

Appendix 6.1: Desk Study and Legal Context

EDF Energy Renewables Ltd

Dunside Wind Farm
Appendix 6.1
Desk Study and Legal
Context

Final report

Prepared by LUC

June 2023



EDF Energy Renewables Ltd

Dunside Wind Farm Appendix 6.1
Desk Study and Legal Context

Version	Status	Prepared	Checked	Approved	Date
1.	Draft for internal review	M. Arthur	H. Embleton	S. Jackson-Matthews	01.03.2023
2.	For Client/legal review			L. McGowan	09.05.2023
3.	Client/Legal review			EDF/Legal	15.05.2023
4.	Final	M. Arthur	H. Embleton	S. Jackson-Matthews	22.05.2023

Contents

Chapter 1	
Introduction	1
Scope	1
Site Overview	1
Terminology and Study Areas	2

Chapter 2	
Legislative Context	3
The Conservation of Habitats and Species Regulations 2017	3
The Wildlife and Countryside Act 1981 (as amended)	4
The Nature Conservation (Scotland) Act 2004	4
The Protection of Badgers Act (1992)	5
The Water Environment and Water Services (Scotland) Act 2003 (WEWS) and the Water Environment (Controlled Activities) (Scotland) Regulations 2011	5
National Planning Framework 4	5
Scottish Biodiversity List	9
Scottish Borders Local Biodiversity Action Plan 2018 – 2028	9

Chapter 3	
Desk Study	10
Methods	10
Results	11

Chapter 1

Introduction

1.1 This appendix sets out the legislative context that creates the mechanism for designated sites and protected species, which subsequently form the basis of an Ecological Impact Assessment (EclA) and Environmental Impact Assessment (EIA) of the proposed Dunside Wind Farm (hereafter referred to as the 'Proposed Development'). The appendix also presents the findings of a desk study undertaken to inform the EclA. The Ecological Impact Assessment is provided in **Chapter 6: Ecology** of the Environmental Impact Assessment Report (EIA Report).

1.2 This appendix has been written to support Chapter 6 of the Environmental Impact Assessment Report (EIA Report) and should be read in conjunction with this chapter and **Chapter 8: Hydrology, Hydrogeology, Geology and Peat** and **Chapter 7: Ornithology**.

1.3 This appendix should be read in conjunction with the following:

- **Appendix 6.2:** Habitats and Vegetation (including National Vegetation Classifications) Survey Report.
- **Appendix 6.3:** Protected Species Survey Report.
- **Appendix 6.4:** Bat Survey Report.
- **Appendix 6.5:** Badger Survey Report (Confidential).
- **Appendix 6.6:** Outline Restoration and Enhancement Plan (OREP).
- **Appendix 6.7:** Shadow Habitat Regulations Assessment (HRA).
- **Appendix 6.8:** Peat Condition Assessment.

1.4 This Appendix is supported by the following figures:

- **EIA Report Figure 6.1:** Ecology Survey Area; and
- **EIA Report Figure 6.2:** Statutory designated areas within 10km and non-statutory designated areas within 5 km of the Site.

Scope

1.5 LUC was appointed by EDF Energy Renewables Ltd (hereafter referred to as 'the Applicant') to complete a suite of ecological surveys, including protected species surveys, to inform an EIA of the Proposed Development.

1.6 In March 2022 LUC submitted a Scoping Report ¹ (on behalf of the Applicant) as a means of agreeing the full scope of surveys relevant to the EIA. This included undertaking phase 1 habitat and national vegetation classification botanical surveys and protected species surveys within the Study Area between April 2022 and September 2022.

1.7 Other protected species and ornithology are outwith the scope of this report, with other protected species included in **Appendices 6.3, 6.4 and 6.5** and ornithology is assessed in **Chapter 7: Ornithology** of the EIA Report.

Site Overview

1.8 The Site is located within the Lammermuir Hills, within the administrative boundary of Scottish Borders Council. The northern Site boundary is also the boundary between the Scottish Borders and East Lothian. The Site is approximately 6 km north of the settlement of Westruther and 7 km to the west of the settlement of Longformacus (to the nearest indicative turbine location).

¹ LUC (2022) Dunside Wind Farm Project. Environmental Impact Assessment – Scoping Report Ecology

1.9 The Site consists of a varied topographic setting of heavily managed moorland dominated by heather, with numerous river valleys, steep sloping hillsides and gently sloping hilltop areas which predominately drain into the Dye Water catchment (a tributary of the River Tweed). The Dye Water flows to the east through the centre of the Site and joins the Whiteadder Water downstream of the Site. Notable hills within the Site include: Meikle Law (468 m AOD) in the north-west; Byreclough Ridge (440 m AOD) in the north, Dunside Hill (437 m AOD) in the south-east, and Wedder Lairs (486 m AOD) in the west. The main land uses are sheep grazing and moorland managed for grouse shooting with the adjacent land to the north-west used for renewable energy production (the operational Fallago Rig Wind Farm).

1.10 The majority of the habitats within the Site have been influenced to varying extents by grazing pressure, recent and historical burning and artificial drainage. The Proposed Development is described in greater detail within **Chapter 3: Development Description** within the EIA Report.

Terminology and Study Areas

1.11 The following terminology is used throughout this Appendix:

■ Site

- All land within the red line boundary (as shown in **EIA Report Figure 6.1**).

■ Proposed Development

- The whole physical process involved in the construction, operation and decommissioning of a Wind Farm at the Dunside Site (i.e. not associated with a particular piece of land).
- Comprises a wind farm with up to 15 turbines and associated infrastructure. A detailed description of the Proposed Development is included **Chapter 3**).

■ Study Area

1.12 The following Study Areas have been adopted in undertaking the desk study, further information is provided in Table 3.1:

- Statutory designated sites for nature conservation purposes: Red line boundary plus 10 km buffer.
- Non-statutory designated sites for nature conservation purposes: Red line boundary plus 5 km buffer.
- Existing protected species records: Red line boundary plus 5 km buffer. 10 km buffer for bats.

Chapter 2

Legislative Context

2.1 The protections afforded to ecological features in Scotland are enshrined in the following key legislation²:

- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Wildlife and Countryside Act 1991 (as amended);
- The Nature Conservation (Scotland) Act 2004; and
- The Protection of Badgers Act 1992 (as amended).

2.2 A brief summary of each piece of legislation is provided below, with specific reference to development planning.

2.3 It should be noted that protection offered to ecological features through national or local planning policy are not discussed in this section, nor are protections specifically offered to avian features (which are discussed in **Chapter 7: Ornithology**).

The Conservation of Habitats and Species Regulations 2017

2.4 The Conservation of Habitats and Species Regulations 2017 (“Regulations”) apply the European Habitats Directive (Directive 92/42/EEC) to electricity projects ³ in Scotland. The Regulations provide the highest level of legal protection available to ecological features and make provisions for the following protected sites.

European Sites

2.5 The term ‘European site’ is used to refer to what were previously known as ‘Natura’ sites. These sites were originally designated as part of the ‘Natura 2000’ network, a Europe-wide system of sites designated for their ecological value. Sites are either designated as Special Areas of Conservation (SACs), the qualifying features for which are normally internationally important habitats or species assemblages, or Special Protection Areas (SPAs), which qualify for their assemblages of birds. As noted above, protections offered to avian features are discussed in **Chapter 7: Ornithology**.

2.6 Ramsar sites, which support internationally important wetland habitats, are listed under the Convention on Wetlands of International Importance as ‘Waterfowl Habitat’ (Ramsar Convention, 1971), and form part of the Natura 2000 network. All Ramsar sites in Scotland are also Natura 2000 sites and are protected under the relevant statutory regimes.

2.7 SACs and SPAs receive considerable protection through the Regulations and these protections are normally reflected in national and local planning policy. Where developments have the potential to affect SACs or SPAs (either alone or in combination), an assessment process (Habitat Regulations Assessment) must first be undertaken.

2.8 In order that potential effects on European sites can be fully understood, it is important that they are considered fully in EclA desk studies.

2.9 There is no change to the protection of SACs or SPAs as a result of the United Kingdom’s exit from the European Union, and the requirements of the Directives continue to be relevant to the management of European sites.

European Protected Species (EPS)

2.10 The Regulations afford wide-ranging protections to a list of species considered to be of international conservation importance, under Schedule 2. EPS are also listed within Annex IV of the Habitats Directive. A species is normally considered

² References to all legislation relate to legislation as amended and in force at the time of writing of this chapter

³ Including amongst others projects subject to consent in terms of section 37 of the Electricity Act 1989 and deemed planning permission in terms of section 57 of the Town and Country Planning (Scotland) Act 1997

important where it plays an important role in wider ecosystems and has historically suffered significant population decline. With regard to EPS, it is an offence to:

- Capture, injure or kill such an animal;
- Harass an animal or group of animals;
- Disturb an animal while it is occupying a structure or place used for shelter or protection;
- Disturb an animal while it is rearing or otherwise caring for its young;
- Obstruct access to a breeding site or resting place, or otherwise deny an animal use of a breeding site or resting place;
- Disturb an animal in a manner or in circumstances likely to significantly affect the local distribution or abundance of the species;
- Disturb an animal in a manner or in circumstances likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young;
- Disturb an animal while it is migrating or hibernating;
- Take or destroy an animal's eggs (in Scotland, this is relevant only to the great crested newt and natterjack toad); and
- Disturb any cetacean (dolphin, porpoise or whale).

2.11 There is no change to the protection of EPS as a result of the United Kingdom's exit from the European Union.

The Wildlife and Countryside Act 1981 (as amended)

2.12 The Wildlife and Countryside Act 1981 (as amended) (WCA) is domestic legislation that gives rise to designated sites, regulates the management of invasive species and provides protections for species of national conservation importance. Important features of the legislation in relation to protected sites and species are set out below.

2.13 Under the WCA Schedules 5 and 6, species considered to be of national conservation importance receive legal protections, often very similar to the protections available to EPS. For this reason, it is important that EclA desk studies identify existing records of WCA protected species.

The Nature Conservation (Scotland) Act 2004

2.14 The Nature Conservation (Scotland) Act 2004 (2004 Act) Act details measures designed to conserve biodiversity and to protect and enhance the biological and geological natural heritage of Scotland. The 2004 Act details the arrangements for the establishment and protection of Special Site of Scientific Interest's (SSSI) and replaces much of part II of the WCA. Section 12 of the 2004 Act imposes a duty on the exercise by a public body or office-holder of any function on, or so far as affecting, any land which is or forms part of a SSSI to further the conservation and enhancement of the features specified in the SSSI notification.

Sites of Special Scientific Interest (SSSI)

2.15 The SSSI network in the UK extends to a system of sites designated for their national conservation value. Sites are designated for their biodiversity, habitats or species assemblages. Any development proposals which affect a site designated as a SSSI will require to be considered in terms of the duty under section 12 of the 2004 Act as well as having regard to any policy tests.

2.16 There is a general presumption against development in SSSIs; however where development is proposed, SSSI consent is required. Subject to certain exceptions, SSSI consent is required for development within a SSSI. SSSI consent will often necessitate extensive mitigation or compensation. For this reason, it is important that EclA desk studies identify SSSIs that may be affected by the Proposed Development.

The Protection of Badgers Act (1992)

2.17 Although badgers are not rare in Scotland, they continue to receive protection due to the high levels of persecution they suffer. Badgers and their setts receive protection against killing, disturbance and destruction and, therefore, knowledge of existing records is of importance to EclA desk studies.

The Water Environment and Water Services (Scotland) Act 2003 (WEWS) and the Water Environment (Controlled Activities) (Scotland) Regulations 2011

2.18 The Water Environment and Water Services (Scotland) Act 2003 (WEWS), introduced a holistic approach to managing the water environment in Scotland. The aim of the Act is to protect and improve the ecological status of the water environment whilst also supporting the social and economic interests of those who depend upon it. The Controlled Activity Regulations (CAR), made under the Act, enables the Scottish Environmental Protection Agency (SEPA) to control activities which may have an impact on the water environment and on the interests of other users of the water environment.

2.19 In the course of its regulatory activities SEPA must aim to protect and improve the water environment, but in determining how, and to what extent this should be done, it must take account of the social, economic and environmental needs of those who depend on the water environment for their livelihood or quality of life. This includes taking into account wider sustainable development issues, such as biodiversity conservation, flood management, drinking water protection, and access to recreation.

2.20 Protection of the water environment includes, in particular:

- a. Preventing further deterioration of, and protecting and enhancing, the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on those aquatic ecosystems;
- b. Promoting sustainable water use based on the long-term protection of available water resources;
- c. Aiming at enhancing protection and improvement of the aquatic environment through, amongst other things, specific measures for the progressive reduction of discharges, emissions and losses of priority substances and the cessation or phasing out of discharges, emissions and losses of the priority hazardous substances;
- d. Ensuring the progressive reduction of pollution of groundwater and preventing further pollution of it; and
- e. Contributing to mitigating the effects of floods and droughts, with a view to contributing to the achievement of the aims specified below.

2.21 Those aims are:

- a. The provision of a sufficient supply of good quality surface water and groundwater as needed for sustainable, balanced and equitable water use;
- b. A significant reduction in pollution of groundwater,
- c. The protection of territorial and other marine waters; and
- d. Achieving the objectives of international agreements, including those which aim to prevent and eliminate pollution of the marine environment, in relation to which measures are adopted under paragraph 1 of Article 16 of the Directive in pursuance of a proposal under paragraph 3 of that Article.

National Planning Framework 4

2.22 On 13 February 2022, the Scottish Ministers adopted NPF4. This forms part of the statutory development plan, along with the Local Development Plans applicable to the area at that time and its supplementary guidance. NPF4 supersedes National Planning Framework 3 and Scottish Planning Policy (SPP) (2014).

2.23 The document sets out for following key policies:

- **Policy 1 is relevant to all developments:** *“When considering all development proposals significant weight will be given to the global climate and nature crises”*
- **Policy 3 Biodiversity** *seeks to protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks. It states:*

- a. *Development proposals will contribute to the enhancement of biodiversity, including where relevant, restoring degraded habitats and building and strengthening nature networks and the connections between them. Proposals should also integrate nature-based solutions, where possible.*
- b. *Development proposals for national or major development, or for development that requires an Environmental Impact Assessment will only be supported where it can be demonstrated that the proposal will conserve, restore and enhance biodiversity, including nature networks so they are in a demonstrably better state than without intervention. This will include future management. To inform this, best practice assessment methods should be used. Proposals within these categories will demonstrate how they have met all of the following criteria:*
 - i. *the proposal is based on an understanding of the existing characteristics of the site and its local, regional and national ecological context prior to development, including the presence of any irreplaceable habitats;*
 - ii. *wherever feasible, nature-based solutions have been integrated and made best use of;*
 - iii. *an assessment of potential negative effects which should be fully mitigated in line with the mitigation hierarchy prior to identifying enhancements;*
 - iv. *significant biodiversity enhancements are provided, in addition to any proposed mitigation. This should include nature networks, linking to and strengthening habitat connectivity within and beyond the development, secured within a reasonable timescale and with reasonable certainty. Management arrangements for their long-term retention and monitoring should be included, wherever appropriate; and*
 - v. *local community benefits of the biodiversity and/or nature networks have been considered.*
- c. *Proposals for local development will include appropriate measures to conserve, restore and enhance biodiversity, in accordance with national and local guidance. Measures should be proportionate to the nature and scale of development.*
- d. *Applications for individual householder development, or which fall within scope of (b) above, are excluded from this requirement.*
- e. *Any potential adverse impacts, including cumulative impacts, of development proposals on biodiversity, nature networks and the natural environment will be minimised through careful planning and design. This will take into account the need to reverse biodiversity loss, safeguard the ecosystem services that the natural environment provides, and build resilience by enhancing nature networks and maximising the potential for restoration.*
- **Policy 4 Natural Places** *seeks to protect, restore and enhance natural assets making best use of nature-based solutions. The relevance of this policy needs to be considered both from a landscape and a biodiversity perspective. The policy states:*
 - a. *Development proposals which by virtue of type, location or scale will have an unacceptable impact on the natural environment, will not be supported.*
 - b. *Development proposals that are likely to have a significant effect on an existing or proposed European site (Special Area of Conservation or Special Protection Areas) and are not directly connected with or necessary to their conservation management are required to be subject to an “appropriate assessment” of the implications for the conservation objectives.*
 - c. *Development proposals that will affect a National Park, National Scenic Area, Site of Special Scientific Interest or a National Nature Reserve will only be supported where:*
 - i. *The objectives of designation and the overall integrity of the areas will not be compromised; or*
 - ii. *Any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by social, environmental or economic benefits of national importance.*

All Ramsar sites are also European sites and/ or Sites of Special Scientific Interest and are extended protection under the relevant statutory regimes.
 - d. *Development proposals that affect a site designated as a local nature conservation site or landscape area in the LDP will only be supported where:*

i. Development will not have significant adverse effects on the integrity of the area or the qualities for which it has been identified; or

ii. Any significant adverse effects on the integrity of the area are clearly outweighed by social, environmental or economic benefits of at least local importance.

e. *The precautionary principle will be applied in accordance with relevant legislation and Scottish Government guidance.*

f. *Development proposals that are likely to have an adverse effect on species protected by legislation will only be supported where the proposal meets the relevant statutory tests. If there is reasonable evidence to suggest that a protected species is present on a site or may be affected by a proposed development, steps must be taken to establish its presence. The level of protection required by legislation must be factored into the planning and design of development, and potential impacts must be fully considered prior to the determination of any application.*

g. *Development proposals in areas identified as wild land in the Nature Scot Wild Land Areas map will only be supported where the proposal:*

i. will support meeting renewable energy targets; or,

ii. is for small scale development directly linked to a rural business or croft, or is required to support a fragile community in a rural area.

All such proposals must be accompanied by a wild land impact assessment which sets out how design, siting, or other mitigation measures have been and will be used to minimise significant impacts on the qualities of the wild land, as well as any management and monitoring arrangements where appropriate. Buffer zones around wild land will not be applied, and effects of development outwith wild land areas will not be a significant consideration.

■ **Policy 5 Soils** *is designed to protect carbon-rich soils, restore peatlands and minimise disturbance to soils from development. It will need to be addressed in the Planning and Renewable Energy Policy Statement and will need to be considered in the carbon report and hydrology and geology chapters. It states that:*

a. *Development proposals will only be supported if they are designed and constructed:*

i. In accordance with the mitigation hierarchy by first avoiding and then minimising the amount of disturbance to soils on undeveloped land; and

ii. In a manner that protects soil from damage including from compaction and erosion, and that minimises soil sealing.

b. *Development proposals on prime agricultural land, or land of lesser quality that is culturally or locally important for primary use, as identified by the LDP, will only be supported where it is for:*

i. Essential infrastructure and there is a specific locational need and no other suitable site;

ii. Small-scale development directly linked to a rural business, farm or croft or for essential workers for the rural business to be able to live onsite;

iii. The development of production and processing facilities associated with the land produce where no other local site is suitable;

iv. The generation of energy from renewable sources or the extraction of minerals and there is secure provision for restoration; and

In all of the above exceptions, the layout and design of the proposal minimises the amount of protected land that is required.

c. *Development proposals on peatland, carbon-rich soils and priority peatland habitat will only be supported for:*

i. Essential infrastructure and there is a specific locational need and no other suitable site;

ii. The generation of energy from renewable sources that optimises the contribution of the area to greenhouse gas emissions reductions targets;

iii. Small-scale development directly linked to a rural business, farm or croft;

- iv. *Supporting a fragile community in a rural or island area; or*
- v. *Restoration of peatland habitats.*

- d. *Where development on peatland, carbon-rich soils or priority peatland habitat is proposed, a detailed site specific assessment will be required to identify:*
 - i. *the baseline depth, habitat condition, quality and stability of carbon rich soils;*
 - ii. *the likely effects of the development on peatland, including on soil disturbance; and*
 - iii. *the likely net effects of the development on climate emissions and loss of carbon*

This assessment should inform careful project design and ensure, in accordance with relevant guidance and the mitigation hierarchy, that adverse impacts are first avoided and then minimised through best practice. A peat management plan will be required to demonstrate that this approach has been followed, alongside other appropriate plans required for restoring and/ or enhancing the site into a functioning peatland system capable of achieving carbon sequestration.

- e. *Development proposals for new commercial peat extraction, including extensions to existing sites, will only be supported where:*
 - i. *the extracted peat is supporting the Scottish whisky industry;*
 - ii. *there is no reasonable substitute;*
 - iii. *the area of extraction is the minimum necessary and the proposal retains an in-situ residual depth of part of at least 1 metre across the whole site, including drainage features;*
 - iv. *the time period for extraction is the minimum necessary; and*
 - v. *there is an agreed comprehensive site restoration plan which will progressively restore, over a reasonable timescale, the area of extraction to a functioning peatland system capable of achieving carbon sequestration.”*

- **Policy 6 Forestry, woodland and trees** *seeks to protect and expand forests, woodland and trees. Given the forested nature of the site this will need to be addressed. It states:*

- a. *Development proposals that enhance, expand and improve woodland and tree cover will be supported.*
- b. *Development proposals will not be supported where they will result in:*
 - i. *Any loss of ancient woodlands, ancient and veteran trees, or adverse impact on their ecological condition;*
 - ii. *Adverse impacts on native woodlands, hedgerows and individual trees of high biodiversity value, or identified for protection in the Forestry and Woodland Strategy;*
 - iii. *Fragmenting or severing woodland habitats, unless appropriate mitigation measures are identified and implemented in line with the mitigation hierarchy;*
 - iv. *Conflict with Restocking Direction, Remedial Notice or Registered Notice to Comply issued by Scottish Forestry.*
- c. *Development proposals involving woodland removal will only be supported where they will achieve significant and clearly defined additional public benefits in accordance with relevant Scottish Government policy on woodland removal. Where woodland is removed, compensatory planting will most likely be expected to be delivered.*
- d. *Development proposals on sites which include an area of existing woodland or land identified in the Forestry and Woodland Strategy as being suitable for woodland creation will only be supported where the enhancement and improvement of woodlands and the planting of new trees on the site (in accordance with the Forestry and Woodland Strategy) are integrated into the design.”*

Scottish Biodiversity List

2.24 The Scottish Biodiversity List (SBL) is a list of animals, plants and habitats that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland. The purpose of the list is to help public bodies carry out their Biodiversity Duty by identifying the species and habitats which are the highest priority for biodiversity conservation in Scotland.

2.25 A duty to further the conservation of biodiversity was placed on all public sector bodies in Scotland in 2004. This biodiversity duty is about connecting people with the environment and managing biodiversity in the wider environment all around us, not just in specific protected sites. SBL species are taken into account when planning proposals or site designations are being considered.

Scottish Borders Local Biodiversity Action Plan 2018 – 2028

2.26 The Scottish Borders Local Biodiversity Action Plan ⁴ 2018 to 2028 (LBAP) provides a framework for new, collaborative action. It promotes joint partnership action for biodiversity at a local landscape scale, with new emphasis on achieving multiple benefits through effective land use, management and stewardship. The LBAP takes an ecosystems approach to promote protection of biodiversity.

2.27 *There are three key steps in an ecosystems approach:*

1. *Taking account of how ecosystems work and recognising that:*

- *Nature connects across both broad and local landscapes*
- *Ecosystems are dynamic, so change is inevitable and adaptive management may be required*
- *Ecosystems are not an infinite resource and cannot repeatedly absorb damaging impacts*

2. *Taking account of ecosystem services, recognising that:*

- *Food, fuel, water, climate regulation, contributions to quality of life, culture and well-being are just some of the benefits we freely receive from ecosystem services*
- *Not maintaining ecosystem services is financially costly for society, when we lose these benefits or have to offset or mitigate negative effects on them*

3. *Involving people who manage or benefit from ecosystem services in decision-making by:*

- *Valuing their knowledge*
- *Supporting them to participate in decision-making*
- *Encouraging them to take responsibility for their actions*

2.28 Using this approach, the LBAP sets out a number of objectives and actions under the ‘six big steps for nature’:

- 1.** Ecosystem Restoration
- 2.** Investment in Natural Capital
- 3.** Quality greenspace for health and education benefits
- 4.** Conserving wildlife in Scotland
- 5.** Sustainable management of land and freshwater
- 6.** Sustainable management of marine and coastal ecosystems

⁴ Scottish Borders Council. Scottish Borders Local Biodiversity Action Plan 2018 – 2028. Available at: file:///C:/Users/embleton_h/OneDrive%20-%20LUC/Desktop/Local_Biodiversity_Action_Plan_2018_28_lowres_feb2020%20(1).pdf [accessed -5/-6/23]

Chapter 3 Desk Study

Methods

3.1 The purpose of the Desk Study is to identify features of ecological importance within defined buffers around the Proposed Development. Data collected via the Desk Study is subsequently used to inform the scope of the EclA and to supplement and guide field surveys and assessments.

3.2 **Table 3.1** lists the features targeted in the desk study, and the resources used to identify them. In order that the study was appropriately focused, buffers were applied, informed by convention, precedent and the EIA team's professional judgement. These buffers are also shown within the table.

Table 3.1: Desk Study Targets

Ecological Feature	Comment	Desk Study Resource	Buffer from Site Boundary
Statutory Designated Sites	To include: <ul style="list-style-type: none"> ■ Natura 2000 Network Sites (SACs and SPAs); ■ Ramsar Sites; ■ National Nature Reserves (NNRs); and ■ SSSIs. 	NatureScot SiteLink Website ⁵ Multi-Agency Geographic Information for the Countryside (MAGIC) ⁶ Scotland Environment Mapping Service ⁷	10 km
Non-statutory Designated Sites	To include: <ul style="list-style-type: none"> ■ Local Nature Conservation Sites (LNCS); ■ RSPB and Scottish Wildlife Trust Reserves; and ■ Ancient/Long-established Woodland. 	Scottish Borders Biodiversity Action Plan ⁸ Scottish Borders Local Biodiversity Technical Note ⁹ MAGIC ¹⁰ Scotland Environment Mapping Service ¹¹ Ancient Woodland Inventory ¹²	5 km

⁵ NatureScot (n.d.) NatureScot SiteLink [online]. Available at <https://sitelink.nature.scot/home> [Accessed February 2023]

⁶ Department for Environment, Food and Rural Affairs et al (n.d.) Multi-Agency Geographic Information for the Countryside [online]. Available at: <http://magic.defra.gov.uk> [Accessed February 2023]

⁷ Scottish Environment Protection Agency (n.d.) Scotland's Environment Map [online]. Available at: <https://map.environment.gov.scot/sewebmap/> [Accessed February 2023]

⁸ Scottish Borders council (2009). Scottish Borders Local Biodiversity Action Plan [online]. Available at: https://www.scotborders.gov.uk/downloads/file/928/local_biodiversity_action_plan [Accessed February 2023].

⁹ Scottish Borders Council (2020). Local Biodiversity Technical Note 4. Available at: https://www.scotborders.gov.uk/downloads/file/7554/local_biodiversity_technical_note (Accessed February 2023)

¹⁰ Department for Environment, Food and Rural Affairs et al (n.d.) Multi-Agency Geographic Information for the Countryside [online]. Available at: <http://magic.defra.gov.uk> [Accessed February 2023]

¹¹ Scottish Environment Protection Agency (n.d.) Scotland's Environment Map [online]. Available at: <https://map.environment.gov.scot/sewebmap/> [Accessed February 2023]

¹² Available at <https://map.environment.gov.scot/sewebmap/> (Accessed February 2023)

Ecological Feature	Comment	Desk Study Resource	Buffer from Site Boundary
Existing records of deep peat and carbon rich soils	N/A	The Carbon and Peatland Map ¹³	2 km
Existing habitats data	N/A	East Lothian Council Habitat Survey Maps	Up to 250 m
Existing Records of EPS and WCA Protected Species	To include: All native EPS and WCA protected species records, post-2000.	National Biodiversity Network (NBN) Atlas Scotland under CC-BY licence ¹⁴ The Wildlife Records Centre (TWIC) ¹⁵	5 km for Protected Species 10 km for Bat Species

3.3 Please note that due to the sensitive nature, detailed badger data is included separately in Confidential Appendix 6.5.

NBN Atlas Scotland and The Wildlife Records Centre (TWIC) Records

3.4 It is acknowledged that the NBN Atlas hosts biological records that may not be used in a commercial context. While the local biological records centre, TWIC, makes its records available through NBN, a separate data request was specifically made to ensure a full data set was available for the purposes of the appendix. Both NBN and TWIC data sets were cross-referenced for consistency.

Results

Designated Sites

3.5 Statutory and non-statutory designated sites within 5 km and 10 km of the Proposed Development are listed in **Table 3.2** below. The location of these sites are illustrated in **EIA Report Figure 6.2**. Sites which are designated solely for geological features are not considered. Ornithology interests are further considered within **Chapter 7: Ornithology**.

3.6 There were no Ramsar sites or National Nature Reserves (NNRs) within 10 km of the Proposed Development, and no Nature Reserves within 5 km of the Proposed Development.

Table 3.2: Statutory and Non-statutory Designated Sites for Nature Conservation within 10km and 5km of the Proposed Development

Site Name	Designation	Approximate Distance and Orientation from the Site Boundary	Qualifying Feature(s)
Statutory Designated Sites within the Redline Boundary			
River Tweed	Special Area of Conservation (SAC)	Within the Site boundary, the river itself crosses the Site west to east, but only the eastern half (approximately) of the length is designated. The access track crosses the River Tweed SAC in a separate location.	Annex 1 habitats (primary reason for selection): <ul style="list-style-type: none"> Water courses of plain to montane levels with the Ranunculus fluitans and Callitriche-Batrachion vegetation

¹³ Scotland's Soils (2016) Carbon and Peatland Map [online]. Available at: <https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/> [Accessed February 2023]

¹⁴ National Biodiversity Network Atlas (n.d.) National Biodiversity Network Atlas, Scotland [online]. Available at: <https://scotland.nbnatlas.org/> [Accessed February 2023]

¹⁵ The Wildlife Records Centre (n.d.). Data requested April 2023. Available online at: <http://www.wildlifeinformation.co.uk/>.

Site Name	Designation	Approximate Distance and Orientation from the Site Boundary	Qualifying Feature(s)
			<p>Annex 2 species (primary reason for selection):</p> <ul style="list-style-type: none"> ■ Atlantic salmon; and ■ Otter <p>Annex 2 species (present as qualifying feature, but not primary reason for selection):</p> <ul style="list-style-type: none"> ■ Sea lamprey; ■ Brook lamprey; and ■ River lamprey.
River Tweed	Site of Special Scientific Interest (SSSI)	Within the Site	<ul style="list-style-type: none"> ■ Otter ■ Atlantic salmon ■ River lamprey ■ Brook lamprey ■ Sea lamprey ■ Beetle assemblage ■ Fly assemblage ■ Trophic ranger river/stream ■ Vascular plant assemblage
Statutory Designated Sites (outwith the Redline Boundary but within 10km)			
Dogden Moss	SAC	2.7 km east	<p>Annex 1 habitats (primary reason for selection):</p> <ul style="list-style-type: none"> ■ Active raised bogs
Greenlaw Moor	SSSI	2.4 km east	<ul style="list-style-type: none"> ■ Raised bog ■ Breeding bird assemblage ■ Pink-footed goose
Lammer Law	SSSI	3 km west	<ul style="list-style-type: none"> ■ Blanket bog ■ Sub-alpine dry heath ■ Juniper scrub ■ Upland assemblage
Crook Burn, Dyshaugh	SSSI	4.7 km east	<ul style="list-style-type: none"> ■ Fen meadow
Gordon Moss	SSSI	7.5 km south	<ul style="list-style-type: none"> ■ Wet woodland

Site Name	Designation	Approximate Distance and Orientation from the Site Boundary	Qualifying Feature(s)
Papana Water	SSSI	7.6 km north	<ul style="list-style-type: none"> ■ Upland mixed ash woodland
Danskine Loch	SSSI	7.8 km north	<ul style="list-style-type: none"> ■ Fen woodland
Langtonless Cleugh	SSSI	9.2 km west	<ul style="list-style-type: none"> ■ Upland mixed ash woodland
Lintmill Railway Cutting	SSSI	9.3k m south-east	<ul style="list-style-type: none"> ■ Raised bog ■ Breeding bird assemblage ■ Pink-footed goose
Rammer Cleugh	SSSI	9.8 km north	<ul style="list-style-type: none"> ■ Upland oak woodland ■ Quaternary geology and geomorphology
Non-statutory Designated Sites within the Site			
Byrecluch Burn, Stot Cleugh (site reference number 71)	Local Biodiversity Site (LBS)	Within the Site	Cleughs and burnsidess with nationally scarce plants and locally rare plants and moths.
Corby Scar and Upper Watch Water (site reference number 76)	LBS	Within the Site	Acid burnsidess with a high diversity of grassland plant species, including several local rarities.
Non-Statutory Designated Sites (within 5km)			
Lammermuir	Local Nature Conservation Site (LNCS)	Immediately adjacent to the north boundary.	Acid, neutral, calcareous grassland. Heathland, blanket bog.
Wester Black Burn (site reference number 131)	LBS	580 m west	Burnsidess and degraded moorland with one fine acid flush.
Boondreigh Burn and Raecleugh (site reference number 63)	LBS	670 m west	Burnside and base-rich flushes with many locally rare plants.
Horseupcleuch (site reference number 99)	LBS	1.6 km north-east	Burnsidess and rocky banks with fine populations of Common Rock-rose, supporting the Northern Brown Argus butterfly. The only surviving Berwickshire site for Wood Bitter-vetch.
Watch Water (site reference number 129)	LBS	1.7 km east	Burnsidess, rocky banks – part wooded – with a high diversity of grassland plants,

Site Name	Designation	Approximate Distance and Orientation from the Site Boundary	Qualifying Feature(s)
			locally rare plants and moths.
Watch Water Reservoir (site reference number 130)	LBS	1.8 km east	Reservoir with flushes and moorland banks with breeding birds and locally rare plants and insects.
Whalplaw Burn (upper) (site reference number 132)	LBS	2.5 km west	Burnsides and flush communities – including fine base-rich flushes and juniper.
Kilmade Burn and Rough Cleugh (site reference number 103)	LBS	3.0 km north-east	Upland burn, associated cleughs, moorland, vestiges of woodland and small base-rich flushes, many locally rare plants and bryophytes and a nationally scarce plant.
Cleckinshaw, Kettelshiel and Bogpark Burns (site reference number 73)	LBS	3.6 km east	Burns, wetland and flushes with breeding waders.
Soonhope Burn upper and Longformacus Burn (site reference number 44)	LBS	3.9 km west	Upland burnsides, cleughs and flushes with notable plants.
Houndslow West Wood (site reference number 100)	LBS	4.1 km south-west	Birch dominated semi-natural woodland and broadleaved plantation
Cromwells and Brunta burn (site reference number 77)	LBS	4.5 km west (closest feature is the access track)	Base-rich knowes and burnside woodland-edge with a notable population of <i>Crepis mollis</i> (Hawk's beard).
Soonhope Burn upper, The Howe (site reference number 45)	LBS	4.5 km west	Upland bursides, cleughs and flushes with both Borders Priority and UK Priority species.
Whalplaw Burn (lower) (site reference number 53)	LBS	4.6 km west	Burnsides, cleughs and screes with juniper and fern communities and a priority reptile.
Unnamed woodland	Ancient woodland	Closest ancient woodland: 625 m west	A range of ancient (of semi-natural origin) woodland and long-established (of plantation origin) are present within 5km of the Site boundary as illustrated on Figure 6.1.2.

Habitats – Deep Peat and Carbon Rich Soil

3.7 NatureScot’s Carbon & Peatland Map 2016¹⁶ identified large areas of the high ground in the north and south of the Site as Class 5 soils, with smaller areas of Class 4 soils at lower elevations. Remaining lower lying areas of the Site around the base of the reiver valleys are classed as mineral soil (Class 0), with no peat indicated.

3.8 These classes are identified as follows:

- **Class 4:** Area unlikely to be associated with peatland habitat or wet and acidic type. Are unlikely to include carbon-rich soils.
- **Class 5:** Soil information takes precedence over vegetation data. No peatland habitat recorded. May also include areas of bare soil. Soils are carbon-rich and deep peat.
- **Class 0:** Mineral soil - Peatland habitats are not typically found on such soils.

3.9 Where areas of Class 4 designation overlapped with the Phase 1 and NVC habitat surveys, consideration was given to the true ecological value of their habitats. Following completion of the peat surveys for the Site the indicative data provided by the Carbon & Peatland Map was updated (see **Chapter 5: Hydrology, Hydrogeology, Geology and Peat** and associated appendices). Detailed habitat survey results are presented in **Appendix 6.2: Phase 1 Habitat and NVC Survey**.

Protected and Notable Species Data

3.10 A data search of relevant protected species records (post-2000) returned the following protected species results:

NBN Atlas

3.11 NBN Atlas¹⁷ and TWIC¹⁸ records identified 4045 records of bat species within the 10 km Study Area. Details are listed below in Table 3.3.

3.12 No bat records were identified within the Site.

Table 3.3: Bat Records (post-2000) within 10km of the Proposed Development

Species	Scientific Name	Number of Records	Most Recent Record
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	1376	2016
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	2252	2016
Unidentified pipistrelle species	<i>Pipistrellus spp.</i>	3	2002
Daubenton’s bat	<i>Myotis daubentonii</i>	207	2016
Natterer’s bat	<i>Myotis nattereri</i>	50	2016
Unidentified myotis species	<i>Myotis spp.</i>	43	2016
Noctule	<i>Nyctalus noctula</i>	103	2016
Brown long-eared bat	<i>Plecotus auritus</i>	7	2016
Unidentified bat	<i>Chiroptera</i>	4	2021

¹⁶ NatureScot (n.d.) NatureScot SiteLink [online]. Available at <https://sitelink.nature.scot/home> [Accessed February 2023]

¹⁷ Scotland’s Soils (2016) Carbon and Peatland Map [online]. Available at: <https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/> [Accessed February 2023]

¹⁸ National Biodiversity Network Atlas (n.d.) National Biodiversity Network Atlas, Scotland [online]. Available at: <https://scotland.nbnatlas.org/> [Accessed February 2023]

3.13 NBN Atlas¹⁹ and TWIC²⁰ records identified 146 records of protected species within the 5 km Study Area and details are listed in **Table 3.4**. One record of adder from 2021 and one record of mountain hare from 2015 were identified within the Site.

Table 3.4: Protected and Notable Species Records (post-2000) within 5 km of the Proposed Development

Species	Scientific Name	Protection/ Priority	Number of Records	Most Recent Record
Adder	<i>Vipera berus</i>	WCA 1981, Scottish Biodiversity List	75	2022
Badger	<i>Meles meles</i>	Badgers Act 1991	22	2022
Common lizard	<i>Zootoca vivipara</i>	WCA 1981, Scottish Biodiversity List	13	2017
Lamprey sp.	<i>Lampetra sp.</i>	Habitats Regulations 1994, Scottish Biodiversity List	2	2004
Atlantic salmon	<i>Salmo salar</i>	Habitat Regulations 1994, Scottish Biodiversity List	15	2005
Mountain hare	<i>Lepus timidus</i>	Habitats Regulations 1994, Scottish Biodiversity List	111	2022
Otter	<i>Lutra lutra</i>	Habitat Regulations 1994, Scottish Biodiversity List	5	2011
Red squirrel	<i>Sciurus vulgaris</i>	WCA 1981, Scottish Biodiversity List	9	2015
Water vole	<i>Arvicola amphibius</i>	WCA 1981, Scottish Biodiversity List	1	2000

3.14 There were no existing records of the following species within the 5km Study Area:

- Reptile: grass snake *Natrix helvetica* and slow-worm *Anguis fragilis*; and
- Great crested newt *Triturus cristatus*.

3.15 This data was used in part to help inform both the desk study as well as identify locations across the survey area where targeted surveys should be conducted. Full details of this are provided in **Appendix 6.3: Protected Species Survey**.

¹⁹ National Biodiversity Network Atlas (n.d.) National Biodiversity Network Atlas, Scotland [online]. Available at: <https://scotland.nbnatlas.org/> [Accessed February 2023]

²⁰ Scotland's Soils (2016) Carbon and Peatland Map [online]. Available at: <https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/> [Accessed February 2023]