

Eastern Green Link 4: Scottish Onshore Scheme

Volume 2: Main Report

Chapter 7: Ecology and Nature Conservation

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Prepared for:

SP Energy Networks
320 St Vincent St
Glasgow, G2 5AD

Prepared by:

AECOM Limited
1 Tanfield
Edinburgh EH3 5DA
United Kingdom

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07.

**Ecology and
Nature**

Conservation

7. Ecology and Nature Conservation

7.1 Introduction

This chapter addresses the potential impacts and effects of the construction and operation (including maintenance), of the Scottish Onshore Scheme on ecological features as far as Mean Low Water Springs (MLWS), whereafter this will be addressed under the Marine Scheme.

Where appropriate, this chapter provides details of mitigation and/or enhancement measures which have been identified to avoid, minimise, reverse, or compensate for adverse effects on ecological features.

This chapter is supported by **Figures 7.1 to 7.11** found within this chapter, and **Confidential Figure CF7.1** and **CF7.2** found within **Volume 5 Confidential Appendices**, as well as the following Appendices within **Volume 4 Appendices** (note that due to the sensitivity and/or persecution of some protected species, details on otters and badgers can be found within **Volume 5 Confidential Appendices**).

- **Appendix 7.1: EcIA Methodology;**
- **Appendix 7.2: Bats;**
- **Appendix 7.3: Other Mammals;**
- **Appendix 7.4: Ornithology;**
- **Appendix 7.5: Great Crested Newt;**
- **Appendix 7.6: Habitats Regulations Assessment;** and
- **Appendix 7.7: Biodiversity Net Gain Report.**

Appendix 7.6: Habitats Regulations Assessment describes the assessment conducted to determine effects from the Scottish Onshore Scheme on European sites (which comprise Special Areas of Conservation (SAC), Special Protection Areas (SPA), and Wetlands of International Importance (Ramsar sites))¹.

Throughout this chapter and its supporting figures and appendices, the area encompassed by the red line boundary is referred to as the 'Application Boundary' and is shown on all supporting figures.

Throughout this chapter, species are given their common and scientific names when first referred to and their common names only thereafter. Nomenclature for vascular plants follows Stace (2019) and for bryophytes, Atherton *et al.* (2010). Where no common name is available to distinguish between species (for example, within the Sphagnum genus of mosses), these are referred to by their scientific name on every mention. All distances are cited as the shortest distance 'as the crow flies', unless otherwise specified.

¹ It is Scottish Government policy to treat Ramsar sites in the same way as European sites, for the purposes of HRA.

7.2 Legislation and Policy

Information on legislation and planning policy relevant to the Scottish Onshore Scheme can be found in **Chapter 4: Legislative and Policy Framework**. However, details of legislation and a summary of national and local planning policy relevant to nature conservation are given under the following sub-headings.

Legislation

This assessment has been carried out in the context of relevant nature conservation legislation including, but not necessarily limited to, the following:

- Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) (the ‘Habitats Regulations’);
- Convention on Wetlands of International Importance (‘Ramsar Convention’);
- Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (more commonly referred to as the ‘Habitats Directive’);
- Council Directive 2009/147/EC on the conservation of wild birds (more commonly referred to as the ‘Birds Directive’);
- Council Directive 2000/60/EC establishing a framework for Community action in the field of water policy (the ‘Water Framework Directive’ (WFD));
- Nature Conservation (Scotland) Act 2004 (as amended);
- Protection of Badgers Act 1992 (as amended);
- Regulation 1143/2014 on invasive alien species (the ‘Invasive Alien Species Regulation’)²;
- Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003;
- The Protection of Seals (Designation of Haul-Out Sites) (Scotland) Order 2014;
- Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (‘CAR Regulations’);
- Water Environment and Water Services (Scotland) Act 2003;
- Wildlife and Countryside Act 1981 (as amended) (the ‘WCA’); and
- Wildlife and Natural Environment (Scotland) Act 2011 (as amended) (‘WANE Act’).

National Planning Policy

National Planning Framework 4 (NPF4) was formally adopted by Scottish Ministers on 13 February 2023. NPF4 includes the following statements of policy intent: “*To protect, restore and enhance natural assets making best use of nature-based solutions*” and “*To protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks.*” NPF4 also states that major development will only be supported where nature networks “*are in a demonstrably better state than without*

² Retained under the European Union (Withdrawal) Act 2018

intervention” using best practice and including future monitoring and management where appropriate.

In compliance with the biodiversity policy contained within NPF4, the Scottish Onshore Scheme has therefore sought to both protect existing ecological features within the Application Boundary and to deliver an overall gain for biodiversity. At the time of preparing this chapter, there was no formal policy requirement in Scotland to undertake quantitative Biodiversity Net Gain (BNG) assessment as part of the planning process for infrastructure developments. Nonetheless, it is SPEN’s policy to conduct formal BNG assessments for their projects. The Scottish Onshore Scheme will therefore be subject to a quantitative BNG assessment, with the aim being to deliver a 10% net gain of biodiversity units relative to the baseline.

Prior to the United Kingdom’s (UK) exit from the European Union (EU), Scotland’s SACs and SPAs were part of a wider European network of such sites known as the ‘Natura 2000 network’. They were consequently referred to as ‘European sites’. Now that the UK has left the EU, Scotland’s SACs and SPAs are no longer part of the Natura 2000 network but form part of a UK-wide network of designated sites referred to as the ‘UK site network’. However, it is current Scottish Government policy to retain the term ‘European site’ to refer collectively to SACs and SPAs (Scottish Government, 2020).

Local Planning Policy

The Scottish Onshore Scheme is situated within Fife Council local authority area. Consequently, relevant local planning policies are stated in Fife’s Local Development Plan (LDP) ‘FIFEplan’, adopted in September 2017. **Table 7-1 Summary of relevant policies within FIFEplan** below lists those LDP policies relevant to nature conservation.

Table 7-1. Summary of relevant policies within FIFEplan

Policy	Relevant Supporting Policy
Policy 1: Development Principles	Avoid flooding and impacts on the water environment. Safeguard or avoid the loss of natural resources, including effects on internationally designated nature conservation sites. Provide green infrastructure as required in settlement proposals and identified in the green network map.
Policy 7: Development in the countryside	Development must be located and designed to protect the overall environmental quality of the area.
Policy 11: Low Carbon	Planning permission will only be granted where it has been demonstrated that sustainable urban drainage measures will ensure that there will be no increase in the rate of surface water run-off in peak conditions or detrimental impact on the ecological quality of the water environment.
Policy 12: Flooding and Water Environment	Development proposals will only be supported where they can demonstrate that they will not, individually or cumulatively: <ul style="list-style-type: none"> increase flooding or flood risk from all sources (including surface water drainage measures) on the site or elsewhere;

Policy	Relevant Supporting Policy
	<ul style="list-style-type: none"> • reduce the water conveyance and storage capacity of a functional flood plain; • detrimentally impact on ecological quality of the water environment, including its natural characteristics, river engineering works, or recreational use; • detrimentally impact on future options for flood management; • require new defences against coastal erosion or coastal flooding; or • increase coastal erosion on the site or elsewhere.
<p>Policy 13: Natural Environment and Access</p>	<p>Development proposals will only be supported where they protect or enhance natural heritage and access assets including:</p> <ul style="list-style-type: none"> • designated sites of international and national importance, including Natura 2000 sites and Sites of Special Scientific Interest (SSSI); • designated sites of local importance, including Local Wildlife Sites (LWS); • woodlands (including native and other long-established woods), and trees and hedgerows that have a landscape, amenity, or nature conservation value; • biodiversity in the wider environment; • protected and priority habitats and species; • carbon rich soils (including peat); and • green networks and greenspaces.

7.3 Consultation

NatureScot and Fife Council’s Natural Heritage Specialist contributed the following comments in response to the Scoping Opinion with **Table 7-2 Scoping Response**, below setting out how these have been actioned within this EIAR. The Scoping Opinion can be found within **Appendix 5.1 Scoping Opinion, Volume 4 Appendices**.

Table 7-2 Scoping Response

Consultee	Summary of Scoping Opinion	Action Taken
<p>NatureScot</p>	<p>It supports the intention to undertake HRA alongside this EIA owing to the closeness of the Firth of Forth SPA and Outer Firth of Forth and St Andrews Bay Complex SPA, and the potential functional connectivity to Loch Leven SPA</p>	<p>HRA within Appendix 7.6 Habitats Regulations Assessment (Volume 4)</p>

Consultee	Summary of Scoping Opinion	Action Taken
	Impacts on qualifying features of the above SPAs from work at the landfall area could be mitigated by avoiding works in the wintering season	As set out within Section 7.6 Embedded Mitigation , workers will be restricted to circa 4 personnel along the coastal path to observe the HDD and jointing activities. No construction vehicles or activities will occur within this area of the coastline due to sensitive ecological features (seals and wintering birds)
	The proposal is unlikely to have Significant Effects on the qualifying features of the following SSSIs that are close to the converter station and proposed underground cable routes, assuming work will not cause any hydrological impacts to these sites: Loch Leven SSSI, Camilla Loch SSSI, Holl Meadows SSSI and Carriston Reservoir SSSI	No significant impacts on Loch Leven SSSI are reported as set out under Assessments of Effects in Section 7.7 Impacts and Effects on Ecological Features . As set out within Table 7-11. Ecological and ornithological features scoped out of further assessment , Camilla Loch was scoped out of further assessment. Hydrological impacts on these sites are addressed in Chapter 8 Water Environment and Flood Risk .
	Impacts on the designated seal haul out site at Kinghorn Rocks could be mitigated by seasonal working restrictions	As set out within Section 7.7 Impacts and Effects on Ecological Features no effects are likely on resting seals at Kinghorn Rocks.
	NatureScot supports the intention to undertake ecological surveys to assess the habitats and the presence of any protected species within the Application Boundary and agrees with the list of excluded surveys and their justifications provided in the Scoping Report	Noted
	Support is given to the development of a CEMP to manage the mitigation of impacts and to the intention to assess the in-combination effects	A CEMP will be produced post-consent.
Fife Council Natural	The species surveys identified for scoping-out are deemed reasonable	Noted

Consultee	Summary of Scoping Opinion	Action Taken
Heritage Specialist	Where suitable habitats for red squirrel, etc., are unavoidable, it is advised that the Applicant should ensure that a pre-works survey is conducted as part of the species-specific mitigation	Pre-construction surveys are required as set out within Section 7.4 Methodology, Section 7.7 Impacts and Effects on Ecological Features and Section 7.8 Additional Mitigation .
	Important Ecological Features (IEFs) scoped-in for assessment are also deemed appropriate	Noted
	The Natural Heritage specialist welcomes HDD, especially where this ensures no loss of trees to felling within woodland areas	Noted
	The overall approach and scope to ecological assessment is deemed appropriately considered	Noted

7.4 Methodology

Guidance and Standards

The following guidance was used when designing the field survey carried out to inform this assessment and to determine the scope and method of the assessment itself:

- *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2024);
- standing advice notes for protected species published by NatureScot (2025a);
- Fife Local Biodiversity Action Plan (LBAP); and,
- FIFEplan supplementary guidance (Fife Council, 2025)
 - Making Fife’s Places, Supplementary Guidance (Fife Council, 2018); and
 - Low Carbon Fife, Supplementary Guidance (Fife Council, January 2019)

In addition, other industry-standard good practice guidelines for surveying for protected/important ecological features were also followed and are referenced throughout this section.

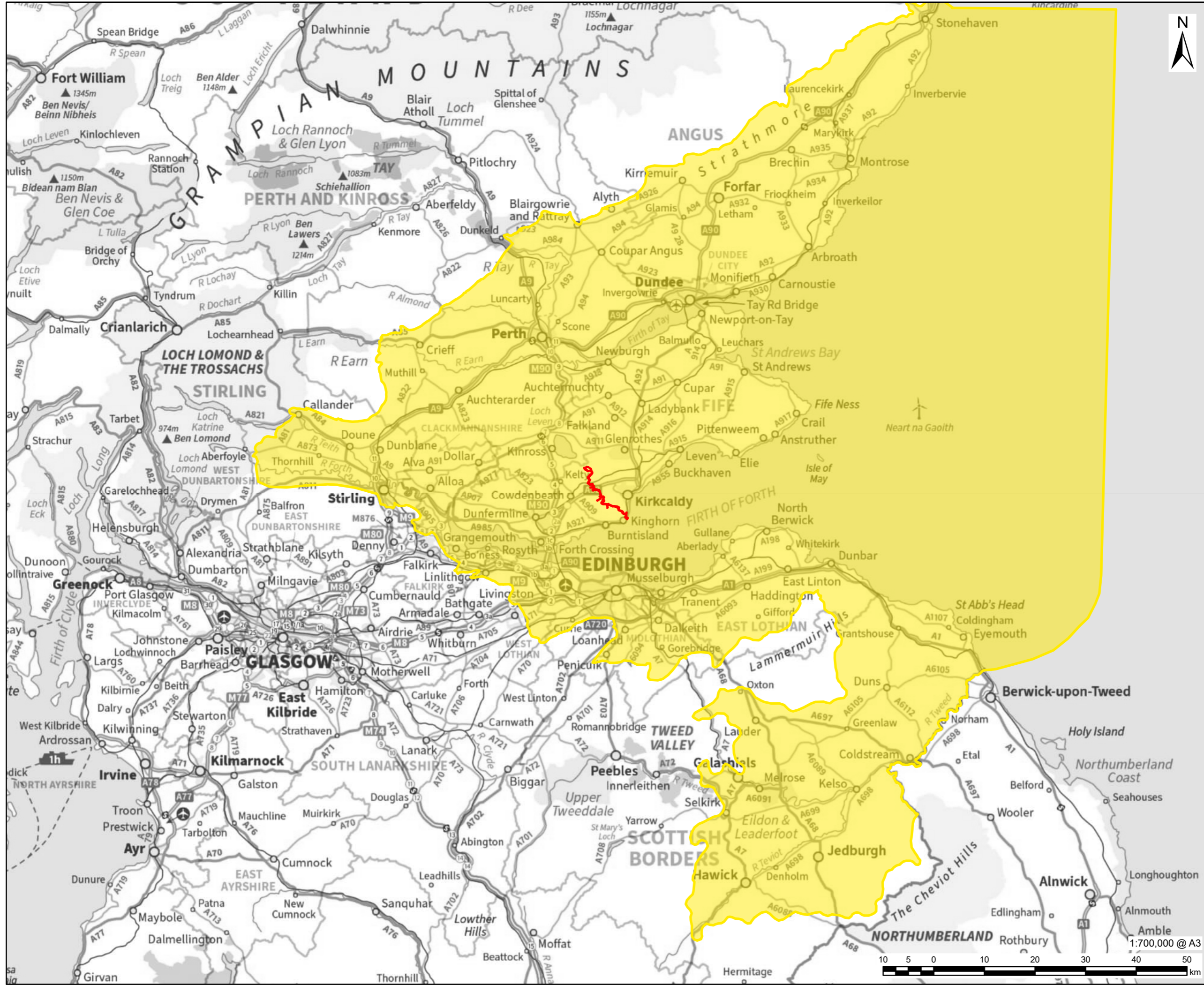
Study Area

The Zone of Influence (Zol) of the Scottish Onshore Scheme is the area over which ecological features may be subject to impacts as a result of its construction and/or operation, and may extend beyond the Application Boundary.

The Zol will vary for different ecological features depending on their sensitivity to environmental change. It is therefore appropriate to identify different Zol for different features. As recommended by the Chartered Institute of Ecology and Environmental

Management (CIEEM) in CIEEM (2024), professionally accredited or published studies and guidance, where available, were used to help determine the likely Zol, as well as professional judgement. However, CIEEM also highlight that establishing the Zol should be an iterative process and can be informed by further desk study and field survey. Where limited information was available, the Precautionary Principle (European Union, 2000) was adopted and a Zol estimated on that basis.

The study areas used for desk study and field survey, and which are reported below, were designed to allow sufficient data to be collected to establish the baseline condition of ecological features.



PROJECT
Eastern Green Link 4

CLIENT
SP Energy Networks

CONSULTANT
AECOM Limited
One Trinity Gardens
Newcastle
NE1 2HF
www.aecom.com

LEGEND
 Planning Application Boundary
 Eastern Lowlands (NHZ 16)

NOTES

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ISSUE PURPOSE

EIA REPORT

PROJECT NUMBER

60707131

FIGURE TITLE

Site Location and Natural Heritage Zone (NHZ) 16

FIGURE NUMBER

Figure 7.1

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Assessment Scope

The scope of survey and assessment described in this chapter was informed by the guidance contained in the published documents listed under **Guidance and Standards** above, on the responses of consultees (as set out in **Section 7.3: Consultation**), and on the results of detailed study once underway.

NatureScot has devised 21 'Natural Heritage Zones' (NHZ) covering the whole of Scotland (SNH, 2002a), which reflect biogeographical differences across the country. Assessment of the impacts on ecological features in this EIA has been carried out in the context of the Eastern Lowlands NHZ (NHZ 16), within which the Scottish Onshore Scheme is located (see **Figure 7.1**). This includes the assessment of cumulative effects which considers the potential for in-combination effects to arise due to other energy developments and land use changes within NHZ 16.

NHZ 16 is characterised by its low coastline and extensive floodplains. It is part of the Midland Valley in Scotland, a low-lying region framed by the Grampian Highlands to the north-west and the Southern Uplands to the south-west. This NHZ is of particular importance for agriculture, river systems, coast and estuaries, and settlements (SNH, 2002b).

The guidelines for EclA published by CIEEM (2024) recommend that only those features that are 'important' and that could be significantly affected by the Scottish Onshore Scheme require detailed assessment, stating that "*it is not necessary to carry out detailed assessment of ecological features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable*".

Consequently, for the purposes of the desk study, field survey and assessment described in this chapter, 'important' ecological features were taken to be:

- Sites designated for nature conservation, including those designated at national and local levels;
- The qualifying features of SACs, SPAs and Wetlands of International Importance (Ramsar sites) within at least 10 km of the Scottish Onshore Scheme (or further where a hydrological or other ecological connection may exist), and the notified features of SSSIs within at least 2 km of the Scottish Onshore Scheme;
- Woodland listed on the Ancient Woodland Inventory (AWI);
- Habitats listed on Annex I of the Habitats Directive;
- Species listed on Annex I of the Birds Directive;
- Species listed on Annex II of the Habitats Directive;
- Species listed on Schedules 2 and 4 of the Habitats Regulations;
- Species listed on Schedules 1, 5 and 8 of the WCA;
- Badger *Meles meles*, which is afforded protection under the Protection of Badgers Act;
- Habitats and species listed on the Scottish Biodiversity List (SBL), which are thus identified as being of principal importance for biodiversity conservation in Scotland;

- Species on the Red List of Birds of Conservation Concern (BoCC) 5 (Stanbury *et al.*, 2021);
- Species or species assemblages shown to indicate good habitat conditions, for example Good Ecological Status or better in relation to the WFD; and,
- Invasive non-native species listed on Schedule 9 of the WCA (although this no longer legally applies in Scotland), those considered to be of EU concern under the Invasive Alien Species Regulation, and those listed in Annex B of NatureScot’s Developing with Nature Guidance (NatureScot, 2022).

Other habitats or species that may be rare, scarce or otherwise important are also included where deemed appropriate through available information and/or professional judgement.

Baseline Data Collection

Desk Study

A desk study was carried out to identify nature conservation designations and records of important habitats and species (as defined under **Assessment Scope** above) potentially relevant to the Scottish Onshore Scheme. A stratified approach was taken when defining the desk study area, based on the likely Zol of the Scottish Onshore Scheme on different ecological features. Accordingly, the desk study sought to identify:

- SPAs, SACs, and Ramsar sites within at least 10 km of the Scottish Onshore Scheme (or further where a hydrological or other ecological connection may exist);
- SSSIs within 2 km of the Scottish Onshore Scheme (or further where a hydrological or other ecological connection may exist);
- any other nationally or locally designated nature conservation sites within 1 km of the Scottish Onshore Scheme; and
- recent records³ of protected and/or important habitats and species within 1 km of the Scottish Onshore Scheme made in the last ten years.

A range of data sources was used for the desk study, as set out in **Table 7-3 Desk study data sources**.

Table 7-3. Desk study data sources

Data source	Date accessed	Data obtained
Amphibian and Reptile Groups of the UK (ARG UK) and Amphibian and Reptile Conservation (ARC) Record Pool (https://www.recordpool.org.uk/)	February 2025	Amphibian/reptile hectad records.
Ancient Tree Inventory (https://ati.woodlandtrust.org.uk/)	February 2025	Locations of known veteran or notable ancient trees.

³ Records are generally considered recent if made in the past 10 years, however, more historic records may be used where appropriate.

Data source	Date accessed	Data obtained
Fife Council website (https://www.fife.gov.uk/)	February 2025	<ul style="list-style-type: none"> LDP policies relevant to nature conservation. Local non-statutory nature conservation designations and/or green infrastructure assets.
Fife Nature Records Centre	September 2024	<ul style="list-style-type: none"> Records of protected and/or important species. Records of non-statutory sites.
Mammal Society Species Hub (https://www.mammal.org.uk/species-hub/full-species-hub/discover-mammals/)	February 2025	Information on protected and important mammals.
Marine Scotland Maps National Marine Plan Interactive (NMPi) (https://marinescotland.atkinsgeospatial.com/nmpi/)	February 2025	Atlantic salmon <i>Salmo salar</i> distribution in Scotland
NatureScot Natural Spaces webpage (https://cagmap.snh.gov.uk/natural-spaces/)	February 2025	<ul style="list-style-type: none"> Ancient Woodland Inventory for Scotland. Results of Native Woodland Survey of Scotland (NWSS).
NatureScot SiteLink webpage (https://sitelink.nature.scot/home)	February 2025	<ul style="list-style-type: none"> SPAs, SACs and Ramsar sites within 10 km of the Scottish Onshore Scheme. SSSIs within 2 km of the Scottish Onshore Scheme.
National Biodiversity Network (NBN) Atlas Scotland (https://scotland.nbnatlas.org/)	September 2024	Commercially-available records of protected and/or important species within 1 km of the Scottish Onshore Scheme, made since 2000.
Ordnance Survey (OS) 1:25,000 maps and aerial photography (https://www.bing.com/maps/)	February 2025	Habitats and connectivity relevant to interpretation of planning policy and potential important species constraints.

Data source	Date accessed	Data obtained
Saving Scotland's Red Squirrels (scottishsquirrels.org.uk)	February 2025	Red squirrel <i>Sciurus vulgaris</i> records.
Scotland's Environment Map (https://map.environment.gov.scot/sewebmap/)	February 2025	Obstacles to fish migration.
SEPA Water Classification Hub (https://www.sepa.org.uk/data-visualisation/water-classification-hub/)	February 2025	Status of watercourses and standing waters.
The National Water Vole Project (NWVP) (https://www.wildlifetrusts.org/national-water-vole-database-mapping-project)	February 2025	Water vole <i>Arvicola amphibius</i> hectad records.

Additionally, NatureScot was contacted on 08 August 2025 to request data relating to freshwater pearl mussel *Margaritifera margaritifera* in watercourses within the Application Boundary, and Fife Raptor Study Group (RSG) were contacted for records of raptor species. Details can be found within **Section 7.5 Baseline Environment** and **Appendix 7.4 Ornithology (Volume 4 Appendices)** respectively.

Field Survey

A summary of the ecological field surveys undertaken to collect baseline data relevant to the Scottish Onshore Scheme is given under the following sub-headings. All surveys were carried out by suitably experienced AECOM ecologists with experience in the relevant subject areas. Unless otherwise specified under the relevant subheading, field surveys occurred between 16 September and 23 October 2024, which is sub-optimal timing for habitats and water vole survey. However, as discussed under Limitations and Assumptions below, a precautionary approach is taken where species diversity may reasonably be underestimated due to seasonality, ensuring that the conclusions drawn from this assessment are robust.

All field mapping was recorded using Esri Field Maps on a GPS-enabled tablet or mobile phone with aerial photography, to maximise accuracy. Field data was subsequently refined as necessary in GIS for figure production.

Habitat Survey

A habitat survey was carried out within the Application Boundary (as it was understood at the time of survey) plus a 50 m buffer where access was possible and safe. The survey generally followed the Phase 1 habitat survey method (JNCC, 2010), by which all areas of land within the survey area are mapped and assigned standard habitat types; however, habitats were classified according to the UK Habitat Classification (UKHab) system (UKHab Ltd, 2023) rather than Phase 1. Additionally, ecological notes were taken to inform habitat condition in line with the statutory biodiversity metric (DEFRA, 2024).

Notes were made for each habitat which reflect conditions at the time of survey; and relevant ecological characteristics were documented. Typical and important/notable plants were recorded using the DAFOR (D=dominant; A=abundant; F=frequent; O=occasional; R=rare) scale, including any occurrence of invasive non-native species (INNS) of plant.

In all areas of notable habitat identified by the initial habitat survey (e.g. groundwater dependent terrestrial ecosystems (GWDTE) or habitats listed on the SBL) a National Vegetation Classification (NVC) survey was carried out following published guidelines between 19 and 21 May 2025.

Bat Surveys

Bat survey methods are summarised below, and full details are provided in **Appendix 7.2: Bats (Volume 4 Appendices)**.

In accordance with industry-standard guidelines published by the Bat Conservation Trust (BCT) (Collins, 2023), a Daytime Bat Walkover (DBW) was carried out to assess the suitability of habitats for roosting, commuting and foraging bats. Suitability was categorised according to the descriptions given in **Table 7-4 Bat habitat suitability categories (from Collins (2023))** below.

Table 7-4. Bat habitat suitability categories (from Collins (2023))

Suitability	Description of commuting and foraging habitat
None	No habitat features on Site likely to be used by any commuting or foraging bats at any time of year (i.e., no habitats that provide continuous lines of shade/protection for flight lines or generate/shelter insect populations available to foraging bats).
Negligible	No obvious habitat features on Site likely to be used for commuting or by foraging bats. However, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	Habitat that could be used by small number of bats for commuting such as a gappy hedgerow or unvegetated stream, but isolated (i.e., not very well connected to the surrounding landscape by other habitat). Suitable but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting, such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for commuting such as river valleys, streams, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed grassland. Site is close to and connected to known roosts.

Preliminary Roost Assessment (PRA) of structures and Ground Level Tree Assessment (GLTA) were also completed concurrently with the DBW, within the Application Boundary (as it was understood at the time of survey) where access was possible and safe. Following Collins (2023), structures were assigned a suitability category of None, Negligible, Low, Moderate, or

High based on the presence of Potential Roost Features (PRF). Trees were assessed as having 'PRF-M', where they had potential suitability for use by multiple bats (including maternity colonies), or 'PRF-I', where they contained features unlikely to be PRF-M but are potentially suitable for only individual or very small numbers of bats.

PRFs searched for included suitable holes, cracks or splits in trees, and any possible ingress points to buildings or structures. Where such features existed, searches were made for evidence of use by bats such as droppings, staining, foraging remains, auditory evidence and the presence of live or dead bats.

Two dusk emergence surveys were carried out on the only tree categorised as PRF-M that may be directly impacted by the Scottish Onshore Scheme (T27; see **Section 7.5: Baseline Environment** below) on 09 and 30 July 2025. This entailed monitoring features on the tree with the aid of night vision cameras and bat detectors to establish if any are used by roosting bats. Footage was subsequently reviewed to ensure survey accuracy, and sonograms were analysed to provide an indication of bat activity during the surveys.

Otter, Water Vole and Beaver Survey

Surveys for otter *Lutra lutra*, water vole and beaver *Castor fiber* were carried out along all watercourses and other waterbodies within a suitable buffer of the Application Boundary as it was understood at the time of survey (200 m for otter and 50 m for water vole and beaver), as far as access was possible and safe.

The surveys followed guidance in published literature (Campbell *et al.*, 2012; Chanin, 2003; Dean *et al.*, 2016; Liles, 2003; Strachan, 2007; Strachan *et al.*, 2011). Any evidence found during the survey was mapped and accompanying field notes taken. Evidence of otter searched for included refuges (holts and layups), spraints (faeces), footprints, trails and foraging signs. Where found, spraints were recorded as fresh, recent or old, according to their apparent age. Evidence of water vole searched for included latrines, footprints, droppings, burrows, trails, and foraging evidence. Evidence of beaver searched for included refuges (burrows or lodges), trails, footprints, scent mounds, feeding caches and foraging signs. Where found, foraging signs were recorded as fresh, old, or mixed based on their apparent age.

Surveyors walked in the channel of watercourses where possible and visually inspected all parts of the banks. Where dense vegetation or soft substrate prevented this, searches for field signs were made as far as access allowed.

Badger Survey

Surveys for badger were carried out in areas of potentially suitable habitat within 50 m of the Application Boundary (as it was understood at the time of survey), as far as access was possible and safe.

The surveys followed guidance in published literature (Harris *et al.*, 1989; Scottish Badgers, 2018). Any evidence of badger found during the survey was mapped and accompanying field notes taken. Badger evidence searched for included setts, spoil heaps, bedding, guard hairs, latrines, footprints, trails, scratch marks and foraging activity. If present, setts were classed as main, annexe, subsidiary or outlier where possible, and holes described as well-used, partially used, or disused, based on relevant guidance (Scottish Badgers, 2018).

Wintering Waterbird Surveys

Wintering waterbird survey methods are summarised below, and full details are provided in **Appendix 7.4: Ornithology (Volume 4 Appendices)**.

Survey of wintering waterbirds were carried out once per month from September 2024 to March 2025 inclusive. Surveys were undertaken of suitable habitat within 500 m of the Converter Station and 1 km of the Landfall. The surveys focussed on high and low tides, to investigate use of the area by birds under different tidal conditions. Where possible, surveys were carried out from two hours before to two hours after the focal tide condition and comprised a similar number of high and low tide surveys.

The surveys generally followed the method adopted by the British Trust for Ornithology (BTO) for the national WeBS scheme (BTO, 2017), which itself is based on the ‘look-see’ method described in Bibby *et al.* (2000). This involved scanning fields / coastal habitats using binoculars and recording the species / number of birds and their behaviour.

Great Crested Newt Surveys

Great crested newt *Triturus cristatus* survey methods are summarised below, and full details are provided in **Appendix 7.4: Great Crested Newts (Volume 4 Appendices)**.

A desk-based search for ponds within the Application Boundary and a 250 m buffer (as it was understood at the time of survey) was carried using aerial imagery and Ordnance survey (OS) mapping and 22 ponds potentially suitable for great crested newt were identified. Four further waterbodies were scoped out due to being unsuitable: an extremely large, unvegetated artificial waterbody associated with historical quarry operations; three small artificial waterbodies apparently used as water treatment facilities; and a small, unvegetated, heavily trampled and muddy puddle by a gate in a livestock field. The locations of ponds in relation to the Application Boundary are shown on **Figure 7.11**, note that some references refer to a group of ponds (e.g. EGL14 refers to all three waterbodies associated with treatment works).

Habitat Suitability Index (HSI) assessment was carried out on all identified ponds, where access was possible and safe, following industry-standard guidance (ARGUK, 2010; Oldham, 2000). This included making field-based observations of habitat attributes: location, area, drying, water quality, shade, waterfowl, fish, number of waterbodies within 1 km, macrophyte cover, and waterbody surface area. For ponds within the habitat survey area this was done concurrently with habitat survey, for ponds outside this area HSI assessment was completed at the same time as eDNA sampling.

The ten field scores (one per habitat attribute) are converted into suitability index scores which are multiplied together then calculated to the power of 0.1 to give a HSI score between 0 (indicating unsuitable habitat) and 1 (representing optimal habitat). The system is not sufficiently precise to conclude that any particular waterbody with a high score will support great crested newt or that a waterbody with a low score will not support the species, though it does provide useful context regarding the suitability of a waterbody for great crested newt.

Environmental DNA (eDNA) sampling was carried out on all ponds which could support great crested newt between 20 and 22 May 2025. This involved the collection of water samples to be analysed for the DNA of species of interest, in this case great crested newt, following

approved field and laboratory protocols (Biggs *et al.*, 2014). Kits for eDNA collection were provided by SureScreen Scientifics Ltd and collected samples were subsequently transported to them for analysis. No eDNA samples were collected of ponds considered unsuitable, e.g. those that were dry at the time of survey.

Other Terrestrial Species

No dedicated pine marten *Martes martes*, red squirrel, wildcat *Felis silvestris*, mountain hare *Lepus timidus*, brown hare *Lepus europaeus* or hedgehog *Erinaceus europaeus* survey was undertaken. However, any sightings of these mammal species, or evidence of their presence (such as squirrel-eaten cones), were noted if encountered incidentally during all fieldwork.

Observations of reptiles, other amphibians and important invertebrates were recorded if encountered during all fieldwork, but no targeted survey was carried out for these species.

Assessment Methodology

The assessment of impacts and effects on ecological features described in this chapter was conducted in accordance with the guidelines published by CIEEM (2024). This may differ from the approach described in **Chapter 5: Environmental Impact Assessment Methodology**; however, it aligns with industry-standard good practice. The principal steps involved in the CIEEM approach can be summarised as:

- baseline conditions are determined through targeted desk study and field survey to identify features that are both present and might be affected by the Scottish Onshore Scheme (both those likely to be present at the time works begin, and for comparison, those predicted to be present at a set time in the future);
- the importance of identified ecological features is evaluated to place their relative biodiversity and nature conservation value into a geographic context, determining those that need to be considered further within the impact assessment;
- the potential impacts of the Scottish Onshore Scheme on relevant ecological features are described, considering established best practice, legislative requirements and embedded design measures;
- the likely effects (adverse or beneficial) on relevant ecological features are assessed and, where possible, quantified;
- measures to avoid or reduce (or, if necessary, compensate for) any predicted significant effects, if possible, are developed in conjunction with other elements of the design (including mitigation for other environmental disciplines);
- any residual effects of the Scottish Onshore Scheme and their significance are reported; and,
- scope for enhancement measures is considered.

For the purposes of this assessment, the geographical level of 'National' means Scotland, 'Regional' is defined as the area encompassed by NHZ 16, 'County' relates to the Fife local authority area, and 'Local' is the area within 10 km of the Scottish Onshore Scheme.

In line with CIEEM guidelines, the terminology used within this chapter draws a clear distinction between the terms ‘impact’ and ‘effect’. Within this chapter, these terms are defined as follows:

- impact – actions resulting in changes to an ecological feature (for example, demolition of a building which supports roosting bats); and,
- effect – the outcome resulting from an impact acting upon the conservation status or structure and/or function of an ecological feature (for example, killing/injuring bats and reducing the availability of breeding habitat because of the loss of a bat roost may lead to an adverse effect on the conservation status of the population concerned).

Impacts are assessed in view of the conservation status of the habitats and species under consideration. CIEEM (2024) states that, for habitats, “*conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area*”. NatureScot defines the conservation status of a species as “*the sum of the influences acting on it which may affect its long-term distribution and abundance, within the geographical area of interest*” (SNH, 2018). A species’ conservation status is considered to be ‘favourable’ when:

- population dynamics indicate that the species is maintaining itself on a long-term basis as a viable component of its habitats;
- the natural range of the species is not being reduced, nor is it likely to be reduced for the foreseeable future; and,
- there is (and probably will continue to be) a sufficiently large habitat to maintain its population on a long-term basis.

NatureScot recommends that the concept of the favourable conservation status of a species should be applied at a national (Scottish) level in order to determine the level of significance of an effect arising from the impact(s) of development (SNH, 2018). However, as highlighted previously, this assessment has also been conducted in the context of NHZ 16, within which the Scottish Onshore Scheme is located. Therefore, even where an impact may not affect the conservation status of a species at the national level, the potential for effects on the conservation status of that species within the NHZ has also been considered.

For the purposes of this EIA, effects predicted to be significant on an ecological feature at the County or greater geographic level are considered to be ‘Significant’ in broader EIA terms, whereas those predicted to be significant only at the Local or less than Local levels, are considered to be ‘Not Significant’.

A detailed description of the CIEEM method for impact assessment is provided in **Appendix 7.1: Ecological Impact Assessment Method (Volume 4 Appendices)**.

The impacts on ecological features arising during the decommissioning phase are expected to be broadly similar to those which will arise during the construction phase, albeit likely less should the underground cables be left in-situ. For this reason, the potential impacts and effects of the decommissioning phase have been scoped out of assessment as set out within **Chapter 5 Environmental Impact Assessment Methodology**.

Limitations and Assumptions

The aim of the desk study was to help characterise the baseline context of the Scottish Onshore Scheme and provide valuable background information that may not be captured by field survey alone. Information obtained during the desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for a particular species does not necessarily mean they do not occur in the study area. Likewise, the presence of records for a particular species does not automatically mean that these still occur within the area of interest or are relevant to the Scottish Onshore Scheme.

Where habitat edges are sharp and coincide with features on base-mapping or aerial photography that are considered correct, their placement is based on the accuracy of that data in GIS. Otherwise, habitat edges are best estimates as judged in the field. Note also that habitat transitions can be gradual without sharp boundaries. Consequently, habitat mapping and any stated habitat areas are approximate and should be verified by measurement on site where required for design or construction.

Survey areas were based on the Application Boundary of the Scottish Onshore Scheme as it was understood at the time of survey. Owing to design changes and lack of land access, some sections within the Application Boundary and surrounding habitats have not been surveyed. Areas not accessed and discrepancies between the survey area and the Application Boundary are shown in the figures supporting this chapter. Habitats not surveyed appear from aerial imagery to largely comprise agricultural fields with occasional field drains of limited ecological value. It is assumed that no trees would be felled during construction in areas of land within the Application Boundary that were not surveyed. Two areas of likely higher quality ecologically were not accessed:

- a. a private area of scrub / woodland associated with Cotter House, west of Auchterderran, where an attenuation basin and related pipes are proposed to be temporarily constructed; and,
- b. a block of woodland associated with Grange Farm towards the southern end of the Application Boundary where the cable will be installed via trenchless HDD.

Subsequently, categorisation and condition assessment of habitats in the north-west of the Scottish Onshore Scheme was not complete. This limitation is discussed further in relation to the BNG assessment within **Appendix 7.7: Biodiversity Net Gain Report (Volume 4 Appendices)** and is considered when carrying out the ecological impact assessment.

Habitat surveys were conducted at the end of the optimal survey period when some plant species (particularly woodland flora) have died back or become difficult to identify. As the majority of habitats recorded are influenced by intensive agricultural practice, it is highly unlikely that rare species are present within the Site. When considering if habitats align with priority habitat types, a precautionary approach was taken.

NVC surveys of potential GWDTE were carried out within a 100 m buffer of the Application Boundary; however, guidance recommends that this is extended to 250 m where excavations deeper than 1 m are required so it is possible GWDTE within the ZoI of the Scottish Onshore Scheme were not identified during field surveys. This limitation is considered when carrying

out the impact assessment and in lieu of habitat surveys, aerial imagery is reviewed to aid the assessment.

Only one survey for water vole was carried out in October, at the end of the suitable survey season (mid-April-September). It is however, recommended that a second survey for water vole be completed to account for seasonal changes in distribution (Strachan *et al.*, 2011). This limitation is considered when drawing conclusions about water vole presence within the Application Boundary.

Two emergence surveys were carried out on the PRF-M tree which will likely be felled during construction. However, emergence surveys on potential bat roosts in trees are not sufficient to confirm the roost is not used at other times of the year as tree-roosting bats exhibit roost-switching behaviour. No bat activity survey was undertaken therefore the species-assemblage present around the PRF is not known and the impact assessment of roosting bats is carried out on a precautionary basis. The majority of the Scottish Onshore Scheme will be underground and linear features crossing the route will be reinstated. Furthermore, the only permanent above ground infrastructure (the converter station) is proposed to be constructed within large pasture fields of low quality for foraging / commuting bats so it can reasonably be assumed that bat activity will be low in this area. Therefore, this is not considered to affect the conclusions drawn in this report in relation to commuting/foraging bats.

Non-breeding bird surveys at the Landfall were only carried out from November-March inclusive. There is still considered to be sufficient data from the November-March surveys to obtain a baseline of birds utilising the habitats. Additionally, some fields surrounding the Landfall were difficult to view from public access and only able to be seen while driving by, resulting in approximate estimates of the number of birds spotted in these fields.

No dedicated pine marten or red squirrel survey was undertaken due to the limited suitable habitat within the Zol; however, the Scottish Onshore Scheme avoids direct impacts on woodland habitat as far as possible. Therefore, any impacts on suitable habitat are minimal and standard species-protection measures would be adopted, where necessary, to avoid effects in relation to these species (as described in **Section 7.6: Embedded Mitigation**).

No dedicated survey for common reptiles, amphibians or breeding bird was carried out, as impacts of the Scottish Onshore Scheme will be temporary (except for small areas of relatively low ecological value at the converter station) and will largely affect agricultural fields of poor quality for these groups. It can, therefore, be reasonably assumed that only small populations of what are common and widespread species are likely to be present if at all.

The likelihood of deviations from baseline conditions increases with elapsed time since survey. While the baseline is not expected to change sufficiently to alter the impact assessment (assuming the application is not delayed more than two years since the date of field survey), the precise situation regarding protected/important species may nevertheless differ (for example, new otter holts may become established). In line with NatureScot guidance, pre-construction surveys should be completed as close to the construction period as possible, and no more than 3 months before the start of works with subsequent licencing and mitigation implemented to ensure compliance with legislation (NatureScot, 2025a).

7.5 Baseline Environment

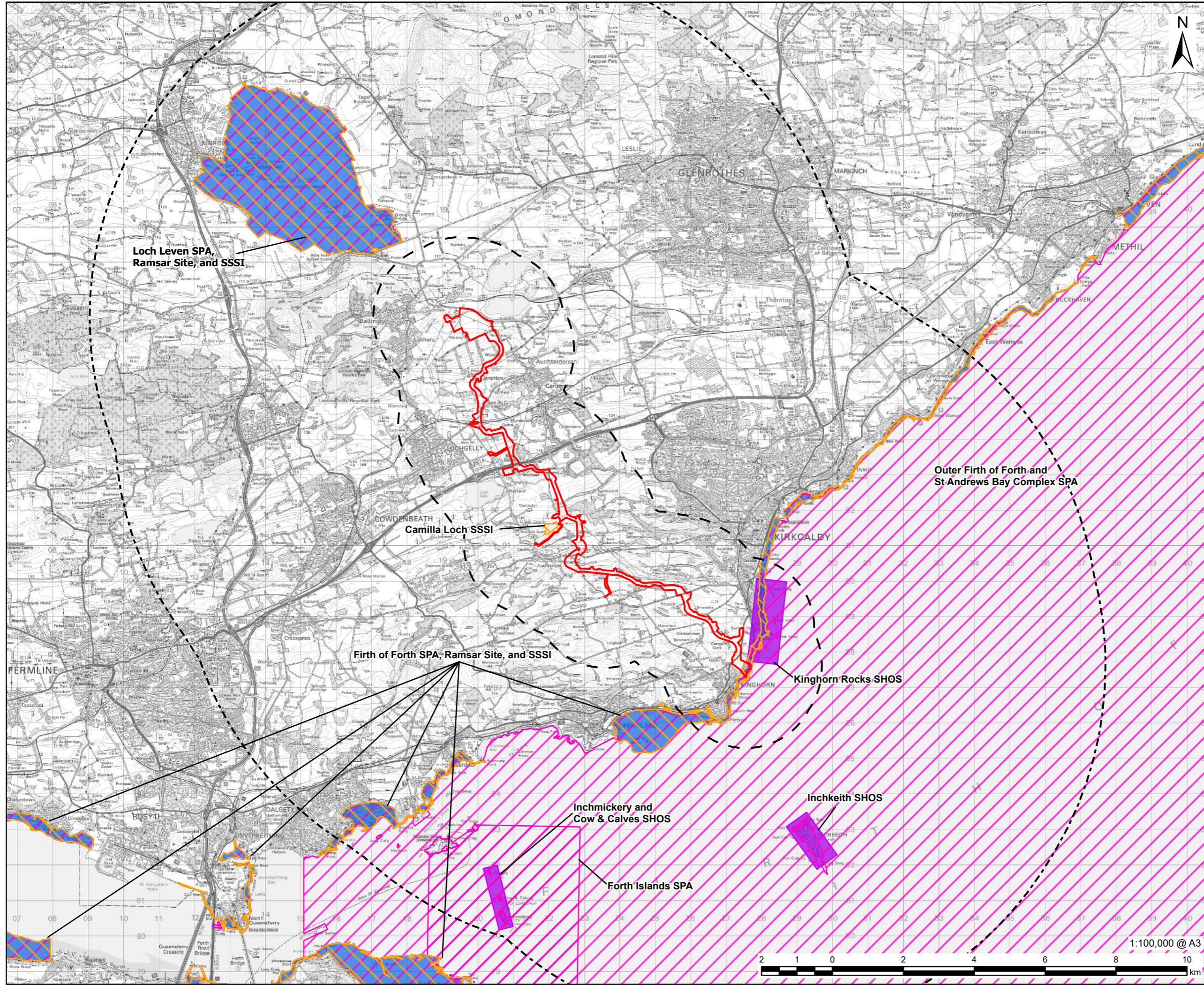
Designated Sites

Statutory Designated Sites

There are no SACs within 10 km of the Scottish Onshore Scheme. Four SPAs designated for a range of non-breeding and breeding birds are present within 20 km of the Scottish Onshore Scheme: Firth of Forth SPA, Outer Firth of Forth and St Andrews Bay Complex SPA, Forth Islands SPA, and Loch Leven SPA. Firth of Forth and Loch Leven are also designated as Ramsar sites and SSSIs.

One additional SSSI exists with potential connectivity to the Scottish Onshore Scheme: Camilla Loch SSSI.

Information on all these nature conservation sites is given in **Table 7-5 Summary of Statutory Designated Sites for Nature Conservation**, and their locations relative to the Application Boundary are shown on **Figure 7.2 Statutory Sites Designated for Nature Conservation**.



- Planning Application Boundary
- 2km Study Area
- 10km Study Area
- Designated Sites
- Site of Special Scientific Interest (SSSI)
- Special Protection Area (SPA)
- Wetland of International Importance (Ramsar site)
- Seal Haul-out Site (SHOs)

NOTES

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ISSUE PURPOSE

EIA REPORT

PROJECT NUMBER

60707131

FIGURE TITLE

Statutory Sites Designated for Nature Conservation

FIGURE NUMBER

Figure 7.2



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Table 7-5. Summary of Statutory Designated Sites for Nature Conservation

Site Name	Reason for Designation	Relationship to the Project
Special Protection Areas		
Firth of Forth SPA	<p>A complex of estuarine and coastal habitats which includes extensive, invertebrate-rich intertidal flats and rocky shores, areas of saltmarsh, lagoons and sand dune. The qualifying features are the following non-breeding bird species:</p> <ul style="list-style-type: none"> • bar-tailed godwit <i>Limosa lapponica</i>; • common scoter <i>Melanitta nigra</i>; • cormorant <i>Phalacrocorax carbo</i>; • curlew <i>Numenius arquata</i>; • dunlin <i>Calidris alpina</i>; • eider <i>Somateria mollissima</i>; • golden plover <i>Pluvialis apricaria</i>; • goldeneye <i>Bucephala clangula</i>; • great crested grebe <i>Podiceps cristatus</i>; • grey plover <i>Pluvialis squatarola</i>; • knot <i>Calidris canutus</i>; • lapwing <i>Vanellus vanellus</i>; • long-tailed duck <i>Clangula hyemalis</i>; • mallard <i>Anas platyrhynchos</i>; • oystercatcher <i>Haematopus ostralegus</i>; • pink-footed goose <i>Anser brachyrhynchus</i>; • red-breasted merganser <i>Mergus serrator</i>; • red-throated diver <i>Gavia stellata</i>; • redshank <i>Tringa totanus</i>; • ringed plover <i>Charadrius hiaticula</i>; • scaup <i>Aythya marila</i>; • shelduck <i>Tadorna tadorna</i>; • Slavonian grebe <i>Podiceps auratus</i>; • turnstone <i>Arenaria interpres</i>; • velvet scoter <i>Melanitta fusca</i>; • wigeon <i>Anas penelope</i>. <p>In addition, the non-breeding waterfowl assemblage and passage sandwich tern <i>Sterna sandvicensis</i> are also qualifying features.</p>	<p>The Scottish Onshore Scheme partially overlaps the boundary of Firth of Forth SPA, at the landfall at Kinghorn. This SPA extends along the north (and south) coast of the Firth of Forth.</p>
Outer Firth of Forth and St Andrews Bay Complex SPA	<p>A large estuarine/marine site which encompasses the Firth of Forth and Firth of Tay. It is designated for the following qualifying non-breeding species:</p> <ul style="list-style-type: none"> • black-headed gull <i>Chroicocephalus ridibundus</i>; 	<p>The landfall for the Scottish Onshore Scheme lies immediately adjacent to this SPA, which encompasses the Firth of Forth as far upstream as Inverkeithing.</p>

Site Name	Reason for Designation	Relationship to the Project
	<ul style="list-style-type: none"> • common gull <i>Larus canus</i>; • common scoter; • eider; • goldeneye; • guillemot <i>Uria aalge</i>; • herring gull <i>Larus argentatus</i>; • kittiwake <i>Rissa tridactyla</i>; • little gull <i>Hydrocoloeus minutus</i>; • long-tailed duck; • razorbill <i>Alca tadorna</i>; • red-breasted merganser; • red-throated diver; • shag <i>Phalacrocorax aristotelis</i>; • Slavonian grebe; and, • velvet scoter. <p>In addition, the site is also designated for the non-breeding waterfowl and seabird assemblages it supports.</p> <p>Furthermore, the following breeding species are also qualifying features:</p> <ul style="list-style-type: none"> • Arctic tern <i>Sterna paradisaea</i> (breeding); • common tern <i>Sterna hirundo</i>; • gannet <i>Morus bassanus</i>; • guillemot; • herring gull; • kittiwake; • Manx shearwater <i>Puffinus puffinus</i>; • puffin <i>Fratercula arctica</i>; and, • shag. <p>The breeding seabird assemblage supported by the site is also a qualifying feature.</p>	
Loch Leven SPA	<p>Loch Leven is the largest natural eutrophic lake in Britain. It is a relatively shallow loch, surrounded by farmland, with a diverse aquatic flora and shoreline vegetation. It is designated for the following qualifying non-breeding bird species:</p> <ul style="list-style-type: none"> • cormorant; • gadwall <i>Anas strepera</i>; • goldeneye; • pink-footed goose; • pochard <i>Aythya farina</i>; • shoveler <i>Anas clypeata</i>; • teal <i>Anas crecca</i>; • tufted duck <i>Aythya fuligula</i>; and, • whooper swan <i>Cygnus cygnus</i>. 	<p>The closest boundary of the SPA is approximately 2.4 km north-west of the Scottish Onshore Scheme. The qualifying geese and swan species use land across the landscape surrounding the SPA.</p>

Site Name	Reason for Designation	Relationship to the Project
	In addition, the non-breeding waterfowl assemblage is also a qualifying feature.	
Forth Islands SPA	<p>A series of islands supporting the main seabird colonies in the Firth of Forth. It is designated for the following qualifying breeding species:</p> <ul style="list-style-type: none"> • Arctic tern; • common tern; • cormorant; • gannet; • guillemot; • herring gull; • kittiwake; • lesser black-backed gull <i>Larus fuscus</i>; • puffin <i>Fratercula arctica</i>; • razorbill <i>Alca torda</i>; • roseate tern <i>Sterna dougallii</i>; • sandwich tern <i>Sterna sandvicensis</i>; and, • shag. <p>In addition, the breeding seabird assemblage is also a qualifying feature.</p>	The closest boundary of the SPA is approximately 6.3 km north-west of the Scottish Onshore Scheme.
Wetlands of International Importance		
Firth of Forth Ramsar site	Designated for the same species as the Firth of Forth SPA.	Coincident with Firth of Forth SPA.
Loch Leven Ramsar site	Designated for the same species as Loch Leven SPA, as well as the eutrophic loch habitat.	Coincident with Loch Leven SPA.
Sites of Special Scientific Importance		
Firth of Forth SSSI	<p>Firth of Forth SSSI is designated for the same list of non-breeding bird species as the Firth of Forth SPA. In addition, the following are also notified biological features of the SSSI:</p> <ul style="list-style-type: none"> • beetle assemblage; • lowland neutral grassland; • maritime cliff; • mudflats; • northern brown argus butterfly <i>Aricia artaxerxes</i>; • saline lagoon; • saltmarsh; • sand dunes; • transition grassland; and, • vascular plant assemblage. 	In the vicinity of the Scottish Onshore Scheme, coincident with the Firth of Forth SPA.

Site Name	Reason for Designation	Relationship to the Project
Camilla Loch SSSI	<p>Camilla Loch is a small, naturally-occurring waterbody. The primary interest feature is the extensive and diverse area of freshwater transition mire at the western end of the loch which is relatively undisturbed and is the best example of its type in west Fife. The SSSI has the following notified features:</p> <ul style="list-style-type: none"> • meso-eutrophic loch; • open water transition fen; and, • springs (including flushes). 	At closest, approximately 30 m from the Scottish Onshore Scheme.
Loch Leven SSSI	<p>Loch Leven SSSI is designated for the same list of non-breeding bird species as the Loch Leven SPA. In addition, the following are also notified biological features of the SSSI:</p> <ul style="list-style-type: none"> • beetle assemblage; • breeding bird assemblage; • breeding gadwall; • breeding tufted duck; • eutrophic loch; • hydrological mire range; and, • vascular plant assemblage <p>Non-breeding greylag goose <i>Anser anser</i> is also a notified feature.</p>	Coincident with the boundary of Loch Leven SPA.

Additionally, three Protected Seal Haul-Out Sites are present within 10 km of the Scottish Onshore Scheme: Kinghorn Rocks, Inchkeith, and Inchmickery and Cow & Calves. Kinghorn Rocks is situated on the Fife coast and is, at its closest, 50 m from the Scottish Onshore Scheme whilst the others are more than 4 km away on islands within the Firth of Forth and will be addressed under the Marine Scheme, where relevant. Kinghorn Rocks is not a breeding seal haul-out and is instead designated as a key seal haul-out based on August survey counts of moulting harbour seal *Phoca vitulina*.

Non-statutory Designated Sites

There are three Local Wildlife Sites (LWS) within 1 km of the Scottish Onshore Scheme: Auchtertool Linn, Balwearie Braes, and Burntisland Binn. Information about these LWS is given in **Table 7-6 Summary of Local Wildlife Sites**, and their locations relative to the Application Boundary are shown on **Figure 7.3 Non-statutory Sites and Habitats Designated for Nature Conservation**.

Table 7-6. Summary of Local Wildlife Sites

Site Name	Site Description	Relationship to the Scottish Onshore Scheme
Auchtertool Linn LWS	A small site centred around a stream and waterfall with some notable habitats; namely semi-natural broadleaved woodland, small areas of swamp dominated by watercress <i>Nasturtium officinale</i> and	Northwest of Auchtertool, this LWS is approximately 15 m from the Application Boundary on the opposite side of Tulloch Road.

Site Name	Site Description	Relationship to the Scottish Onshore Scheme
	great reedmace <i>Typha latifoli</i> , and unimproved grassland.	
Balwearie Braes LWS	Three distinct parcels along a dismantled railway. The area has rocky outcrops and hosts a variety of notable habitats including unimproved (and some semi-improved) neutral grassland, unimproved calcareous grassland, semi-natural broadleaved woodland, and basic inland cliff. The site is notable for spring cinquefoil <i>Potentilla neumanniana</i> , and it is anticipated there is a rich invertebrate assemblage present.	At closest, approximately 120 m north of the Application Boundary and on the opposite bank of Tiel Burn which flows parallel through intervening land.
Craigencalt Farm LWS	The Site largely encompasses Kinghorn Loch with additional terrestrial habitats to the north. In addition to open water and semi-improved neutral grassland which occur across most of the site, smaller notable habitats include broadleaved semi-natural woodland, marsh, swamp and inland cliff.	Approximately 1 km west of the Application Boundary, separated by an expanse of agricultural fields.

Habitats

The desk study identified records of four priority SBL species of plant, seaweed and lichen outwith, but within 1 km of, the Application Boundary. These are wig wrack *Ascophyllum nodosum* ead *mackaii*, wild clary *Salvia verbenaca*, and sun spurge *Euphorbia helioscopia* at Kinghorn, and *Ramalina fraxinea* at Loch Gelly. Whilst the record is verified, the occurrence of wig wrack is unusual as it is almost entirely known to occur in very sheltered sea lochs on the west coast of Scotland. This species is very unlikely to occur in the vicinity of the coastal part of the Application Boundary as the conditions are very exposed.

Habitats recorded during field survey are shown on **Figure 7.4 Habitat Survey Results** and important / notable habitats are highlighted on **Figure 7.5⁴ Important / Notable Habitats**. The surveyed area is characterised largely by agricultural fields (improved pastures dominate north of the A92 whilst arable crop fields are more common to the south) with pockets of woodlands, scrub, neutral grassland, and, very locally, wetlands. Additionally freshwater habitats including watercourses are scattered throughout the Application Boundary, and there are notable coastal habitats at the far south-eastern end. Built-up / urban areas are very limited in extent.

The recorded habitats are described below under headings corresponding to UKHab Level 2 categories. Lower level UKHab types are described in each section as applicable. NVC codes are provided for notable habitats only and are labelled on **Figure 7.5 Important / Notable Habitats**. Where applicable, habitats listed on ***Annex I of the Habitats Directive*** are shown in bold italic and **SBL priority habitats** are underlined. Page numbers referenced throughout this section refer to both **Figure 7.4 Habitat Survey Results** and **Figure 7.5 Important / Notable Habitats**.

⁴ Nb. all habitats that are potentially groundwater dependent are shown on this figure; however, damp grasslands (gc37 and g3c8) are not considered important ecologically.