REPORT

Ecological Impact Assessment

Proposed Battery Energy Storage System, Spittal

Client:	Field Spittal Ltd
Reference:	PC3506-RHD-07-XX-RP-Z-0016
Status:	Final
Date:	19 December 2024

Royal HaskoningDHV
Enhancing Society Together

HASKONINGDHV UK LTD.

Westpoint
Peterborough Business Park
Lynch Wood
Peterborough
PE2 6FZ
United Kingdom
Water & Maritime
VAT registration number: 792428892

Phone: +44 1733 3344 55
Email: info@uk.rhdhv.com
Website: royalhaskoningdhv.com

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Royal HaskoningDHV

Summary

The construction of a battery energy storage system (BESS) is proposed at land south of the existing Spittal 275 kV substation, Halkirk, KW12 6XA.

Royal HaskoningDHV was instructed by Field Spittal Ltd. to undertake an Ecological Impact Assessment (EcIA) of the Proposed Development. To inform this assessment, a desktop study, habitat and species field surveys were undertaken.

The Proposed Development occupies a total footprint of 48.58 ha, 4.45 ha of which is newly created permanent infrastructure (**Figure 1**).

The Site is dominated by sheep grazed modified grassland habitat of low ecological importance. Other habitats present within the Site include types of neutral grassland, standing water and other river and stream habitats; the majority of which will be retained alongside the Proposed Development.

There is approximately 608 m of hedgerows present within the Site and around 288 m is anticipated to be lost because of the Proposed Development. To mitigate the loss of this habitat, the Proposed Development includes the creation of 245 m of species rich native hedgerow, which will result in significant biodiversity enhancement within the context of the Site.

The scheme will deliver significant biodiversity enhancement within the context of the Site, comprising a net gain of 29.83% for Hedgerow habitats and 54.87% for Area habitats. The expected positive effects will be delivered through the provision of new landscaping alongside the Proposed Development.

Subject to the implementation of mitigation measures and safeguards detailed within this EcIA, no significant adverse ecological effects are anticipated as a result of the Proposed Development.

Mitigation measures detailed herein could be secured by appropriately worded planning conditions.

1. Introduction

The assessment in this report has been authored by Beth Millwater (MSc, BSc (Hons)), an Ecologist at Royal HaskoningDHV with four years' experience as a professional ecologist. She is a qualifying member of Chartered Institute of Ecology and Environmental Management (CIEEM) and therefore is familiar with and follows the CIEEM code of professional conduct (CIEEM, 2022). Beth has experience conducting ecological assessments for a range of project types and sizes.

Additional technical review, support and quality assurance was provided by Leonardo Gubert (PhD MCIEEM CEnv), a Principal Ecologist at Royal HaskoningDHV with 24 years of experience as a professional ecologist; and by Will Salmon (BSc (Hons) MSc MCIEEM), a senior ornithologist at Royal HaskoningDHV with 15 years of professional experience.

1.1 Purpose of the report

This EcIA report has been prepared by Royal HaskoningDHV on behalf of Field Spittal Ltd (Field). This assessment considers the effects of operation with groundworks and infrastructure within the development footprint (**Figure 1**); and sets out the findings of an Ecological Impact Assessment (EcIA) of the proposed development footprint, at land adjacent to the south of the existing Spittal 275kV substation, Halkirk, KW12 6XA (hereafter the 'Site'). The development footprint comprises the BESS compound, substation building, 275 kV underground cable connection, new access road and temporary construction compound, drainage and landscaping.

Construction of a Battery Energy Storage System (BESS) (hereafter 'the Proposed Development') is proposed at the Site, for which consent is sought under section 36 of the Electricity Act 1989. The Site is shown in **Figure 1** and the elements of the Proposed Development are described in **Section 1.2** below.

The purpose of this EcIA report is to:

- Identify and describe all potentially significant ecological effects associated with the Proposed Development;
- Set out the mitigation measures required to ensure compliance with nature conservation legislation and to address any potentially significant ecological effects;
- Identify how mitigation measures will/could be secured;
- Provide an assessment of the significance of any residual effects;
- Identify appropriate enhancement measures; and
- Set out the requirements for post-construction monitoring.

The scope of this assessment has been determined with consideration of best-practice guidance provided by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) and the Biodiversity: Code of practice for planning and development published by the British Standards Institute (BS 42020:2013).

1.2 Description of the project

The Proposed Development principally comprises a battery energy storage system (BESS) with a capacity of up to 300 megawatts (MW) which will charge and discharge electricity from the adjacent Spittal 275 kV substation. By being co-located adjacent to the Spittal substation, the Proposed Development will support the transmission operator to manage network constraints by minimising curtailment and maximising the benefits of current and future renewable energy generation in the Highlands. BESS are an essential

technology to realise the full benefits of renewable generation and ultimately contributes to the achievement of the UK and Scottish Governments' greenhouse gas emissions targets.

Exact battery specifications are still to be determined and will be confirmed as part of the detailed design stage during pre-construction, however the principal components of the Proposed Development include:

- Battery storage units arranged into rows;
- Medium-voltage (MV) skids and ancillary low-voltage (LV) equipment;
- High-voltage (HV) grid transformers;
- Air insulated switchgear;
- A substation building comprising welfare facilities, a switch room and control room;
- An underground 275 kV grid connection cable; and
- Site-wide supporting infrastructure including cabling, access tracks, fencing, attenuation basins, and landscaping measures.

1.3 Supporting documents

The Breeding Bird Appraisal Report (document reference PC3506-RHD-07-XX-RP-Z-0006), provided in **Appendix A** should be read in conjunction with this EcIA for full context of the baseline conditions present.

1.4 Consultation

Consultation was sought during the pre-application phase from several stakeholders, as described in **Table 1.1** below.

Table 1.1: Stakeholder responses to pre-application phase consultation.

Stakeholder	Consultation area	Stakeholder response
The Highland Council	Pre-application advice	Issued on 12th June 2024 (reference number: 24/00187/PREMAJ). Responses have been reviewed and accounted for fully in the assessment.
NatureScot	Pre-application advice	Input provided on the Highland Council advice provided on 12th June 2024 (reference number: 24/00187/PREMAJ). Responses have been reviewed and accounted for fully in the assessment.
NatureScot	Regarding the proposed methods to assessing potential impacts upon designated sites, protected and notable species, significant biodiversity enhancement calculations and the proposed landscaping associated with the project.	A meeting was held on 14th November 2024. NatureScot agreed with the meeting minutes on 5th December 2024 (document reference: PC3506-RHD-07-XX-MI-Z-002). Responses have been reviewed and accounted for fully in the assessment.

2. Planning policy and legislation

2.1 Legislation

Legislation relating to wildlife and biodiversity of relevance to this EcIA includes:

- The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- The Protection of Badgers Act 1992; and
- Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended)

This legislation has been addressed, as appropriate, in the production of this EcIA report with further information provided in **Appendix A**.

2.2 National planning policy

National Planning Framework 4 and the Scottish Biodiversity List (SBL) provide national policy relating to wildlife and biodiversity and are considered herein.

Full details of these relevant policies are provided within **Appendix A**.

2.3 Local planning policy

Local policy of relevance to the Proposed Development include:

- The Highland Nature Biodiversity Action Plan (BAP); and
- The Highland Council Biodiversity Planning Guidance (Highland Council, 2024).

Full details of these relevant policies are provided within **Appendix A**.

2.4 Standing advice

NatureScot, as the Scottish Government's advisor on nature, wildlife management, and landscape conservation, provide standing advice regarding protected species with the aim to support local authorities during planning process and forms a material consideration in determining applications in the same way as any individual response received from the organisation following consultation. Standing advice has therefore been given due consideration, alongside other relevant detailed guidance documents, in the scoping of ecological surveys and production of this report.

3. Methodology

This EcIA primarily considers the effects of construction works associated with groundworks and infrastructure as well as the operation of the Proposed Development. The ecological study area comprises the areas within the wider planning boundary that are proposed to include the BESS compound, substation compound, 275 kV underground cable connection, new access road and temporary construction compound, drainage and landscaping. Therefore, all components of this EcIA are based on the ecological study area, as shown in **Figure 1**.

3.1 Desk study

A desk study of the Site was undertaken in November 2024 and involved a review of online resources and biological records obtained from the Highland Biological Recording Group (HBRG) as detailed below.

The desk study data sources included:

- The Multi-Agency Geographic Information for the Countryside (MAGIC) online database;
- Data regarding SBL habitats across various databases through NatureScot (2023);
- Highland Biological Recording Group (HBRG) who provided non-statutory designated sites data and protected and notable species records for within 2 km of the Site (as defined in **Section 1.2**) and protected and notable bird data for within 3 km of the Site (data requested and received from HBRG in April 2024);
- Publicly available data from other proposed developments in the immediate vicinity (the EIA Scoping Report for the nearby Spittal Substation and HVDC Converter Station).

The above data sources were reviewed to identify ecological features which may be within the Site's likely 'zone of influence' (ZoI). The ZoI is the area over which off-site ecological features may be subject to significant effects arising from the Proposed Development and associated activities within the Site.

For the purposes of this report, the features considered and their maximum potential ZoI are:

- Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar sites within 5 km of the Site (including possible/proposed sites);
- Sites of Special Scientific Interest (SSSI) within 2 km of the Site;
- Non-statutory designated sites within 2 km of the Site;
- Notable habitats such as Ancient Woodland, groundwater dependent terrestrial ecosystems and SBL Habitats of Principal Importance within 500 m of the Site;
- Protected and notable birds within 5 km of the Site; and
- All other protected and notable species within 2 km of the Site.

A review was undertaken of the location of any such features, their distance from and connectivity with the Site, and the reasons for their ecological interest. This information was used to determine whether they may be within the ZoI from the ecological study area.

The location of designated sites in relation to the Site are presented in **Figure 3.**

To assess the potential for Ground Water Dependent Terrestrial Ecosystems (GWDTE) to be present within or adjacent to the Site, the following field and desk-based assessments were carried out:

- A UKHab survey of the Site, completed in March 2024;
- Data regarding SBL habitats across various databases through NatureScot (2023);
- A review of the Site's topography; and
- A review of Scotland's Environment Web National Soil Map of Scotland (NatureScot, 2024).

The results of both the desk study and field survey for each ecological receptor are presented together within the respective subsections of **Section 4.**

3.2 Field survey

A habitat survey was undertaken on 5th March 2024 by a suitably qualified ecologist (Tom Clemence, MSc ACIEEM FISC Level 4) who recorded and mapped habitat types within sections of the Ecological Study Area of the Site in accordance with the UKHab classification system (UKHab Ltd, 2023).

Typical and notable plant species were recorded for all habitat types. This survey was not intended to be a detailed inventory of plant species but had the purpose to collect enough information to identify the different habitats within the Site. Mapping of habitats found during the field survey are shown in shown in **Figure 2.**

The following parameters were adopted for the UKHab survey undertaken for this assessment:

- Minimum Mappable Unit (MMU):
  - $10m^2$/0.001ha (polygons);
  - 5m (linear);
- Primary Habitats recorded to a minimum of Level 3 (**Section 4.3** below) with UKHab codes provided; and
- Mandatory secondary codes used.

Alongside habitats, the survey was "extended" to collect additional field information, comprising:

- Plant species lists recorded for each identified habitat/parcel;
- Evidence of, or potential for, European Protected Species (EPS) (including bats, great crested newt and otter);
- Evidence of, or potential for, other protected species (including birds, reptiles, water vole, badger and certain invertebrates);
- Evidence of, or potential for, other notable species (including SBL Species of Principal Importance as well as notable, rare, protected or controlled plants and invertebrates); and
- Any other survey information relevant to ecological matters.

The results of both the desk study and field survey for each ecological receptor are presented together within the respective subsections of **Section 4**.

3.2.1 Further Survey Work

A Breeding Birds Appraisal was carried out in June 2024. Details are presented in full within the Breeding Birds Appraisal report (**Appendix B**).

3.3 Biodiversity Calculation

As encouraged by the Highland Council Biodiversity Planning Guidance (Highland Council, 2024), the Defra Statutory Biodiversity Metric (herein the 'Biodiversity Metric') was used to calculate the net effect of the Proposed Development upon biodiversity (Defra, 2024a). It should be noted that the Biodiversity Metric has

been developed to quantify the value of the habitats in England, where it is now a statutory requirement of most planning applications under the Environment Act (2021). In Scotland, the Biodiversity Metric is only used as a complementary tool to help quantify the value of habitats present, and to assess the effectiveness of a proposed development's habitat retention, creation and enhancement measures in achieving positive effects for biodiversity, in accordance with planning guidance. Until a suitable metric for use in Scotland has been developed, the Highland Council Biodiversity Planning Guidance (Highland Council, 2024) and research published by Scottish Government (2023) suggest that the Biodiversity Metric is a tool that may be considered appropriate to use.

When using the Biodiversity Metric in Scotland, it must also be considered that the value and types of habitat present in Scotland and England vary and therefore the values assigned by the Biodiversity Metric (which is based on English habitats) may not be entirely applicable.

Notwithstanding the above, the Biodiversity Metric (Defra, 2024a) has been a useful tool to allow assessment of the baseline and understand the potential for biodiversity enhancement. Enhancement assessments have been undertaken by qualified professionals, in a qualitative manner, to determine the most effective delivery of enhancement for the Site and which are considered appropriate in this instance and until further guidance is available. This includes determining habitat condition, ecological connectivity and strategic significance of the habitats present within the Site, with these factors used as proxies to assess and assign a numeric value to describe the biodiversity of habitats. Enhancement proposals have been incorporated as part of the Proposed Development based on careful consideration of the site specifics and realities of delivering effective enhancement.

In accordance with the Defra (2024a) guidance, the biodiversity value of a habitat is measured in Biodiversity Units (BDU). BDUs are further split between three broad habitat types:

- Hedgerow habitats;
- Watercourse habitats; and
- Area habitats (e.g. all types of grassland, woodland and wetland).

The significant biodiversity enhancement of the Site will be quantified based on the Ecological Study Area shown in **Figure 1** (i.e. the Site), as this is the area within which permanent habitat losses and subsequent biodiversity enhancements will take place.

3.4 Limitations

The extended habitat survey was undertaken in early March and recorded species and habitats observed during this period. There is potential that species present within the Site would not have been observed during the surveys and therefore not recorded. This may include ground nesting birds that nest later in the year but were not present at the time of survey.

The Biodiversity Metric used has been developed for habitats in England and is not adjusted to reflect the value of the habitats found in Scotland. Therefore, where required, the quantified biodiversity values as calculated by the Biodiversity Metric are used as a guide. Where appropriate, professional judgement has been used to also qualify habitat value and recommended proportionate mitigation measures.

The condition of all watercourses present on site were assumed to be moderate for the purposes of Biodiversity Metric calculations. This assumption is made in the absence of formal river condition assessments as per the Statutory Biodiversity Metric's Use Guide (Defra, 2024a). The assumed moderate condition follows a precautionary approach, as to not underestimate the biodiversity value of the heavily modified watercourses within biodiversity calculations.

Despite these constraints, when considering the objective of the survey, the habitats present and the surrounding areas, it is considered that these constraints would not have a major impact on the validity of findings.

Any potential limitations regarding the Breeding Bird Appraisal are listed within **Appendix B**.

3.5 Assessment

Ecological features are identified, evaluated and assessed in accordance with the CIEEM Guidelines for Ecological Impact Assessment (2018), considering the following attributes:

- **Receptor importance**: key sites, habitats and species which have been identified by European, national, and local Governments and specialist organisations as a key focus for biodiversity conservation in the UK. Importance is also qualified by the geographic context of an ecological receptor, i.e., a species which may be not recognised on a national biodiversity list maybe locally in decline, and therefore its local importance is greater than its national importance.;
- **Direction of impact**: positive or adverse; and
  Magnitude of impact: This considers the extent of the area subject to a predicted impact; the duration the impact is expected to last prior to recovery or replacement of the resource or feature; whether the impact is reversible, with recovery through natural or spontaneous regeneration, or through the implementation of mitigation measures or irreversible, when no recovery is practicable within a reasonable timescale or there is no intention to reverse the impact; and the timing and frequency of the impact, i.e., conflicting seasons or increasing impact through repetition.

The assessment of significance of an effect is a function of the importance of the receptor and the magnitude of the impact. Likely significant effects identified within the assessment as major or moderate are regarded within this assessment as significant. Residual significance of effects are determined following implementation of proposed mitigation measures.

Impacts are unlikely to be significant where features of low importance are subject to small scale or short-term effects. If an impact is not significant at the level at which the resource or feature has been valued, it may be significant at a more local level.

It is an established principle (CIEEM, 2018) that EcIA is an iterative process. Specialist advice on the avoidance and mitigation of the potential negative effects of the Proposed Development has been input from an early design stage.

4. Baseline ecological conditions

4.1 Designated sites

No statutory designated sites (international or national) were recorded within or immediately adjacent to the Site.

Six internationally designated sites were identified within 5 km of the Site: the River Thurso Special Area of Conservation (SAC); Caithness and Sutherland Peatlands SAC, Special Protection Area (SPA), and Ramsar site; and Caithness Lochs SPA and Ramsar site.

Three nationally designated sites were identified within 2 km of the Site: Archanarras Quarry Site of Special Scientific Interest (SSSI); Spittal Quarry SSSI; and Banniskirk SSSI.

No non-statutory designated sites were recorded within and up to 2 km from the Site.

Further details of the above sites are provided in **Table 4.1** and their locations are show within **Figure 3**.

Table 4.1. European and international designated sites within 5 km and national designated and non-statutory sites within 2 km of the Site.

Site name	Designation	Distance and direction from Site	Special interests or qualifying features
European and International designated sites within 5 km of the Site			
River Thurso	SAC	2.1 km west	Qualifies under Annex II for the presence of Atlantic salmon *Salmo salar*.
Caithness Lochs	SPA	4.7 km northeast	Caithness Lochs qualifies as an SPA under Article 4.1 as the site regularly supports populations of European importance, including: Whooper swan *Cygnus cygnus*; and Greenland white-fronted goose *Anser albifrons flavirostris*. Caithness Lochs also qualifies as an SPA under Article 4.2 as the site regularly supports populations of European Importance, including, greylag goose.
	Ramsar (No. 928)		Consisting of six lochs and a mire, Caithness Lochs Ramsar site supports a wide diversity of aquatic and wetland vegetation including submerged and aquatic communities and species rich marginal, fen and swamp communities. In winter, these lochs support internationally important wintering populations of whooper swan, Greenland white-fronted goose and greylag goose *Anser anser*.
Nationally designated sites within 2 km of the Site			
Archanarras Quarry	SSSI	355 m west	A former quarry designated for the protection of its geological features (fish fossils).

Site name	Designation	Distance and direction from Site	Special interests or qualifying features
Spittal Quarry	SSSI	820 m southeast	A former quarry designated for the protection of its geological features (fish fossils). Spittal Quarry is known for housing large and complete fossils, including the fish species *Cephalaspis magnifica Traquair* which is unique to this site.
Banniskirk Quarry	SSSI	1.4 km northeast	A former quarry designated for the protection of its geological features (fish fossils). The site has a layer calcareous laminite that contains fossil fish. The fossil fish bed has been exposed here as a result of quarrying to extract flagstones. This is the first site in Scotland where fossil fish were found in Old Red Sandstone (in 1826).

Caithness Lochs SPA and Ramsar site comprise seven component SSSIs: Broubster Leans SSSI, Loch of Mey SSSI, Loch Calder SSSI, Loch Heilen SSSI, Loch Scarmclate SSSI, Loch Watten SSSI and Loch of Wester SSSI. It is important to note that these designations only cover roost sites for Greenland white-fronted goose, greylag goose and whooper swan (Patterson *et al*. 2013) and do not include potentially 'functionally-linked' habitats in the wider landscape, which are important for all three qualifying species outside of the breeding season (Stroud *et al*. 2016). Further consideration of the baseline in respect of these species is provided in **Section 4.4.4.2**.

4.2 Scottish Biodiversity List Habitats

There are no habitats listed on the SBL that are within the Site. However, there are several stands of riparian woodland present within 2 km of the Site. Additionally, no ancient woodland was recorded within or immediately adjacent to the Site, or within 0.5 km of the Site.

4.3 Habitats and flora

All habitats recorded on-site are shown within **Figure 2**.

Biodiversity Metric values of habitats are referenced within this Section of the report and detailed in full within **Section 4.5**.

4.3.1 Notable plants

The data search returned no records of notable plant species or invasive non-native species (INNS) of plant from within the Site or within 2 km.

No notable floral communities or notable individual species were recorded during the UKHab field survey. However, two INNS were recorded during the field survey: Japanese rose *Rosa rugosa* was recorded in the hedgerows to the south of the Site, and *Cotoneaster* sp. was recorded in the hedgerows that forms the modified grassland field boundaries.

4.3.2 Modified grassland (g4)

Habitat Description
The majority of the Site, 22.98 ha, was classified as modified grassland (UKHab primary code g4), used by grazing sheep (UKHab secondary codes: 100 grazed and 102 sheep grazed). This was dominated by smooth meadow-grass *Poa pratensis* and common couch *Elymus repens*.

Although this habitat provides some value under the Biodiversity Metric (46.69 BDU), it is common, widespread and highly artificial. Furthermore, it does not meet the criteria for any SBL Habitats of Principal Importance. The ecological value of this habitat alone is considered to **fall below the threshold of Local importance**.

Biodiversity Metric Summary
The Biodiversity Metric value of this habitat is 45.96 BDU and condition was poor.

4.3.3 Holcus-Juncus neutral grassland (g3c8)

Habitat Description
Holcus-Juncus neutral grassland (UKHab primary code: g3c8, secondary codes: 10 scattered scrub, 29 plantation, 32 scattered trees) comprises 1.89 ha to the north of the Site. This grassland was unmanaged, with plant species that included cocksfoot *Dactylis glomerata*, crested dog's tail *Cynosurus cristatus*, rush species J*uncus sp*., nettle species *Cirsium sp*., dock species *Rumex sp*., and tufted hairgrass *Deschampsia cespitosa*. Scattered planted trees with spiral guards were also present within this habitat, and included species such as rowan *Sorbus aucuparia*, alder *Alnus glutinosa*, silver birch *Betula pendula* and willow *Salix sp.*

The habitat has a semi-natural origin and comprises a range of native species of broad ecological value. However, negative condition indicators, such as less than ten species vascular plant species present per metre squared. The habitat is common and widespread, and falls short of any SBL Habitats of Principal Importance qualifying criteria. The habitat is therefore considered to be of **local importance**.

Biodiversity Metric Summary
The Biodiversity Metric value of this habitat is 15.12 BDU and condition was moderate.

4.3.4 Other rivers and streams (r2b)

Habitat Description

Several modified watercourses were present on Site, with field drainage channels present between fields and the track bisecting the site, and one burn bordering the west of the Site (UKHab code: r2b). The burn to the west of the Site (herein the 'burn') had cobble, pebble and gravel substrate, a culvert beneath a track and mammal passages. The channel of the burn was approximately 2 m wide with a bankfull width of approximately 6 m and water depth of approximately 0.5 m. The flow velocity of the burn was moderate, and turbidity was low. The total length of other rivers and streams habitat on site was approximately 1.11 km.

The burn is relatively shallow and narrow, as well as heavily modified, but is known to be utilised by local otters (a protected and notable species). The field channels present between the fields and track bisecting the site are narrow, artificial and likely seasonally dry. However, these channels connect to the burn. The habitat however does fall short of any SBL Habitats of Principal Importance qualifying criteria. Therefore, the other rivers and streams on site are of **local importance**.

Biodiversity Metric Summary

The Biodiversity Metric value of this habitat is 4.45 BDU and condition was moderate.

4.3.5 Urban habitats (u1c and u1b)

Habitat Description

Artificial unvegetated - unsealed surface (u1c) and developed land - sealed surface (u1b) were recorded on the tracks bisecting the site. The approximate total coverage of urban habitats was 2.79 ha, with artificial unvegetated - unsealed surface (u1c) comprising 0.57 ha and developed land - sealed surface (u1b) comprising 2.22 ha.

These urban habitats are devoid of vegetation and are therefore of **negligible importance** for ecology and biodiversity.

Biodiversity Metric Summary

The Biodiversity Metric value of this habitat is 0 BDU, a condition assessment is not required for this habitat type.

4.3.6 Hedgerows and scrub (h2a, h2b, h3d, h3h)

Habitat Description

A 345 m length of non-native hedgerow (UKHab code: h2b, secondary code: 517 recent management) was observed north of the existing track between fields of modified grassland to the northern extents of the site. Species present in this non-native hedgerow included beech *Fagus sylvatica* and *Cotoneaster hylmoei*.

A 263 m length of other native hedgerow (UKHab code: h2a, secondary code: 517 recent management) was also present to the east of the track at the centre of the Site. Species present within this other native hedgerow included dog rose *Rosa canina*, ash *Fraxinus excelsior* and elder *Sambucus nigra*.

Both hedgerows were approximately and 1.2 m tall as well as immature with gaps present throughout.

The track to the southern extents of the Site were lined with bramble scrub (UKHab code: h3d) and mixed scrub (UKHab code: h3h). Japanese Rose, an INNS, was present within the mixed scrub, alongside elder. The total length of scrub on the Site is approximately 902 m.

The hedgerows present on site were immature with gaps present, so are limited in their ecological value. Nevertheless, hedgerows are a SBL Habitat of Principal Importance, so are considered to be of **Local importance**.

Linear mixed scrub and bramble scrub are not SBL habitats. Additionally, mixed scrub on site is further limited in its ecological value due to the presence of non-native species. The ecological value of the scrub habitats on site are considered to **fall below the threshold of Local importance.**

Biodiversity Metric Summary
The Biodiversity Metric value of linear hedgerow habitats was 2.64 Hedgerow BDU. The conditions of the hedgerows present ranged from poor to moderate.

The Biodiversity Metric value of scrub habitats was 1.04 Hedgerow BDU and condition was poor.

4.3.7 Deschampsia neutral grassland (g3c7)

Habitat Description
Deschampsia neutral grassland comprises approximately 0.069 ha of the Site and was recorded along the western boundary of the site (UKHab code: g3c7). Species present included tufted hair-grass, broadleaved dock *Rumex obtusifolius*, and cock's-foot.

The habitat has a semi-natural origin and comprises a range of native species of broad ecological value. However, negative condition indicators, such as, less than ten species vascular plant species present per m^2 and Combined cover of species indicative of sub-optimal condition and physical damage were recorded. The habitat is common and widespread, and falls short of any SBL Habitats of Principal Importance qualifying criteria. The habitat is therefore considered to be of **local importance**.

Biodiversity Metric Summary
The Biodiversity Metric value of this habitat is 0.55 BDU and condition is moderate.

4.3.8 Other standing water (r1g)

Habitat Description
One pond with an area of approximately 0.023 ha was recorded to the north of site (UKHab code: r1g, secondary code: 42 pond). This pond was surveyed from a 30 m distance; therefore a detailed assessment was not conducted and as a precaution, the condition of the pond was assumed to be moderate.

Though the pond falls short of the SBL habitat of Principal Importance criteria, it has the potential to provide a range of benefits to biodiversity and is therefore of intrinsic ecological interest. The pond is therefore of **local importance** within the context of the Site.

Biodiversity Metric Summary
This habitat is located outside of the boundary used for the significant biodiversity enhancement calculations and therefore no Biodiversity Metric value for this habitat was calculated.

4.4 Species

4.4.1 Bats

The HBRG data search returned no records of bats within 2 km of the Site.

No bats or evidence of their presence were recorded during the UKHab field survey. However, several structures surrounding the access track to the southern side of the Site were present which could provide potential roosting habitat, including a ruined schoolhouse and several active farm buildings. Preliminary Roost Assessments (PRA) of potential roost features and these structures were not conducted during the field survey as they are outside of the Site's boundary. Additionally, the line of coniferous trees north of the southern access track which joins to the A9, could provide suitable roost features, although this line of trees is also outside of the Site's boundary.

In general, foraging and commuting habitat on Site is limited to the areas of neutral grassland (Holcus-Juncus and Deschampsia), the burn and along the hedgerows. The line of coniferous trees mentioned above, provide suitable commuting and foraging features for bats, however, this line of trees is outside of the Site's boundary.

The Site is of limited value to bats due to low roosting and suboptimal foraging opportunities. However, given the legal protection afforded to bats, they are taken through to assessment regarding providing suitable mitigation and are considered to be of **local importance**.

4.4.2 Badgers

No records of badger (*Meles meles*) were returned within 2 km of the Site.

Field signs of badger were searched for during the field survey. However, no evidence of badger activity, such as setts or tracks, were recorded.

Badger setts are confirmed as likely absent from the Site. However, there remains the potential for foraging and dispersing badgers to be present.

Badgers are common and widespread and not of current conservation concern. However, given their legal protection, this species is taken through to assessment to ensure suitable safeguards and mitigation are secured. Badgers are considered to be of **local importance** within the context of the Site.

4.4.3 Riparian mammals

The HBRG data search returned no records of water vole *Arvicola amphibius* within or up to 2 km of the Site. One record of otter was found within 2 km of the Site, 1.98 km southeast of the Site boundary.

Several otter spraints of varying age were recorded during the field survey, located in the mammal passage running beneath the existing track over the burn. The otters present in the burn are likely those occasionally foraging or commuting. No evidence of breeding dens or holts were found, likely due to the burn's heavy modification reducing suitable resting habitat for otter.

During the field survey no signs of water vole were identified within the Site. However, suitable habitats for water vole are present within the wider local landscape.

The field channels present between the fields on site are seasonally dry, and are therefore unsuitable for both water voles and otter.

Water voles are considered likely absent from within the Site, and the Proposed Development provides buffers to off-site suitable habitat thereby avoiding risks of direct or indirect impacts. Water voles are therefore **not considered further** within this assessment.

The numerous otter spraints found by the burn are evidence that otters are present on Site. Even though these are likely to be associated with transient individuals, their legal protection means this species is taken through to assessment to ensure suitable safeguards and mitigation are secured. Otters are considered to be of **local importance** within the context of the Site.

4.4.4 Birds

The site does not lie within or adjacent to any statutory designated sites with ornithological interest, however, there are two identified within the ZoI; details of these are provided in **Table 4.2**.

Table 4.2: European and international designated sites within 5 km with qualifying features of ornithological interest.

Designated site	Distance from Site	Relevant qualifying features
Caithness Lochs SPA	4.7 km northeast	• Greenland white-fronted goose (non-breeding) • Greylag goose (non-breeding) • Whooper swan (non-breeding)
Caithness Lochs Ramsar site		• Greenland white-fronted goose (non-breeding) • Greylag goose (non-breeding) • Whooper swan (non-breeding) • Ruff *Philomachus pugnax* (migration)

4.4.4.1 Breeding birds

The HBRC data search returned no records of notable breeding bird species within the 3 km search radius from the Site. The EIA Scoping Report for the Spittal Area 400 kV Substation and HVDC Converter Station (Banniskirk Hub) (SSEN, 2023) identified breeding lapwing *Vanellus vanellus*, curlew *Numenius arquata* and snipe *Gallinago gallinago* within 2km of the Proposed Development. Additionally, the habitats on the Site were considered suitable to support a range of notable bird species including skylark *Alauda arvensis* and meadow pipit *Anthus pratensis*.

During the Breeding Birds Appraisal walkover survey in June 2024, a total of 21 species were recorded. Stonechat *Saxicola rubicola* was the only species confirmed as breeding during the survey. Stonechats are above-ground nesting birds with BoCC Green status, and were associated with tall ruderal, ditch and burn habitats on Site.

Curlew and lapwing, both BoCC Red-listed wading bird species, were also recorded on Site with breeding status of 'possible', although only one curlew was present during the survey and lapwing was recorded in flight only. Lesser redpoll *Acanthis cabaret*, which is also a BoCC Red-listed bird species, were recorded in coniferous woodland plantation bordering the Site with breeding status of 'possible'. Other BoCC Red-listed species not recorded during the survey but which may breed on Site (based on the habitats present) include song thrush *Turdus philomelos*, starling *Sturnus vulgaris* and house sparrow *Passer domesticus.*

Recorded species with breeding status of 'likely' were dunnock *Prunella modularis*, meadow pipit *Anthus pratensis*, reed bunting *Emberiza schoeniclus*, sedge warbler *Acrocephalus schoenobaenus*, wren *Troglodytes troglodytes* and willow warbler *Phylloscopus trochilus*, all of which are BoCC Amber- listed songbirds; plus pied wagtail *Motacilla alba* which has Green conservation concern status.

Other species recorded with 'possible' breeding status were common gull *Larus canus*, kestrel *Falco tinnunculus*, oystercatcher *Haematopus ostralegus* and woodpigeon *Columba palumbus*, all of which are

BoCC Amber-listed above-ground nesting birds; plus carrion crow *Corvus corone*, feral pigeon *Columba livia*, goldfinch *Carduelis carduelis*, jackdaw *Coloeus monedula*, siskin *Carduelis spinus*, and swallow *Hirundo rustica*, which are BoCC Green-listed above-ground nesting birds.

In summary, the Breeding Bird Appraisal walkover recorded a number of notable bird species typical of the area, predominantly waders and passerines, which were considered to be possibly breeding on Site. Given the size of the Site and the habitats present, it is considered that the Site supports no more than 1-2 breeding pairs of the species described, all of which are widespread in Caithness. No species recorded during the Breeding Bird Appraisal are listed as Schedule 1 breeding birds under the Wildlife and Countryside Act (1981); and the presence of such species on Site was considered unlikely. The information presented in the Breeding Bird Appraisal Report (**Appendix B**) is considered sufficient to characterise the baseline in respect of breeding birds and no further breeding birds are considered necessary.

The breeding bird assemblage of the Site is considered to be of **local importance** when assessed in a geographic context.

4.4.4.2 Overwintering and non-breeding birds

The HBRC data search did not return any records of notable non-breeding bird species within 3 km of the Site.

The EIA Scoping Report for the Banniskirk Hub (SSEN, 2023) identified that Greenland white-fronted goose, greylag goose and whooper swan populations forage widely over grassland and arable habitats and could potentially forage across the Site. All three species are associated with the nearby Caithness Lochs SPA and Ramsar site which is designated for their overwintering presence. The Onshore Scoping Report for the Ayre Offshore Wind Farm (TWP, 2024), which includes an onshore cable corridor bordering the Site, noted that Loch Watten, Loch of Wester and Loch Scarmclate SSSIs, all of which are partly designated for wintering greylag goose or whooper swan, are located within the Scoping Boundary for that project. These SSSIs are components of the Caithness Lochs SPA and Ramsar site.

Greenland white-fronted geese in Caithness have historically been associated with two of the component SSSIs of Caithness Lochs SPA and Ramsar site: Loch of Mey and Broubster Leans. Patterson *et al.* (2013) noted that there are "*two main flocks of approximately equal size, roosting at Broubster Leans and Loch of Mey*". The most recent Wetland Bird Survey (WeBS) five-year average count (2018/19 – 2022-23) is 143 individuals at Loch of Mey and 63 birds at Broubster Leans; there are no WeBS records of Greenland white-fronted goose at Loch Scarmclate or Loch Watten, the two closest component SSSIs to the Proposed Development, over the past five years (Woodward *et al.* 2024). Greenland white-fronted goose has a core foraging range of up to 8 km around roosts (SNH, 2016) and is highly faithful to its wintering quarters (Francis *et al.* 2011). On this basis, the potential for Greenland white-fronted geese associated with Caithness Lochs SPA and Ramsar site to occur the vicinity of the Site is considered highly unlikely.

Greylag geese associated with Caithness Lochs SPA and Ramsar site are known to range much more widely than Greenland white-fronted geese and have a core foraging distance of 15-20 km around roosts (SNH, 2016). The most recent WeBS five-year (2018/19 – 2022-23) average counts for Loch Scarmclate and Loch Watten are 1,394 and 1,579 birds respectively (Woodward *et al.* 2024). The flocks associated with Caithness Lochs SPA have been found to use mainly stubble in autumn, transitioning to improved grassland in the winter and a combination of improved and unimproved grassland in the spring (Patterson *et al.* 2013). Therefore, there is the potential that the Site could provide suitable foraging habitat for greylag geese associated with Caithness Lochs SPA and Ramsar site, given that the Site consists predominantly of modified (improved) grassland. Whooper swan was recorded by Patterson *et al.* (2013) mainly in a triangular area bounded by a line between Broubster Leans, Loch Heilen and Loch Wester, although small numbers

were recorded at Loch Scarmclate and Loch Watten. The most recent WeBS five-year (2018/19 – 2022-23) average counts for Loch Scarmclate and Loch Watten are 65 and 105 respectively (Woodward *et al.* 2024). In the vicinity of Caithness Lochs, this species been found in stubble fields in the autumn, transitioning towards improved grassland over winter, and predominantly improved grassland in the spring (Patterson *et al.* 2013). Therefore, there is the potential that the Site could provide suitable foraging habitat for whooper swans associated with Caithness Lochs SPA and Ramsar site, given that the Site consists predominantly of modified (improved) grassland.

Non-breeding greylag goose, Greenland white-fronted goose and whooper swan are of **international importance**, as they are qualifying features of the Caithness Lochs SPA and Ramsar site. The Site is unlikely to support significant wintering populations of other notable bird species, based on the location and habitats present, although small numbers of non-SPA waterbirds may be present between October and February. Other non-breeding birds are therefore considered to be of **local importance** when assessed in a geographic context.

All wild birds are protected under the Wildlife & Countryside Act 1981 (as amended) and are therefore taken through to assessment on this basis.

4.4.5 Reptiles

The HBRG data search returned no records of protected or notable reptile species within 2 km of the Site.

No reptiles or evidence of their presence was recorded during the UKHab survey.

Opportunities for reptiles within the habitats on site are limited to the areas of *Deschampsia* neutral grassland and scrub, due to the grazing pressure present across the majority of the site which reduces the suitability of modified grassland areas to support reptiles (Edgar, Foster and Baker, 2010). Reptiles are therefore taken as likely absent from within the Site.

Given their likely absence, reptiles are **not considered further** within the context of this assessment.

4.4.6 Amphibians

The HBRG data search returned no records of protected or notable amphibian species within 2 km of the Site.

One pond was present directly adjacent to the north of the Site, which could provide potential breeding opportunities for amphibian species. The terrestrial habitats on site would be within the home range of any breeding amphibians potentially using this pond. Great crested newts in particular, are considered likely absent due to their natural range being restricted to south of the Scottish Highlands. Additionally, this pond is suboptimal for breeding amphibians due to it being seasonally dry, and not well connected to other potential breeding ponds (Baker et al., 2011). Amphibians are therefore taken as likely absent from within the Site.

Given their likely absence, amphibians are **not considered further** within the context of this assessment.

4.4.7 Invertebrates

The HBRG data search returned no records of protected or notable invertebrate species within 2 km of the Site.

The majority of the Site is dominated by modified grassland which is in actively grazed by sheep, providing suboptimal conditions for diverse invertebrate assemblage in general. As such, direct and indirect effects are unlikely and populations which are present within the Site are not considered of ecological importance.

Invertebrates are therefore **not considered further** within the context of this assessment.

4.5 Biodiversity baseline

The baseline Biodiversity values of the Site, based upon the UKHab survey and condition assessment undertaken and calculated using the Biodiversity Metric, are summarised below:

- Habitat units = 61.63 BDU
- Hedgerow units = 29.83 BDU
- Watercourse units = 4.45 BDU

These are detailed in full within **Appendix C** of this report.

4.6 Groundwater dependent terrestrial ecosystems

Based on the desk study and information collected as part of the field survey, GWDTE are considered absent from within the Site boundary. The desk study data highlighted a small area of riparian woodland on the western bank of the burn. However, the field survey of the Site confirmed this riparian woodland was in fact absent, seemingly recently cleared. The topography of the Site indicates the Site does not interact with the River Thurso SAC, and is outside of its catchment.

As no potential GWDTE are present within or adjacent to the Site, based on the UKHab surveys carried out, no further surveys including National Vegetation Classification have been completed or are considered necessary. As such, GWDTEs are **not considered further** within this assessment.

4.7 Summary of important ecological features

Table 4.3 below summarises all important ecological features identified within their respective zones of influence, together with the geographic context of their importance that are taken forward to assessment.

Table 4.3. Summary of important ecological features and their geographic context

Ecological feature	Geographic context of importance and/or protection status
Designated sites (SAC, SPA and Ramsar)	International
Holcus-Juncus neutral grassland	Local
Other rivers and streams	Local
Hedgerows	Local
Deschampsia neutral grassland	Local
Other standing water	Local
Bats	Local and legally protected
Badgers	Local and legally protected
Otter	Local and legally protected
Breeding birds	Local and legally protected

Ecological feature	Geographic context of importance and/or protection status
Non-breeding greylag goose, Greenland white-fronted goose and whooper swan	International (as qualifying features of the Caithness Lochs SPA and Ramsar site)
Other non-breeding birds	Local

5. Description of the Proposed Development

Detailed planning permission is sought for construction and operation of a BESS at the Site. The following EcIA is based on the Indicative Site Layout Plan on behalf of Field.

5.1 Construction

The construction phase is estimated to take up to two years and would involve the following key activities:

- Site preparation and establishment activities, including vegetation removal and the erection of temporary fencing;
- Construction of the new access road and junction onto the A9;
- Earthworks and establishment of site compound;
- Construction of equipment platforms and foundations, including underground ducting and cabling;
- Delivery and arrangement of equipment;
- Cabling and connection works between battery equipment, ancillary equipment and substation compound;
- Installation of underground cabling between substation compound and Spittal substation;
- Testing and commissioning; and
- Landscape planting, earthworks and site restoration.

The final construction sequencing and programme will be determined subject to detailed design following the appointment of a suitable construction contractor. Landscaping and site restoration would be programmed and carried out as early as possible following construction to ensure landscape planting is given suitable time to establish, and any disturbed areas are returned to their pre-development condition.

Construction traffic would be distributed across the construction programme. A Transport Statement and Outline Construction Traffic Management Plan (OCTMP) has been prepared to support the application which outlines expected traffic movements and traffic management measures. Subject to a consent being granted, a final CTMP would be prepared for approval by the Local Planning Authority prior to any construction works commencing.

5.2 Operation

The facility would be available to import and export electricity on a 24/7 basis. During normal operations, the facility would be operated entirely remotely. It would only be necessary for a maintenance engineer to visit the site during routine maintenance visits (approximately monthly) or in the rare event that emergency maintenance is required.

On-site security, including security fencing around and gated accesses into site compounds would ensure the site is secure and not accessible to the public or trespassers. On-site CCTV cameras, motion sensors and security lights would be arranged to provide full coverage of the site. An off-site 24/7 security contractor would be appointed to ensure any security breaches are responded to, including police notification.

To reduce light pollution, the site would not be lit at night, and lighting would only be used when accessed by maintenance staff or if triggered by a security breach. Lighting would be low level directional LED lighting with shrouds to prevent any upward light spill.

5.3 Decommissioning

The Proposed Development would have an operational life of 30 years, after which the Site would be restored to its former use. Decommissioning works and site rehabilitation would be subject to a Decommissioning Strategy which would be prepared in consultation with and approved by the local planning authority prior to the commencement of any works.

Decommissioning would consider relevant environmental legislation and technology available at the time of decommissioning. Decommissioning works would be undertaken in accordance with a statement of operations covering safety and environmental issues, including the safe removal of electrical equipment and foundations down to 1 m below ground level, to ensure the site can be effectively returned to its former use. The works will consider all relevant environmental legislation and technology available at the time of decommissioning, and notice will be given to the local planning authority prior to the commencement of any works.

6. Assessment of effects and mitigation measures

6.1 Designated sites

6.1.1 River Thurso SAC

The River Thurso SAC is located within Caithness and encompasses 348.25 ha of the River Thurso, which is considered to be a main river. The River Thurso SAC Qualifies under Annex II for the presence of Atlantic salmon. Negative pressures on salmon populations within the SAC include forestry operations and over-grazing, resulting in the SAC's current condition being assessed as unfavourable, but recovering. The River Thurso SAC has been assessed as having **international importance** for the purposes of this assessment.

The Site is located 2.1km east of the River Thurso SAC, however, the topography of the area limits any interaction between the River Thurso SAC and any watercourses on site. Therefore, the potential for hydrological connectivity to be present between the Site and the River Thurso SAC is minimal, and the **magnitude of impacts is negligible** with **no significant adverse effects predicted**. No additional mitigation over and above standard pollution prevention measures will be required.

However, as a precaution, best practice pollution prevention measures will be implemented throughout the pre-construction, construction, operational and decommissioning phases of the Proposed Development. This will be presented within a Pollution Prevention Plan which will form part of an appropriately worded Construction Environmental Management Plan (CEMP). Plans will be written with due consideration of guidance from SEPA (2024) and potential pollution pathways at the pre-construction, construction, operational and decommissioning phases of the Proposed Development. The Pollution Prevention Plan will also include best practice measures to reduce the risk of INNS from being introduced to and spread from the site.

6.1.2 Caithness Lochs SPA

Caithness Lochs SPA consists of six lochs and a mire, Broubster Leans. The lochs range in type from oligotrophic to eutrophic and support a wide diversity of aquatic and wetland vegetation; Loch Scarmclate, the nearest component, is the only shallow, relatively nutrient-rich, marl loch in Caithness. The Site lies approximately 4.7 km southwest from Caithness Lochs SPA (and Loch Scarmclate). At this distance, it is possible that the Site may be occasionally visited by Greenland white-fronted goose, greylag goose and whooper swan which are non-breeding qualifying features of the SPA to forage on land within and adjacent to the Site, and therefore these species could be affected by disturbance and land use changes arising from the Proposed Development. Caithness Lochs SPA and its features have been assessed as having **international importance** for the purposes of this assessment.

In respect of Greenland white-fronted goose, as described in **Section 4.4.4.2** this species is highly faithful to its wintering quarters (Francis *et al.* 2011) and within the SPA is closely associated with two component SSSIs – Loch of Mey and Broubster Leans. Both of these are further than 8 km from the Site, and therefore the Site is beyond the maximum foraging range around these roosts (SNH, 2016). On this basis it was considered highly unlikely that Greenland white-fronted geese associated with Caithness Lochs SPA would occur in the vicinity of the Site. Therefore, there is a negligible magnitude of impact and **no significant adverse effects** predicted on Greenland white-fronted geese associated with Caithness Lochs SPA, and no mitigation for this species is considered necessary.

The Site lies within the potential foraging range for greylag goose around the SPA roosts (SNH, 2016) and therefore greylag geese associated with Caithness Lochs SPA may occur on or in the vicinity of the Site. This species could be disturbed by construction activities, although it shows a greater tolerance towards

human disturbance compared with other geese (Balmer *et al.* 2013) and since there is abundant alternative suitable habitat in the wider landscape, any disturbance effects are expected to be short-lived and not have a significant impact on the SPA population. Permanent loss of foraging habitat associated with the Proposed Development is unlikely to significantly affect the species; with a 20 km foraging range around roosts, the potential foraging range for the Caithness Lochs SPA population encompasses a vast area of approximately 160,000 hectares, which based on aerial photography comprises at least 30% suitable foraging habitat (48,000 ha). Assuming a worst-case scenario where all habitats on Site became unsuitable for greylag geese, this would represent a loss of 0.1% of potential foraging habitat. Therefore, there is a negligible magnitude of impact and **no significant adverse effects** predicted on Caithness Lochs SPA in respect of its greylag goose population.

Whooper swan has a core foraging range of less than 5 km around roosts (SNH, 2016). The distance between the Site and Loch Scarmclate, the closest component of Caithness Lochs SPA, is therefore close to the limit of this range. This species could also be disturbed by construction activities, although it has been shown to habituate to some types of human activity (Goodship and Furness, 2022). Given the relatively small population of whooper swan at Loch Scarmclate and the abundance of alternative suitable habitat in the wider landscape, any disturbance effects are expected to be short-lived and not have a significant impact on the SPA population. Permanent loss of foraging habitat associated with the Proposed Development is unlikely to significantly affect the species; assuming a 5 km foraging range around roosts, the potential foraging range for whooper swans from Loch Scarmclate and nearby Loch Watten covers approximately 17,500 ha, which based on aerial photography comprises at least 50% suitable foraging habitat. Assuming a worst-case scenario where all habitats on Site became unsuitable for whooper swans post-construction, this would represent a loss of 0.55% of potential foraging habitat, however this is considered precautionary as it assumes whooper swan uses all suitable habitat equally whereas it is more likely to use habitats closer to the SPA site. Therefore, there is a negligible magnitude of impact and **no significant adverse effects** predicted on Caithness Lochs SPA in respect of its whooper swan population.

Mitigation measures to minimise the risk of potential disturbance impacts to greylag goose and whooper swan, and other non-breeding birds, are set out in **Section 6.3.5.**

6.1.3 Caithness Lochs Ramsar site

Since Caithness Lochs Ramsar site has the same qualifying features and boundary as Caithness Lochs SPA, the assessment of effects is the same as in **Section 6.1.2**, the site being of international importance, and a negligible magnitude of impact resulting in **no significant adverse effects**.

No significant adverse effects are predicted on ruff as this species is likely to be restricted to the Ramsar site itself.

6.2 Habitats

6.2.1 Holcus-Juncus neutral grassland

The 1.89 ha of locally important *Holcus-Juncus* neutral grassland located within the Site is outside of the Proposed Development construction and landscape area. As such, this habitat will be retained in its entirety alongside the Proposed Development, resulting in a negligible magnitude of impact and **no significant adverse effects being anticipated**.

6.2.2 Other rivers and streams

The 1.11 km of locally important other rivers and streams within the Site are outside of the Proposed Development construction and landscape area. As such, this habitat will be retained in its entirety alongside

the Proposed Development. The Proposed Development has the potential to have a low adverse magnitude of impact on the water quality of the other rivers and streams on Site. Without mitigation, this would result in a minor adverse significance of effect.

However, with the implementation of standard pollution prevention measures which will be detailed in the Pollution Prevention Plan section of the CEMP, the magnitude of impacts is reduced to negligible and **no adverse residual effects** are anticipated on the other rivers and streams.

6.2.3 Hedgerows

The 608 m of other native hedgerow located within the Site are of Local importance.

The Proposed Development is anticipated to result in 288 m of hedgerow being removed. The hedgerow removal is proposed along the existing track at the centre of the Site, to widen the existing farm track being used temporarily while the new access track for the Proposed Development is established, as well as to the access track on the northeastern extent of the site.

In the absence of mitigation, these losses will result in a medium adverse magnitude of impacts and a moderate adverse effect at the Local level.

As part of the Proposed Development, 245 m of native hedgerow will be created alongside the Proposed Development, located parallel to where the baseline other native hedgerow was located on the existing track at the centre of the Site. The created native hedgerow will comprise the planting of additional native species to increase the species richness of the hedgerow. All landscaping measures, including the species rich hedgerow creation, will be detailed within an appropriately worded Habitat Management and Monitoring Plan. An outline Habitat Management and Monitoring Plan can be found in **Section 6.4.1**. Though the length of hedgerow being created is less than the hedgerow being lost, the created hedgerows will provide a greater range of ecological resources for local wildlife due to the improved structure and improved seasonal availability of fruits, seeds and invertebrates resulting from the increased hedgerow species diversity.

Subject to the implementation of these measures, the Proposed Development is anticipated to result in a low beneficial magnitude of impact and a **minor beneficial residual significance of effect** at the Local level.

6.2.4 Deschampsia neutral grassland

The 0.069 ha of Locally important *Deschampsia* neutral grassland located within the Site is outside of the Proposed Development footprint. As such, this habitat will be retained in its entirety alongside the Proposed Development, resulting in a negligible magnitude of impact and **no significant adverse effects being anticipated**.

6.2.5 Other standing water

The Locally important pond located within the Site will be retained alongside the Proposed Development. The Proposed Development has the potential to have a low adverse magnitude of impact on the water quality of the pond. Without mitigation, this would result in a minor adverse significance of effect.

Therefore, the Pollution Prevention Plan section of the CEMP will include sufficient measures to avoid any pollution during the construction phase.

Subject to the implementation of these measures, the magnitude of impacts is reduced to negligible, and **no adverse residual effects** are anticipated on other standing water.

6.3 Species

6.3.1 Bats

The Proposed Development will result in the permanent loss of 13.85 ha of modified grassland habitat that provides negligible foraging, dispersal and roosting opportunities for bats. Bats are considered to be of local importance for the purposes of this assessment.

The majority of the habitats present within and adjacent to the Site that provide opportunities for bats will be retained alongside the Proposed Development, including structures surrounding the access track to the southern side of the Site, the line of coniferous trees north of the southern access track which joins to the A9, neutral grassland (Holcus-Juncus and Deschampsia), and the burn.

Although 288 m of hedgerow will be removed from the Site, the hedgerows present on site were immature with gaps present, so are limited in their ecological value to foraging and commuting bats. Immature hedgerows which are not well established have less resources to support invertebrates, and therefore support a lower invertebrate biomass for foraging bats to feed on (Buglife, 2024). Bats prefer to utilise continuous tree lines and hedgerows as commuting features, so the gappiness of the hedgerows on site means their potential to support commuting bats is low (Collins, 2023). Therefore, the hedgerow losses associated with the Proposed Development are not considered to be sufficient to sever any valuable potential commuting or foraging routes.

Without mitigation, this would result in a low adverse magnitude of impact and a minor adverse significance of effects being anticipated.

Lighting of the Site will not be required during the construction phase, however lighting during the operational phase may be required when the Site is accessed during the unlikely event of emergency on-site maintenance activities or if triggered by a security breach, which has the potential to disturb local bat species. The lighting will be low level directional LED lighting with shrouds to prevent any upward light spill. The detail of the lighting plan should be informed by consultation with a Suitably Qualified Ecologist (SQE) and in accordance with the Institution of Lighting Professionals (ILP) Bats and Artificial Lighting at Night Guidance Note 8 (2023).

In addition, the Proposed Development's landscaping design, which will includes areas of grassland, a waterbody (attenuation basin), and 245 m of hedgerow, is anticipated to enhance the Site's overall suitability for foraging and commuting bats. All new habitats will be managed post-construction in accordance with an appropriate Habitat Management and Monitoring Plan.

Subject to the implementation of the above mitigation measures, the magnitude of impacts is reduced to negligible, and **no adverse residual effects** are anticipated on bats.

6.3.2 Badgers

Badger setts are considered to be likely absent from the Site and no evidence of foraging or commuting badgers was recorded during the UKHab survey. Therefore, no legal infringements are anticipated. Badgers are considered to be of local importance for the purposes of this assessment.

However, there remains the risk that badgers could pass through the Site and therefore, safeguards will be implemented. Without these safeguards, there is a low magnitude of impact resulting in a minor adverse significance of effect. These include:

- Any excavations during the construction or site investigation phases will either be covered or provided with a means of escape (e.g. an angled scaffold board ramp at one end of an excavation);
- Large diameter (over 150 mm) pipes will be capped to avoid any animals entering and taking shelter; and
- Any suspected mammal holes over 10 cm in diameter identified during the construction or site investigation phases will be reported to a SQE prior to any works commencing within 30 m of that location.

These measures will be detailed within a Species Protection Plan (SPP) which will be delivered post consent and prior to commencement of construction, ground investigation or enabling works. An Outline SPP has been provided pre-consent in **Appendix D**.

Subject to the implementation of the above mitigation measures, the magnitude of impacts is reduced to negligible, and **no adverse residual effects** are anticipated on badgers.

6.3.3 Otters

Several otter spraints of varying age were recorded along the burn. Otters are considered to be of local importance for the purposes of this assessment. The otters present in the burn are likely those occasionally foraging or commuting rather than breeding or resting, due to the burn's heavy modification reducing suitable resting habitat for otter. The burn will be retained alongside the Proposed Development, and therefore no direct loss of otter commuting or foraging habitat will occur. However, the Proposed Development has the potential to have a low adverse magnitude of impact on the water quality of the burn.

Without mitigation, this would result in a low adverse magnitude of impact and a minor adverse significance of effects being anticipated.

Lighting of the Site will not be required during the construction phase, however lighting during the operational phase may be required when the Site is accessed during the unlikely event of emergency on-site maintenance activities or if triggered by a security breach, which has the potential to disturb local bat species. The lighting will be low level directional LED lighting with shrouds to prevent any upward light spill. The detail of the lighting plan should be informed by consultation with a Suitably Qualified Ecologist (SQE) and in accordance with the Institution of Lighting Professionals (ILP) Bats and Artificial Lighting at Night Guidance Note 8 (2023).

Additionally, pollution of the burn will be avoided implementation of standard pollution prevention measures detailed in the Pollution Prevention Plan section of the CEMP.

Subject to the implementation of the above mitigation measures, no significant adverse effects are predicted upon otters. These measures will be detailed within a SPP which will be delivered post consent and prior to commencement of construction, ground investigation or enabling works. An Outline SPP has been provided pre-consent in **Appendix D**.

Subject to the implementation of the above mitigation measures, the magnitude of impacts is reduced to negligible, and **no adverse residual effects** are anticipated on otters.

6.3.4 Breeding birds

Breeding birds are considered to be of local importance for the purposes of this assessment.

Potential impacts on breeding birds arising from construction phase activities are primarily direct destruction or disturbance of nests, and direct loss or degradation of nesting and foraging habitat as a result of Site

preparation, earthworks, vegetation removal and conversion of habitat. Without mitigation, this would result in a medium adverse magnitude of impact and a moderate adverse significance of effects being anticipated.

To avoid direct impacts to breeding birds during construction, removal of all vegetation (including modified and neutral grassland, due to the potential presence of ground-nesting species) should take place outside of the bird nesting season i.e. undertaken between September and February inclusive.

If clearance or groundwork is required between March and August, a suitably experienced ecologist should first check the affected habitats for active nests. If any were found, the nest(s) and immediate surroundings should be left undisturbed (e.g. through creation of a 5m buffer area) until the eggs had hatched and young had fledged, or the breeding attempt was otherwise concluded i.e. nest abandoned/predated.

If breeding waders are present, a larger buffer area around the nest(s) may be necessary. Buffer distances will be influenced by the nature of the work, location of the receptor and possible lines of sight, however in accordance with NatureScot (2022a) guidance, they are likely to be between 50 m and 300 m depending on the species.

Following initial clearance or groundworks, ongoing habitat management and checks for new nesting attempts will be required to prevent ground-nesting species from re-colonising the Site until construction works have ended.

A 2.29 ha area of modified grassland and 288 m length of hedgerow which may provide nesting bird habitat will be permanently lost during the construction phase of the Proposed Development. These habitat losses will be mitigated through the creation of 8.84 ha of other neutral grassland, 245 m of native hedgerow and 0.33 ha of pond habitat within the Proposed Development. Though the length of hedgerow habitat to be created is less than the length of hedgerow being lost, the created habitats will overall provide a greater range of nesting opportunities for a range of breeding birds due to the improved vegetation structure and permanence of the habitats (i.e. not in active agricultural use by livestock). The 245 m of created hedgerow will comprise the planting of a range of native species to increase the overall species richness of the hedgerows on Site. Once established, this will result in enhanced nesting and foraging opportunities and improved seasonal availability of fruits, seeds and invertebrates borne of the increased hedgerow species diversity.

Potential impacts on breeding birds arising from operational phase activities (other than direct loss of nesting and foraging habitat as a result of installation of the Proposed Development which are encapsulated as a construction impact) are limited to potential disturbance or destruction of nests during routine maintenance visits. The Proposed Development will not be lit at night and low-level lighting would only be triggered during occasional maintenance and security visits (see **Section 5.2**), therefore no impacts from artificial lighting are predicted.

To avoid direct destruction or disturbance of nests during the operational phase, locations within the completed Site where bird nesting may occur with high likelihood of destruction or disturbance, such as structures subject to movement (e.g. machinery), opening (e.g. doors) or high footfall should be fitted with deterrents such as anti-perching spikes or gratings, during or at conclusion of construction. If an active nest or nests are found in such locations, the nest(s) and immediate surroundings should be left undisturbed (e.g. through creation of a 5 m buffer area) until the nestlings or precocial (mobile) chicks reach flight ability (i.e., fledge), or the breeding attempt has otherwise naturally concluded. If breeding waders or birds of prey are present, a larger buffer area around the nest(s) may be necessary. These measures will be detailed within an appropriately worded SPP.

Subject to the implementation of the above mitigation measures, the magnitude of impacts is reduced to negligible, and **no adverse residual effects** are anticipated on breeding birds.

6.3.5 Non-breeding (overwintering and passage) birds

Potential effects on greylag geese, whooper swans and Greenland white-fronted geese which are associated with Caithness Lochs SPA and Ramsar are considered in **Section 6.1.2** and **Section 6.1.3**. All other non-breeding birds are considered to be of local importance for the purposes of this assessment.

During the construction phase the Proposed Development has the potential to result in a medium adverse magnitude of impact and a moderate adverse significance of effect on other non-breeding birds, potentially including small numbers of non-SPA waterbirds, through disturbance or displacement of resting and foraging habitat within and adjacent to the Site between October and February.

Adverse effects from disturbance are anticipated to be greatest during works which produce a sudden visual or loud noise stimulus (e.g. hammer piling and large off-track vehicle movements). The magnitude of this effect is anticipated to be its greatest during the mid-winter period (November to January, inclusive) when movement and flights are most energetically costly to the birds.

To minimise impacts, the following mitigation measures will be detailed and implemented in accordance with a suitably worded SPP. An Outline SPP has been provided pre-consent in **Appendix D**. These measures will also be set out within a Construction Environmental Management Plan (CEMP) to ensure relevant contractors are aware of these measures. Mitigation measures will include:

- Sensitive timing - the construction phase should be started outside the mid-winter period (November to January, inclusive), where practicable, to avoid the initiation of activities which will cause disturbance when land within and adjacent to the Site may already be in use by waterbirds and therefore, when movement and flights are most energetically costly to the birds;
- Ecological Clerk of Works (ECoW) – ECoW will attend Site during works which are likely to pose a high risk of disturbance to non-breeding waterbirds. Working methods and timing may be adjusted, based on the guidance of the attending ECoW to avoid and minimise impacts on non-breeding waterbirds;
- Works producing a sudden visual or loud noise stimulus (e.g. hammer piling and large off-track vehicle movements) should be avoided where possible so as not to occur in proximity to aggregations of non-breeding waterbirds within or in proximity to the Site, particularly during dusk, night or dawn, or in sustained periods (i.e., seven days or more) of below-freezing temperatures. Where this cannot be avoided, alternative, methods which make use of best available techniques (BAT) to reduce noise, such as vibro piling, may be necessary.

Subject to the implementation of the above measures, the magnitude of impacts is reduced to low adverse and **minor adverse residual effects** are anticipated. This significance of effect will be reduced to negligible outside of the winter months (October to February, inclusive).

6.4 Biodiversity

In order to assess whether the Proposed Development delivers significant biodiversity enhancements in accordance with NPF4, the baseline and post-development biodiversity value of the Biodiversity Calculation Area have been quantified using the Biodiversity Metric (Defra, 2024a), as noted within **Section 3.3**. Given that the Biodiversity Metric is specific to England and is not applicable in real policy terms in Scotland, the calculations have been combined with qualitative approach to ensure bespoke and appropriate enhancement for the site and local context.

As summarised in Table 6.1 and set out in full within **Appendix C**, the Proposed Development is anticipated to deliver a significant biodiversity enhancement which is further discussed below.

The post intervention values of the Biodiversity Metric are based on the habitat retention, restoration, enhancement and creation measures which have been set out within:

- This EcIA report;
- The Landscape Mitigation Plan (Stephenson Halliday, 2024); and
- The Indicative Site Layout Plan (Field, 2024).

In order to ensure the success of the proposed habitat retention, creation and enhancement measures, long-term management of the habitats within the Proposed Development will be required post-development. These measures will be detailed and implemented in accordance with a Habitat Management and Monitoring Plan. An overview of the Habitat Management and Monitoring Plan is provided in **Section 6.4.1**.

Table 6.1. Biodiversity calculations summary

	Habitat units	Hedgerow units	Watercourse units
On-site baseline	61.63	2.64	4.45
On-site post-intervention	95.45	3.43	4.45
On-site net change in BDU	33.82	0.79	0.00
On-site percentage net change	**+ 54.87%**	**+ 29.83%**	**0.00%, fully retained**

The Biodiversity Metric calculation demonstrates that the Proposed Development will deliver a 54.87% and 29.83% increase in the biodiversity value of Area habitats and Hedgerow habitats respectively within the Site. No changes to the watercourse habitats within the Site are proposed and therefore there is no change anticipated.

Measures included within the Proposed Development which seek to maximise opportunities for biodiversity are shown within the Landscape Masterplan (Stephenson Halliday, 2024). These include:

- The creation of species rich and regionally appropriate grassland;
- The creation of pond habitat; and
- Creation of 245 m of hedgerow the planting of additional species to increase species richness. Newly planted hedgerow species may include hazel, alder, hawthorn, dog rose and holly.

Due to the measures outlined above and outputs of the biodiversity calculations, the Proposed Development is considered to deliver significant biodiversity enhancements in accordance with NPF4 (Scottish Government, 2023).

6.4.1 Habitat Management and Monitoring Plan

A Habitat Management and Monitoring Plan will be finalised post consent and prior to the commencement of construction. The Habitat Management and Monitoring Plan will:

- Be informed by the recommendations within this report and the Landscape Mitigation Plan (Stephenson Halliday, 2024);
- Ensure the appropriate management of retained, created and enhanced habitats within the Site during construction, operation and decommissioning of the Proposed Development;
- Provide detail on the location and techniques for habitat creation and restoration;
- Describe the management objectives for each habitat type that will be created, enhanced, or restored in order to establish success criteria for the different habitat types affected; and
- Be agreed with the Highland Council.

The Habitat Management and Monitoring Plan should seek to maximise opportunities for biodiversity. This will include:

- Low intensity management of grassland habitats (e.g. annual hay cuts once the grassland is established);
- Management of invasive or fast growing species which, if unmanaged, could reduce diversity, such as gorse; and
- Replacement of failed planting.

6.5 Effects during decommissioning

Project information on the decommissioning works are detailed in **Section 6.5**. It is anticipated that the decommissioning impacts will be similar in nature to those identified during construction. The same potential impacts noted for construction are therefore expected to be scoped in (and out) for decommissioning.

6.6 Significance of residual effects

Table 6.2 below summarises the assessment of potential impacts on each important ecological feature, proposed mitigation and the assessed residual effects.

Table 6.2. Summary of effects

Important ecological feature	Potential impacts and effects	Avoidance and mitigation measures	Mechanism by which measures are secured	Residual effects
River Thurso SAC	Habitat degradation and resultant impacts on qualifying Atlantic salmon.	Avoidance of degradation and impacts through Pollution Prevention Plan.	Planning condition	None
Caithness Lochs SPA	Disturbance of qualifying bird assemblages and loss of foraging habitat.	Construction phase should be initiated outside the mid-winter period (Nov-Jan). Works producing a sudden visual or loud noise stimulus (e.g. hammer piling, large off-track vehicle movements) will be reduced where possible by using best available techniques.	CEMP and Species Protection Plan	Negligible
Caithness Lochs Ramsar site	Disturbance of qualifying bird assemblages and loss of foraging habitat.	Construction phase should be initiated outside the mid-winter period (Nov-Jan). Works producing a sudden visual or loud noise stimulus (e.g. hammer piling, large off-track vehicle movements) will be reduced where possible by using best available techniques.	CEMP and Species Protection Plan	Negligible
Holcus-Juncus neutral grassland	Habitat loss or degradation.	Avoidance of loss through design.	Planning condition	None
Other rivers and streams	Habitat loss or degradation.	Avoidance of loss through design. Pollution Prevention Plan and new landscaping.	Planning condition	None
Hedgerows	Habitat loss or degradation.	Hedgerow creation to be detailed within a Habitat Management and Monitoring Plan.	Planning condition	Minor beneficial
Deschampsia neutral grassland	Habitat loss or degradation.	Avoidance of loss through design.	Planning condition	None
Other standing water	Habitat loss or degradation.	Avoidance of loss through design. Pollution Prevention Plan and new landscaping.	Planning condition	None

Important ecological feature	Potential impacts and effects	Avoidance and mitigation measures	Mechanism by which measures are secured	Residual effects
Bats	Lighting impacts degrading foraging and commuting suitability.	Sensitive lighting plan for operational phase and new landscaping.	Planning condition	None
Badgers	Killing or injury during construction phase.	Covering or installing ramps in excavations, covering open ended pipework and reporting any suspected mammal holes to an SQE.	Planning condition and Species Protection Plan	None
Breeding birds	Direct destruction or disturbance of nests Direct loss or degradation of nesting and foraging habitat. Potential disturbance or destruction of nests during routine maintenance visits	Removal of all vegetation should take place outside of the bird nesting season i.e. undertaken between September and February. If nests are found, the nest(s) and immediate surroundings should be left undisturbed. Ongoing checks during construction phase for new nesting attempts during the breeding season. New habitat creation and enhancement.	CEMP and Species Protection Plan	None
Non-breeding birds	Direct disturbance and displacement. Direct loss or degradation of resting and foraging habitat. Disturbance and displacement during routine maintenance visits.	Construction phase should be initiated outside the mid-winter period (Nov-Jan). Works producing a sudden visual or loud noise stimulus (e.g. hammer piling, large off-track vehicle movements) will be reduced where possible by using best available techniques.	CEMP and Species Protection Plan	Minor adverse during construction phase between October and February inclusive
Biodiversity	Loss of habitats and associated biodiversity.	Habitat retention, creation and enhancement.	Landscape Plan and planning condition	Positive effects for biodiversity

Subject to the implementation of the above mitigation, residual adverse effects from the Proposed Development are anticipated to be avoided on all features. With the implementation of 245 m hedgerow creation, there is predicted to be a minor beneficial impact, which is considered to be significant at the Local level. Positive effects for biodiversity are also anticipated.

7. Cumulative effects

Cumulative effects can result from actions which are individually insignificant but, when take in combination, can become significant when concentrated on a specific location or over a period of time.

A high-level review of projects or plans with the potential to have cumulative effects with the Proposed Development has been undertaken.

A review of The Highland Council and Energy Consents Unit Planning Portals identified projects within 1 km of the Site boundary which have been screened in for consideration of cumulative effects, in combination with the Proposed Development. The location of these projects is shown within **Figure 4.**

7.1 Description of projects screened in

7.1.1 West of Orkney Wind Farm

Status: Consent granted
Construction and operation of the onshore substation and infrastructure associated with West of Orkney Wind Farm, approximately 25 km from the north Sutherland coast. The energy scheme will have an expected capacity of around 2GW, which aims to commence construction in 2027 and begin generating electricity in 2029. Onshore construction activities will include onshore transmission infrastructure comprising up to two cable landfalls, an onshore substation and up to five associated export circuits, located in an area west and south of Thurso, Caithness. The export cables from the West of Orkney Windfarm will landfall to the east of the Dounreay Nuclear Facility in Caithness, at Crosskirk and / or Greeny Geo approximately 3.7 km to the west of Thurso. Underground cables will transport power to new substation infrastructure at Spittal, approximately 33 km inland of the cable landfall.

7.1.2 Ayre Offshore Wind Farm

Status: Pre-application
Construction and operation of the onshore substation, inter-array cables, 400kV cable corridor and infrastructure associated with Ayre Offshore Wind Farm, approximately 33 km off the coast of Orkney (eastwards from Deerness). The energy scheme will have an expected capacity of around 1GW, generated by 50 – 60 floating offshore wind turbines. The exact landfall area of the wind farm is subject to a process of refinement and will be described further at the application stage, but at present will likely be located within Sinclair's Bay, Caithness. Ayre Offshore Wind Farm's substation is planned to connect to SSE's new proposed Spittal 400 kV substation. Both on and offshore consent applications are due to be submitted in 2025, with detailed design taking place 2027 – 2029, followed by construction and installation 2030 – 2033.

7.1.3 Banniskirk Hub

Status: Pre-application
Construction and operation of New Spittal Area 400kV substation and HVDC converter station to connect to the proposed new 400kv overhead line between Spittal and Beauly, the new Spittal to Peterhead HVDC link, and the existing Spittal 275/132kv substation.

7.1.4 Mybster Croft BESS

Status: Under consideration
Erection and operation of a 47MW capacity BESS facility, comprising containerized battery storage units, inverters, transformers, switch room, site access, landscaping, fencing and ancillary infrastructure. The equipment to provide this consists of an array of twelve battery terraces, feeding inverters located in an

acoustically treated building. The inverters are linked to transformers which lead to a switch-room, in turn linked to the Mybster Gris Supply Point (GSP) via a new 33KV cable, routed down the existing access track to the substation which runs adjacent to the application site.

7.1.5 Fig Power – Spittal BESS

Status: Consent granted
Proposed development of a 49.9MW BESS at Spittal, Caithness, and consists of elements such as battery storage containers, electrical control buildings, transformers, security fencing, CCTV, access, landscaping and associated works. The proposed site is situated on the eastern side of the A9 road at Spittal, on land within the disused quarry at the Spittal Mains Quarry.

7.1.6 Ouglassy Wind Farm

Status: Pre-application
The Proposed Development will comprise up to eight wind turbines, with a blade tip height of up to 180m, BESS technology, associated infrastructure and ancillary development. Initial assessments for the site suggest it could accommodate up to nine turbines and an energy storage system, the combined output of which would be over 50 MW.

7.1.7 Achanarras BESS

Status: Pre-application
The construction and operation of a 200 MW BESS, associated access, landscaping and habitat creation. The proposed development would cover an area of approximately 1.8 ha and consist of a compound containing circa 100 energy storage containers and ancillary development including electrical control buildings, transformers and switchgear, sited on a hardstanding surrounded by security fencing. The proposed development is located immediately to the west of the existing Spittal substation.

7.1.8 Spittal – Loch Buidhe – Beauly 400kV Connection

Status: Pre-application
Construction and operation of a new 400kV overhead transmission line (OHL) over a distance of approximately 167 km, between new proposed substations at Spittal, Loch Buidhe and Beauly. The project being promoted is known as the Spittal – Loch Buidhe – Beauly 400 kV OHL Connection.

7.1.9 New Quarry

Status: Pre-application
A&D Sutherland Ltd will be submitting a planning application to form a new quarry 34.6 ha adjacent to the north east of the existing Spittal Quarry, for the purpose of extracting high grade Caithness flagstone. The existing quarry is now depleted of the supply of commercially usable material remaining. The extraction will be undertaken in phases with ongoing restoration taking place in the quarried areas as the next phase progresses.

7.2 Assessment of cumulative effects

Additive, incremental, associated and connected cumulative effects have been considered for the projects screened in for potential cumulative effects in relation to the Proposed Development, in accordance with CIEEM (2018) guidance.

Subject to the implementation of mitigation measures detailed above, the Proposed Development is not anticipated to result in any significant adverse effects on ecological receptors, as summarised within **Table**

6.2. However, a residual minor adverse effect is anticipated with regard to non-breeding birds, as a result of potential temporary disturbance during the construction phase of the Proposed Development. Given the scale of the Proposed Development and abundance of suitable habitat for wintering birds (open habitats such as grassland and winter stubble) within Caithness and surrounding the Site, the potential for this effect to be additive or incremental is low. Moreover, the Site is considered unlikely to be of significant importance to non-breeding birds, including qualifying species of Caithness Lochs SPA and Ramsar site, due to the presence of extensive, more suitable habitat in the general vicinity. Therefore, the risk of this becoming an additive or incremental cumulative significant adverse effect is negligible.

Associated or connected cumulative effects may occur if the Proposed Development served to enable any of the projects identified within **Section 7** to be constructed. This is not the case and therefore there is no potential for the minor adverse effect to non-breeding birds to result in an associated or connected cumulative effect (CIEEM, 2018).

Therefore, no projects have been identified which are anticipated to interact with the Proposed Development and result in significant adverse cumulative effects upon ecological receptors.

Enhancement

The Landscape Mitigation Plan (Stephenson Halliday, 2024) includes landscape planting enhancements and habitat creation which will make positive contributions to on-site biodiversity, as evidenced by the biodiversity calculations detailed in **Table 6.1**.

Other biodiversity enhancements, additional to those included in the biodiversity calculations which are embedded into the Proposed Development, will be delivered in order to target locally important ecological receptors.

Further details will be set out in a Habitat Management and Monitoring Plan and/or SPP at the detailed design stage, however as an indicative guide, these may include:

- Inclusion of plant species of known wildlife value;
- Provision of new bird nesting opportunities;
- Sustainable Drainage System (SuDS) pond design will be tailored to ensure suitability for supporting breeding amphibians;
- Scrape creation within open grassland for butterfly and moth species dependent on colonising plant species. Such areas also provide basking habitat for reptiles;
- Creation of log piles; and
- Provision of mammal passing places – it is anticipated that the Proposed Development will be surrounded by security fencing. To ensure that wildlife can access the newly created areas of soft landscaping, access points should be installed at the base of the fences. These should be a minimum of 200 mm x 200 mm. Two-way badger gates with the flap removed may be a practical means of implementation.

Conclusions

In the absence of mitigation, the Proposed Development is anticipated to result in adverse ecological effects ranging from minor to moderate, significant at the Local Level. However, subject to the implementation of the mitigation and precautionary measures proposed within this Assessment, **no significant adverse ecological effects are anticipated**.

The majority of the Proposed Development footprint comprises grazed modified grassland habitat of negligible ecological importance. The implementation of the proposed Landscape Mitigation Plan (Stephenson Halliday, 2024) will result in the creation of new habitats which will mitigate for the expected losses of baseline habitats. In addition, landscape proposals are anticipated to enhance the existing ecological conditions at the Site.

The Biodiversity Metric assessment of the Proposed Development shows that the net effects are anticipated to achieve significant biodiversity enhancement, with a 54.87% gain in Area habitat and 29.83% gain in Hedgerow habitats BDUs.

The measures set out herein can be secured though appropriately worded planning conditions. Those expected to be secured are:

- **CEMP** – to avoid impacts to breeding and non-breeding birds during the construction phase. The CEMP will also include a Pollution Prevention Plan to avoid impacts on statutory designated sites and water quality.

- **Habitat Management and Monitoring Plan** – to include management and monitoring measures for all habitats retained, created or enhanced within the Site as part of the Proposed Development. Management and monitoring activities should last a minimum of 30 years with responsible parties and funding mechanisms secured. The Plan should be agreed in advance of construction with the Highland Council. Monitoring against the agreed management objectives will be an essential part of the Habitat Management and Monitoring Plan and will be used to evaluate effective habitat creation and restoration interventions, as well as identifying the need to finetune management efforts. On this basis, it is expected that the Habitat Management and Monitoring Plan will function as a live document where success, criteria and management prescriptions may be subject to revision based on monitoring findings and relevant agreements.

- **Lighting Plan** – to avoid potential impacts on bats and otters.

- **Species Protection Plan** – to avoid potential impacts to otters, badgers and birds.

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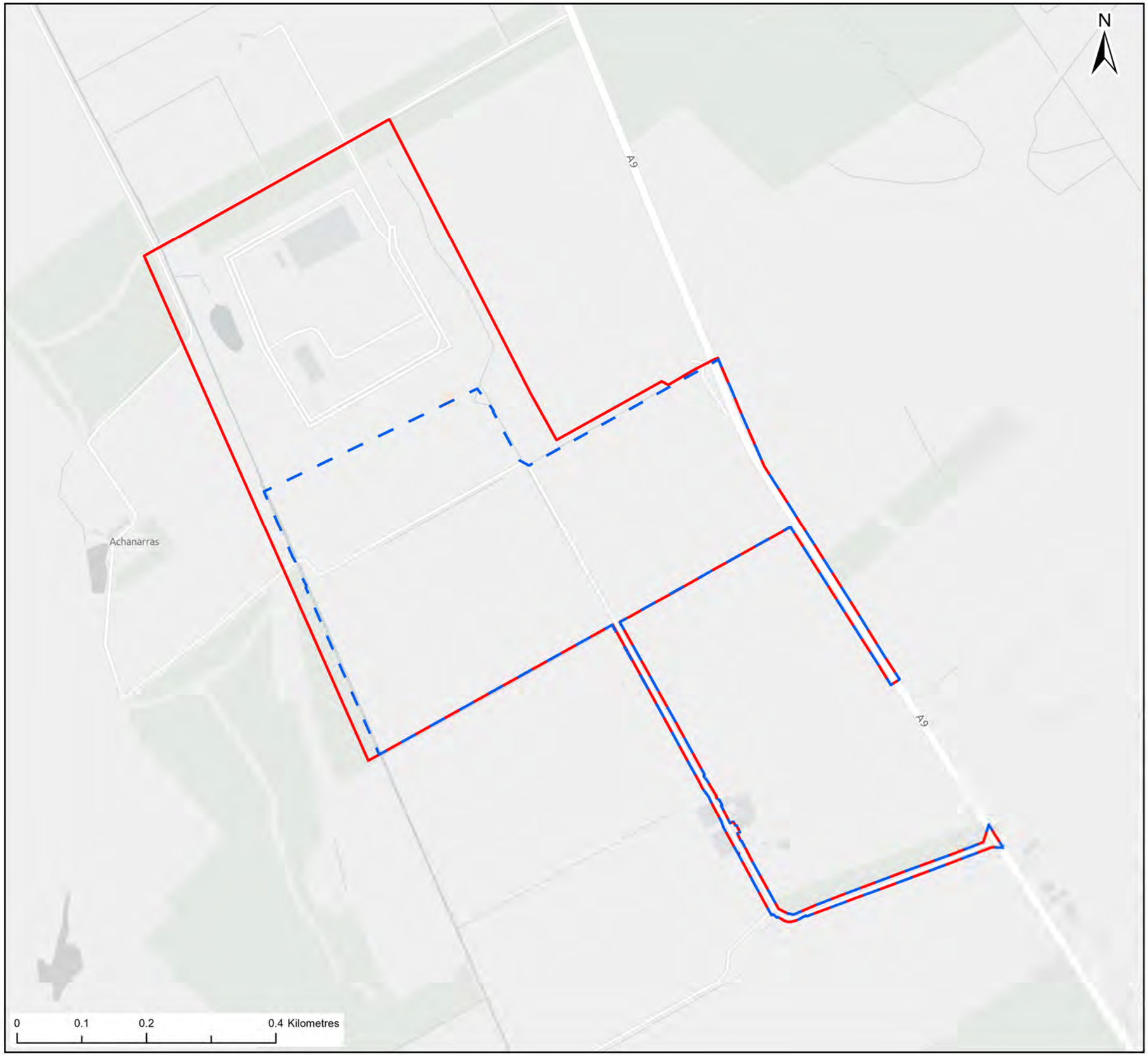
Figures



Legend:

- Planning Boundary
- Ecological Study Area

Report: Field Spittal Ltd – Ecological Impact Assessment

Title: Site boundaries

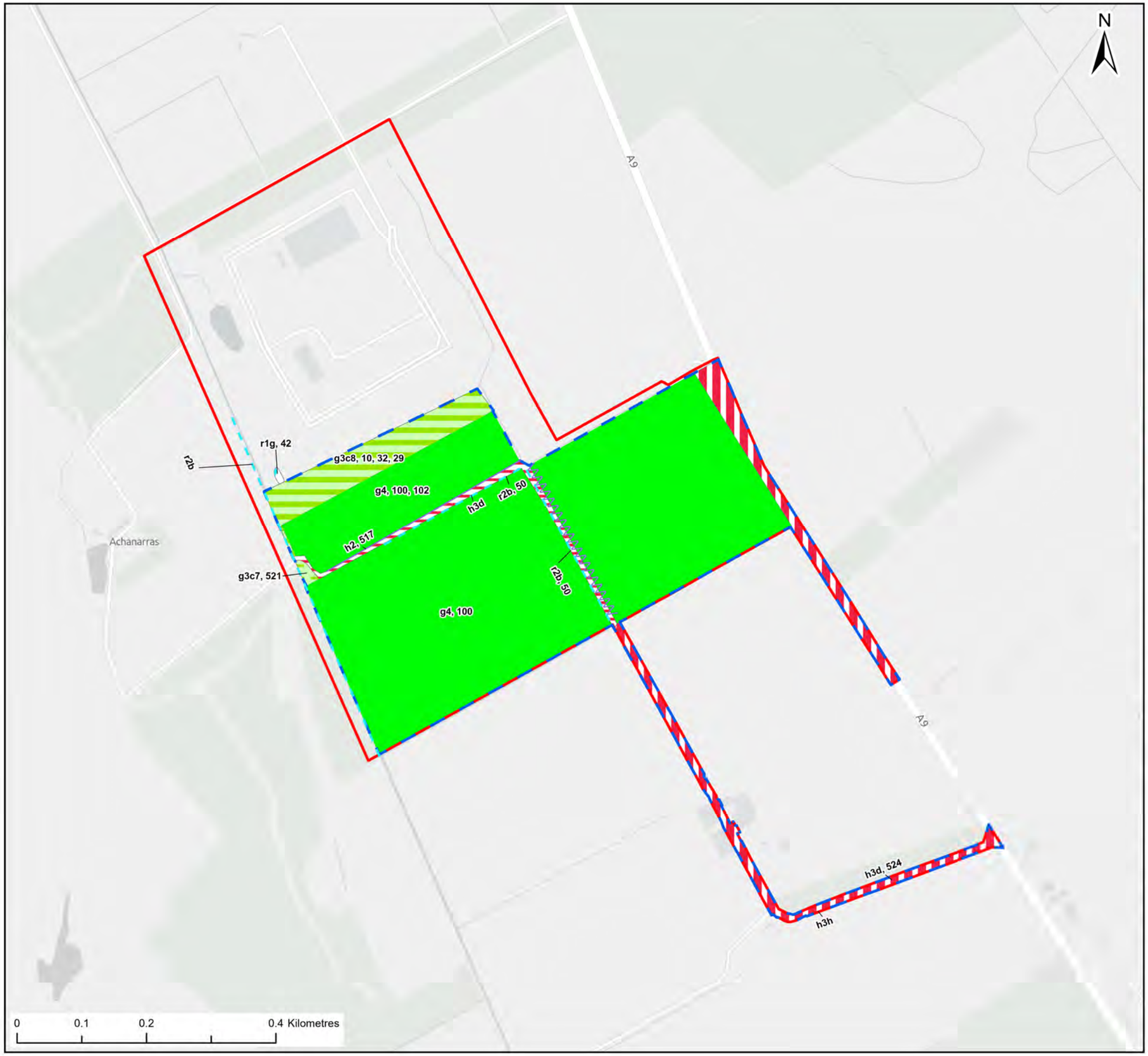
Figure: 1

Drawing No: PC3506-RHD-07-XX-DG-Z-0024

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
P01	13/12/2024	JH	SB	A3	1:6,000

Co-ordinate system: British National Grid

Royal HaskoningDHV
Enhancing Society Together



Legend:

- Planning Boundary
- Ecological Study Area

UK Hab Primary Linears

- h2 - Hedgerows
- h2a6 - Other native hedgerow
- r2b - Other river/stream

UK Hab Primary Polygons

- g3c7 - Deschampsia neutral grassland
- g3c8 - Holcus_Juncus neutral grassland
- g4 - Modified grassland
- r1g - Other standing water
- u1b - Developed land; sealed surface
- u1c - Artificial unvegetated, unsealed surface

Secondary Code Linears

517 - Recent Management

50 - Ditch

Secondary Code Polygons

10 - Scattered scrub

42 - Pond

100 - Grazed

521 - Unmanaged

102 - Sheep grazed

29 - Plantation

32 - Scattered trees

Report: Field Spittal Ltd – Ecological Impact Assessment

Title: Habitat Plan

Figure: 2 | Drawing No: PC3506-RHD-07-XX-DG-Z-0023

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
P02	03/12/2024	JH	BM	A3	1:6,000
P01	12/04/2024	JH	SB	A3	1:6,000

Co-ordinate system: British National Grid

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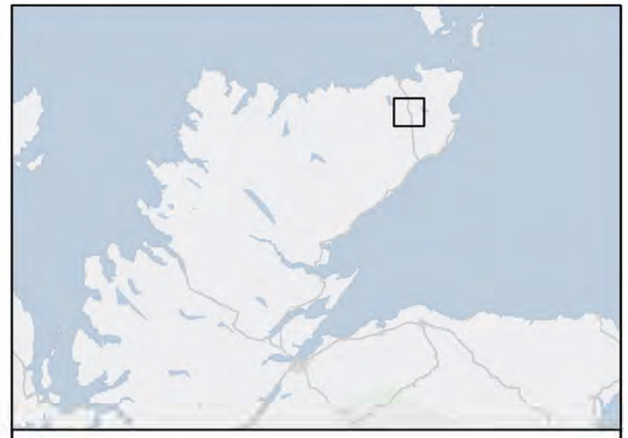
310000
315000
320000
960000
955000
950000
N
Halkirk
Gillock
Caithness Lochs
(RAMSAR, SPA & SSSI)
Loch Watten
Banniskirk Quarry
Caithness Lochs
(RAMSAR, SPA & SSSI)
Achanarras Quarry
Spittal Quarry
Westerdale Quarry
River Thurso
Caithness and Sutherland Peatlands
(RAMSAR, SAC, SPA & SSSI)
0
0.5
1
2 Kilometres



Legend:

- Planning Boundary
- Ecological Study Area
- Site 5km Buffer
- Ancient Woodland
- Special Areas of Conservation (SAC)
- RAMSAR
- Special Protection Area (SPA)
- Sites of Special Scientific Interest (SSSI)

Report: Field Spittal Ltd – Ecological Impact Assessment

Title: Designated Sites Plan

Figure: 3

Drawing No: PC3506-RHD-07-XX-DG-Z-0022

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
P02	02/12/2024	JH	BM	A3	1:45,000
P01	12/04/2024	JH	SB	A3	1:45,000

Co-ordinate system: British National Grid

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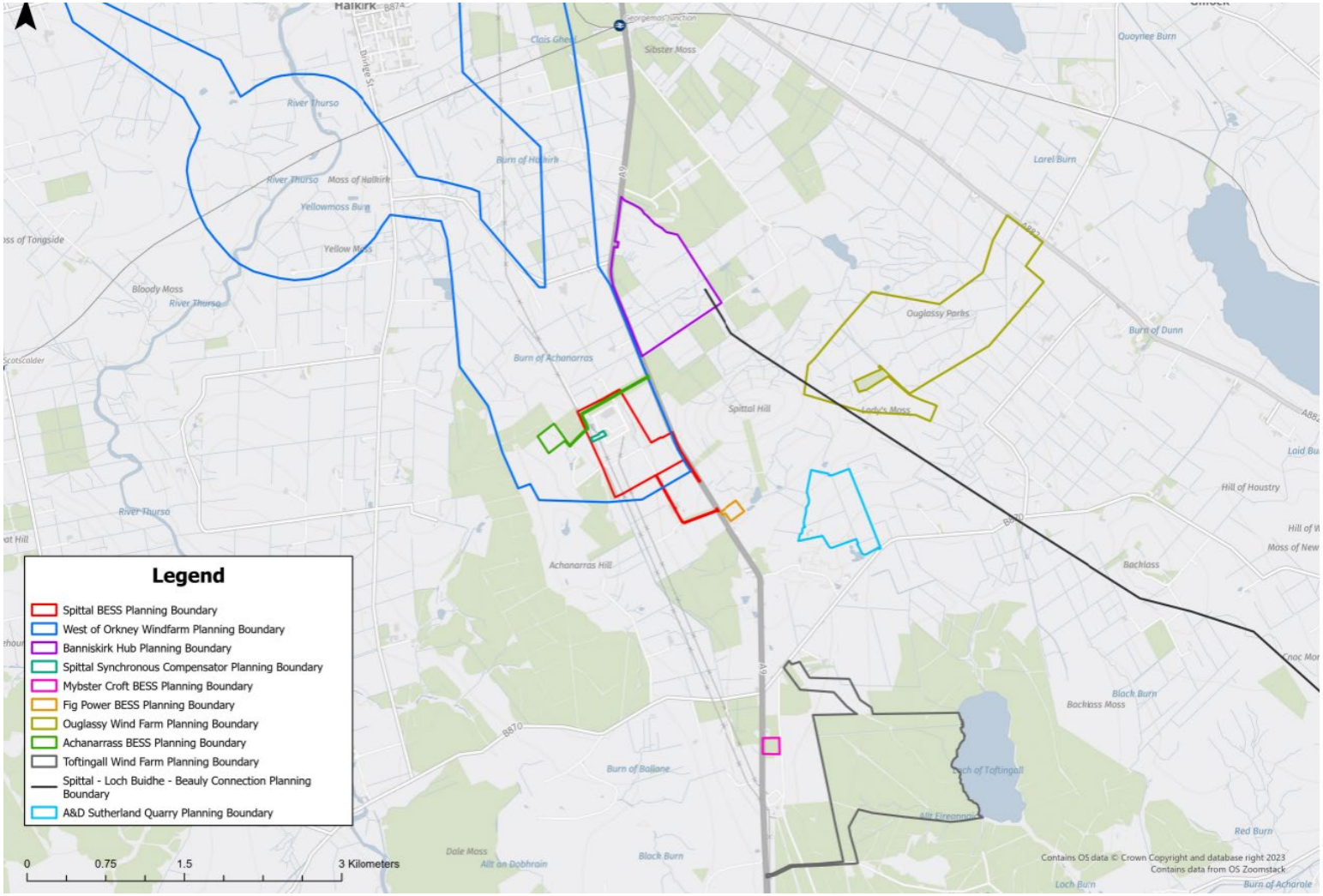

Figure 4 Projects Screened in for Assessment of Cumulative Effect

Appendix A – Breeding Bird Appraisal

REPORT

Breeding bird appraisal

Proposed Battery Energy Storage System, Spittal

Client: Field Spittal Ltd

Reference: PC3506-RHD-07-XX-RP-Z-0006

Status: Final

Date: 19 December 2024

Royal HaskoningDHV

Enhancing Society Together

HASKONINGDHV UK LTD.

Winslade Park
Manor Drive
Exeter
Clyst St Mary
EX5 1FY
United Kingdom
Water & Maritime

+44 1392 447999 **T**
info@rhdhv.com **E**
royalhaskoningdhv.com **W**

Document title: Breeding bird appraisal

Subtitle: Proposed Battery Energy Storage System, Spittal
Reference: PC3506-RHD-07-XX-RP-Z-0006

Status: Final
Date: 19 December 2024
Project name: Field Energy - SGS Breeding bird appraisal
Project number: PC3506
Author(s): WS

Drafted by: WS

Checked by: RB

Date: 22/07/2024

Approved by: EW

Date: 31/07/2024

Classification

Project related

Royal HaskoningDHV

Table of Contents

1 Introduction

Royal HaskoningDHV has been commissioned by Field Spittal Limited (Field) to carry out a breeding bird appraisal of the site of a proposed Battery Energy Storage System (BESS) on land at Spittal Mains, Spittal, Wick KW1 5XR (herein referred to as the 'site'). The site comprised predominantly of improved agricultural fields with smaller areas of other habitats including neutral grassland, hedgerows and scrub.

The purpose of the breeding bird appraisal, which is documented in this report, is to provide an evaluation of the habitats and identify the likely importance of the site for breeding birds. Recommendations to ensure legal compliance and provide ornithological enhancement are also presented. This breeding bird appraisal has supported the Ecological Impact Assessment (EcIA) for the Proposed Development.

2 Legislation

Key legislation relating to ornithology is summarised below.

2.1 Conservation (Natural Habitats, &c.) Regulations 1994

In Scotland, the Habitats Directive (EU Council Directive 92/43/EEC) is translated into specific legal obligations by the Conservation (Natural Habitats, &c.) Regulations 1994, known as the Habitats Regulations. The Habitats Regulations were amended in 2019 to retain the provision of the Regulations following the UK's exit from the European Union (EU) and set out the decision-making procedures for the protection of SPAs (and Special Areas of Conservation (SACs)) which, following the 2019 amendment, now form the UK's National Site Network (NSN). Where Ramsar Sites coincide with an SPA or an SAC, they are afforded the same level of protection as NSN sites.

2.2 The Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act (1981) was enacted in order to implement the Wild Birds Directive and Bern Convention in Great Britain but has been amended and supplemented over the intervening decades, including (in Scotland) the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) 2011. In relation to nesting birds, the Wildlife and Countryside Act 1981 (as amended) makes it an offence to intentionally or recklessly:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while that nest is in use or being built;
- Obstruct or prevent any bird from using its nest; and
- Take or destroy the egg of any wild bird.

For any wild bird species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), it's an offence to intentionally or recklessly disturb:

- Any bird while it is building a nest;
- Any bird while is in, on, or near a nest containing eggs or young;
- Any bird while lekking; and
- The dependent young of any bird.

Furthermore, those species listed on Schedules A1 and 1A receive additional protection which makes it an offence, at any time, to intentionally or recklessly:

- Take, damage, destroy or interfere with any nest habitually used by any wild bird included in Schedule A1 (golden eagle and white-tailed eagle); and
- Harass any bird included in Schedule 1A (golden eagle, white-tailed eagle, hen harrier and red kite).

3 Information sources

Documents and assessments relating to bird conservation status referenced within this report are summarised below.

3.1 Birds of Conservation Concern 5

Birds of Conservation Concern 5 (BoCC5; Stanbury *et al*, 2021) is the latest assessment of the status of all the UK's regularly occurring bird species. Birds have been assessed against a set of objective criteria and placed on the Green, Amber or Red lists to indicate an increasing level of conservation concern.

3.2 Scottish Biodiversity List

The Scottish Biodiversity List (SBL) (SBL; NatureScot, 2020) is a list of animals, plants and habitats that are considered to be of principal importance for biodiversity conservation in Scotland. Bird species on this list and relevant to the site include curlew *Numenius arquata,* skylark *Alauda arvensis,* linnet *Linaria cannabina*, reed bunting *Emberiza schoeniclus* and lapwing *Vanellus vanellus*.

3.3 Highland Nature Biodiversity Action Plan

The Highland Nature Biodiversity Action Plan (HNBAP; The Highland Council, 2021) contains key actions for Highland nature conservation. Priority bird species on the HNBAP and relevant to the site include curlew, lapwing and oystercatcher *Haematopus ostralegus*.

4 Methodology

4.1 Desk study

The Defra MAGIC map application (https://magic.defra.gov.uk/magicmap.aspx) was used to identify statutory designated sites with ornithological interest within a 5km radius of the site, including Special Protection Areas (SPAs), Ramsar sites and Sites of Special Scientific Interest (SSSIs). Biodiversity data was requested from the Highland Biological Recording Group (HBRC) including previous records of notable bird species within 3km of the site. Publicly available data from other proposed developments in the immediate vicinity were also reviewed for historical bird records.

4.2 Field survey

A walkover survey was undertaken on 25 June 2024 in suitable weather conditions (cloudy, wind force 3-4, temperature 13°C, no precipitation). The survey focused on both habitats and bird species within the site, although habitats and birds up to 50m from the site boundary were also noted. All bird species were identified and recorded in broad accordance with the breeding bird survey methodology for a single visit (Bird Survey & Assessment Steering Group, 2023) including behavioural notations where appropriate. Each species' breeding status on site was estimated based on habitats present and behaviours observed.

Recording of habitats was carried out predominantly in relation to their ability to support breeding birds. A formal habitat survey was previously undertaken by Royal HaskoningDHV in accordance with the UK Habitat Classification methodology (UKHab Ltd, 2023) in March 2024.

4.3 Evaluation

The breeding bird assemblage of the site has been evaluated in accordance with Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) guidelines.

5 Results

5.1 Desk study

5.1.1 Designated sites with ornithological interest

The site does not lie within, or adjacent to, any statutory designated sites with ornithological interest. A total of three statutory designated sites with ornithological interest have been identified within a 5km radius of the site; details of these are provided in **Table 1**. Other SSSIs are present within 5km, however these do not have birds listed as reasons for notification.

Table 1 Statutory designated sites within 5km of the site

Designated site	Approx. distance & direction from Proposed Development	Relevant qualifying features / reasons for notification
Caithness Lochs SPA	4.7km NE	• Greenland white-fronted goose *Anser albifrons flavostris* (non-breeding) • Greylag goose *Anser anser* (non-breeding) • Whooper swan *Cygnus cygnus* (non-breeding)
Caithness Lochs Ramsar site	4.7km NE	• Greenland white-fronted goose (non-breeding) • Greylag goose (non-breeding) • Whooper swan (non-breeding) • Ruff *Philomachus pugnax* (migration)
Loch Scarmclate SSSI	4.7km NE	• Greylag goose (non-breeding)

5.1.2 Previous records of notable bird species

The HBRC data search did not identify any records of notable bird species within 3 km of the site.

The EIA Scoping Report for the Spittal Substation and HVDC Converter Station (SSEN, 2023) identified breeding lapwing, curlew and snipe within 2km of the proposed development, and habitats on the site were considered suitable to support a range of notable bird species including skylark and meadow pipit. The Onshore Scoping Report for the Ayre Offshore Wind Farm (TWP, 2024), which includes an onshore cable corridor bordering the site, has not proposed breeding bird surveys but instead intends to rely on data from a desktop study to inform the baseline.

5.2 Field survey

5.2.1 Species list

A total of 21 species were recorded during the walkover survey. These are listed in **Table 2** along with their legal and conservation status, and estimated breeding status on site. The conservation status has been established using the documents and assessments in **Section 3**.

Table 2 Bird species recorded during the walkover survey

Common name	Scientific name	Legal / conservation status*	Estimated breeding status
Carrion crow	*Corvus corone*	*	Possible
Common gull	*Larus canus*	Amber	Possible
Curlew	*Numenius arquata*	Red, SBL, HNBAP	Possible
Dunnock	*Prunella modularis*	Amber	Likely
Feral pigeon	*Columba livia*	*	Possible
Goldfinch	*Carduelis carduelis*	*	Possible
Jackdaw	*Coloeus monedula*	*	Possible
Lapwing	*Vanellus vanellus*	Red, SBL, HNBAP	Possible
Lesser redpoll	*Acanthis cabaret*	Red	Possible
Kestrel	*Falco tinnunculus*	Amber, SBL	Possible
Meadow pipit	*Anthus pratensis*	Amber	Likely
Oystercatcher	*Haematopus ostralegus*	Amber, HNBAP	Possible
Pied wagtail	*Motacilla alba*	*	Likely
Reed bunting	*Emberiza schoeniclus*	Amber, SBL	Likely
Sedge warbler	*Acrocephalus schoenobaenus*	Amber	Likely
Siskin	*Carduelis spinus*	*	Possible
Stonechat	*Saxicola rubicola*	*	Confirmed
Swallow	*Hirundo rustica*	*	Possible
Wren	*Troglodytes troglodytes*	Amber	Likely
Willow warbler	*Phylloscopus trochilus*	Amber	Likely
Woodpigeon	*Columba palumbus*	Amber	Possible
Notes: *standard protection and Green-listed unless stated. Red and Amber list species following Stanbury *et al* (2021).			

5.2.2 Habitat descriptions

The site was dominated by agriculturally improved (modified) grassland fields. Smaller areas of semi-improved neutral grassland, hedgerows, scrub and ditches/streams were also present, with coniferous plantation and tall ruderal vegetation bordering the site; **Figure 2** for habitat locations and **Figure 3** for photograph locations. The habitats are summarised below along with the bird species recorded during the walkover survey.

5.2.2.1 Modified grassland

The majority of the site consisted of modified grassland used for grazing cattle and sheep (**Photo 1**). The sward varied between fields but typically included frequent to dominant Yorkshire-fog *Holcus lanatus*, crested dog's tail *Cynosurus cristatus*, perennial ryegrass *Lolium perenne* and smooth meadow grass *Poa pratensis*. Due to the levels of agricultural improvement and livestock grazing fields containing these habitats supported few birds, but carrion crow was noted along with a single curlew (although there was no suggestion of the latter breeding). Lapwing was recorded in flight only.

5.2.2.2 Neutral grassland

Ungrazed neutral grassland was present in the north of the site and bordering the Spittal electricity substation (**Photo 2**). This was dominated by grasses such as tufted hairgrass *Deschampsia cespitosa*, common bent *Agrostis capillaris* and Yorkshire-fog but also contained rushes and herbs such as red campion *Silene dioica* and creeping buttercup *Ranunculus repens*, and scattered young trees including alder *Alnus glutinosa*, rowan *Sorbus aucuparia* and willow *Salix* spp. Singing meadow pipit, reed bunting and sedge warbler were noted in this habitat, along with two kestrels.

5.2.2.3 Hedgerows and scrub

Hedgerows and scrub occurred alongside the access track running between the fields (**Photo 3**), consisting predominantly of bramble *Rubus fruticosus*, rose *Rosa* spp., elder *Sambucus nigra* and hawthorn *Crataegus monogyna*. Goldfinch, dunnock and woodpigeon were recorded in this habitat.

5.2.2.4 Ditches and streams

Modified ditches and streams bordering fields on and adjacent to the site **(Photo 4**) did not contain any wetland bird species, but emergent vegetation bordering channels supported sedge warbler and stonechat.

5.2.2.5 Tall ruderal vegetation

An area of tall, wet vegetation in one field contained yellow iris *Iris pseudacorus*, willowherb *Epilobium spp*., hogweed *Heracleum sphondylium* and common nettle *Urtica dioica*. Pied wagtail, swallow, stonechat and sedge warbler were all recorded in this area (**Photo 5**).

5.2.2.6 Coniferous plantation woodland

Coniferous trees and plantations to the west of the site contained a number of birds not recorded elsewhere, including siskin, lesser redpoll, wren and willow warbler.

5.2.2.7 Man-made habitats

The Spittal electricity substation to the north of the site (**Photo 6**) supported common gull, oystercatcher and feral pigeon. Farm buildings bordering the access track attracted swallow, feral pigeon and jackdaw.

Photo 1 Modified grassland grazed by cattle

Photo 2 Neutral grassland

Photo 3 Hedgerows and scrub bordering access track

Photo 4 Watercourse between fields

Photo 5 Tall ruderal vegetation

Photo 6 Spittal electricity substation

6 Discussion

6.1.1 Designated sites with ornithological interest

There are no SSSIs, SPAs or Ramsar sites with breeding birds as qualifying/interest features within 5km of the site, therefore it is highly unlikely that the site is used by breeding birds associated with such sites.

6.1.2 Breeding birds on site

The site provided suitable breeding habitat for curlew and lapwing, both of which were recorded during the site walkover survey, although neither were confirmed as nesting on site. Curlew and lapwing are both Red-listed, SBL and HNBAP species but are fairly widespread in Caithness during the breeding season, as indicated by the BTO Bird Atlas 2007-2011 breeding distribution maps. Curlew and lapwing are described as summer, passage and winter migrants in Caithness with hundreds of records of each submitted in 2023 (SOC 2024). Given the size of the site and the habitats present, it is considered that the site supports no more than one pair each of curlew and lapwing.

Notable passerine species recorded on site and likely to be breeding include meadow pipit, reed bunting and sedge warbler, with the former favouring neutral and modified grassland and the latter two species occurring in tall ruderal vegetation and neutral grassland with scattered trees. All three species are Amber-listed, with reed bunting also a SBL species, however they are all widely distributed across Caithness as indicated by the BTO Bird Atlas 2007-2011 breeding distribution maps. Given the size of the site and the habitats present, it is considered that the site supports no more than 1-2 pairs of meadow pipit, reed bunting and sedge warbler.

Trees, hedgerows and scrub on site, and coniferous woodland bordering the site, provided suitable breeding habitat for small numbers of other notable passerines including lesser redpoll (Red-listed), willow warbler and dunnock (both Amber-listed). Other notable species not recorded during the survey but which may breed on site include song thrush *Turdus philomelos,* starling *Sturnus vulgaris* and house sparrow *Passer domesticus* which are all Red-listed species. However, given the size of the site and the habitats present it is considered that the site supports no more than 1-2 pairs each of the species described.

Common gull and oystercatcher (both Amber-listed) were recorded at the electricity substation to the north of the site, and considered to be possibly breeding there. Other than kestrel, raptors which may use the site during the breeding season include buzzard *Buteo buteo*, sparrowhawk *Accipiter nisus* and barn owl *Tyto alba*. No evidence of these species nesting was recorded, although coniferous plantation woodland adjacent to the site may provide suitable breeding habitat for up to one pair each of buzzard and sparrowhawk, and barn owl may nest in nearby farm buildings.

7 Summary and Conclusion

The site consisted predominantly of modified and neutral grassland with hedgerows and ditches. The walkover recorded a number of notable bird species typical of the area, predominantly waders and passerines which were considered to be possibly breeding on site. Given the size of the site and the habitats present, it is considered that the site supports no more than 1-2 breeding pairs of the species described, all of which are widespread in Caithness. No Schedule 1/A1/1A species or birds associated with statutory designated sites are considered likely to breed on site.

The breeding bird assemblage of the site is considered to be of **local importance** when assessed in a geographic context in accordance with CIEEM guidelines (2018). The information presented in this report is considered sufficient to characterise the baseline in respect of breeding birds and no further breeding birds are considered necessary.

8 Recommendations

This section outlines some broad recommendations to ensure legal compliance in respect of breeding birds and provide ornithological enhancement. Full details of ornithological avoidance, mitigation, compensation and enhancement measures will be provided in the EcIA report.

To avoid direct impacts to nesting birds, removal of all vegetation (including modified and neutral grassland) should take place outside of the bird nesting season i.e. undertaken between September and February inclusive. If clearance is required between March and August, a suitably experienced ecologist should first check the affected habitats for active nests. If any were found, the nest(s) and immediate surroundings should be left undisturbed (e.g. through creation of a 5m buffer area) until the eggs had hatched and young had fledged, or the breeding attempt was otherwise concluded i.e. nest abandoned/predated. If breeding waders are present, a larger buffer area around the nest(s) may be necessary.

The site lacked mature trees, but nest boxes could be installed on fenceposts to provide additional nesting opportunities. Broader habitat enhancement measures for birds could include new tree and hedgerow planting, provision of species-rich grassland and new wetland / pond creation. All new and retained habitats should be managed post-construction in accordance with an appropriate habitat management plan.

9 References

Chartered Institute of Ecology and Environmental Management (CIEEM 2018, updated 2022). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine.

NatureScot (2020) Scottish Biodiversity List (available at https://www.nature.scot/doc/scottish-biodiversity-list)

Scottish & Southern Electricity Networks (SSEN, 2023) Spittal Substation and HVDC Converter Station Environmental Impact Assessment Scoping Request.

Scottish Ornithologists' Club (SOC) Caithness Branch (2024). Caithness Bird Report 2023.

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114: 723-747.

The Highland Council (2021) Highland Nature Biodiversity Action Plan 2021 – 2026 (available at https://www.highlandenvironmentforum.info/wp-content/uploads/2022/01/Highland-Nature-Biodiversity-Action-Plan-2021-2026-_compressed-.pdf)

UKHab Ltd (2023). UK Habitat Classification Version 2.0 (available at https://www.ukhab.org/)

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315000
320000
960000
955000
950000
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Halkirk
Gillock
Caithness Lochs
(RAMSAR, SPA & SSSI)
Loch Watten
Banniskirk Quarry
Caithness Lochs
(RAMSAR, SPA & SSSI)
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(RAMSAR, SAC, SPA & SSSI)
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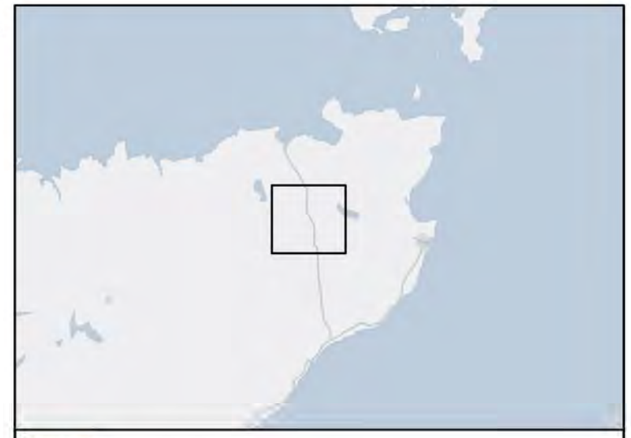

Legend:

- Planning Boundary
- Ecological Study Area
- Site 5km Buffer
- Ancient Woodland
- Special Areas of Conservation (SAC)
- RAMSAR
- Special Protection Area (SPA)
- Sites of Special Scientific Interest (SSSI)

Report: Field Spittal Ltd – Breeding Bird Appraisal

Title: Designated Sites Plan

Figure: 1

Drawing No: PC3506-RHD-07-XX-DG-Z-0025

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Co-ordinate system: British National Grid

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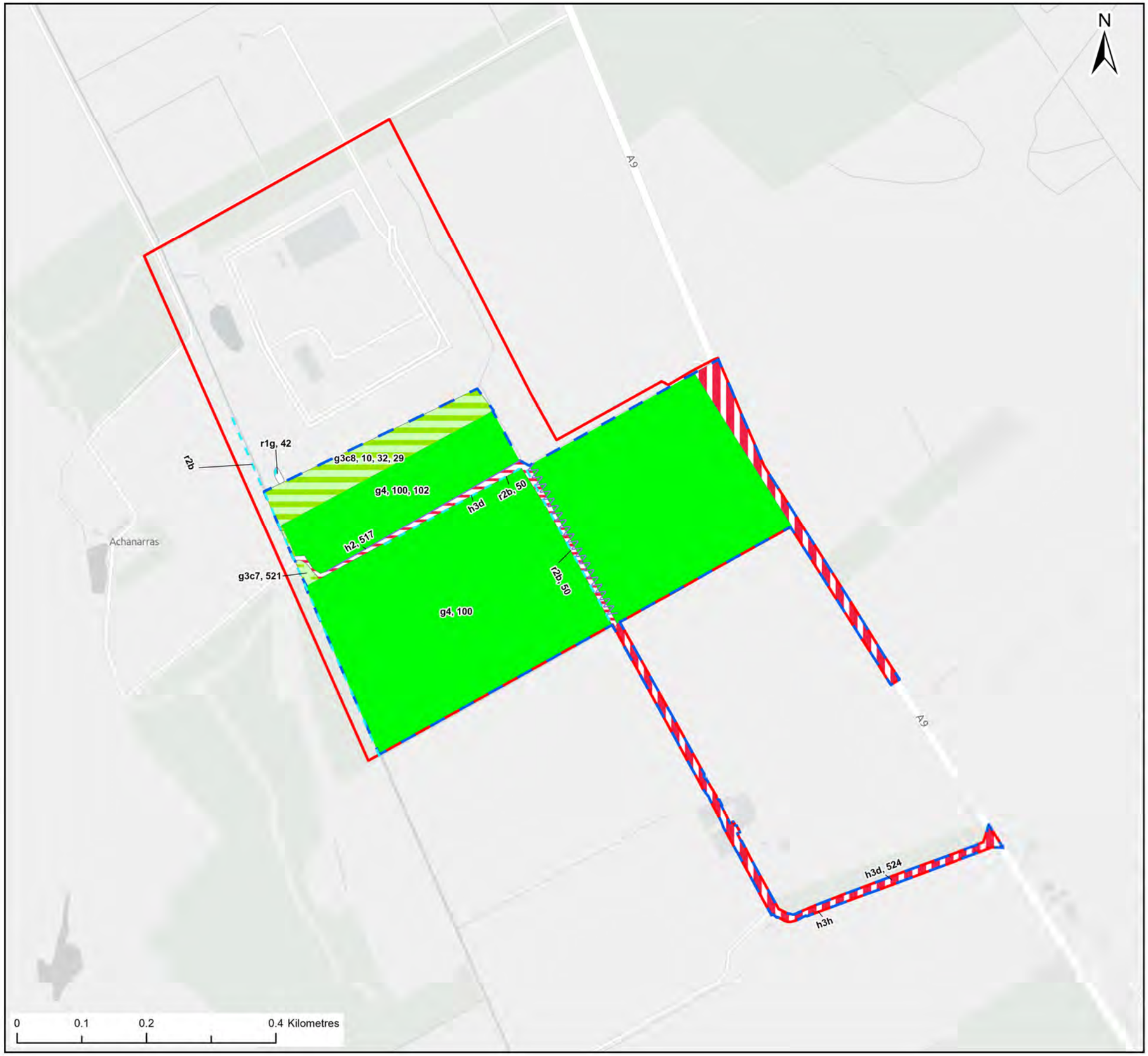

Legend:

- Planning Boundary
- Ecological Study Area

UK Hab Primary Linears

- h2 - Hedgerows
- h2a6 - Other native hedgerow
- r2b - Other river/stream

UK Hab Primary Polygons

- g3c7 - Deschampsia neutral grassland
- g3c8 - Holcus_Juncus neutral grassland
- g4 - Modified grassland
- r1g - Other standing water
- u1b - Developed land; sealed surface
- u1c - Artificial unvegetated, unsealed surface

Secondary Code Linears

517 - Recent Management

50 - Ditch

Secondary Code Polygons

10 - Scattered scrub

42 - Pond

100 - Grazed

521 - Unmanaged

102 - Sheep grazed

29 - Plantation

32 - Scattered trees

Report: Field Spittal Ltd – Breeding Bird Appraisal

Title: Habitat Plan

Figure:	Drawing No:				
2	PC3506-RHD-07-XX-DG-Z-0026				
Revision:	**Date:**	**Drawn:**	**Checked:**	**Size:**	**Scale:**
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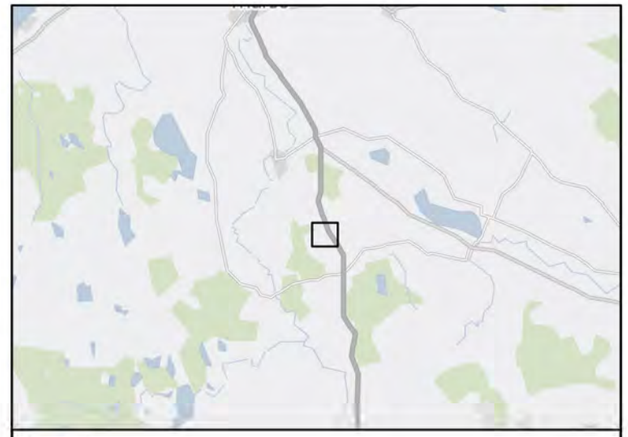

Legend:

- Site Boundary
- Photo Locations

Report: Field Spittal Ltd – Breeding Birds Appraisal

Title: Spittal - Photograph locations

Figure: 3

Drawing No: PC3506-RHD-07-XX-DG-Z-0021

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
P02	02/12/2024	JH	BM	A3	1:5,000
P01	31/07/2024	JH	SB	A3	1:5,000

Co-ordinate system: British National Grid

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Appendix B – Legislation and Policy

Legislation

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

The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) (also known as the Habitats Regulations) transposed into UK law the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives). The Habitats Regulations were amended in 2019 to retain the provision of the Regulations following the UK's exit from European Union (EU).

These regulations provide protection for specific habitats listed in Annex I and specific species in Annex II of the Habitats Directive. They set out the decision-making procedures for the protection of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) which, following the 2019 amendment, now form the UK's National Site Network. Under the Habitats Regulations it is an offence (subject to exceptions) to deliberately capture, injure, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, uproot, destroy, or trade in the plants listed in Schedule 4.

The Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act (1981) was enacted to implement the Birds Directive and Bern Convention in Great Britain but has been amended and supplemented over the intervening decades. It contains four parts and 17 schedules which cover:

- Part 1: Wildlife – the protection of birds, animals, plants and measures to prevent the establishment of non-native species which may be detrimental to native wildlife;
- Part 2: Nature conservation – the countryside and National Parks (including the designation of protected areas);
- Part 3: Public rights of way; and
- Part 4: Miscellaneous provisions of the act.

Under the Wildlife and Countryside Act (as amended) the country nature conservation bodies have a duty to notify any area of land which is 'of special interest by reason of any of its flora, fauna, or geological or physiographical features'. These sites are known as Sites of Special Scientific Interest (SSSIs).

The Wildlife and Countryside Act 1981 (as amended) makes it a criminal offence to:

- Intentionally kill, injure, or take any wild bird;
- To take, damage or destroy the nest of any wild bird while that nest is in use or being built;
- To take or destroy the egg of any wild bird;
- To intentionally kill, injure or take any animal listed in Schedule 5 of the act and protects occupied and unoccupied places used for shelter or protection by such animals;
- To intentionally pick, uproot or destroy any wild plant listed in Schedule 8 of the Act; or
- To plant or otherwise cause to grow any non-native, invasive species listed under Part 2 of Schedule 9 of the Act.

Protection of Badgers Act 1992

Badgers and their setts are protected under the Protection of Badgers Act 1992. It is an offence under the Act to:

- Wilfully taking, injuring or killing a badger;
- Cruelty to a badger;
- Intentional or reckless interference with a badger sett;
- Sale or possession of a badger; and
- Marking or ringing of a badger.

Interfering with a badger sett includes:

- Damaging or destroying a sett or any part of it;
- Obstructing access to a sett;
- Disturbing a badger while it is in a sett; and
- Causing or allowing a dog to enter a badger sett.

Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended)

The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (known as CAR) regulate certain activities in Scotland that could affect its water environment. The regulations cover rivers, lochs, transitional waters (estuaries), coastal waters groundwater, and groundwater dependant wetlands. To carry out activities near or in waterbodies, a CAR license may be required depending on the nature of the works.

Policy and guidance

National Planning Framework 4 (NPF4)

NPF4 is a long-term plan looking to 2045 that guides spatial development, sets out national planning policies, designates national developments and highlights regional spatial priorities. Policy 3 of the NPF4 supports development that helps to secure positive effects for biodiversity. The Policy states that development proposals should seek to "*conserve, restore and enhance biodiversity, including nature networks so they are in a demonstrably better state than without intervention"*.

Research has since been carried out by the Scottish Government regarding the implementation of NPF4, Policy 3 (Scottish Government, 2023). The findings state that the Defra Biodiversity Metric could be adapted for planning and development use in Scotland.

Scottish Biodiversity List

The Scottish Biodiversity List (SBL) is a list of animals, plants and habitats that Scottish Ministers consider to be of Principal Importance for biodiversity conservation in Scotland (NatureScot, 2020). Habitats and species in this list are noted where appropriate herein.

Highland Nature Biodiversity Action Plan

The Highland Nature Biodiversity Action Plan (BAP) contains nine key actions for Highland nature conservation and details priority species and habitats within the Highland region that must be considered within any development assessment. Any BAP habitats or species which may be affected by the development proposals are referenced herein.

The Highland Council Biodiversity Planning Guidance (BPG)

The Highland Council have developed BPG as non-statutory planning guidance to manage biodiversity enhancement (Highland Council, 2024). This includes the use of the Department for Environment, Food and Rural Affairs' (Defra) Biodiversity Net Gain (BNG) Metric (Defra, 2023) until a suitable metric for use in Scotland has been developed. At the time of writing there is no statutory requirement for BNG in Scotland, and a BNG metric, which will be relevant to Scottish habitats, is in development by NatureScot.

The Chartered Institute of Ecology and Environmental Management (CIEEM) has defined BNG as a goal for a development project, policy, plan or activity in which the impacts on biodiversity are outweighed by measures taken to avoid and minimise the impacts, to restore affected areas and finally to offset the residual impacts, to the extent that the gain exceeds the loss (CIEEM, 2019).

The BPG states that "a minimum 10% biodiversity enhancement is require although a higher percentage and/or bespoke measures may be expected where development impacts a non-statutory designated area or a locally important area as designated by the local Authority".

Appendix C – Significant Biodiversity Enhancement Calculation Metric

The Statutory Biodiversity Metric
Start page

Project details			
Planning authority:	Highland Council		
Project name:	Spittal BESS		
Applicant:	Field Spittal Ltd.		
Application type:	Battery Energy Storage Facility		
Planning application reference:			
Completed by:	BM (Royal HaskoningDHV)		
Date of metric completion:	11 December 2024		
Reviewer:	LG (Royal HaskoningDHV)		
Calculation iteration:	1		
Planning authority reviewer:			
Date of planning authority review:			
Target % net gain:	**10%**		
Irreplaceable habitat present at baseline:	**No ✓**		
Total site area - including irreplaceable habitat area (hectares):	**27.73**	**Irreplaceable habitat site area (hectares):**	**0.00**
Total off-site area - including irreplaceable habitat area (hectares):	**N/A**	**Irreplaceable habitat area off-site (hectares):**	**N/A**

Main menu

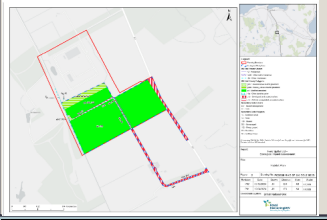
Results

Cell style conventions	
⚠	Attention required
▲	Input error/rules and principles not met
	Use of this cell is not appropriate
	Enter data
	Automatic lookup
	Result

View all

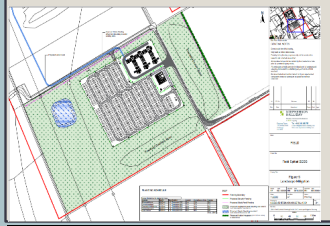
Reset view

On-site baseline map — Insert



On-site baseline map reference number	baseline

On-site post intervention map — Insert



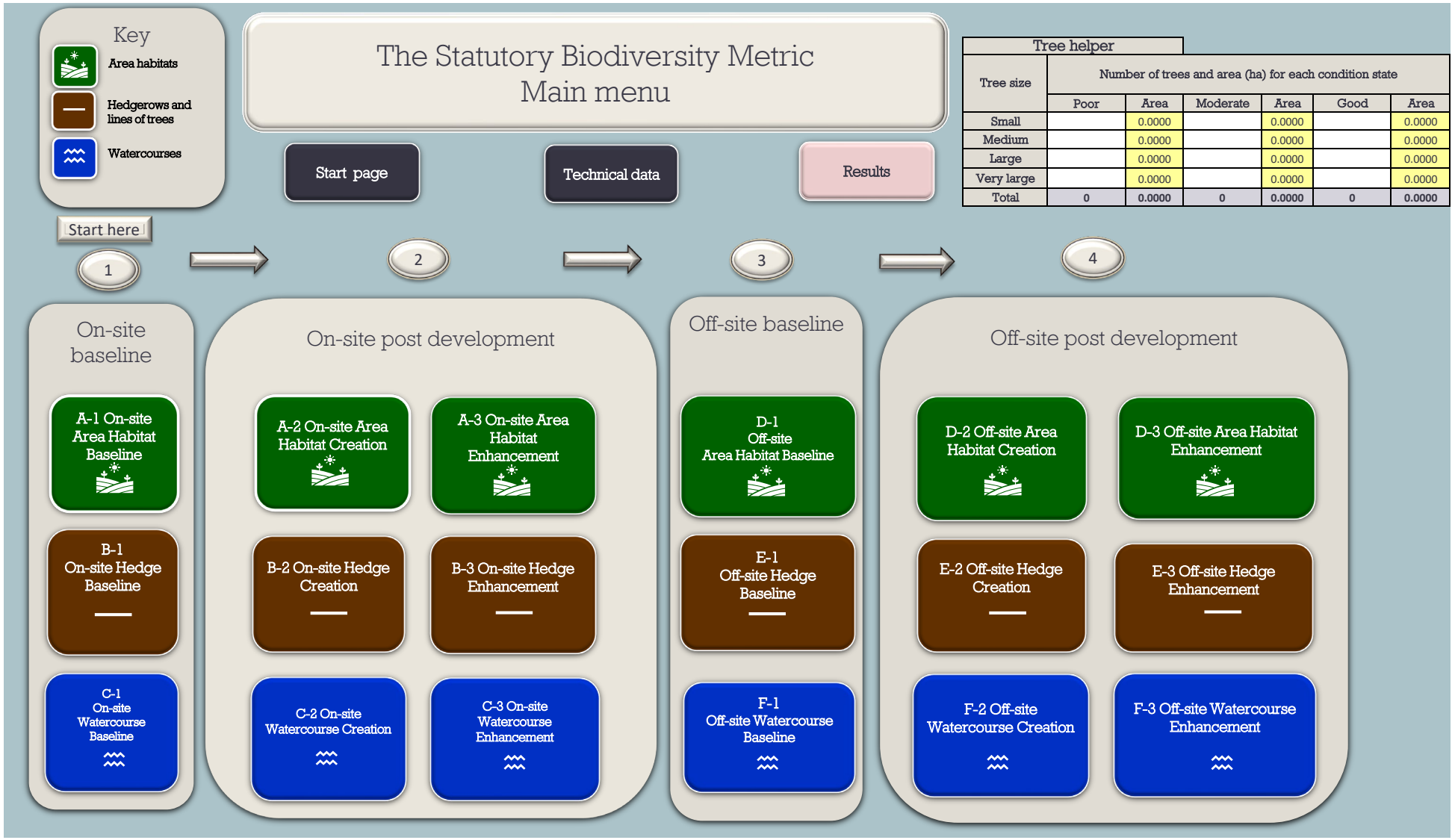
On-site post-intervention map reference number	landscaping

Off-site baseline map — Insert

Off-site baseline map reference number	

Off-site post intervention map — Insert

Off-site post-intervention reference number	



Tree helper

Tree size	Number of trees and area (ha) for each condition state					
	Poor	Area	Moderate	Area	Good	Area
Small		0.0000		0.0000		0.0000
Medium		0.0000		0.0000		0.0000
Large		0.0000		0.0000		0.0000
Very large		0.0000		0.0000		0.0000
Total	0	0.0000	0	0.0000	0	0.0000

The Statutory Biodiversity Metric Results

Return to start page

Headline results

Detailed results

Habitat trading summaries

Off-site summary

Irreplaceable habitats summary

Unit shortfall summary

Spittal BESS

Headline Results

Scroll down for final results ⚠

Return to results menu

On-site baseline	*Habitat units*	61.63	
	Hedgerow units	2.64	
	Watercourse units	4.45	
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	95.45	
	Hedgerow units	3.43	
	Watercourse units	4.45	
On-site net change (units & percentage)	*Habitat units*	33.82	54.87%
	Hedgerow units	0.79	29.83%
	Watercourse units	0.00	0.00%

On-site net gain is less than target set ⚠

Off-site baseline	*Habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	*Habitat units*	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%

Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	33.82
	Hedgerow units	0.79
	Watercourse units	0.00
Spatial risk multiplier (SRM) deductions	*Habitat units*	0.00
	Hedgerow units	0.00
	Watercourse units	0.00

FINAL RESULTS

Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	33.82	
	Hedgerow units	0.79	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	54.87%	
	Hedgerow units	29.83%	
	Watercourse units	0.00%	Total net gain achieved is less than target set ▲
Trading rules satisfied?		Yes ✓	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	10.00%	61.63	67.80	0.00	No additional area habitat units required to meet target ✓
Hedgerow units	10.00%	2.64	2.91	0.00	No additional hedgerow units required to meet target ✓
Watercourse units	10.00%	4.45	4.89	0.44	

Input errors/rule breaks present in metric ▲

Project Name: Snitral BESS Map Reference: baseline

A-1 On-Site Habitat Baseline

Condense / Show Columns | Condense / Show Rows | Main Menu

Area habitat summary	
Total Net Unit Change	33.68
Total Net % Change	84.87%
Trading Rules Satisfied	Yes ✓

	Existing area habitats				Distinctiveness		Condition		Strategic significance				Ecological baseline								Bespoke compensation agreed for losses of V/HDH or irreplaceable habitat	Comments		
Ref	Broad Habitat	Habitat Type	Irreplaceable habitat	Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier	Required Action to Meet Trading Rules	Total habitat units	Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area habitat lost	Units lost			User comments	Planning authority comments	Habitat reference number
1	Grassland	Other neutral grassland	No	0.069	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required ≥	0.55	0.069	0	0.55	0.00	0.00	0.00			UKHab g3c7 - Deschampsia neutral grassland, S21 - unmanaged. Retained west of the main BESS area.		1
2	Grassland	Other neutral grassland	No	1.89	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required ≥	15.12	1.89	0	15.12	0.00	0.00	0.00			UKHab g3c5 - Holcus_lanatus neutral grassland, 10 - scattered scrub, 29 - plantation, 32 - scattered trees. Retained north of the main BESS area.		2
3	Grassland	Modified grassland	No	3.361	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required ≥	6.72	3.361	0	6.72	0.00	0.00	0.00			UKHab g4 - modified grassland, 100 - grazed, 103 - sheep grazed. Retained north of the main BESS area.		3
4	Grassland	Modified grassland	No	11.181	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required ≥	22.36	0	0	0.00	0.00	11.18	22.36			UKHab g4 - modified grassland, 100 - grazed. All lost then subsequently landscaped/ main BESS site (creation).		4
5	Grassland	Modified grassland	No	8.439	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required ≥	16.88	5.767	0	11.53	0.00	2.67	5.34			UKHab g4 - modified grassland, 100 - grazed. Partially retained, remainder lost then subsequently landscaped (creation).		5
6	Urban	Developed land; sealed surface	No	1.127	V.Low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Compensation Not Required	0.00	1.127	0	0.00	0.00	0.00	0.00			UKHab u1b - developed land; sealed surface. Retained.		6
7	Urban	Developed land; sealed surface	No	1.097	V.Low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Compensation Not Required	0.00	1.097	0	0.00	0.00	0.00	0.00			UKHab u1b - developed land; sealed surface. Retained.		7
8	Urban	Artificial unvegetated, unsealed surface	No	0.57	V.Low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Compensation Not Required	0.00	0.57	0	0.00	0.00	0.00	0.00			UKHab u1c - Artificial unvegetated unsealed surface. Retained.		8
9																								
10																								
11																								
12																								
13																								
		Total habitat area		27.73									61.63	13.26	0.00	33.93	0.00	13.85	27.71					
		Site Area (Excluding area of individual trees, green walls, interstitial hard structures)		27.73																				

Total area lost (excluding area of individual trees, green walls and interstitial hard structures)	13.85

M² to hectares conversion tool:	Select a unit	Hectares	M²

Project Name: Spittal BESS Map Reference: landscaping

A-2 On-Site Habitat Creation

Condense / Show Columns | Condense / Show Rows | Main Menu

Area habitat summary	
Total Net Unit Change	33.69
Total Net % Change	86.82%
Trading Rules Satisfied	Yes ✓
Area Check	Area Acceptable ✓

				Distinctiveness		Condition		Strategic significance			Post intervention habitats			Temporal multiplier			Difficulty multipliers					Habitat units delivered	Comments		
Ref	Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier	Standard time to target condition (years)	Habitat created in advance (years)	Delay in starting habitat creation (years)	Standard or adjusted time to target condition	Final time to target condition (years)	Final time to target multiplier	Standard difficulty of creation	Applied difficulty multiplier	Final difficulty of creation	Difficulty multiplier applied		User comments	Planning authority comments	Habitat reference number
1	Grassland	Other neutral grassland	5.915	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0	0	Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	39.65			4
2	Urban	Sustainable drainage system	0.33	Low	2	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	3	0	0	Standard time to target condition applied	3	0.893	Medium	Standard difficulty applied	Medium	0.67	0.79			4
3	Grassland	Other neutral grassland	0.79	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0	0	Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	5.29			4
4	Urban	Developed land: sealed surface	3.898	V Low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	0	0	Standard time to target condition applied	0	1.000	Low	Standard difficulty applied	Low	1	0.00			4
5	Grassland	Other neutral grassland	0.221	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0	0	Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	1.26			4
6	Urban	Artificial unvegetated, unsealed surface	0.599	V Low	0	N/A - Other	0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	0	0	Standard time to target condition applied	0	1.000	Low	Standard difficulty applied	Low	1	0.00			5
7	Grassland	Other neutral grassland	1.094	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0	0	Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	7.32			5
8	Grassland	Other neutral grassland	0.981	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0	0	Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	6.57			5
9																								
10																								
11																								
12																								
13																								
		Total habitat area	13.86																	Total Units	61.69			

Site Area (Excluding area of individual trees, green walls, intertidal hard structures)	13.86

M² to hectares conversion tool:	Select a unit	Hectares	M²

Project Name: Spittal BESS Map Reference: baseline

B-1 On-Site Hedge Baseline

Condense / Show Columns | Condense / Show Rows

Main Menu

Hedgerow summary	
Total Net Unit Change	0.79
Total Net % Change	29.83%
Trading Rules Satisfied	Yes ✓

	Existing hedgerow habitats			Distinctiveness		Condition		Strategic significance			Required Action to Meet Trading Rules	Ecological baseline						Comments		
Ref	Hedge number	Habitat type	Length (km)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier		Total hedgerow units	Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	User comments	Planning authority comments	Habitat reference number
1		Non-native and ornamental hedgerow	0.345	V.Low	1	Poor	1	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	0.40	0.302		0.35	0.00	0.04	0.05			
2		Native hedgerow	0.263	Low	2	Moderate	2	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	1.21	0		0.00	0.00	0.26	1.21			
3		Non-native and ornamental hedgerow	0.345	V.Low	1	Poor	1	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	0.40	0.345		0.40	0.00	0.00	0.00			
4		Non-native and ornamental hedgerow	0.281	V.Low	1	Poor	1	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	0.32	0.281		0.32	0.00	0.00	0.00			
5		Non-native and ornamental hedgerow	0.276	V.Low	1	Poor	1	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	0.32	0.276		0.32	0.00	0.00	0.00			
6																					
7																					
8																					
9																					
10																					
			1.61									2.84	1.20	0.00	1.36	0.00	0.31	1.28			

Project Name: Spittal BESS Map Reference: landscaping

B-2 On-Site Hedge Creation

Condense / Show Columns | Condense / Show Rows

Main Menu

Hedgerow summary	
Total Net Unit Change	0.79
Total Net % Change	25.83%
Trading Rules Satisfied	Yes ✓

		Proposed habitats		Distinctiveness		Condition		Strategic significance			Temporal multiplier					Difficulty risk multipliers				Hedge units delivered	Comments		
Ref	New hedge number	Habitat type	Length (km)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier	Standard Time to target condition (years)	Habitat created in advance (years)	Delay in starting habitat creation (years)	Standard or adjusted time to target condition	Final time to target condition (years)	Final time to target multiplier	Standard difficulty of creation	Applied difficulty multiplier	Final difficulty of creation	Difficulty multiplier applied		User comments	Planning authority comments	Habitat reference number
1		Species-rich native hedgerow	0.266	Medium	4	Moderate	2	Formally identified in local strategy	High strategic significance	1.15	5	0	0	Standard time to target condition applied	5	0.827	Low	Standard difficulty applied	Low	1	2.05			
2																								
3																								
4																								
5																								
6																								
			0.27																		2.05			

Project Name: Spittal BESS	Map Reference: baseline
C-1 On-Site WaterC' Baseline	

Condense / Show Columns | Condense / Show Rows | Main Menu

Watercourse summary	
Total Net Unit Change	0.00
Total Net % Change	0.00%
Trading Rules Satisfied	Yes ✓

Existing watercourse type			Distinctiveness		Condition		Strategic significance			Watercourse encroachment		Riparian encroachment		Required Action to Meet Trading Rules	Ecological baseline						Bespoke compensation agreed for losses of WIDH	Comments		
Ref	Watercourse type	Length (km)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier	Extent of encroachment	Multiplier	Extent of encroachment for both banks	Multiplier		Total watercourse units	Length retained	Length enhanced	Units retained	Units enhanced	Length Lost	Units Lost		User Comments	Planning authority comments	Habitat reference number
1	Other rivers and streams	0.579	High	6	Moderate	2	Location ecologically desirable but not in local strategy	Medium strategic significance	1.1	Major	0.5	Major/Major	0.75	Same habitat required =	2.87	0.579		2.87	0.00	0.00	0.00				
2	Ditches	0.248	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Major	0.5	Major/Major	0.75	Same habitat required =	0.74	0.248		0.74	0.00	0.00	0.00				
3	Ditches	0.279	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Major	0.5	Major/Major	0.75	Same habitat required =	0.84	0.279		0.84	0.00	0.00	0.00				
4																									
5																									
6																									
7																									
8																									
		1.11													4.48	1.11	0.00	4.48	0.00	0.00	0.00				

Appendix D – Outline Species Protection Plan

A Species Protection Plan (SPP) will be delivered post consent and prior to commencement of construction, ground investigation or enabling works. This appendix acts as an outline SPP, detailing in **Table D.1** recommended safeguards and mitigation deemed appropriate to minimise impacts on protected and notable species highlighted in this EcIA.

All works should follow the hierarchy set out by CIEEM (2018) in their *Guidelines For Ecological Impact Assessment In the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. The hierarchy is as follows:

- **Avoidance**: Seek options that avoid harm to ecological features;
- **Mitigation**: Negative effects should be minimised through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed – for example, through a condition or planning obligation;
- **Compensation**: Where there are significant residual negative ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures; and
- **Enhancement**: Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.

Table D.1. Outline SPP measures.

Ecological Receptor	Recommended mitigation measures
Badgers	Badgers have the ability to establish new sett entrances in a short period of time, so a pre-works badger survey would be needed up to 3 months before any works commence to ensure there are no badger setts within or adjacent to works area. The survey will cover a minimum of 30m buffer from the proposed works. If an active badger sett were to be found within 30m of a development, a NatureScot licence would be required if the sett were to be disturbed. If any additional badger setts are identified during the works, an Ecological Clerk of Works should be sought to confirm their presence and address any new licensing requirements.
Bats	To ensure that the habitats surrounding the site remain as viable roosting sites and commuting/ foraging route for bats, it is important to preserve their integrity during construction. Any construction activities should retain woodland, hedgerows and building where possible to minimise disruption of bat habitat. Additionally, works should be carried out during day time hours to reduce potential impacts on bats. No lighting of the site will be used during the construction phase, avoiding any potential adverse effects upon bats. Lighting during the operational phase will only be required when the site is accessed by maintenance staff or if triggered by a security breach. The lighting will be low level directional LED lighting with shrouds to prevent any upward light spill. The detail of the lighting plan should be informed by consultation with a Suitably Qualified Ecologist (SQE) and in accordance with the Institution of Lighting Professionals (ILP) Bats and Artificial Lighting at Night Guidance Note 8 (2023).
Breeding birds	Proposed works should be undertaken outside of the of the bird nesting season (March - August inclusive, although weather dependant). If works are required within the nesting bird season, then an Ecological Clerk of Works (ECoW) must check the area for nesting birds a maximum of 48 hours prior to the commencement of works. Active nests and their associated vegetation must remain until young birds have left

Ecological Receptor	Recommended mitigation measures
	the nest. Additionally, works will need to avoid the active bird nesting season to minimise noise and light disturbance to nesting birds in close proximity to the sites.
Non-breeding birds	The construction phase should be started outside the mid-winter period (November to January, inclusive) to avoid the initiation of activities which will cause disturbance when land adjacent to the Site is already in use by waterbirds and therefore, movement and flights are most energetically costly to the birds; An ECoW will attend Site during works which are likely to pose a high risk of disturbance to non-breeding waterbirds. Working methods and timing may be adjusted, based on the guidance of the attending ECoW to avoid and minimise impacts on non-breeding waterbirds; Works producing a sudden visual or loud noise stimulus (e.g. hammer piling and large off-track vehicle movements) should be avoided where possible so as not to occur in proximity to aggregations of non-breeding waterbirds within or in proximity to the Site, particularly during dusk, night or dawn, or in sustained periods (i.e., seven days or more) of below-freezing temperatures. Where this cannot be avoided, alternative, methods which make use of best available techniques (BAT) to reduce noise, such as vibro piling, may be necessary.
Otter	During construction, all plant should be checked at the start of the working day to ensure no otters are resting underneath it. All excavations left open overnight include an escape ramp with adequate grip, at least 30 cm wide and set at an angle of no greater than 45°. A toolbox talk should be provided to contractors by an ECoW prior to works to explain what to do if an otter is encountered on site. If an active otter holt is discovered in close proximity of the works, a NatureScot licence will be required.
Invasive non-native species	The introduction or spread of invasive non-native species could be potentially harmful to native floral and faunal species in the local area and therefore would require any invasive non-native species encountered during construction to be managed appropriately. For example, for invasive non-native plant species this could include: • Chemical control; • Manual/mechanical control such as pulling or digging out live, dead or dying plants; • Burying plants (other than Japanese knotweed); and • Disposing of contaminated soil and plants off Site at suitable locations such as approved waste sites. A pre-works walkover should be conducted to identify any invasive non-native species present on site. If invasive non-native species are found, an Invasive Species Management Plan (ISMP) should be produced prior to any construction, detailing measures to be implemented to avoid the risk of spreading invasive non-native species as part of the operations.
All wildlife	Any clearance works should be carried out in a precautionary manner in relation to all wildlife present on site. Any animals encountered should be allowed to move off of their own accord if disturbed, or, in the case of hedgehogs, be carefully moved to a safe location away from the works, if necessary. If works are to be undertaken outside daylight hours, a sensitive lighting scheme should be implemented to avoid

Ecological Receptor	Recommended mitigation measures
	indirect disturbance to foraging birds, badgers and small mammals that may be using the site. Any excavations created on site should have a ramp installed at the end of each workday to allow for any nocturnal wildlife that may become trapped in the excavation to escape. A suitable ramp would have adequate grip, be at least 30 cm wide and set at an angle of no greater than 45°.