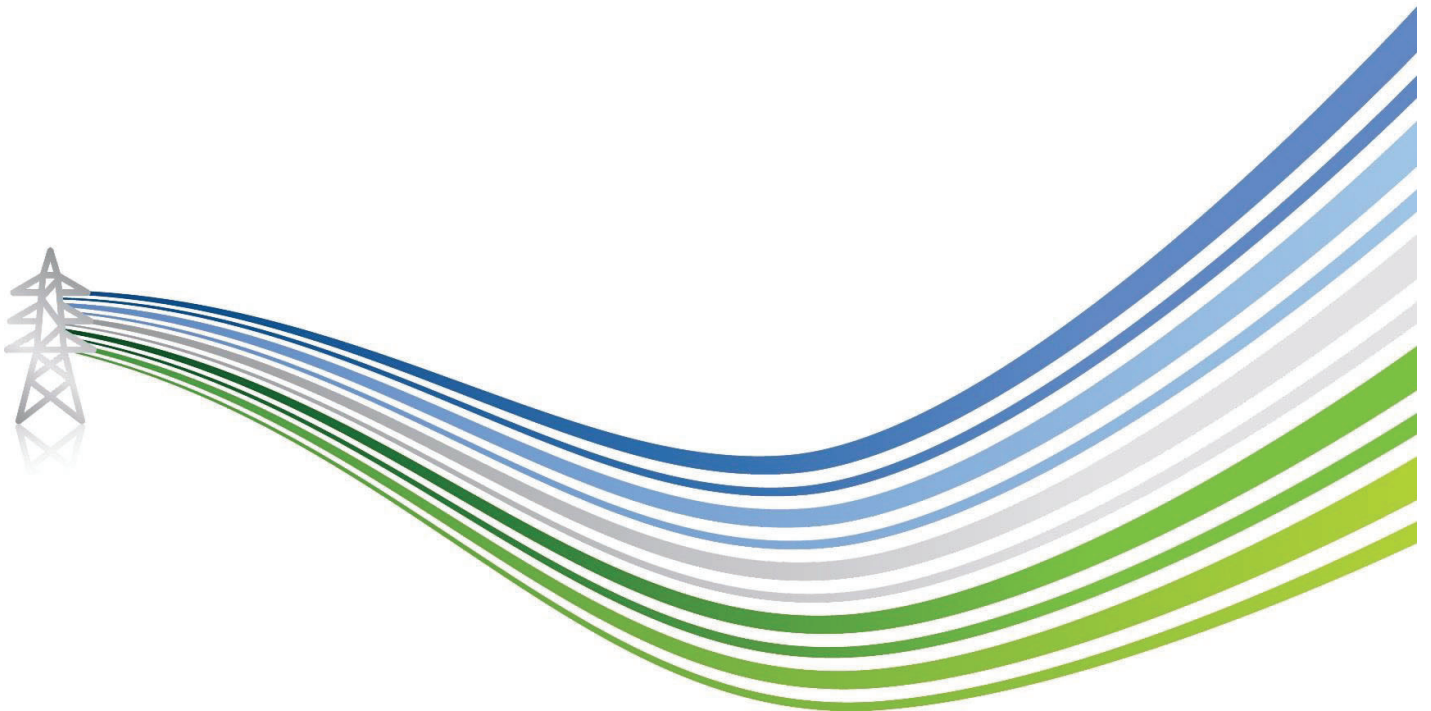


**Emmock 400kV Substation**  
**Environmental Impact Assessment (EIA)**  
**Volume 4 | Appendix 9.1**

**Desk Study and Legal Context**

**November 2024**



## CONTENTS

<b>LIST OF ABBREVIATIONS</b>	<b>3</b>
<b>1. INTRODUCTION</b>	<b>4</b>
1.1 The Proposals	4
1.2 Requirement for the Report	4
1.3 Terminology and Survey Area	4
1.4 Relevant Legislation	4
<b>2. METHODS</b>	<b>7</b>
2.1 Baseline Data Collection	7
<b>3. RESULTS</b>	<b>9</b>
3.1 Designated sites	9
3.2 Protected Species	11

## LIST OF ABBREVIATIONS

EclA; Ecological Impact Assessment

EPS; European Protected Species

WCA; The Wildlife and Countryside Act 1981 (as amended)

SAC; Special Areas of Conservation

SPA; Special Protection Areas

SSSI; Sites of Special Scientific Interest

NNR; National Nature Reserve

LNCS; Local Nature Conservation Site(s)

## 1. INTRODUCTION

### 1.1 The Proposals

1.1.1 Scottish Hydro Electric Transmission plc (the Applicant) is applying to Angus Council for full planning permission under the *Town and Country Planning Act (Scotland) 1997*, to install and operate a new 400 kV substation at Emmock, near Tealing in Angus, with associated earthworks, the formation of platforms, landscaping, means of access, means of enclosure, site drainage, and temporary construction compounds.

1.1.2 This appendix presents the full methodology and results of the desk study, and review of the legal context, undertaken to inform the Ecological Impact Assessment (EclA) relevant to the proposed Emmock 400 kV Substation hereafter referred to as the Proposed Development.

1.1.3 It should be read in conjunction with **Chapter 3: Development of the Proposed Development** (Volume 2) of the Environmental Impact Assessment (EIA Report) for full details of the Proposed Development and **Chapter 9: Ecology** for an assessment of the effects of the Proposed Development upon Ecology.

1.1.4 This appendix is supported by the following:

- **Figure 9.1.1: The Proposed Development and Survey Area (EIA Report Volume 3);** and
- **Figure 9.1.2: Designated sites within 10km and 5km of the Proposed Development.**

1.1.5 This appendix supports the EclA in addition to **Appendix 9.2 Ecological Survey Report** and **Appendix 9.3 Biodiversity Net Gain Assessment Report**.

### 1.2 Requirement for the Report

1.2.1 LUC was commissioned by the Applicant to undertake an ecological desk study and provide legal context to aid the design process and identify potentially sensitive ecological features within the relevant Desk Study Area. Data returned by the desk study is used to inform field survey methods and the scope of the assessment.

### 1.3 Terminology and Survey Area

1.3.1 The following terminology will be used throughout this report:

- Site: all land within the planning application (red line) boundary (**Figure 1.1: Site Location**);
- Proposed Development: The infrastructure including the platform, bays, control buildings, access tracks, drainage and landscape features and temporary construction compounds (see **Chapter 3: Description of the Proposed Development**); and
- Ecology Survey Area: The area within the red-line boundary, plus relevant buffers (up to 250 m around the Site, and up to 50 m around the proposed construction route) where access was granted in which all ecology surveys were undertaken in line with good practice guidelines for all ecological features surveyed (see **Figure 9.1.1: The Proposed Development and Ecology Survey Area**).

### 1.4 Relevant Legislation

1.4.1 The protections afforded to ecological features in Scotland are enshrined in the following key legislation:

- The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)<sup>1</sup>;
- The Wildlife and Countryside Act 1981 (as amended)<sup>2</sup>; and
- The Protection of Badgers Act 1992 (as amended)<sup>3</sup>.

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

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<sup>1</sup> Available online: <https://www.legislation.gov.uk/uksi/1994/2716/contents> [Accessed August 2024]

<sup>2</sup> Available online: <https://www.legislation.gov.uk/ukpga/1981/69> [Accessed August 2024]

<sup>3</sup> Available online: <https://www.legislation.gov.uk/ukpga/1992/51> [Accessed August 2024]

- 1.4.3 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 10: Ornithology**). Similarly, sites designated for their geological interest are discussed within **Chapter 11: Hydrology and Hydrogeology**.

*The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)*

- 1.4.4 In Scotland, the European Habitats Directive (Directive 92/43/EEC) has been transposed into national legislation via the Conservation (Natural Habitats &c.) Regulations 1994 (as amended). The Habitats Regulations provide the highest level of legal protection available to ecological features and make provisions for the following protected sites and species.

*European Sites*

- 1.4.5 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 largely qualify for their assemblages of birds.
- 1.4.6 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 in Europe. All Ramsar sites in Scotland are also European sites and are protected under the relevant statutory regimes.
- 1.4.7 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, an assessment process (Habitat Regulations Appraisal) must first be undertaken.
- 1.4.8 In order that potential effects on European sites can be fully understood, it is important that they are considered fully in EclA desk studies.
- 1.4.9 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 Directive continue to be relevant to the management of European sites.

*European Protected Species (EPS)*

- 1.4.10 The Habitats 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 important where it plays an important role in wider ecosystems and has historically suffered significant population decline. Regarding 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).

- 1.4.11 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)*

- 1.4.12 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.

*Sites of Special Scientific Interest (SSSI)*

- 1.4.13 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. There is a general presumption against development in SSSIs; however where development is proposed, SSSI consent is required. 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 Proposed Development.

*Protected Species*

- 1.4.14 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 Protection of Badgers Act (1992)*

- 1.4.15 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.

## 2. METHODS

### 2.1 Baseline Data Collection

#### Designated sites

2.1.1 A desk-top search for statutory designated nature conservation sites was conducted with 10 km and 5 km of the Site, including sites of international<sup>4</sup>, national<sup>5</sup> and local<sup>6</sup> importance. Non-statutory designated sites<sup>7</sup> within 2km of the Site was also conducted.

#### Protected species

2.1.2 A desktop search for protected species was also conducted using publicly available biological records from the past 15 years was undertaken within 2 km of the Site (and 10km for bat species).

2.1.3 Reference should be made to **Chapter 10: Ornithology** for details of ornithological survey and assessment.

#### Study Area

2.1.4 **Table 2.1** 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, and these are also shown.

**Table 2-1 – Features targeted in the desk study**

Ecological Feature	Comment	Desk Study Resource	Buffer from Site Boundary
Statutory Designated Sites	<ul style="list-style-type: none"> <li>▪ Special Areas of Conservation (SAC); and</li> <li>▪ Ramsar Sites</li> </ul>	NatureScot SiteLink <sup>8</sup> website Multi-Agency Geographic Information for the Countryside (MAGIC) <sup>9</sup>	10 km
	<ul style="list-style-type: none"> <li>▪ Sites of Special Scientific Interest (SSSI);</li> <li>▪ National Nature Reserves (NNR); and</li> <li>▪ Local Nature Reserves (LNR).</li> </ul>	Scotland Environment Mapping Service <sup>10</sup>	5 km
Non-statutory Designated Sites	<ul style="list-style-type: none"> <li>▪ Local Nature Conservation Sites (LNCS);</li> <li>▪ RSPB and Scottish Wildlife Trust Reserves; and</li> <li>▪ Ancient/Long-established Woodland.</li> </ul>	Tayside Local Biodiversity Action Plan (2016-2026) <sup>11</sup> MAGIC Scotland Environment Mapping Service	2 km
Existing records of deep peat and carbon rich soil	N/A	The Carbon and Peatland Map <sup>12</sup>	2 km

<sup>4</sup> i.e. Special Areas of Conservation (SAC)

<sup>5</sup> i.e. Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR)

<sup>6</sup> i.e. Local Nature Reserves (LNR)

<sup>7</sup> i.e. Local Nature Conservation Sites (LNCS), non-governmental organisation (NGO) nature reserves, and Ancient Woodland Inventory (AWI)

<sup>8</sup> URL: <https://sitelink.nature.scot/home> [Accessed March 2024]

<sup>9</sup> 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 March 2024]

<sup>10</sup> Scottish Environment Protection Agency (n.d.) Scotland's Environment Map [online]. Available at: <https://map.environment.gov.scot/sewebmap/> [Accessed March 2024]

<sup>11</sup> URL: <https://www.taysidebiodiversity.co.uk/> [Accessed March 2024].

<sup>12</sup> 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 March 2024]

Ecological Feature	Comment	Desk Study Resource	Buffer from Site Boundary
Existing Records of EPS and WCA Protected Species	To include: <ul style="list-style-type: none"> <li>All native EPS and WCA protected species recorded, post-2009.</li> </ul>	National Biodiversity Network (NBN) Atlas Scotland <sup>13</sup>	5 km for Protected Species 10 km for Bat Species

Limitations

2.1.10 The Site is not covered by a local biological records centre, therefore desk study data was obtained from NBN Atlas only. Due to licensing rules, desk study data obtained from NBN Atlas was limited to records under the CC-BY and OGL licences only. As such a small number of records may not have been available for use. Given the habitats present within the Study Area, which is dominated by lowland agricultural land, this is not considered to have had a substantial impact on the conclusions of the assessment.

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<sup>13</sup> National Biodiversity Network Atlas (n.d.) National Biodiversity Network Atlas, Scotland [online]. Available at: <https://scotland.nbnatlas.org/> [Accessed March 2024]



### 3. RESULTS

#### 3.1 Designated sites

3.1.1 Statutory and non-statutory designated sites within 2 km, 5 km and 10 km of the Proposed Development are listed in **Table 3.1** below, in line with the Scoping Report<sup>14</sup>. **Table 3.2** below lists the statutory and non-statutory designated sites within 2 km, 5 km and 10 km of the principal construction route, with the exception of those identified in **Table 3.1**.

**Table 3-1: Designated Sites within 10, 5 and 2 km of the Site**

Site Name	Designation	Approx. Distance and Orientation from the Site	Qualifying Feature(s)
<b>Statutory Sites (within 10km)</b>			
River Tay	SAC	Approximately 8.3 km northeast	Otter Atlantic salmon <i>Salmo salar</i> River lamprey <i>Lampetra fluviatilis</i> Brook lamprey <i>Lampetra planeri</i> Sea lamprey <i>Petromyzon marinus</i> Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels
Firth of Tay and Eden Estuary	SAC	Approximately 7.2 km south	Estuaries Intertidal mudflats and sandflats Harbour seal <i>Phoca vitulina</i> Subtidal sandbanks
<b>Statutory Sites (within 5km)</b>			
Auchterhouse Hill	SSSI	Approximately 2.7 km northwest	Subalpine dry heath
<b>Non-statutory Designated Sites (within 2km)</b>			
Unnamed woodland Woodland ID: 20331	Ancient Woodland	Approximately 0.1 km southwest	Long-Established (of plantation origin) (LEPO)
Unnamed woodland Woodland ID: 20334	Ancient Woodland	Approximately 1.7 km southwest	LEPO
Wynton Wood Woodland ID: 20330	Ancient Woodland	Approximately 0.3 km west	LEPO

**Table 3.2 Additional Designated Sites within 10, 5 and 2 km of the Principal Construction Route**

Site Name	Designation	Approx. Distance and Orientation from the Site	Qualifying Feature(s)
<b>Statutory Sites (within 10km)</b>			
Barry Links	SAC	9.1 km southwest	Coastal dune heathland Dune grassland Humid dune slacks Shifting dunes Shifting dunes with marram
<b>Statutory Sites (within 5km)</b>			
Gaige Marsh	SSSI	2.7 km east	Flood-plain fen
<b>Non-statutory Designated Sites (within 2km)</b>			

<sup>14</sup> Scottish and Southern Energy Network (2024) Scoping Report Emmock 400 kV Substation

Site Name	Designation	Approx. Distance and Orientation from the Site	Qualifying Feature(s)
<b>Statutory Sites (within 10km)</b>			
Trottick Ponds	LNR and LNCS	Approximately 140 m east	Open water, woodland, scrub, grassland
Dighty Burn	LNCS	Within the proposed construction route; this LNCS flows under the U322 Emmock Road	Running water in stoney burn, and associated mature woodland and reed beds.
Balmuir	LNCS	Approximately 170 m east	Adjoins Trottick Ponds LNR & consists of semi-natural broadleaved woodland and young plantation.
Tarzan's Island	LNCS	Approximately 1.3 km southeast	A diverse and complex hill with grassland habitats, scrub and wetland margins along a burn.
Middleton Woods	LNCS	Approximately 875 m southeast	Establishing mixed native woodland, grassland, new native plantation and developing pond.
Longhagh Quarry	LNCS	Approximately 1.5 km east	Grassland, broom scrub and ash/sycamore woodland.
Fithie Burn and Duntrune Quarry	LNCS	Approximately 1.3 km east	Proposed LNCS
Burnside of Duntrune	LNCS	Approximately 1.7 km east	Proposed LNCS
Caird Park	LNCS	Immediately south	A largely typical golf course with fairways divided by linear plantations and lines of trees.
Stobsmuir Pond	LNCS	Approximately 1.8 km southwest	Formal water feature with wooded island used by wildfowl
Scottish Water Field	LNCS	Approximately 1.8 km southwest	Small inaccessible grassland atop a covered reservoir.
Den o' Mains	LNCS	Approximately 550 m southeast, wholly within the Caird Park LNCS	Running water, ponds, marsh and woodland.
The Miley	LNCS and SWT Reserve	Approximately 1.7 km southwest	Diverse grasslands on railway ballast, tall herb/scrub and a linear woodland.
Dundee Crematorium	LNCS	Approximately 2.0 km southwest	Proposed LNCS; Mature policy woodland – highly managed in parts
Ardler Ponds	LNCS	Approximately 2.0 km southwest	Artificial ponds with reed beds.
Clatto Extension	LNCS	Approximately 1.8 km east	Neutral grassland and shrub on sloping ground with newly planted mixed native woodland
Unnamed woodland Woodland ID: 21,033	Ancient Woodland	Within the proposed construction route	LEPO
Unnamed woodland Woodland ID: 21,038	Ancient Woodland	Immediately west of the proposed construction route	LEPO
Balmuir Wood Woodland ID: 21,017	Ancient Woodland	Approximately 590 m east	LEPO
Shielhill Wood Woodland ID: 21,023	Ancient Woodland	Approximately 590 m east	LEPO
Unnamed woodland Woodland ID: 21,024	Ancient Woodland	Approximately 1.4 km east	LEPO

Site Name	Designation	Approx. Distance and Orientation from the Site	Qualifying Feature(s)
<b>Statutory Sites (within 10km)</b>			
East Muirhouse Strip Woodland :D: 21,028	Ancient Woodland	Approximately 1.2 km southeast	LEPO
Unnamed woodland Woodland ID: 21,035	Ancient Woodland	Approximately 2 km east	LEPO
Unnamed woodland Woodland ID: 21,037	Ancient Woodland	Approximately 180 m south	LEPO
Unnamed woodland Woodland ID: 21,342	Ancient Woodland	Approximately 1.6 km west	LEPO

3.1.2 There were no Ramsar sites identified within 10 km of the Site, and no NNRs, RSPB or Scottish Wildlife Trust reserves identified within 5 km of the Site. In addition, no records of deep peat or carbon-rich soils were identified within 2 km of the Site.

### 3.2 Protected Species

3.2.1 No records of protected species were identified within the Site. The closest record is of a red squirrel was recorded approximately 400 m northeast of the proposed construction route and approximately 300 m northeast of the Site in 2015.

3.2.2 The desk study of relevant protected species records (post 2009) returned a total of 98 records of bats within 10 km of the Proposed Development as detailed in **Table 3.2** below. Note that the NESBReC dataset contained no records of bats within 10 km of the Site.

**Table 3.2: Bat Records (post-2009) within 10km of the Site**

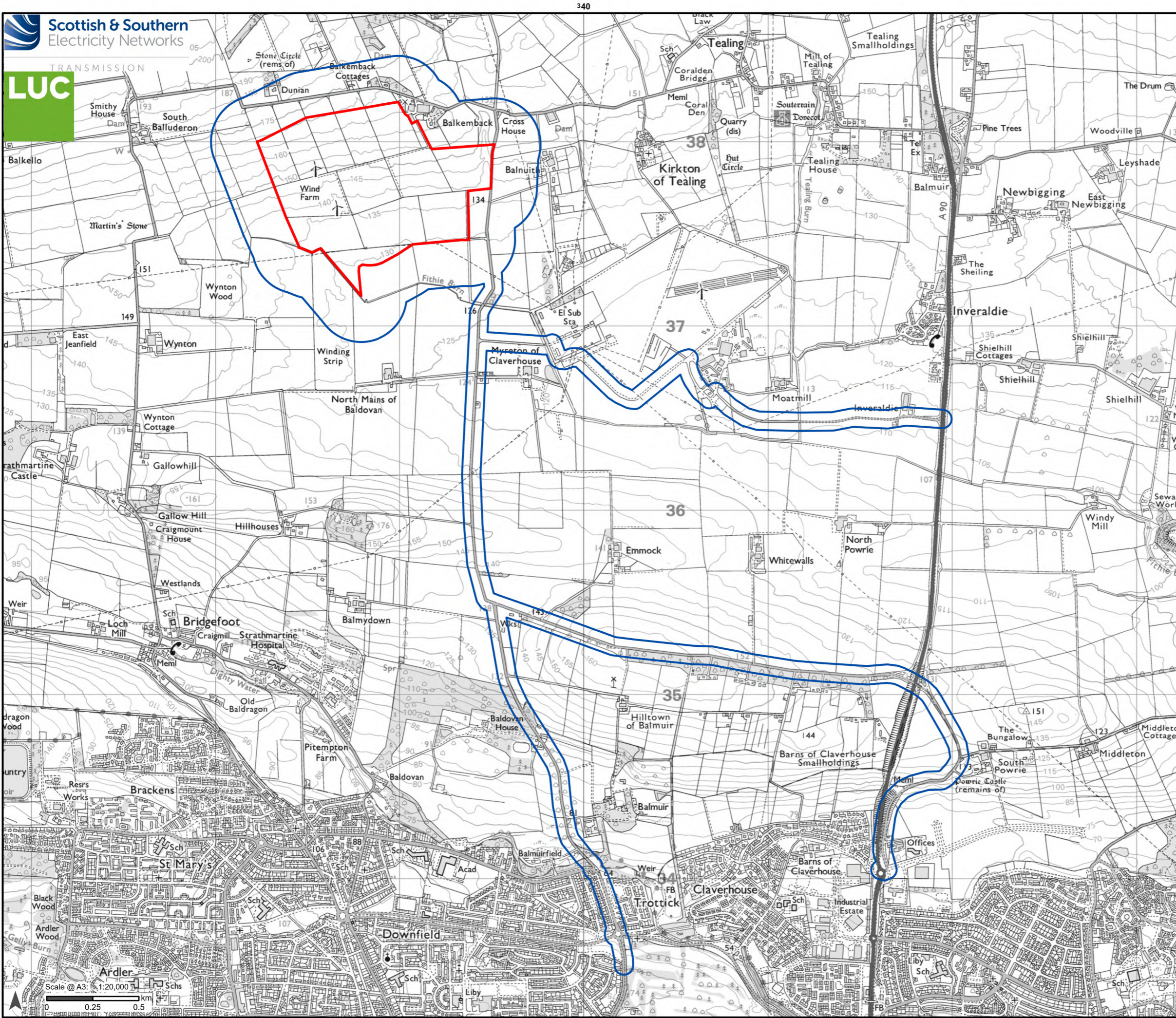
Species	Latin Name	Number of Records	Year(s) of Records
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	34	2009 - 2020
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	28	2009 - 2020
Daubenton's	<i>Myotis daubentonii</i>	17	2009 - 2022
Noctule	<i>Nyctalus noctula</i>	1	2013
Nyctalus species	<i>Nyctalus sp.</i>	2	2013
Unidentified bat	<i>Chiroptera sp.</i>	16	2009 - 2023

3.2.3 The desk study also identified a total of 388 records of other protected species within 5 km of the Site as detailed in **Table 3.3** below.

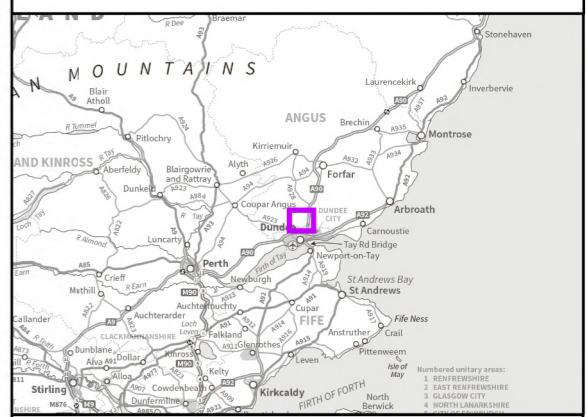
**Table 3.3: Protected Species (post-2009) within 5 km of the Site**

Species	Latin Name	Number of Records	Year(s) of Records
Beaver	<i>Castor fiber</i>	1	2023
Badger	<i>Meles meles</i>	1	2009
Water vole	<i>Arvicola amphibius</i>	1	2024
Red squirrel	<i>Sciurus vulgaris</i>	384	2009-2023
Common toad	<i>Bufo bufo</i>	1	2016

3.2.4 No records of otter, wildcat, pine marten, water vole, mountain hare, hedgehog, Atlantic salmon, brook lamprey, sea lamprey, or adder were identified in the desk study.



- ▭ Emmock red line boundary
- ▭ Ecology survey area (250m buffer from red line boundary and 50m buffer on access tracks)
- ▭ Ecology survey area (250m buffer from red line boundary and 50m buffer on access tracks)
- ▭ Ecology survey area (250m buffer from red line boundary and 50m buffer on access tracks)



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Project No: LT382  
Project: Emmock 400 kV Substation

Title:  
The Proposed Development and Ecology Survey Area

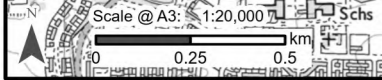
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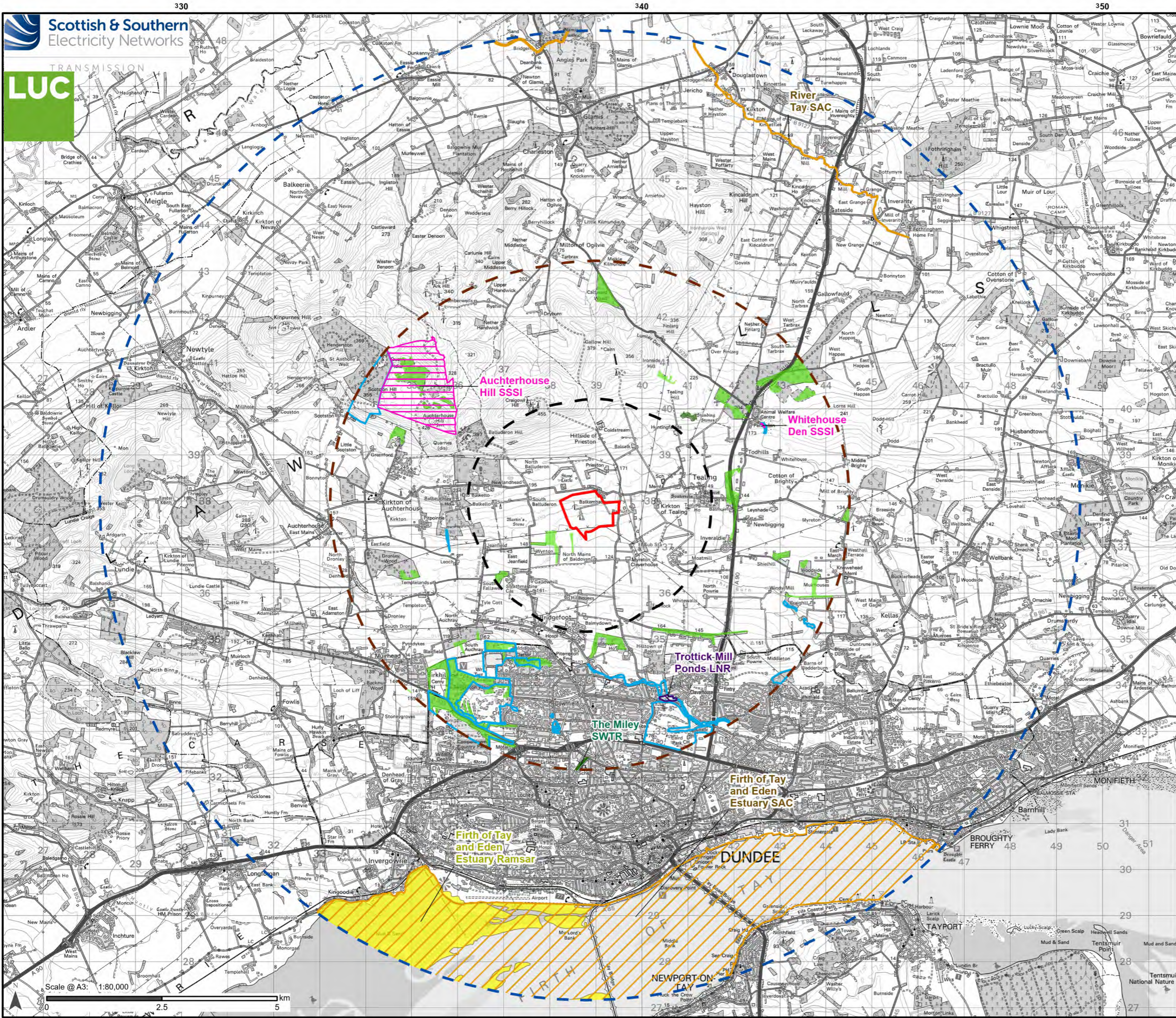
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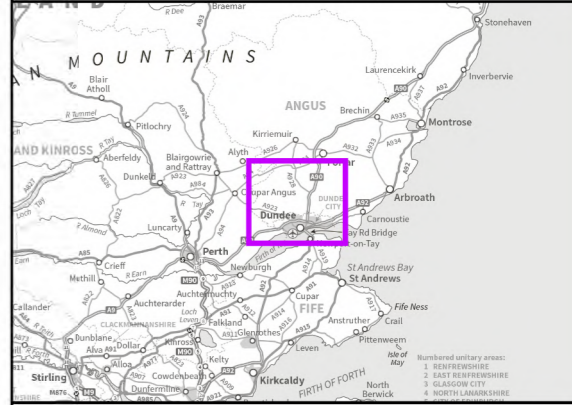
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- Emmock red line boundary
- 2km buffer
- 5km buffer
- 10km buffer
- Designated sites within 10km**
- Ramsar site
- Special Area of Conservation (SAC)
- Designated sites within 5km**
- Site of Special Scientific Interest
- Local Nature Reserve (LNR)
- Scottish Wildlife Trust Reserve (SWTR)
- Local Nature Conservation Site
- Ancient Woodland Inventory**
- Ancient (of semi-natural origin)
- Long-Established (of plantation origin)
- Other (on Roy map)

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Project No: LT382  
Project: Emmock 400 kV Substation

Title:  
Designated Sites within 10km and 5km of the Site

Drawn by: IB Date: 06/11/2024

Figure: 9.1.2

Scale @ A3: 1:80,000  
0 2.5 5 km