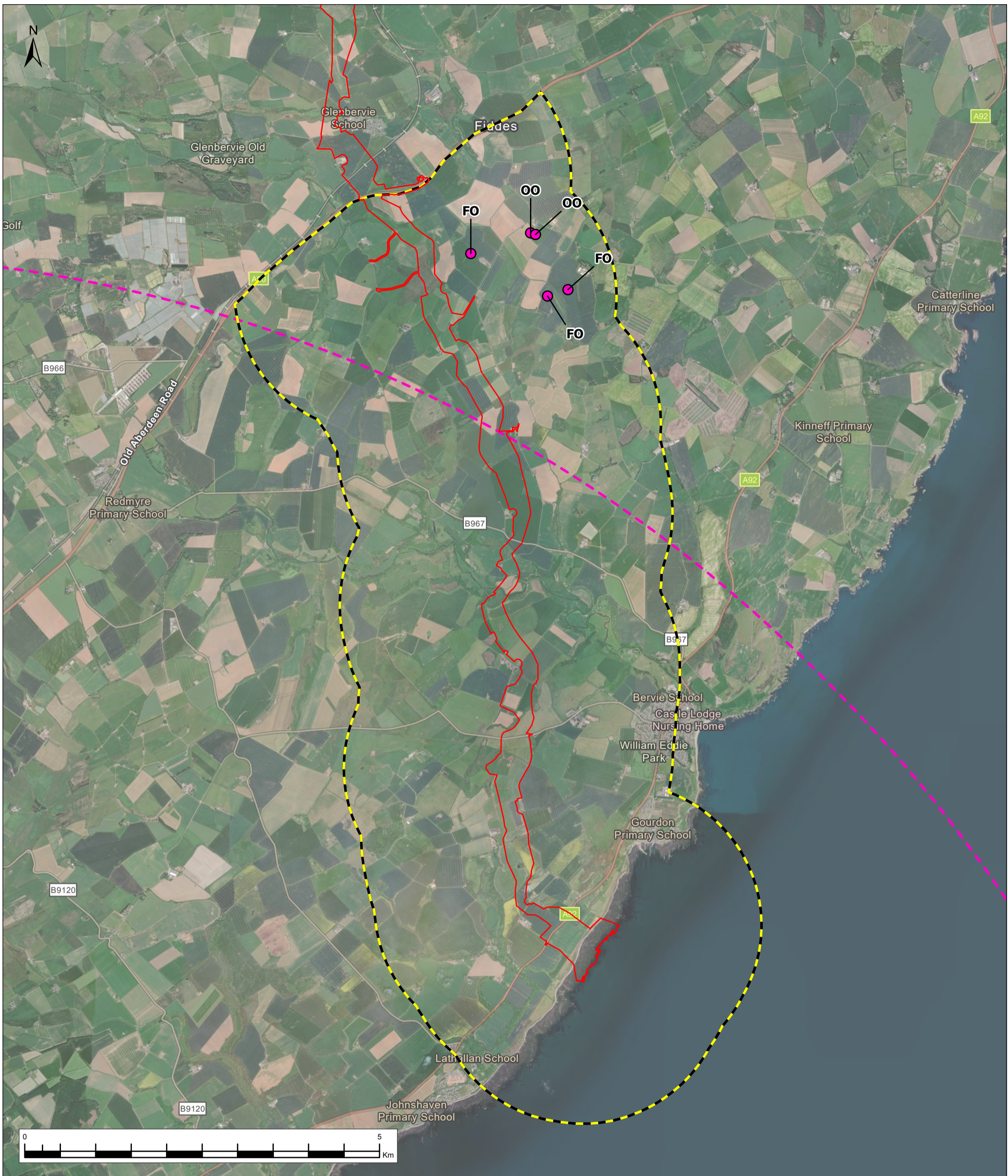
Activity Code	Behaviour
FO	Foraging



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<b>Jacobs</b>	
Client	<b>TWP</b> THISTLE WIND PARTNERS
Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Foraging Goose Survey (November 2023)
Aconnex Number	Drawing Status
Figure 7.10.3	



Legend

- PPP Application Boundary
- Foraging Goose Survey Area
- Montrose Basin SPA and Ramsar Site - 20 km Buffer

Foraging Goose Survey Records

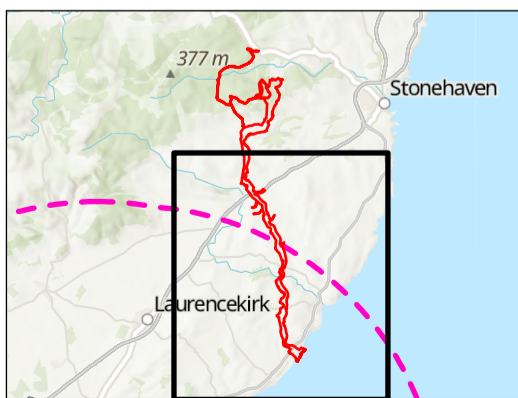
Species

- PG: Pink-Footed Goose

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Activity Code	Behaviour
FO	Foraging
OO	Roosting / Loafing



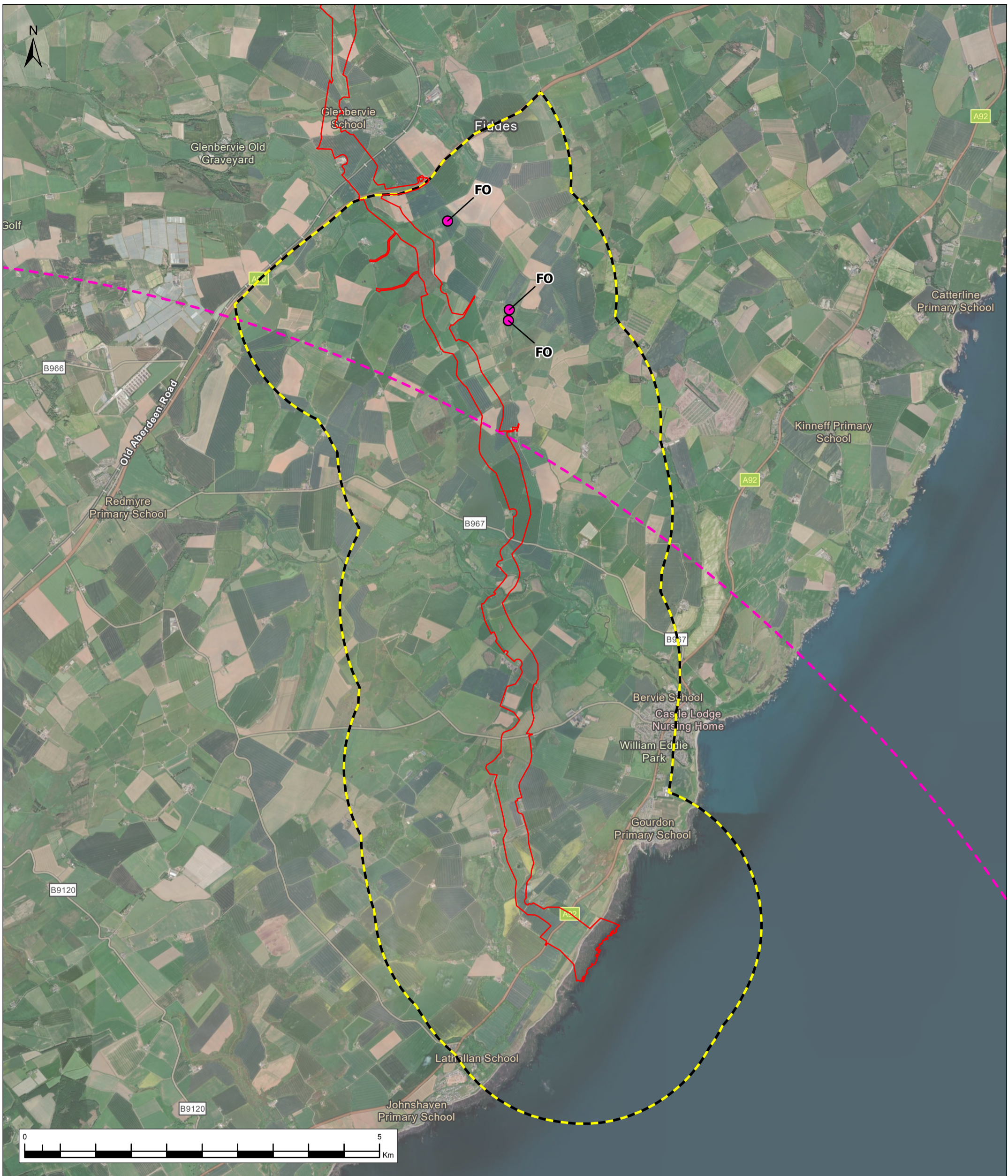
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# Jacobs

**TWP** THISTLE WIND PARTNERS

Client	
Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Foraging Goose Survey (April 2024)
Aconnex Number	Drawing Status

Figure 7.10.8



Legend

- PPP Application Boundary
- Foraging Goose Survey Area
- Montrose Basin SPA and Ramsar Site - 20 km Buffer

Foraging Goose Survey Records

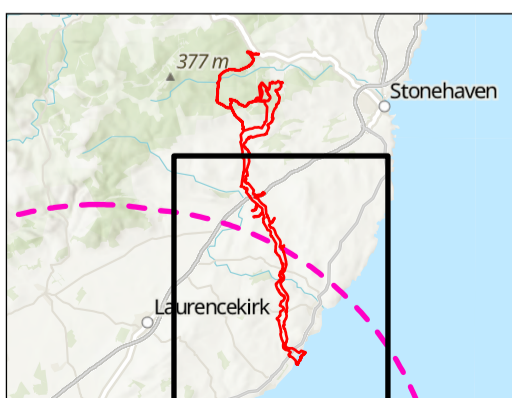
Species

- PG: Pink-Footed Goose

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Activity Code	Behaviour
FO	Foraging



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Client	TWP THISTLE WIND PARTNERS
Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Foraging Goose Survey (December 2023)
Aconnex Number	Drawing Status

Figure 7.10.4



**Legend**

- PPP Application Boundary
- Foraging Goose Survey Area
- Montrose Basin SPA and Ramsar Site - 20 km Buffer

**Foraging Goose Survey Records**

**Species**

- PG: Pink-Footed Goose

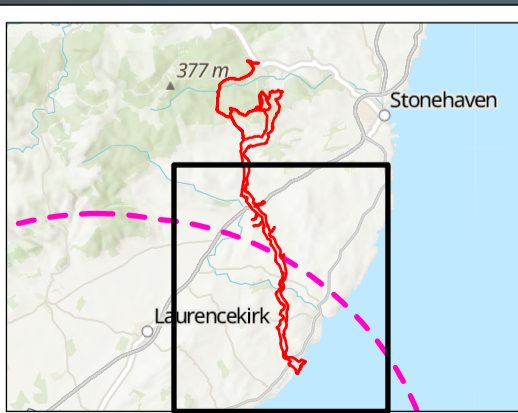
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Activity Code	Behaviour
OO	Roosting / Loafing

2	19/11/25	Initial Issue	JS	AB	AB	AB
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Client	
Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Foraging Goose Survey (January 2024)
Aconnex Number	Drawing Status

Figure 7.10.5



**Legend**

- PPP Application Boundary
- Foraging Goose Survey Area
- Montrose Basin SPA and Ramsar Site - 20 km Buffer

**Foraging Goose Survey Records**

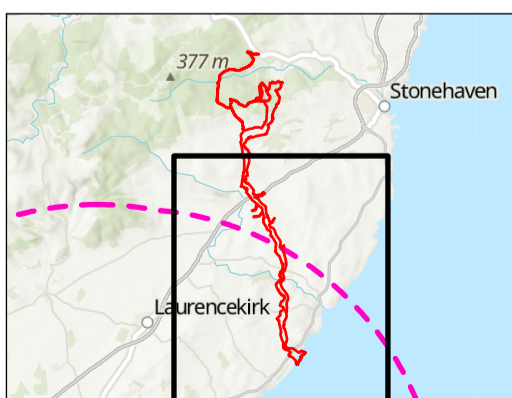
**Species**

- PG: Pink-Footed Goose

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Jacobs No.						

Activity Code	Behaviour
FO	Foraging
OO	Roosting / Loafing

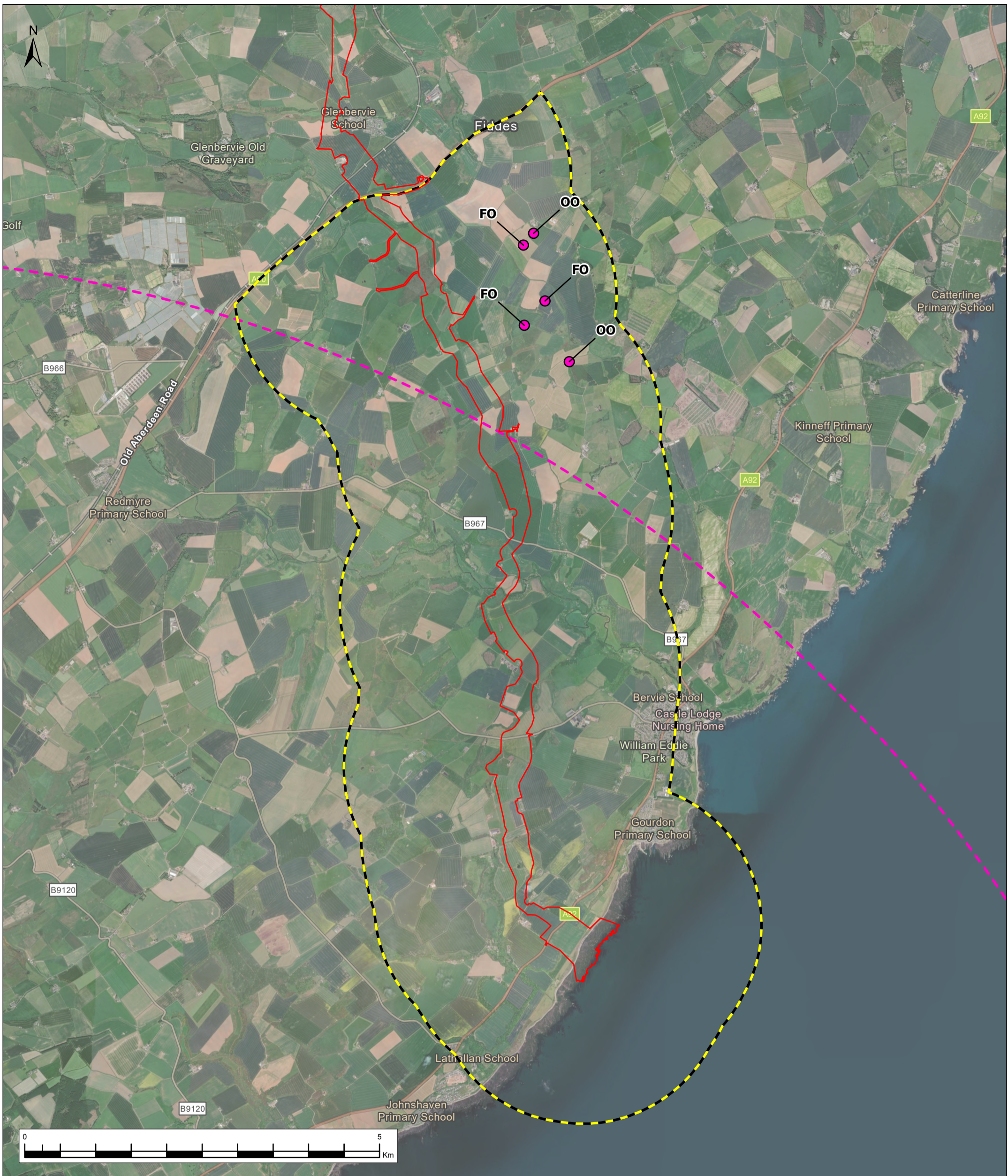


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Client	Jacobs TWP THISTLE WIND PARTNERS
Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Foraging Goose Survey (February 2024)

Aconnex Number	Drawing Status
Figure 7.10.6	



**Legend**

- PPP Application Boundary
- Foraging Goose Survey Area
- Montrose Basin SPA and Ramsar Site - 20 km Buffer

**Foraging Goose Survey Records**

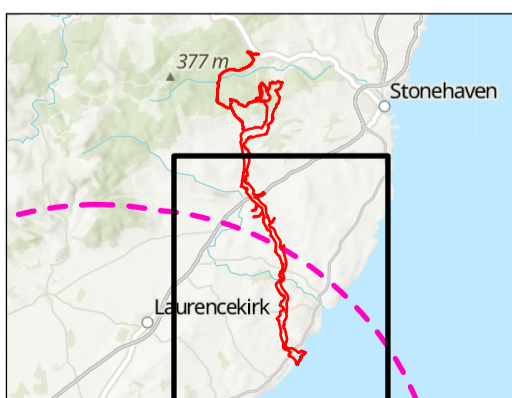
**Species**

- PG: Pink-Footed Goose

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Activity Code	Behaviour
FO	Foraging
OO	Roosting / Loafing



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Project	Bowdun Offshore Windfarm - Onshore Ecology
Drawing Title	Onshore Ornithology - Foraging Goose Survey (March 2024)

Aconnex Number	Drawing Status
Figure 7.10.7	