Burnside to Greens 400kV Connection

Environmental Appraisal Appendix C: Terrestrial Ecology

Document No	UKCAL-RPS-03-CSE-ENV-RPT-00003	**Rev**	01
Classification	Public	**Rev Date**	24/11/2025
Reason for Issue	Accepted for Use		

Document Notes

Confidentiality Notice and Disclaimer

Document History

Rev	Date	Reason for Issue	Originator	Reviewer	Approver	Modifications
01	24/11/2025	Final	Doug Blease	Surabhi Verma	Jessica Antas	

Table of Contents

1 Introduction

1.1 Background

Tetra Tech Limited (Tetra Tech) was commissioned by RPS Ltd in August 2025 to undertake an Ecological Appraisal of up to four 400 kilovolt (kV) underground cable circuits, connecting Caledonia Offshore Wind Farm Burnside Onshore Substations to the Scottish and Southern Energy Networks Transmission (SSEN-T) Greens Substation, together with associated works., hereafter referred to as "the Proposed Development".

This report has been prepared by a Tetra Tech Senior Ecologist of 'proficient' competency, as per the Chartered Institute of Ecology and Environmental Management (CIEEM) Competency Framework [1], and the conditions pertinent to it are in Annex A.

1.2 Site Description

A plan showing the red line boundary (RLB), hereafter referred to as "the Site", is provided in Annex B. The site is centred at Ordnance Survey Grid Reference NJ 8275 4619, and covers an area of 157ha of predominantly agricultural land around Maryhill and Greens, near Turriff, Aberdeenshire. Cropland and sheep-grazed pastures dominate the site, some bordered by hedgerows and tree lines. Multiple farm buildings are present immediately adjacent to the boundary, with small villages and crofts scattered throughout the wider landscape.

1.3 Development Proposals

The Proposed Development includes the following elements:

- A working cable corridor up to 100 metres wide, accommodating all temporary works areas required for installation;
- Up to four 400 kV cable circuits installed in trenches;
- Up to two temporary haul roads;
- Haul road access points;
- Up to four Joint Bays for each cable circuit;
- Up to two Satellite construction compounds; and
- Temporary crossing infrastructure for haul road(s), road, watercourse and utilities

The parameters set out are presented to enable consideration and determination of Planning Permission in Principle (PPP).

The RLB [2] has been reviewed and considered throughout this report.

1.4 Purpose of Report

The purpose of this report is to:

- Undertake a desk study to obtain existing information on statutory and non-statutory sites of nature conservation interest and relevant records of protected / notable species within the site and its zone of influence.
- Present the results of an extended Habitat Classification Survey, involving a walkover of the site to record habitat types and dominant vegetation, including any invasive species, and evidence of protected fauna or habitats capable of supporting such species.
- Evaluate potential ecological receptors on site and within the zone of influence; identify any constraints to the site's development and make any recommendations for further surveys, mitigation or enhancement.

Scientific names are provided at the first mention of each species and common names (where appropriate) are then used throughout the rest of the report for ease of reading.

1.5 Quality

Our ecologists follow CIEEM's Code of Professional Conduct [3], with all surveys completed in accordance with Tetra Tech's Biosecurity Policy [4].

All staff have completed Health and Safety training. Risk Assessment Method Statements have been completed and verified prior to the site visit, with Dynamic Risk Assessments completed by all site staff upon arrival at site.

1.6 Validity

This report will be considered to remain valid for 18 months (until April 2027), in accordance with professional guidance [5]. After this time, it may be appropriate to consult an ecologist to confirm if an update assessment is required. The recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the habitats present, RLB or development proposals upon which this report was based.

2 Methodology

The following section should be read in conjunction with Annex C – Key Legislation.

2.1 Historic Surveys

Historic surveys for planning applications submitted to Aberdeenshire Council in close proximity to the site include the following:

Onshore Transmission Infrastructure (**APP/2024/1812**)

Targeted surveys for badger, bats, otter, water vole, and breeding and wintering birds were undertaken in 2024 to inform an Environmental Impact Assessment (EIA) report [6] for the approx. 37km cable route.

Greens Substation and Associated Infrastructure (**APP/2024/1927**)

A National Vegetation Classification (NVC) survey and Biodiversity Net Gain (BNG) assessment were conducted alongside targeted protected species surveys throughout 2024 to inform an EIA [7].

Abbotshaugh BESS (**APP/2025/0793**)

Ecological reports for the nearby BESS scheme include a Preliminary Ecological Appraisal [8], Outline Biodiversity Enhancement and Management Plan [9], and a Species Protection Plan for mammals informed by surveys throughout 2024 and 2025 [10].

2.2 Desk Study

The desk study undertaken in October 2025 comprised a review of information available in the public domain with regards to designated and notable areas of biological interest.

In addition to an information request from the North East Scotland Biological Records Centre (NESBReC), the desk study used the following online databases:

- National Biodiversity Network (NBN) Atlas [11];
- NatureScot Sitelink (NatureScot, 2024) [12];
- Native Woodland Survey of Scotland (NWSS) data [13]; and
- Ancient Woodland Inventory (AWI) [14].

The geographical extent of the search area was related to the significance of sites and species and potential zones of influence. For this site the following search areas were considered appropriate:

- 20km for sites of International Importance (e.g. Special Areas of Conservation (SAC), Special Protection Area (SPA), Ramsar sites);
- 2km for sites of National or Regional Importance (e.g. Sites of Special Scientific Interest (SSSI), protected or otherwise notable species and non-statutory designated sites of County Importance (e.g. Local Wildlife Sites (LWS));
- 2km for biological records;
- 1km for ancient woodland and mapped priority habitats (Scottish Biodiversity List (SBL) priority habitats and species.

The data search did not cover Tree Preservation Orders (TPOs); or Conservation Areas designated for their special architectural and historic interest.

2.3 Field Surveys

The following methodologies have been used to identify the ecological receptors present on or near the site and which are relevant to the proposed development. Land adjacent to accessible boundaries (Annex B) was subject to visual appraisal using binoculars.

2.3.1 Habitats

An extended Habitat Classification Survey was undertaken on the site on 19th August and 29th September 2025 by a Tetra Tech Senior Ecologist of 'proficient' competency for this type of survey, as per the Chartered Institute of Ecology and Environmental Management (CIEEM) Competency Framework [1].

The habitats present on site were mapped in accordance with the UK Habitat Classification Professional Edition – Version 2.0 [15], hereafter referred to as 'UKHab'. The habitats have been classified to a minimum of 'Level 3' (broad habitats) (in accordance with UKHab). Classification to 'Level 4' was applied where priority habitats or those listed on the Scottish Biodiversity List [16] were present. Where habitats occur in multiple areas of the site or are of different condition, additional polygons of the same habitat have been mapped so that their condition may be assessed independently.

The minimum recording unit for habitat area is 25m^2 or 5m length for linear habitats (such as hedgerows or watercourses). Dominant plant species were recorded for each habitat present using standard nomenclature [17]. Nomenclature for bryophytes follows Mosses and Liverworts of Britain and Ireland [18]. Relative plant species abundance was estimated using the DAFOR[1] scale.

2.3.2 Protected and Notable Species

Alongside the Habitat Classification Survey, the Site was appraised for evidence of, and its potential to support, protected or notable species, especially those listed under The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), Schedule 5 of the Wildlife and Countryside Act (W&CA) 1981 (as amended), those given extra protection under Section 2 of the Nature Conservation (Scotland) Act 2004, and species included in the 'North East Scotland Biodiversity Partnership 4 Year Strategic Plan 2022-2026' [19] .

The presence of protected and notable species was determined using standard best practice guidance and are listed below.

Badger (*Meles meles*)

The site was surveyed for evidence of badger setts or other badger activity including paths, latrines or signs of foraging. The methodologies used and the recording of setts was classified in accordance with published criteria [20].

[1] The DAFOR scale has been used to estimate the frequency and cover of the different plant species as follows: Dominant (D), Abundant (A), Frequent (F), Occasional (O), Rare (R) , The term 'Locally' (L) is also used where the frequency and distribution of a species are patchy and 'Edge' (E) is also used where a species only occurs on the edge of a habitat type

Red Squirrel (*Sciurus vulgaris*)

The survey followed guidance outlined by Forestry Commission [21] and in accordance with survey guidance for initial non-intrusive visual surveys [22] and NatureScot guidance (2022).

Pine Marten (*Martes martes*)

The assessment for pine marten included evaluating suitable habitats, noting any field signs of their presence, and identifying potential den sites within 250 meters of the proposed development, as per current guidance [22] and NatureScot advice (2018).

Bats (all *Chiroptera*)

Roosting Bats – Buildings / Structures / Trees

Any suitable buildings, structures or trees within the red line boundary were assessed from the ground for their suitability to support breeding, resting and hibernating bats using survey methods in accordance with the Bat Conservation Trust (BCT Good Practice Guidelines [23], hereafter referred to as the 'BCT Guidelines'.

Categorisation of Trees

A preliminary assessment of trees was undertaken, following which trees were categorised to highlight whether additional assessment is required, referring to the categories in Table 2.1 below. Professional judgement was used to identify trees where features could be obscured by foliage or other branches. If at least one potential roost feature (PRF) was identified, the tree was categorised as 'PRF'.

Table 2.1: Categorisation of Trees

Suitability	Description
None	Either no PRFs in the tree or highly unlikely to be any.
FAR	Further assessment required (FAR) to establish if PRFs are present in the tree.
PRF	A tree with at least one PRF present.

Otter *(Lutra lutra)*

The site was assessed for its suitability to support otter using industry standard guidance [24].

Water Vole (*Arvicola amphibius*)

Waterbodies within or adjacent to the site were assessed for their suitability to support water vole using industry standard guidance [25].

Birds

Bird species identified at the time of survey were noted and an assessment of habitats was undertaken to determine the likely value to breeding and foraging birds.

Amphibians

The Site was appraised for its suitability to support common amphibians using guidance outlined in the Herpetofauna Workers' Manual [26].

In addition to the above, any ponds present were subject to a great crested newt (GCN) *Triturus cristatus* Habitat Suitability Index (HSI) assessment [27].

Reptiles

The site was appraised for its suitability to support reptiles using guidance outlined in the Herpetofauna Workers' Manual [26].

Invertebrates

The Buglife website was used to check for Important Invertebrate Areas (IIAs) [28] and B-Lines ('insect pathways') [29] in proximity to the site. The site's habitats were appraised for suitability to support assemblages of invertebrates.

Other Species

The site was also appraised for its suitability to support other protected or notable fauna with regard to the Guidelines for Preliminary Ecological Appraisal [30] and BS42020:2013 Biodiversity – Code of Practice for Planning and Development [31]. Evidence of any current or historical presence of such species was recorded.

Invasive Non-Native Species

Evidence of species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended by the Wildlife and Natural Environment (Scotland) Act 2012.) were recorded as seen.

2.4 Limitations

Any absence of desk study records cannot be relied upon to infer absence of a species/habitat as the absence of records may be a result of under-recording within the given search area.

The optimal period to undertake an extended UKHab survey is April-September, inclusive. As the survey was undertaken within the optimal survey window, this is not considered to be a limitation to the survey methodology as the dominant species of the respective vegetation types were visible and identifiable.

To determine presence or likely absence of protected species usually requires multiple visits, at appropriate times of the year for each target species. To inform this report only surveys were carried out during August and September 2025. Although these dates may be considered a sub-optimal survey period for some of the target species, the effort was considered to be appropriate to inform this Ecological Appraisal of the 400kv cable route which is relatively short in length. This survey focuses on assessing the potential of the site to support species of note, with reference to those given protection under UK or European wildlife legislation.

This report provides an assessment of the ecological interest present on the days the site was visited and highlights areas where further survey work may be recommended. In addition, the desk-based study carried out in advance of the survey enabled consideration to be given to the level of survey effort necessary for the predominantly agricultural habitat within the site boundary, as well as the volume of existing or previous (recent) survey information publicly available from nearby projects enabling a

wider picture and understanding of the ecological context of the area to be established. Baseline data is expected to be maintained, augmented by targeted survey where required, leading up to and including pre-works checks to minimise the limitation of reliance on old or invalid datasets.

Further ecological surveys will be undertaken by the Applicant where appropriate and when detailed designs and a finalised cable route and understanding of likely interactions with receptors is known. These details would support the consideration of the detailed design at MSC stage.

At this stage there is sufficient survey detail to confirm the presence of protected species in and around the site, as necessitated by ALDP Policy E1.6 and NPF4 Policy 4f which require survey work to be undertaken to inform an assessment into directing appropriate avoidance and mitigation.

Though much of the site could be accessed directly, permission was not granted for a number of land parcels (Annex B). Broad habitats in these areas could be assigned with confidence due to their relatively basic agricultural type. However full botanical species lists, invasive species and discreet protected/notable species evidence could not be collected.

An attempt was made to assess a small timber livestock shelter (TN7) for bat roost potential. Though electric fencing prevented a thorough internal inspection, no PRFs were noted on the shelter. Similarly, a small ($2m^2$) brick building on the north bank of a ditch (TN18) could not be safely surveyed due to a steep bank with overgrown vegetation. While small gaps were present in the brickwork and mortar, the interior was exposed to the elements and noticeably damp, with standing water present. This building was therefore considered unlikely to support roosting bats.

3 Results & Evaluation

3.1 Designated Sites

Troup, Pennan and Lion's Heads Special Protection Area (SPA) is located approx. 17km north of the site and is designated for its breeding seabird assemblage. Prior consultation with NatureScot has confirmed that no likely significant impacts are anticipated and no Habitats Regulations Assessment (HRA) is required **[32]**.

3.2 Ancient Woodland and Priority Habitats

The Native Woodland Survey of Scotland (NWSS) database returned three areas of native woodland within 1km of the site. The closest is a 0.7ha parcel located approx. 300m east of site at NJ 8373 4570. Two further parcels are present north of site, at approx. NJ 8315 4690 and NJ 8349 4687.

No ancient woodland was returned within 1km.

3.3 Habitats

The following habitats, as outlined in Table 3.1, have been identified through our field assessment. A UKHab map can be found in Annex D, Target Notes in Annex E, and a Target Note Plan in Annex F.

Table 3.1: Habitats Recorded.

Habitat (UKHab Code)	Result	Importance Assessment
g3c Other neutral grassland	Other neutral grassland on site was associated with arable reversion grassland and pastures subject to reduced grazing intensities. All parcels were similar in species composition, with a tussocky sward of false oat-grass *Arrhenatherum elatius*, Yorkshire-fog *Holcus lanatus*, crested dog's-tail *Cynosurus cristatus* and common bent *Agrostis capillaris*, with occasional cock's-foot *Dactylis glomerata*, sweet vernal-grass *Anthoxanthum odoratum* and perennial rye-grass *Lolium perenne.* Dicotyledonous associates were comparatively low in cover, but featured autumn hawkbit *Scorzoneroides autumnalis,* cat's-ear *Hypochaeris radicata*, common knapweed *Centaurea nigra*, common mouse-ear *Cerastium fontanum*, cow parsley *Anthriscus sylvestris*, creeping buttercup *Ranunculus repens*, creeping thistle *Cirsium arvense*, germander speedwell *Veronica chamaedrys*, hogweed *Heracleum sphondylium*, lesser stitchwort *Stellaria graminea*, meadow vetchling *Lathyrus pratensis*, nettle *Urtica dioica*, ribwort plantain *Plantago lanceolata*, and yarrow *Achillea millefolium*.	**Regional** – NESBiP priority habitat

Habitat (UKHab Code)	Result	Importance Assessment
g4 Modified grassland	Modified grassland, dominated by a few palatable species and associated with either arable or grazing use, was recorded across the site. Perennial rye-grass and white clover *Trifolium repens* were characteristically abundant, alongside occasional to frequent creeping buttercup, creeping thistle, dandelion *Taraxacum agg.,* and great plantain *Plantago major*.	**Regional** – NESBiP priority habitat
w1g Other broadleaved woodland Secondary Codes: 33 Line of trees	Lines of broadleaved trees were noted as boundary features on site. Beech *Fagus sylvatica* was by far the most abundant species, with sycamore *Acer pseudoplatanus* and ash *Fraxinus excelsior* common.	**Local** – semi-natural habitat; mature native trees
w1h Mixed woodland Secondary Codes: 33 Line of trees	Lines of mixed broadleaved and coniferous trees, primarily ash, beech and Sitka spruce *Picea sitchensis*, were recorded across the site.	**Site** – common and widespread
w2c Other coniferous woodland Secondary Codes: 33 Line of trees	Short lines of Sitka spruce were present towards the south of site, extending briefly along historic field boundaries.	**Site** – common and widespread
h2a5 Species-rich native hedgerow Secondary Codes: 114 Dry stone wall	Two species-rich native hedgerows were noted on site: one extended west atop a dry-stone wall from the unnamed road at NJ 8286 4589, while the other encircled the field centred at NJ 8330 4531. Hawthorn *Crataegus monogyna* was abundant, with hazel *Corylus avellana*, blackthorn *Prunus spinosa* and plum *Prunus domestica* occasional to frequent.	**National** – SBL priority habitat
h2a6 Other native hedgerow Secondary Codes: -	A hedgerow comprised solely of hawthorn marked the field boundary east of the pond, just inside the line of broadleaved trees at approx. NJ 8290 4631.	**National** – SBL priority habitat

Habitat (UKHab Code)	Result	Importance Assessment
h3e Gorse scrub Secondary Codes: -	Small patches of scrub dominated by gorse *Ulex europaeus* with occasional broom *Cytisus scoparius* were present across the site. The majority of these were linear, extending along field boundaries and roadsides, though a larger area exists at the northernmost extent of the red line boundary.	**Regional** – NESBiP priority habitat
c1c Cereal crops Secondary Codes: -	A large proportion of the site was used for the cultivation of cereal crops, with most relevant parcels hosting stubble at the time of survey. Cover of native vegetation was negligible.	**Site** – widespread anthropogenic habitat
c1d Non-cereal crops Secondary Codes: -	Two fields had been planted with a crop of potatoes. While native vegetation was generally sparse, localised patches of arable annuals were present. These included black bindweed *Fallopia convolvulus*, chickweed *Stellaria media*, common ramping-fumitory *Fumaria muralis*, field forget-me-not *Myosotis arvensis*, field pansy *Viola arvensis*, knotgrass *Polygonum aviculare*, northern dock *Rumex longifolius*, pineappleweed *Matricaria discoidea*, redshank *Persicaria maculata*, and sun spurge *Euphorbia helioscopia*.	**Site** – widespread anthropogenic habitat
u1b Developed land; sealed surface Secondary Codes: -	Multiple unnamed roads are present within the site boundary.	**Site** – widespread anthropogenic habitat
r1g Other standing water Secondary Codes: 42 Pond	A pond was present towards the centre of the site at approx. NJ 8283 4638. Cover of floating macrophytes was negligible, though vegetation dominated by soft rush was recorded around the margin of the pond and on a small island in the centre.	**Regional** – NESBiP priority habitat (ponds)
r2b Other rivers and streams Secondary Codes: 33 Ditch	Two ditches diverge from the Burn of Greens and run westward across the site. The largest of the two starts just north of the pond, then runs for over a kilometre before drying out close to the northwestern site boundary. Though lined on either side by a narrow strip of false oat-grass and nettle, any potentially native aquatic flora within the ditch itself was smothered by monkeyflower *Erythranthe sp*.	**Regional** – NESBiP priority habitat (rivers & burns)

Habitat (UKHab Code)	Result	Importance Assessment
	The second ditch enters the site at approx. NJ 8222 4701, running west for approx. 400m before forking and terminating northwest of the red line boundary. Further monkeyflower was recorded from the channel, though less frequently than in the ditch to the south.	

3.4 Protected and Notable Species

A review of historic surveys and data purchased from the North East Scotland Biological Records Centre (NESBReC) confirmed the presence of a number of protected and notable species within 2 km of the site, recorded within the last 10 years (since 2015). Relevant data are discussed in Table 3.2 below. Further information on relevant species / environmental legislation and planning policy can be found in Annex C.

Table 3.2: Species

Species	Legal Protection	Result	Importance Assessment
Badger	Protection of Badgers Act 1992; Wildlife and Countryside Act 1981 (as amended) Schedule 6.	**Desk Study** The data search returned six records of badger within 2km of the site, all dated 2015. The closest record was recorded from a grid square that overlaps with the site boundary. Badger field signs were recorded during the surveys for both Greens Substation and Abbotshaugh BESS. **Field Survey** A badger sett was recorded approx. 50m from the site boundary (TN12). At least 15 entrances were noted, and all but two were considered to be well-used. The majority of these entrances faced north towards the site boundary. Features such as free draining soils, available forage, sheltered areas such as tree lines are present on and adjacent to site, providing opportunities for sett creation. Primary foraging habitat is offered by parcels of modified grassland across the site, while cropland, other neutral grassland and scrub provide secondary foraging habitat. Badger are considered highly likely to be active across the site and in the near landscape.	**National (UK)** – Protection of Badgers Act 1992
Red squirrel	Wildlife and Countryside Act 1981 (as amended) Schedules 5 and 6.	**Desk Study** The data search returned two records of red squirrel within 2km of the site. Both were dated 2020, with the closest from 1.7km southwest of site. **Field Survey** No direct evidence of foraging or commuting squirrel was found on site during the survey. Tree lines around the site offer some foraging resources and commuting	**National** – SBL species

Species	Legal Protection	Result	Importance Assessment
		routes, though the site is dominated by open agricultural land and is relatively distant from connected high-quality red squirrel habitat.	
Pine marten	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended); Wildlife and Countryside Act 1981 (as amended) Schedule 5.	**Desk Study** The data search returned three records of pine marten within 2km of the site, the closest approx. 1.6km southwest of site (dated 2021). **Field Survey** No evidence of pine marten activity or presence was recorded on site during the survey, and the habitats on site are considered suboptimal for pine marten due to lack of connectivity and denning opportunities.	**Regional** – LBAP priority species **National** – SBL species
Other protected or notable terrestrial mammal species	Wildlife and Countryside Act 1981 (as amended).	**Desk Study** The data search returned two records of brown hare *Lepus europaeus* from 2015, with the closest observed 0.7km northeast of the site. Two records of water shrew *Neomys fodiens* were returned from 0.7km southwest of site, the most recent dated 2024. Incidental sightings of brown hare were recorded during surveys for Greens Substation. **Field Survey** No evidence of other protected or notable mammals was found on site during the field survey. The treelines and scrub on site offer shelter and nesting sites for a range of mammal species *e.g.* hedgehog, and it can be expected that arable and grassland habitats can host brown hare.	**Regional** – NESBiP 'Big 5' species (hedgehog *Erinaceus europaeus*)
Bats	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), Wildlife and	**Desk Study** The data search returned one record each of common pipistrelle *Pipistrellus pipistrellus*, and soprano pipistrelle *Pipistrellus pygmaeus.* Both were recorded in 2018 within a grid square that overlaps with the site.	**International** – European protected species

Species	Legal Protection	Result	Importance Assessment
	Countryside Act 1981 (as amended) Schedules 5 & 6.	Bat surveys for Greens Substation found one confirmed summer roost in a farmhouse at the Mains of Greens (approx. NJ 8256 4684), and three additional hibernation roosts. **Field Survey** Roosting Several PRFs were observed within the tree line at approx. NJ 8290 4631. Roosting opportunities are abundant just beyond the red line boundary owing to the numerous farm buildings adjacent to site (*e.g.*, TN13). Foraging and Commuting Though the site largely consists of open cropland and grassland, the mature tree lines, hedgerows, and ditches joining the Burn of Greens offer sheltered commuting routes for bats. A range of invertebrate prey is likely to be present, owing to livestock-grazed grassland, waterbodies/ditches, mature trees, native hedgerows, and low levels of artificial lighting. Overall, the site is considered to offer moderate suitability for foraging and commuting bats.	
Otter	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended); Wildlife and Countryside Act 1981 (as amended) Schedules 5 and 6.	**Desk Study** The data search did not return any records of otter within 2km of the site, though otter spraint was recorded from a small bridge over the Burn of Greens in 2024. **Field Survey** No evidence of otter was found on site during the survey. Opportunities for holt creation, breeding and foraging were minimal within the red line boundary, with little cover or water. Both ditches join the Burn of Greens to the east, offering good connectivity with more typical habitat around Little Water and eventually the River Ythan to the south. While otter are considered unlikely to be resident on site individuals may occasionally pass through, for example while commuting between the Burn of Asleid and the Burn of Greens.	**International** – European protected species
Water Vole	Wildlife and Countryside Act 1981 (as	**Desk Study** The data search returned four records of water vole. The nearest of these (dated 2021) was from the Burn of Asleid, which flows approx. 400m southwest of the	**National (UK)** – SBL species

Species	Legal Protection	Result	Importance Assessment
	amended) Schedule 5.	boundary. Potential water vole burrows were recorded from the Burn of Greens during surveys associated with Greens Substation in 2024. **Field Survey** No evidence of water vole was found on site during the survey. The two ditches joining the Burn of Greens contained little water at the time of survey and were largely lined by ruderal vegetation, though featured steep banks suitable for burrowing. The margin of the pond was densely vegetated but lacked the sloping banksides preferred for burrowing. Though local records are plentiful, aquatic habitats on site are considered likely to be used primarily as sink habitat during periods of population boom.	
Birds	Wildlife and Countryside Act 1981 (as amended).	**Desk Study** The data search returned records of 45 bird species within 2km of the site, including twelve Schedule 1 species: Barn Owl *Tyto alba*, Black-tailed Godwit *Limosa limosa*, Brambling *Fringilla montifringilla*, Goshawk *Accipiter gentilis*, Hen Harrier *Circus cyaneus*, Merlin *Falco columbarius*, Osprey *Pandion haliaetus*, Red Kite *Milvus milvus.* Redwing *Turdus iliacus*, Snow Bunting *Plectrophenax nivalis*, and Whooper Swan *Cygnus cygnus*. The nature of the records (i.e. breeding/wintering/passage) was not specified by the LERC. Barn Owl activity was recorded during surveys associated with Greens Substation, including both direct observations and field signs indicative of roosting within the Mains of Greens farmyard complex. **Field Survey** Species of conservation concern recorded on site include Bullfinch *Pyrrhula pyrrhula*, Dunnock *Prunella modularis*, Greenfinch *Chloris chloris*, House Martin *Delichon urbicum*, Linnet *Linnaria cannabina*, Meadow Pipit *Anthus pratensis*, Skylark *Alauda arvensis*, Song Thrush *Turdus philomelos*, Sparrowhawk *Accipiter nisus*, Starling *Sturnus vulgaris*, and Swift *Apus apus*. Nesting opportunities for most species are likely to be restricted to tree lines, hedgerows, field boundaries and scrub, which have the potential to support a diverse range of urban, farmland, and some woodland species. Breeding	**National (Scotland)** – SBL (several species) **Regional** – NESBiP priority species NESBiP 'Big 5' species 2025 (Swift)

Species	Legal Protection	Result	Importance Assessment
		opportunities for ground-nesting birds such as Skylark are ubiquitous, with livestock density likely to factor into the territory selection. The grazed grassland habitats are likely to provide an abundance of invertebrate prey for hirundines and passerines. Nesting and roosting opportunities for Barn Owl *Tyto alba* are abundant just outwith the red line boundary, with multiple old farm buildings and open-fronted barns.	
Common Amphibians	Wildlife and Countryside Act 1981 (as amended).	**Desk Study** The data search returned no records for amphibians within 2km of the site. HSI assessments of local ponds for Greens Substation APP/2024/1927 returned scores of "*Poor*" or "*Below Average*". **Field Survey** No amphibian field signs were recorded during the survey. The pond (NJ 8283 4638) is considered to provide suitable breeding habitat for relevant native species, with tall grassland, ditches, and tree lines providing protected dispersal routes. Grassland habitats may be used for opportunistic foraging, particularly during warm, damp nights, and dry stone walls provide suitable basking opportunities, refugia and hibernacula for amphibians. An assessment of the single pond returned an HSI of 0.43 – suggestive of "*Poor*" habitat suitability for GCN (see Annex G for the full HSI calculation). Given the absence of records from Northeast Scotland and limited habitat suitability, GCN are not discussed further in this report.	**National (Scotland)** – SBL species (common toad)
Reptiles	Wildlife and Countryside Act 1981 (as amended).	**Desk Study** The data search returned no records for reptiles within 2km of the site. **Field Survey** No evidence of reptiles was found on site during the survey. The cropland and grazed neutral grassland dominating the site are considered largely unsuitable for reptiles, and the site lacks the acid grassland/scrub mosaics	**National (Scotland)** – SBL species (slow worm, adder and common lizard)

Species	Legal Protection	Result	Importance Assessment
		favoured by common lizard and adder. Slow worm may be present in low numbers near hedgerows/tree lines and on sandier soils towards the west of site.	
Invertebrates	Some invertebrates are protected under Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) and Wildlife and Countryside Act 1981 (as amended).	**Desk Study** The data search returned over 200 records for invertebrates within 2km of the site, including several SBL priority moth species. The site does not fall within an Important Invertebrate Area and is located approx. 3km from the nearest B-Line running the length of the River Ythan. **Field Survey** Several common invertebrates were noted during the field survey, including peacock butterfly *Aglais io* and silver y moth *Autographa gamma*. The lines of mature trees, native hedgerows, pond, and grazed grassland are considered likely to support a range of common invertebrate taxa, while dry stone walls provide breeding and overwintering opportunities for groups such as mason bees *Osmia sp*.	**National (Scotland)** – SBL species
Protected or notable flora		**Desk Study** No notable floral records were returned from the desk study. **Field Survey** A small population of large-flowered hemp nettle *Galeopsis speciosa* (Vulnerable, GB Red List) was recorded just south of the southernmost ditch at approx. NJ 8197 4663 (TN19).	**National (UK)** – GB Red List species
Invasive non-native species (INNS)	Wildlife and Countryside Act 1981 (as amended) Section 14; Environmental Protection Act 1990.	**Desk Study** No records of INNS were returned from the desk study. Both giant hogweed *Heracleum mantegazzianum* and monkeyflower were recorded during surveys for Abbotshaugh BESS, the former from the Burn of Greens and the latter found in drainage ditches across the site. **Field Survey** Monkeyflower was found to be abundant along the length of the southernmost ditch (TN17), and a colony of garden yellow archangel *Lamiastrum galaeobdolon*	**Regional** – NESBiP priority action

Species	Legal Protection	Result	Importance Assessment
		subsp. argentatum was recorded on the boundary at approx. NJ 8165 4652 (TN22).	

4 Mitigation

4.1 General Mitigation

The key general mitigations across the project (as provided by the client) are as follows:

- Tool-box talks will be prepared and delivered by the ECoW as necessary to advise all visitors and workers on site of the presence of ecological features and the mitigation measures required. This will include information on recognizing certain field signs such as badger setts, red squirrel dreys etc. to ensure all contractors can identify signs and notify an ECoW.
- Construction activities will be limited to clearly defined working areas and vegetation clearance will be kept to a minimum. Where important habitat loss is unavoidable, habitat removal will be timed and phased to minimise potential effects, and compensatory habitat created, or existing habitat enhanced.
- Habitat connectivity will be retained wherever possible by maintaining links within and to green corridors such as tree lines, scrub and watercourses. Where effects on connectivity are unavoidable, it may be artificially supplemented (e.g. by the creation of temporary brash hedges).

4.2 Protected Species Licensing

Where protected species may potentially be impacted, further surveys would be undertaken to fully inform the proposals, mitigation, and, if necessary, a European Protected Species Licence (EPSL) to allow actions that would otherwise be illegal.

4.3 Mitigation and Further Survey

All of the works outlined below in Table 4.1 should be assumed as likely requirements to inform a subsequent MSC application, unless otherwise stated, and should be considered during the remaining stages of the design process. Mitigation suggested is formed from the preliminary findings and will be developed as the detailed design and planning process progresses. This mitigation will be delivered through mechanisms such as the production and implementation of a Construction Environmental Management Plan which include steps such as the appointment of an ECoW to oversee and monitor the proposed mitigation measures.

Further surveys shall also enable full coverage of those parcels of land that could not be accessed during the initial surveys (Annex B).

Enhancement opportunities are to be confirmed following review of the associated Outline Biodiversity Enhancement Report.

Table 4.1: Mitigation and Further Survey / Assessment

Ecological Receptor	Further Survey / Assessment	Mitigation
Designated sites	NatureScot have confirmed that no further assessment (*i.e.*, Habitats Regulations Assessment) is considered required.	No targeted mitigation required.
Habitats	A Biodiversity Net Gain (BNG) feasibility assessment will be required, following the production of detailed layout and landscaping plans, to determine whether the development can provide a net gain in line with Policy 1.7 of Aberdeenshire Council's Local Development Plan 2023: "*Measures require to be identified to enhance biodiversity in proportion to the opportunities available and the scale of the development opportunity…when it is not practical to meet biodiversity net gain within a development site, we may require off-site contributions towards biodiversity within the settlement or near to the site*" [33]. A Tree Survey would be undertaken should the proposed development risk encroaching on root protection zones.	Detailed mitigation and compensation for habitat loss to be informed by the BNG feasibility assessment. Mature trees and hedgerows would be retained where possible, together with suitable buffers / root protection zones. Where this is not possible, compensatory planting would be required. This would include the creation of native hedgerows, native deciduous woodland, and mixed native woodland planting. When fragmenting hedgerows, the construction working width would be minimised as far as practicable. Standard measures to reduce noise, dust, etc. are included within the outline Construction Environmental Management Plan (oCEMP) submitted with the PPP application in accordance with British Standard BS42020:2013. Works would be carried out in accordance with permitting requirements, including the Environmental Authorisations (Scotland) Amendment Regulations 2025. NetRegs Guidance for Pollution Prevention (GPP) should be included within the oCEMP to avoid damage or degradation of adjacent habitats [34]
Badger	At the MSC stage, a targeted badger survey would be undertaken to survey for additional setts and to guide	Detailed avoidance, mitigation and compensation to be informed by the targeted survey.

Ecological Receptor	Further Survey / Assessment	Mitigation
	appropriate avoidance and mitigation for any potential impacts. The survey work already undertaken has established the presence of badgers within the vicinity of the site. As a mobile species, sett locations may have changed by MSC stage and so further survey work is necessary to avoid and mitigate against any potential impacts. There is sufficient detail at this stage however to confirm presence and establish the principle of development however through the compliance with ALDP Policy E1.6 and NPF4 Policy 4f by virtue of the surveying, identification of presence and outlining of proposed next steps and ultimate avoidance/mitigation to be incorporated into the project design.	Precautionary working measures to avoid accidental harm to badgers and other mammals during the construction phase are included within the oCEMP: • Information regarding badger (and other mammals) shall be included within Toolbox Talks, the requirement for which is recommended to be captured within the oCEMP. • Back-filling or coverage of excavations overnight or sloping the sides to 45º or less to provide an exit to any animal entering the excavation where proximity to badger setts is identified. • Checking the site/stored materials at the beginning of each working day. • Temporarily exposed cable ducts would be capped in a way as to prevent badgers or other mammals from gaining access. • Construction-phase and operational lighting would be designed to be wildlife-friendly, to limit disturbance to badgers.
Red squirrel	Pre-works checks. The survey work already undertaken has established the potential for squirrel within the vicinity of the site. As a mobile species, drey locations may have changed by MSC stage and so further survey work is necessary to avoid and mitigate against any potential impacts. There is sufficient detail at this stage however to confirm presence and establish the principle of development however through the compliance with ALDP Policy E1.6 and NPF4 Policy 4f by virtue of the surveying, identification of presence and outlining of proposed next	Mature trees and priority woodland / hedgerows would be retained where possible to limit any severance to commuting/foraging routes. Good practice working methods would be adopted as a precautionary approach during works to reduce the likelihood of disturbance, injury and/or mortality of red squirrel occurring. Pre-works surveys shall be undertaken to check for any new dreys that may have arisen between the field survey and start of construction. If there is confirmed presence of red squirrel dreys, affected vegetation clearance/tree removal would take

Ecological Receptor	Further Survey / Assessment	Mitigation
	steps and ultimate avoidance/mitigation to be incorporated into the project design.	place outwith the red squirrel breeding season (February to September inclusive). If this is not possible, further survey and licensing would be undertaken.
Other protected or notable terrestrial mammal species	No further survey or assessment is considered required.	To avoid harm to hedgehogs during the construction phase of the development, A detailed search for hedgehogs would be carried out immediately prior to removing any dense vegetation and brash piles between the months of October and April (inclusive). If any hedgehogs are found, they shall be moved to a safe area away from the development works, or, if hibernating, taken to a local hedgehog rescue centre. Avoiding vegetation clearance and groundbreaking works between March and October (inclusive) will minimise the risk of harming brown hare leverets in their forms. If this is not possible, an ECoW will deliver a toolbox talk to relevant staff to minimise the risk of injury or fatality to brown hare leverets during spring and summer. During construction, good practice working methods shall be adopted, including checking the site / stored materials at the beginning of each day by a suitably experienced ECoW, and site staff toolbox talks.
Bats	**Roosting** For the purposes of informing this Environmental Appraisal it was considered that the level of survey work was proportionate to the environmental risk associated with the development and its location as per clause 4.1.2 of BS42020. Buildings and trees with bat roost potential are to be retained. Should the proposals have the potential to	**Roosting** If roosting bats are found, a European Protected Species (EPS) mitigation licence will be needed if proposed work will have impacts on EPS that would otherwise be illegal. **Foraging and Commuting**

Ecological Receptor	Further Survey / Assessment	Mitigation
	impact buildings or trees offering PRFs for bats via disturbance (such as night-working or vibrations), additional survey will be required to confirm presence or likely absence to fully inform licensing and mitigation. The survey work already undertaken has established the potential for bats within the vicinity of the site. As a mobile species, roost locations may have changed by MSC stage and so further survey work is necessary to avoid and mitigate against any potential impacts. There is sufficient detail at this stage however to confirm presence and establish the principle of development however through the compliance with ALDP Policy E1.6 and NPF4 Policy 4f by virtue of the surveying, identification of presence and outlining of proposed next steps and ultimate avoidance/mitigation to be incorporated into the project design.	The oCEMP includes mitigation to avoid disturbance of commuting and foraging bats i.e. avoiding unnecessary lighting at night. A construction-phase lighting strategy would be designed in line with the Bats and Artificial lighting UK guideline, with the inclusion of using bat sensitive lighting on or around the development [35]. Lighting duration would be limited to necessary times to reduce the impacts of artificial lighting to bats and other wildlife.
Otter	Pre-works checks. The survey work already undertaken has established the potential of otter within the vicinity of the site. As a mobile species, sett locations may have changed by MSC stage and so further survey work is necessary to avoid and mitigate against any potential impacts. There is sufficient detail at this stage however to confirm presence and establish the principle of development however through the compliance with ALDP Policy E1.6 and NPF4 Policy 4f by virtue of the surveying, identification of presence and outlining of proposed next steps and ultimate avoidance/mitigation to be incorporated into the project design.	Precautionary working measures, as detailed for badger above, are included within the oCEMP to avoid accidental harm to otter and other mammals during the construction phase. Lighting installed as part of the construction phase would be focussed on the working area only to avoid potential disturbance and / or deterrence of commuting and foraging otters in the wider landscape.

Ecological Receptor	Further Survey / Assessment	Mitigation
Water vole	Pre-works checks.	Standard precautionary working measures, as described for badger above, are included within the oCEMP to avoid accidental harm to water vole and other mammals during the construction phase.
Birds	Both the desk study and previous surveys confirm Barn Owl presence in the area. As a Schedule 1 species which can breed at any time of year, a targeted Barn Owl survey may be required should works be proposed within 100m of suitable barns and outbuildings within or adjacent to the red line boundary [36]. Existing and publicly available data has been used to inform measures related directly to breeding birds. Breeding bird survey work will be undertaken in advance of submission of documents associated with the MSC. These documents shall detail additional mitigation to be adopted to avoid impacts on breeding birds, if required beyond that already adopted in the OCEMP. The survey work already undertaken has established the presence of Barn Owl within the vicinity of the site. As a mobile species, nest locations may have changed by MSC stage and so further survey work is necessary to avoid and mitigate against any potential impacts. There is sufficient detail at this stage however to confirm presence and establish the principle of development however through the compliance with ALDP Policy E1.6 and NPF4 Policy 4f by virtue of the surveying, identification of presence and outlining of proposed next steps and ultimate avoidance/mitigation to be incorporated into the project design.	Mitigation specific to Barn Owl to be guided by any further surveys for that species. All vegetation clearance and groundworks should be undertaken outside of the peak nesting bird season (March to September, inclusive). If this is not possible, nesting bird checks by a suitably experienced ecologist will be required no more than 48 hours prior to clearance works. Tree lines, hedgerows, and scrub shown as to be retained within the final design should be protected in accordance with industry standards in order to maintain a variety of suitable nesting habitat in the near landscape.

Ecological Receptor	Further Survey / Assessment	Mitigation
Amphibians	No further survey or assessment is considered required.	As no amphibians were recorded during the site survey (or the nearby Caledonia EIA surveys) it is considered reasonable that no specific mitigation is required. • However as best practice, an ECoW will be employed during the construction stage and will deliver toolbox talks, and advise on specific matters where appropriate.
Reptiles	No further survey or assessment is considered required.	As no reptiles were detected during the site survey (or the nearby Caledonia EIA surveys) it is considered reasonable that no specific mitigation is required. • However as best practice, an ECoW will be employed during the construction stage and will deliver toolbox talks, and advise on specific matters where appropriate.
Invertebrates	No further survey or assessment is considered required.	Although no further survey or assessment is recommended or considered required, good practice working conditions shall be adopted. as included within the OCEMP. SEPA pollution prevention guidelines would be followed on site to prevent degradation of the within the surrounding landscape. Standard measures outlined within the oCEMP would prevent construction works from impacting offsite habitats.
Protected or notable flora	No further survey or assessment is considered required.	The location of the small population of large-flowered hemp nettle (notable flora) would be presented on plans, reviewed in relation to design, where possible avoided, or soil material in this location appropriately

Ecological Receptor	Further Survey / Assessment	Mitigation
		translocated to maintain viable seed bank following guidance from the ECoW.
Invasive non-native species	Monkeyflower and garden yellow archangel were recorded within the site and its survey buffer during the field survey. Under the Wildlife and Countryside Act 1981, as amended by the Invasive Non-native Species (EU Exit) (Scotland) (Amendment etc.) Regulations 2020, it is illegal to plant, or otherwise cause to grow, any plant in the wild outwith its native range. To avoid an offense resulting from the spread of these species, the Proposed Development would work with land managers responsible for these areas to promote the eradication of these plants prior to the commencement of works.	General precautionary measures to prevent the spread of INNS would be implemented (*e.g.*, a clean, check, dry policy for tools and machinery before entering site) and are included in the associated oCEMP. Toolbox talks shall be conducted prior to works to ensure the contractors are aware of the potential for invasive species on site. Best working methods, including pollution prevention methods, are outlined in the oCEMP to limit the spread of invasive plant species. In the event an additional invasive species is identified at any point during the works, findings would be reported by the ECoW and the contractor to the client. The client would then report this to the local authority and SEPA along with any proposed change in avoidance or mitigation measures.

5 Conclusions

The site is considered likely to support several protected species including badger, roosting bats, and nesting birds. As such, potential impacts on habitats and protected species will be included within the oCEMP, ensuring works follow good practice and precautionary approaches.

The survey work already undertaken has established the presence or potential of these species within the vicinity of the site. As mobile species, sett/roost/nest locations may have changed by MSC stage and so further survey work is necessary to avoid and mitigate against any potential impacts. There is sufficient detail at this stage however to confirm presence and establish the principle of development however through the compliance with ALDP Policy E1.6 and NPF4 Policy 4f by virtue of the surveying, identification of presence and outlining of proposed next steps and ultimate avoidance/mitigation to be incorporated into the project design.

Key recommendations include:

- Land parcels to which access was not granted to be surveyed and results included in updates to the CEMP as part of the MSC discharge process.
- Breeding bird survey work will be undertaken when the breeding bird survey season commences in March 2026 in advance of MSC submission. These document will consider the rationalised route and detail additional mitigation to be adopted through the CEMP or other mechanism, to avoid impacts on breeding birds.
- Review the requirement for further focussed surveys for badger, Barn Owl, bats, and water vole following the detailed engineering design process.
- Conduct a full BNG feasibility assessment based on detailed layout and landscaping plans. This will inform habitat enhancement measures.
- Aim to undertake vegetation clearance outside the peak nesting bird bird season.
- Adopt light pollution mitigation as outlined in the oCEMP and design a construction-phase lighting strategy in line with BCT guidelines.
- Ensure the works are overseen by a suitably experienced ECOW and ensure Toolbox Talks on applicable environmental factors are delivered to Contractors before works commence.

The habitat enhancement measures identified following the BNG feasibility assessment will not only mitigate potential impacts, but ensure that there is a net gain in biodiversity across the site. Where possible, habitat enhancement measures will be linked to the ecological receptors present on site. The proposed development, with appropriate ecological considerations, can proceed in compliance with current local and national biodiversity planning policies.

6 References

[1] CIEEM, "CIEEM's Competency Framework," 2024. [Online]. Available: https://cieem.net/resource/competency-framework/.

[2] Caledonia Offshore Wind Farm Ltd, "Scope of Work - Planning Application for Burnside to Greens 400kV Cable. Document No UKCAL-CWF-CON-ENV-SOW-00002," 2025.

[3] CIEEM, *Code of Professional Conduct,* Chartered Institute of Ecology and Environmental Management, Ampfield, 2022.

[4] Tetra Tech, "Biosecurity Policy," 2023.

[5] CIEEM, *Advice note on the lifespan of ecological reports & surveys,* Chartered Institute of Ecology and Environmental Management, Winchester., 2019.

[6] Caledonia Offshore Wind Farm Ltd, "Volume 5 Proposed Development (Onshore); Chapter 3 Terrestrial Ecology and Biodiversity. Report code UKCAL-CWF-CON-EIA-RPT-00005-5003," 2024.

[7] WSP Ltd, "Greens Substation: EIA Report. Volume 2 – Chapter 9: Ecology, Nature Conservation and Ornithology," 2024.

[8] ITPEnergised, "Abbotshaugh Energy Storage: Preliminary Ecological Assessment," 2025.

[9] ITPEnergised, "Abbotshaugh Energy Storage: Outline Biodiversity Enhancement and Management Plan," 2025.

[10] ITPEnergised, "Abbotshaugh Energy Storage: Species Protection Plan," 2025.

[11] NBN Atlas, "Occurence Records," 2025. [Online]. Available: https://records.nbnatlas.org/#tab_simpleSearch.

[12] NatureScot, "SiteLink," n.d.. [Online]. Available: https://sitelink.nature.scot/home.

[13] Scottish Forestry, "Native Woodland Survey of Scotland (NWSS)," 2025. [Online]. Available: https://www.forestry.gov.scot/forests-environment/biodiversity/native-woodlands/native-woodland-survey-of-scotland-nwss.

[14] Scottish Government, "Ancient Woodland Inventory (Scotland)," 2024. [Online]. Available: https://www.data.gov.uk/dataset/c2f57ed9-5601-4864-af5f-a6e73e977f54/ancient-woodland-inventory-scotland1.

[15] UK Hab Ltd., "Uk Habitat Classification Version 2.0," 2023. [Online]. Available: Https://www.ukhab.org.

[16] NatureScot, "Scottish Biodiversity List," 2022. [Online]. Available: https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy-and-cop15/scottish-biodiversity-list.

[17] Stace, New Flora of the British Isles, 4th ed., Suffolk: C&M Floristics Middlewood Green, 2019.

[18] I. Atherton, S. Bosanquet and M. Lawley, Mosses and Liverworts of Britain and Ireland, London: British Bryological Society , 2010.

[19] North East Scotland Biodiversity Partnership, "NESBiP 4 Year Strategic Plan," 2022.

[20] Harris, Cresswell and Jefferies, Surveying badgers. An occasional publication of the mammal society – No. 9, London: Mammal Society, 1989.

[21] J. Gurnell, P. Lurz, R. McDonald and H. Pepper, "Practical techniques for surveying and monitoring squirrels," Forestry Comission, 2009.

[22] W. Cresswell, J. Birks, M. Dean, M. Pacheco, W. Trewhella, D. Wells and S. Wray, UK BAP Mammals: Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation, Southampton: The Mammal Society, 2012.

[23] Collins, Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition), London: The Bat Conservation Trust, 2023.

[24] Chanin, "Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series No 10," English Nature, Peterborough, 2003.

[25] M. S. R. G. D. A. R. Dean, "The Water Vole Mitigation Handbook," *The Mammal Society Mitigation Guidance Series,* p. Eds Fiona Mathews and Paul Chanin, 2016.

[26] Gent and Gibson, Herpetofauna Workers' Manual, Peterborough: JNCC, 2003.

[27] Amphibian and Reptile Groups of the United Kingdom, "ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index," 2010. [Online]. Available: https://www.arguk.org/info-advice/advice-notes/9-great-crested-newt-habitat-suitability-index-arg-advice-note-5/.

[28] Buglife, "Important Invertebrate Areas," [Online]. Available: https://www.buglife.org.uk/our-work/important-invertebrate-areas/.

[29] Buglife, "B-Lines," [Online]. Available: https://www.buglife.org.uk/our-work/b-lines/.

[30] CIEEM, Guidelines for Preliminary Ecological Appraisal, 2nd ed., Winchester: CIEEM, 2017.

[31] BSI, "BS 42020 – a code of practice for biodiversity in planning and development," BSI Group, London, 2013.

[32] A. Ferguson, "Email to J. Ferguson, 23 September. Burnside to Greens 400kV Connection - NatureScot," 2025.

[33] Aberdeenshire Council, "Aberdeenshire Local Development Plan 2023," 2023.

[34] NetRegs, "Guidance for Pollution Prevention (GPP) Documents," 2020. [Online]. Available: https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/.

[35] ILP, *Guidance Note 08/23. Bats and Artifical Lighting at Night,* Institution of Lighting Professionals and Bat Conservation Trust, 2023.

[36] NatureScot, "Disturbance Distances in selected Scottish Bird Species – NatureScot Guidance," 2022. [Online]. Available: https://www.nature.scot/doc/disturbance-distances-selected-scottish-bird-species-naturescot-guidance.

[37] Barn Owl Trust, "Barn Owl nestboxes for inside buildings," [Online]. Available: https://www.barnowltrust.org.uk/barn-owl-nestbox/barn-owl-nestboxes/.

7 Annex A – Report Conditions

This Report has been prepared using reasonable skill and care for the sole benefit of Caledonia Offshore Wind Farm Limited ("the Client") for the proposed uses stated in the report by Tetra Tech Limited ("Tetra Tech"). Tetra Tech exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder's permission.

No liability is accepted or warranty given for; unconfirmed data, third party documents and information supplied to Tetra Tech or for the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report. Tetra Tech does not purport to provide specialist legal, tax or accounting advice.

The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary, and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The "shelf life" of the Report will be determined by a number of factors including; its original purpose, the Client's instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

Tetra Tech reserves the right to share this Report and any related materials, surveys, drawings and/or documents at any time with the relevant Local Ecological Records Centre (LERC), any relevant statutory body or any equivalent organisation as Tetra Tech may reasonably require from time-to-time.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

8 Annex B – Site Access Plan

9 Annex C – Key Legislation

Habitats Directive

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, or the 'Habitats Directive', is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

In the UK, the Habitats Directive is transposed into national law via the Conservation (Natural Habitats, &c) Regulations 1994 (as amended) in Scotland, the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales, and via the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland.

Birds Directive

The EC Directive on the Conservation of Wild Birds (791409/EEC) or 'Birds Directive' was introduced to achieve favourable conservation status of all wild bird species across their distribution range. In this context, the most important provision is the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex 1 of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance.

The Conservation (Natural Habitats etc.) Regulations 1994

Within Scotland, the primary legislation in relation to Habitats Regulations remains the 1994 statutory instrument.

All species protected under this legislation are European Protected Species and licensing is required for the undertaking of certain activities affecting these species. The protection is applied to all stages of the animals' life.

Under Regulations 39 of the Habitats Regulations it is unlawful to deliberately or recklessly:

- 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 its eggs (in Scotland, this is relevant only to the great crested newt and natterjack toad); and
- disturb any cetacean (dolphin, porpoise, or whale).

If impacts to protected species are considered unavoidable then the works may need to be carried out under a site-specific licence from NatureScot. Certain displacement operations may be carried out under a Class licence by a registered person or a site-specific licence.

Species listed on Annex II of the Habitats Regulations are attributed further protection which means that Special Areas of Conservation (SAC) may be designated to internationally important sites for these species.

Wildlife & Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. This legislation is the chief means by which the 'Bern Convention' and the Birds Directive are implemented in the UK. Since it was first introduced, the Act has been amended several times.

The Act makes it an offence to (with exception to species listed in Schedule 2) intentionally:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use; or
- take or destroy an egg of any wild bird.

Or to intentionally do the following to a wild bird listed in Schedule 1:

- disturbs any wild bird while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird.

In addition, the Act makes it an offence (subject to exceptions) to:

- intentionally or recklessly kill, injure or take any wild animal listed on Schedule 5;

- interfere with places used for shelter or protection, or intentionally disturbing animals occupying such places; and
- The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Finally, the Act also makes it an offence (subject to exceptions) to: intentionally pick, uproot or destroy any wild plant listed in Schedule 8, or any seed or spore attached to any such wild plant; unless an authorised person, intentionally uproot any wild plant not included in Schedule 8; or sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Following all amendments to the Act, Schedule 5 'Animals which are Protected' contains a total of 154 species of animal, including several mammals, reptiles, amphibians, fish and invertebrates. Schedule 8 'Plants which are Protected' of the Act, contains 185 species, including higher plants, bryophytes and fungi and lichens. A comprehensive and up-to-date list of these species can be obtained from the JNCC website.

Part 14 of the Act makes unlawful to plant or otherwise cause to grow any plant in the wild outwith its native range.

It is recommended that plant material of invasive non-native species is disposed of as bio-hazardous waste, and these plants should not be used in planting schemes.

Environment Protection Act 1990

The Act imposes a classification of soil and other waste containing viable propagules of invasive non-native plant species as controlled waste. This has been applied to Japanese Knotweed *Reynoutria japonica*, with the result that waste containing this species must be disposed of in accordance with the duty of care set out in section 34 of the Act.

Protection of Badgers Act 1992

The main legislation protecting badgers in Scotland, England and Wales is the Protection of Badgers Act 1992 (the 1992 Act). Under the 1992 Act it is an offence to: wilfully kill, injure, take or attempt to kill, injure or take a badger; dig for a badger; interfere with a badger sett by, damaging a sett or any part thereof, destroying a sett, obstructing access to a sett, causing a dog to enter a sett or disturbing a badger while occupying a sett.

The 1992 Act defines a badger sett as: "any structure or place which displays signs indicating current use by a badger".

Birds of Conservation Concern

This is a review of the status of all birds occurring regularly in the United Kingdom. It is regularly updated and is prepared by leading bird conservation organisations, including the British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC) and The Royal Society for the Protection of Birds (RSPB).

The latest report was produced in 2021 (Eaton *et al*, 2021) and identified 70 red list species, 103 amber species, and 72 green species. The criteria are complex, but generally:

Red list species are those that have shown a decline of the breeding population, non-breeding population or breeding range of more than 50% in the last 25 years.

Amber list species are those that have shown a decline of the breeding population, non-breeding population or breeding range of between 25% and 50% in the last 25 years. Species that have a UK breeding population of less than 300 or a non-breeding population of less than 900 individuals are also included, together with those whose 50% of the population is localised in 10 sites or fewer and those whose 20% of the European population is found in the UK.

Green list species are all regularly occurring species that do not qualify under any of the red or amber criteria are green listed.

Global IUCN Red List

The International Union for Conservation of Nature (IUCN) Threatened Species was devised to provide a list of those species that are most at risk of becoming extinct globally. It provides taxonomic, conservation status and distribution information about threatened taxa around the globe.

The system catalogues threatened species into groups of varying levels of threat, which are: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CE), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), Not Evaluated (NE). Criteria for designation into each of the categories is complex, and consider several principles.

Local Biodiversity Action Plan (LBAP)

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level),and are usually drawn up by a consortium of local Government organisations and conservation charities.

Some LBAPs may also include Habitat Action Plans (HAP) and/or Species Action Plans (SAP), which are used to guide and inform the local decision making process.

Wild Mammals (Protection) Act 1996

This Act offers protects a form of protection to all wild species of mammals, irrespective of other legislation, and focussed on animal welfare, rather than conservation.

Unless covered by one of the exceptions, a person is guilty of an offence if he mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering.

Its application is typically restricted to preventing deliberate harm to wildlife (in general) during construction works etc.

National Planning Framework

National Planning Framework 4 (NPF4) is the top tier of planning policy. The Framework provides guidance to local authorities and other agencies on planning policy and the operation of the planning system.

"Policy 1 gives significant weight to the nature crisis to ensure that it is recognised as a priority in all plans and decisions. Policy 4 protects and enhances natural heritage, and this is further supported by Policy 5 on soils and Policy 6 on forests, woodland and trees. Policy 20 also promotes the expansion and connectivity of blue and green infrastructure, whilst Policy 10 recognises the particular sensitivities of coastal areas.

Protection of the natural features of brownfield land is also highlighted in Policy 9, and protection of the green belt in Policy 8 will ensure that biodiversity in these locations is conserved and accessible to communities, bringing nature into the design and layout of our cities, towns, streets and spaces in Policy 14.

Most significantly, Policy 3 plays a critical role in ensuring that development will secure positive effects for biodiversity. It rebalances the planning system in favour of conserving, restoring and enhancing biodiversity and promotes investment in nature-based solutions, benefiting people and nature. The policy ensures that Local Development Plans (LDPs) protect, conserve, restore and enhance biodiversity and promote nature recovery and nature restoration. Proposals will be required to contribute to the enhancement of biodiversity, including by restoring degraded habitats and building and strengthening nature networks. Adverse impacts, including cumulative impacts, of development proposals on the natural environment will be minimised through careful planning and design, taking into account the need to reverse biodiversity loss. Development proposals for national, major or Environmental Impact Assessment (EIA) development 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. Proposals for local development will include appropriate measures to conserve, restore and enhance biodiversity."

See here for full details: https://www.gov.scot/publications/national-planning-framework-4/

10 Annex D – UKHab Plan

11 Annex E – Target Notes

TN1	
Description	**Photos**
C1d **British National Grid (m):** 383096E, 845756N	

TN2	
Description	**Photos**
Short line of beech **British National Grid (m):** 383016E, 845654N	

TN3	
Description	**Photos**
g4 **British National Grid (m):** 383049E, 845603N	

TN4	
Description	**Photos**
Scattered arable annuals: Fumaria muralis, Viola arvensis, Rumex longifolius, Fallopia convulvulus, Stellaria media, Euphorbia helioscopia, Persicaria maculosa, Polygonum aviculare, Matricaria discoidea, Myosotis arvensis, **British National Grid (m):** 383191E, 845670N	

TN5	
Description	**Photos**
g4 **British National Grid (m):** 383278E, 845723N	

	

TN6	
Description	**Photos**
g4 **British National Grid (m):** 383280E, 845547N	

TN7	
Description	**Photos**
Small outbuilding, wood with corrugated roof - neg BRP **British National Grid (m):** 383236E, 845681N	

TN8	
Description	**Photos**
h2a5 - with dry stone wall **British National Grid (m):** 383070E, 845913N	 

TN9	
Description	**Photos**
g4 **British National Grid (m):** 383060E, 846017N	

	

TN10	
Description	**Photos**
C1c **British National Grid (m):** 383024E, 846235N	

TN11	
Description	**Photos**
w1 line of trees **British National Grid (m):** 382895E, 846280N	

TN12	
Description	**Photos**
Badger sett - at least 15 entrances, all but a couple well-used. Many dung pits nearby.	

	

TN13	
Description	**Photos**
Old barn and outbuilding complex (beyond RLB) - bat and barn owl potential **British National Grid (m):** 382586E, 846232N	

TN14	
Description	**Photos**
g3c **British National Grid (m):** 382413E, 846277N	

TN15	
Description	**Photos**
c1c **British National Grid (m):** 381988E, 846470N	

TN16	
Description	**Photos**
w1 line of trees **British National Grid (m):** 382035E, 846272N	

TN17	
Description	**Photos**
Ditch choked with Erythranthe **British National Grid (m):** 382269E, 846509N	 

TN18	
Description	**Photos**
Brick/stone building, 6x5ft, some limited BRP? Gaps in mortar and enclosed interior. Bird nest inside **British National Grid (m):** 382029E, 846619N	

TN19	
Description	**Photos**
Galeopsis speciosa in field margin **British National Grid (m):** 382005E, 846627N	

TN20	
Description	**Photos**
Ditch choked with marginal vegetation **British National Grid (m):** 381764E, 846842N	

TN21	
Description	**Photos**
w1 line of beech **British National Grid (m):** 381671E, 846714N	

TN22	
Description	**Photos**
Garden yellow archangel **British National Grid (m):** 381660E, 846520N	

TN23	
Description	**Photos**
c1c w/ g4 beyond **British National Grid (m):** 381952E, 846945N	

12 Annex F – Target Note Plan

13 Annex G – HSI Calculation

SI No	SI Description	SI Value
1	Geographic location	0.01
2	Pond area	0.95
3	Pond permanence	0.9
4	Water quality	0.33
5	Shade	1
6	Water fowl effect	0.67
7	Fish presence	0.67
8	Pond Density	0.55
9	Terrestrial habitat	0.67
10	Macropyhyte cover	0.5
HSI Score		***0.43***
Pond suitability (see below)		*Poor*

HIS Score	Pond Suitability
< 0.50	Poor
0.50 - 0.59	Below average
0.60 - 0.69	Average
0.70 - 0.79	Good
> 0.80	Excellent

For methodology and rationale, please see:

Amphibian and Reptile Groups of the United Kingdom (2010) ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index. Available at: https://www.arguk.org/info-advice/advice-notes/9-great-crested-newt-habitat-suitability-index-arg-advice-note-5/.