Ecological Appraisal

Stoneworthy Battery Energy Storage System (BESS)

29/05/2024

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EXECUTIVE SUMMARY

2.1. An Ecological Assessment ("EcoAs") has been undertaken for a proposed Battery Energy Storage System ("BESS") and associated infrastructure (the "Proposed Development") on land near Lower Hopworthy, Pyworthy. This is to assess the potential impacts on local ecology as a result of the Proposed Development. Baseline information within the ecological assessment comprises an initial desk-based assessment and habitat survey, which have been outlined within the relevant sections of this report.

2.2. The desk-based assessment identified that within 15km of the Application Site boundary there are three internationally designated sites, all of which are Special Areas of Conservation "SACs". The closest of these is Culm Grasslands, at 5.6km north. There are three Sites of Special Scientific Interest (SSSIs) within 5km of the Application Site, the closest of which is Kingsford Fen, at 4.2km northwest. These designated sites have been assessed below. There will be **no adverse effects** on the integrity of any statutory designated sites as a result of the Proposed Development.

2.3. With the exception of Brendon and Vealand Fen SSSI, no statutory designated sites were found to have ecological, ornithological, or hydrological connectivity to the Application Site based upon the topography of the local area and respective qualifying features. A data search was conducted in order to supplement this Ecological Assessment and found seven non-statutory County Wildlife Sites (CWS). Monk's Farm is the closest, at 0.26m northwest, this site, and a further three are noted to have potential hydrological connectivity. With the implementation of the recommended design measures, it has been determined that there will be **no likely significant effects** on any designated site with connectivity to the Application Site as a result of the Proposed Development.

2.4. A total of five habitat types were noted within the Ecological Study Area (ESA) during the UK Habitat Classification Survey undertaken in January 2024. During the survey visit, these habitats were assessed for their potential to support protected and notable species and condition to inform a biodiversity net gain assessment. Overall, excluding boundary features, the proposed Application Site is considered to be of relatively **low ecological interest** in terms of habitats.

2.5. The construction of the Proposed Development will occur over land which has been identified primarily as grassland in poor condition habitat. Proposed security fencing will cross grassland in poor condition only. The access route will utilise existing gaps in hedgerow and will not result in any loss of this habitat. The extent of habitat loss in a local context **not considered significant**.

2.6. From the survey findings and impact assessment conducted it is considered that the Proposed Development will result in **no likely significant adverse effects** on local wildlife when precautionary and mitigation measures are implemented.

INTRODUCTION

Background

2.7. Neo Environmental Ltd has been appointed by RES Ltd (the "Applicant") to undertake a Ecological Assessment ("EcoAs") for a proposed battery storage development (BESS) (the "Development") on lands near Lower Hopworthy, Pyworthy, Torrige District, Devon, England, EX22 6LA (the "Application Site").

Development Description

2.8. Stoneworthy Energy Storage System is a proposed battery energy storage system (BESS) comprising approximately 32no. battery enclosures, 16no. PCS (power conversion systems), 16no. MV skids (PCS transformer and switchgear), a 33kV substation building with a high voltage area containing auxiliary transformer and grid compliance equipment, a 132kV grid transformer with associated equipment and a grid connection to a National Grid Electricity Distribution (NGED) overhead line.

Site Description

2.9. The area of the proposed Development (the "Application Site") lies at an elevation of approximately 98 - 110 m AOD and covers a total area of c. 3.6 hectares. It is centred at approximate National Grid Reference (NGR) E 230354 N 101885 and is located c.1km southwest from the village of Pyworthy, c. 1.3km southwest from the village of Derril, and c. 3.8km south west from Holsworthy town.

2.10. The site comprises a single agricultural field currently in use for pastoral farming. The field itself is bound by a mixture of trees, hedgerows and post-and-wire fencing. The land slopes from east to west and there is an area of scrub present towards the north/ northeast. Small pockets of woodland are adjacent to the Application Site's boundaries to the northeast, south and southwest.

2.11. Access will be gained from an unnamed local road adjacent to the northern boundary of the Application Site. This road originates from the Derriton Road c. 1.35km east from the Application Site.

2.12. Recreational Routes include the Public Right of Way (PRoW) Pyworthy 7 located c.0.04km northwest and Pyworthy 3 located c.0.17km southeast of the Proposed Development.

2.13. Electrical infrastructure is present within the Application Site and a solar Farm development is directly adjacent to its southeastern boundary. Two other solar farms are within close proximity to the Application site with one c. 1.9km southwest and another c. 2.6km northeast from the Application site. There are also turbines present within the landscape.

2.14. The area surrounding the Application Site is predominantly agricultural, punctuated by individual properties and farmsteads and renewable energy infrastructure.

Adopted Design Principles

2.15. Where possible, measures have been implemented as part of the iterative design process to prevent the various phases of the Proposed Development affecting sensitive ecological features. Ecological measures incorporated into the Proposed Development design include the following:

2.16. Measures incorporated into the Proposed Development design include the following:

- NGED 132kV Overhead Line Buffer (15m)
- NGED 33kV Overhead Line Buffer (15m)
- NGED 33kV Buried Line (10m)
- Flood Zone (Avoided)
- Watercourse Buffer (10m)
- Hedgerow Buffer (5m)
- Woodland Buffer (10m)
- Tree Buffer (Dependant on Height & Crown) (Avoided)
- Root Protection Area Determined via Arboricultural Survey (Avoided)
- Trees with bat roost potential (Avoided)

Scope of the Assessment

2.17. An EcoAs has been completed for the Application Site to inform the submission of a planning application to Torridge District Council for a proposed BESS development. The aims of this report are to:

- Determine the main habitat types within and immediately adjacent to the Application Site in relation to the Proposed Development footprint;
- Identify any actual or potential habitat or species constraints pertinent to the development of the Application Site and to identify how the Proposed Development

can avoid, mitigate and, if necessary, compensate for impacts on these actual or potential constraints;

- Assess the potential impacts of the Proposed Development during the construction, operation and decommissioning phases;
- Provide mitigation to reduce the impacts of the activities undertaken during the various phases of the Proposed Development, and
- Identify potential opportunities for the Proposed Development to enhance and add to the biodiversity resource within the site.

Statement of Authority

2.18. The assessment has been conducted by qualified ecologists. All work has been carried out in line with the relevant professional guidance: Chartered Institute of Ecology and Environmental Management's ("CIEEM") Guidelines for Ecological Impact Assessment ("EcIA") in the UK and Ireland[1].

2.19. Thomas Hill MEnv (Hons), is an ecologist with over five years' experience in the industry. The portfolio of projects he has contributed to vary in scale from small residential adjustments, all the way to national level infrastructure projects and large renewable energy schemes. His office experience consists of multi-disciplinary collaboration, data analysis, project management, and reporting writing numerous document types including Species Specific Reports, Preliminary Ecological Appraisal Reports, Ecological Impact Assessments, and Net Gain Assessments. Regarding fieldwork Thomas is skilled in a variety of survey methodologies including Phase 1, UK Habitat Classification, Habitat Condition Assessment, Great Crested Newt ("GCN") Habitat Suitability Index Assessment, Bat Emergence/Re-entry, Bat Transect, Otter and Water Vole, and Badger/Otter Pre-commencement alongside other Ecological Clerk of Works assignments. In addition, Thomas is an accredited agent for GCN work and has successfully inputted his expertise into relevant requests for further information and addressed comments as a part of the planning process.

[1] CIEEM (2022) Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine. Version 1.2.

LEGISLATION AND PLANNING POLICY CONTEXT

International Legislation

2.20. International legislation relevant to the Proposed Development is outlined within **Table 2-1** below.

Table 2--1: Relevant International Legislation

Directive	Main Provisions
Bern Convention	The Bern Convention[2] came into force in 1982, with the principal aims to ensure conservation and protection of wild plant and animal species and their natural habitats (listed in Appendices I and II of the Convention), to increase cooperation between contracting parties, and to regulate the exploitation of those species (including migratory species) listed in Appendix III.
Bonn Convention	The Bonn Convention[3] came into force in 1985. Contracting Parties work together to conserve migratory species and their habitats by providing strict protection for endangered migratory species (listed in Appendix I of the Convention), concluding multilateral Agreements for the conservation and management of migratory species which require or would benefit from international cooperation (listed in Appendix II), and by undertaking cooperative research activities.
Ramsar Convention	The Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention)[4] came into force in 1975. It is an international treaty for the conservation and wise use of wetlands.

National Legislation

Wildlife & Countryside Act 1981 / Conservation of Habitats and Species Regulations 2017

2.21. The Wildlife and Countryside Act 1981[5] (as amended), formerly used to implement EU legislation, has more recently been strengthened by the Conservation of Habitats and Species Regulations 2017. This consolidates and amends existing national legislation, making it an offence to:

[2] Available at: https://www.coe.int/en/web/bern-convention

[3] Available at: https://www.cms.int/en/convention-text

[4] Available at: https://www.ramsar.org/about-the-convention-on-wetlands-0

[5] Parliament of the United Kingdom, 1981. Wildlife and Countryside Act 1981 (as amended). Available at: http://www.legislation.gov.uk/ukpga/1981/69

- *"Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting*
- *Intentionally kill, injure or take any wild animal listed under Schedule 5 of the Act; intentionally damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 of the Act; disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection*
- *Pick or uproot any wild plant listed under Schedule 8 of the Act"*

Environment Act 2021

2.22. This Act introduced a legally binding target on species abundance for 2030, aiming to reverse declines of key wild species. It creates a requirement for 10% net biodiversity gain as part of development projects, and for a series of Nature Recovery Strategies to cover England. The new Act makes minor amendments to the 1981 Act and 2017 Regulations (see above). It expands measures taken against illegal deforestation, enshrines a legal duty for water companies to reduce adverse impacts from storm overflow discharge, and gives statutory effect to conservation covenants. To assist in the above, it also creates an Office for Environmental Protection.

2.23. The Environment Act supersedes the former UK Post-2010 Biodiversity Framework and UK Biodiversity Action Plan ("BAP"). While certain provisions of the Act are only likely to enter force in 2022 and 2023, some are already current. The BMP and Net Gain Assessment at **Technical Appendices 2.3 and 2.4** aim to demonstrate how the Proposed Development will assist in achieving the Act's net gain targets.

Natural Environment and Rural Communities Act 2006

2.24. The Natural Environment and Rural Communities ("NERC") Act[6] places a duty on planning authorities to have due regard for biodiversity and nature conservation during operations, ensuring that biodiversity is a key consideration in the local planning process.

2.25. Section 41 of the NERC Act lists a number of habitats and species of principal importance for the conservation of biodiversity in England.

[6] Available at https://www.legislation.gov.uk/ukpga/2006/16/contents

Hedgerows Regulations 1997

2.26. Under the Hedgerows Regulations 1997, certain hedgerows[7] are classified as 'Important' based on factors such as the presence of a certain number of woody native plant species. Subject to certain exceptions, the removal of an 'Important' hedgerow is prohibited.

2.27. 'Removal' includes uprooting all or part of the hedgerow, as well as any acts that could lead to the hedgerow's destruction. Removal is permitted under Section 6 of the Act under a small number of exemptions, including:

"for carrying out development for which planning permission has been granted or is deemed to have been granted, except development for which permission is granted by article 3 of the Town and Country Planning General Permitted Development Order 1995 in respect of development of any of the descriptions contained in Schedule 2 to that Order other than Parts 11 (development under local or private Acts or orders) and 30 (toll road facilities)."

Protection of Badgers Act

2.28. The Protection of Badgers Act 1992[8] makes it illegal to kill, injure or take a badger or to intentionally or recklessly interfere with a badger sett. Sett interference includes disturbing badgers whilst they are occupying a sett or obstructing access to it.

Planning Policy

National Planning Policy Framework (2023)

2.29. The National Planning Policy Framework ("NPPF")[9] sets out the government planning policies for England and how they should be applied. With regards to ecology and biodiversity, Chapter 15 "Conserving and Enhancing the Natural Environment", paragraph 174, states that planning policies and decision should enhance the local environment by:

- Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and

[7] Available at https://www.legislation.gov.uk/uksi/1997/1160/contents/made

[8] Parliament of the United Kingdom (1992). Protection of Badgers Act 1992. Available at http://www.legislation.gov.uk/ukpga/1992/51/contents

[9] Department for Housing, Communities and Local Government (2023) National Planning Policy Framework. Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

other benefits of the best and most versatile agricultural land, and of trees and woodland;

- Maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate. Minimise impacts on, and provide net gains in, biodiversity where possible. Recognise the wider benefits of natural capital and ecosystem services.

2.30. Under these aims, paragraph 175 stresses the need to plan for natural capital at a catchment or landscape scale, linked to national and local targets. Paragraph 180 sets out the principles that local planning authorities should apply when determining planning applications:

- If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons, and a suitable compensation strategy exists; and

- Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Biodiversity Action Plans

2.31. The UK Biodiversity Action Plan ("UKBAP"; 1994)[10] was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. Lists of national Priority species and habitats were produced with all listed species/habitats having specific action plans, defining the measures required to ensure their conservation.

2.32. While the UKBAP has since been superseded by the Environment Act (see above), regional and local BAPs have been produced to develop plans for species/ habitats of nature conservation importance at regional and local levels. The Devon BAP[11] contains a long list of Priority habitats including, among others:

- Alder/willow wet woodland,
- Cities, towns and villages,
- Species-rich hedges,
- Rivers, streams, floodplains and fluvial processes.

2.33. Several Priority species are also listed. Those most relevant to the habitats within the Application Site and/or the local area in which the Application Site is found include:

- Primrose,
- Marsh fritillary,
- White-clawed crayfish,
- Atlantic salmon,
- Barn owl,
- House sparrow
- Cirl bunting,

[10] Available at https://data.jncc.gov.uk/data/cb0ef1c9-2325-4d17-9f87-a5c84fe400bd/UKBAP-BiodiversityActionPlan-1994.pdf

[11] Available at: https://www.devon.gov.uk/environment/wildlife/the-devon-biodiversity-action-plan-bap

- Curlew,
- Brown hare,
- Dormouse,
- Greater horseshoe bat,
- Soprano pipistrelle,
- Otter, and
- Water vole.

North Devon and Torridge Local Plan 2011 – 2031

2.34. Adopted in October 2018, this is the current Local Plan for Torridge, the district in which the Application Site falls. The relevant policies set out within the Plan include the following ecological provisions.

Policy ST03: Adapting to Climate Change and Strengthening Resilience

"Development should be designed and constructed to take account of the impacts of climate change and minimize the risk to and vulnerability of people, land, infrastructure and property by […]

(i) conserving and enhancing landscapes and networks of habitats, including cross-boundary green infrastructure links, strengthening the resilience of biodiversity to climate change by facilitating migration of wildlife between habitats and improving their connectivity."

Policy ST14: Enhancing Environmental Assets

"The quality of northern Devon's natural environment will be protected and enhanced by ensuring that development contributes to:

(a) Providing a net gain in northern Devon's biodiversity where possible, through positive management of an enhanced and expanded network of designated sites and green infrastructure, including retention and enhancement of critical environmental capital;

(b) Protecting the hierarchy of designated sites in accordance with their status;

(c) Conserving European protected species and the habitats on which they depend […]."

Policy DM04: Design Principles

"(1) Good design seeks to guide overall scale, density, massing, height, landscape, layout, materials, access and appearance of new development. It seeks not just to manage land use but support the creation of successful places and respond to the challenges of climate change. Development proposals need to have regard to the following design principles […]

(f) retain and integrate existing landscape features and biodiversity to enhance networks and promote diversity and distinctiveness of the surrounding area […]."

Policy DM08: Biodiversity and Geodiversity

"(1) Development should conserve, protect and, where possible, enhance biodiversity and geodiversity interests and soils commensurate with their status and giving appropriate weight to their importance. All development must ensure that the importance of habitats and designated sites are taken into account and consider opportunities for the creation of a local and district-wide biodiversity network of wildlife corridors which link County Wildlife Sites and other areas of biodiversity importance.

European Sites

(2) The highest level of protection will be given to potential and existing Special Protection Areas, candidate and existing Special Areas of Conservation and listed or proposed Ramsar sites. Proposals having an adverse impact on the integrity of such areas that cannot be avoided or adequately mitigated to remove any adverse effect will not be permitted other than in exceptional circumstances. These circumstances will only apply where there are:

(a) no alternative solutions;

(b) imperative reasons of overriding public interest; and

(c) necessary compensatory provisions secured to ensure that the overall coherence of the Natura 2000 network of European sites is protected.

(3) Development will only be supported where any necessary mitigation is included such that, in combination with other plans or projects, there will be no adverse effects on the integrity of European Nature Conservation Sites.

National Sites

(4) Development proposals within or outside a Site of Special Scientific Interest or Marine Conservation Zone which would be likely to affect the designation adversely, either individually or in combination with other developments, will not be supported unless the benefits of the development at this site clearly outweigh both the adverse impacts on the site and any adverse impacts on the wider network of Sites of Special Scientific Interest and Marine Conservation Zones.

Local Sites

(5) Development likely to affect adversely locally designated sites, their features or their function as part of the ecological network, including County Wildlife Sites, County Geological Sites and sites supporting Biodiversity Action Plan habitats and species, will only be permitted where the need for and benefits of the development clearly outweigh the loss, and the coherence of the local ecological network is maintained.

Protected Species and Habitats

(6) Adverse impacts on European and UK protected species and Biodiversity Action Plan habitats and species must be avoided wherever possible, subject to:

(i) the legal tests afforded to them where applicable; or otherwise unless

(ii) the need for and benefits clearly outweigh the loss.

Ancient Woodland and Veteran Trees

(7) Development must avoid the loss or deterioration of ancient woodland and veteran trees, unless the need for, or benefits of development on that site clearly outweigh the loss.

Avoidance, Mitigation and Compensation for Biodiversity and Geodiversity Impacts

(8) Development should avoid adverse impact on existing features as a first principle and enable net gains by designing in biodiversity features and enhancements and opportunities for geological conservation alongside new development. Where adverse impacts are unavoidable they must be adequately and proportionately mitigated, If full mitigation cannot be provided, compensation will be required as a last resort."

Policy DM09: Safeguarding Green Infrastructure

"Development involving the loss of green infrastructure including public open space will only be supported where:

(a) alternative green infrastructure is provided of at least equivalent size, quality and accessibility to that being lost; or

(b) the green infrastructure network in the locality can be retained or enhanced through redevelopment of a small part of the site […]."

2.35. The EcoAs of the Proposed Development will consider each of the policies outlined above.

Guidance Documents

BS 42020:2013 Biodiversity

2.36. The British Standards Institute has published *BS 42020:2013 Biodiversity*[12]*. Code of Practice for Planning and Development* which offers a coherent methodology for biodiversity management. This document seeks to promote transparency and consistency in the quality and appropriateness of ecological information submitted with planning applications and applications for other regulatory approvals. This document cites CIEEM's EcIA Guidelines as the acknowledged reference on EcIA reporting, as such where relevant the two should be used in tandem.

CIEEM Guidelines

2.37. CIEEM have produced guidance on Ecological Impact Assessment[13] and Ecological Report Writing[14].

2.38. EcIAs is a process of identifying, quantifying and evaluating potential effects from activities such as those related to development on habitats, species and ecosystems. This EcIA process follows the steps set out in Table 2-2 below.

Table 2-2: EcIA Process

Task	Description
Scoping	Determining the matters to be addressed in the EcIA, including consultation to ensure the most effective input to defining the scope. Scoping is an ongoing process – the scope of the EcIA may be modified following further ecological survey/research and during impact assessment.
Establishing the baseline	Collecting information and describing the ecological conditions in the absence of the proposed project, to inform the assessment of impacts.
Important ecological features	Identifying important ecological features (habitats, species and ecosystems, including ecosystem function and processes) that may be affected, with reference to a geographical context in which they are considered important.
Impact assessment	An assessment of whether important ecological features will be subject to impacts and characterisation of these impacts and

[12] BS 42020:2013 Biodiversity. Code of practice for planning and development

[13] CIEEM (2022) Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine. Version 1.2. Available at: ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.2-April-22-Compressed.pdf (cieem.net)

[14] CIEEM (2017) Guidelines for Ecological Report Writing. Available at: https://cieem.net/wp-content/uploads/2019/02/Ecological-Report-Writing-Dec2017.pdf

	their effects. Assessment of the significance of the residual ecological effects of the project (those remaining after mitigation), including cumulative effects.
Avoidance, mitigation, compensation and enhancement	Incorporating measures to avoid, reduce and compensate negative ecological impacts and their effects, and the provision of ecological enhancements. Monitoring impacts and their effects. Evaluation of the success of proposed mitigation, compensation and enhancement measures.

2.39. The aims of their EcIA guidelines are to:

- promote good practice;
- promote a scientifically rigorous and transparent approach to EcIA;
- provide a common framework to EcIA in order to promote better communication and closer cooperation between ecologists involved in EcIA; and
- provide decision-makers with relevant information about the likely ecological effects of a project.

2.40. Whilst this is document is an EcoAs, and thus differs from an EcIA, CIEEM guidance for EcIA and report writing still contains relevant elements that are applicable to this report. In practice, however, this Ecological Assessment only differs from a full EcIA in a small number of minor areas, e.g. allowing the Planning Authority broader discretion as to where they feel planning conditions are necessary and appropriate.

Natural England

2.41. Natural England have published standing advice for various protected species and habitats in England. The advice covers accepted and recommended survey, avoidance, mitigation and compensation standards for development affecting these ecological features. These advice documents have been borne in mind where relevant to the Proposed Development.

METHODOLOGY

Zone of Influence

2.42. The Zone of Influence ("ZoI") is the area encompassing all predicted negative ecological effects from a Proposed Development. This is informed by the habitats present within the Application Site and the nature of the Proposed Development. Due to the scale and nature of the Proposed Development, it is considered that the ZoI outlined in **Table 2-3** below was appropriate for the gathering of information to inform the desk study.

Table 2-3: Zone of Influence for Ecological Features

ECOLOGICAL FEATURE	Zone of Influence (ZoI)
International statutory designations	15km or extent of hydrological influence, whichever is greater
National statutory designations	5km
Non-statutory designations	2km
Protected and Priority species and habitats	2km
UK Habitats Classification and Species Scoping Surveys	30m

Desk Study

2.43. A desk-based assessment was undertaken to collate available ecological information for the Application Site and the surrounding area. This included a search of international statutory designated sites within a 15km radius, and statutory designated sites within a 5km radius of the Proposed Development, including; Special Protection Areas ("SPA"), Special Areas of Conservation ("SAC"), Ramsar Sites, Sites of Special Scientific Interest ("SSSI"), National Nature Reserves ("NNR") and Local Nature Reserves ("LNR"). The description of each of these sites was obtained and cross-referenced utilising the Multi-Agency Geographic Information for the Countryside (MAGIC) website[15]

2.44. A data search was conducted through the Devon Biodiversity Records Centre (DBRC) to obtain information regarding protected/Priority species within 2km of the Application Site boundary.

[15] Available at - https://magic.defra.gov.uk/

Field Survey

UK Habitat Classification Survey

2.45. A UK Habitat Classification Survey was undertaken on the 24th of January 2024 by Steven Pagett. The Ecological Survey Area ("ESA") covered all land within the Application Site and a 50m buffer around the entire site.

2.46. Survey work was carried out in accordance with UK habitat survey guidance. This habitat classification method provides a standardised system to record and map semi-natural vegetation and other wildlife habitats to assess the potential importance for nature conservation. Habitats were mapped electronically in the field in order to produce a digital habitat map.

Species Scoping Survey

2.47. A species scoping survey was carried out to identify the presence of protected species, or the potential of the Application Site to support protected species. The aim of the survey was to provide an overview of the Application Site and to determine whether any further survey work was required.

2.48. Table 2-4 below outlines the relevant habitat and field signs that indicate the potential presence of protected or Priority species within the ESA.

Table 2-4: Indicative Habitats and Field Signs of Protected Species

Taxon	Indicative Habitat(s)	Field Signs (In Addition to Sightings)
Badger	Found in most rural and many urban habitats.	Excavations and tracks: sett entrances, latrines, hairs, well-worn paths, prints, scratch marks on trees.
Bats	Roosts – trees, buildings, bridges, caves, etc. Foraging areas – e.g., parkland, water bodies, streams, wetlands, woodland edges and hedgerow. Commuting routes – linear features (e.g.) hedgerows, water courses, tree lines).	In or on potential roost sites: droppings stuck to walls, urine spotting in roof spaces, oil from fur staining round roost entrances, feeding remains (e.g., moth wings under a feeding perch).
Birds	Trees, scrub, hedgerow, field margins, grassland, buildings.	Nests, droppings below nest sites (especially in buildings of trees), tree holes.

Common reptiles	Rough grassland, log and rubble piles.	Sloughed skins.
Dormouse	Deciduous woodland, overgrown/species-rich hedgerows and associated scrub.	Nests, feeding remains (distinctively marked hazelnut shells).
Otter	Watercourses.	Holts (or dens), prints, spraints (droppings), slide marks into watercourses, feeding signs (e.g. fish bones).

Weather Conditions

2.49. The survey was undertaken in optimal weather conditions, with no rain, heavy wind or cloud cover which would materially affect the findings of the survey.

LIMITATIONS

2.50. Results of the assessment undertaken by Neo Environmental are representative of the time that surveying was undertaken.

2.51. The absence of records returned during the data search does not necessarily indicate absence of a species/habitat from an area. It may instead indicate they are under-recorded within the search area. Due to the commercial nature of this project, not all relevant records which may relate to this project may be utilised, as such, a precautionary measure has been implemented regarding presence (and therefore subsequent impact) of potential species.

2.52. The UK Habitat survey and species scoping survey do not aim to produce a full botanical or faunal species list or provide a full protected species survey. Instead, they enable competent ecologists to ascertain an understanding of the ecology of the site in order:

- Broadly to identify the nature conservation value of a site and preliminary assess the significance of any potential impacts on habitat/species recorded, and/or;
- To confirm the need and extent of any additional specific ecological surveys that are required to identify the true nature conservation value of a site.

EVALUATION METHODS

2.53. The evaluation of ecological receptors is based upon CIEEM guidelines[16,17], which suggest that the value or potential value of an ecological resource or feature (for example a habitat type, species or ecosystems) should be determined within a geographical context (e.g. rare at a local level). Attributing a value to a receptor, which is also a designated site, is generally precise, as the designations themselves provide an indication of value.

Impact Assessment

2.54. The impact assessment process involves:

- identifying and characterising impacts and their effects;
- incorporating measures to avoid and mitigate negative impacts and effects;
- assessing the significance of any residual effects after mitigation;
- identifying appropriate compensation measures to offset significant residual effects; and
- identifying opportunities for ecological enhancement.

2.55. The terms 'impact' and 'effect' are used commonly throughout ecological reports. Impact is defined as a change experienced by an ecological feature, while effect is defined as the outcome to an ecological feature from an impact. Impacts and effects can be positive, negative or neutral.

2.56. Assessment of potential impacts and effects needs to consider on-site, adjacent and more distant ecological features, including habitats, species and statutory and ecological designated sites.

2.57. This Ecological Assessment has been concluded by an experienced ecologist following CIEEM guidance[18].

Assessing the Magnitude of Change

[16] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine.
[17] CIEEM (2022) Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine. Version 1.2.
[18] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine. Version 1.1.

2.58. Determining the magnitude of any likely effects requires an understanding of how the ecological features are likely to respond to the Proposed Development. This change can occur during construction or operation of the Proposed Development.

2.59. Effect magnitude refers to changes in the extent and integrity of an ecological receptor. A definition of ecological 'integrity' that is relevant across the UK is found within Scottish Executive circular 6/1995 (as updated, 2000)[19]. This states that:

> *"The integrity of a site is the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified".*

2.60. Although this definition is used specifically regarding international-level designated sites (SACs and SPAs), it is also considered suitable for wider countryside habitats and species for the purposes of this assessment.

2.61. Effects can be adverse, neutral or positive. Effects are judged in terms of magnitude in space and time. There are five levels of spatial effects and five levels of temporal effects as described in Table 2-5 and Table 2-6 respectively.

Table 2-5: Spatial Effect Magnitude

Spatial Magnitude	Description
Very High	Would cause the loss of the majority of a feature (>80%) or would be sufficient to damage a feature sufficient to immediately affect its viability.
High	Would have a major effect on the feature or its viability. For example, more than 20% habitat loss or damage.
Moderate	Would have a moderate effect on the feature or its viability. For example, between 10 - 20% habitat loss or damage.
Low	Would have a minor effect upon the feature or its viability. For example, less than 10% habitat loss or damage.
Negligible	Minimal change on a very small scale; effects not dissimilar to those expected within a 'do nothing' scenario.

[19] Natura Casework Guidance: How to consider plans and projects affecting Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). Available at: https://www.nature.scot/natura-casework-guidance-how-consider-plans-and-projects-affecting-special-areas-conservation-sacs

Table 2-6: Temporal Effect Magnitude

Temporal Magnitude	Description
Permanent	Effects continuing indefinitely beyond the span of one human generation (taken here as 30+ years), except where there is likely to be substantial improvement after this period in which case the category Long-term may be more appropriate.
Long-term	From 15 years up to (and including) 30 years; for short-lived species such as invertebrates, multiple generations.
Medium-term	From 5 years up to (but not including) 15 years; for short-lived species, a single generation.
Short-term	Up to (but not including) 5 years; for short-lived species, a single season or part of a season.
Negligible	No effect.

BASELINE CONDITIONS

DESIGNATED SITES

2.62. The Proposed Development does not lie within or adjacent to any designated environmental sites.

2.63. Within 15km of the Application Site boundary there are three internationally designated sites: these are all Special Areas of Conservation ("SACs"). The closest of these is the Culm Grasslands SAC, located 5.6km north of the Application Site at its closest point. No Ramsar Sites, possible SACs ("pSACs") or potential SPAs ("pSPAs") were recorded within 15km. There are three Sites of Special Scientific Interest ("SSSIs") within 5km of the Application Site, namely Kingford Fen SSSI, Small Brook SSSI and Brendon and Vealand Fen SSSI. No National Nature Reserves ("NNRs") or Local Nature Reserves ("LNRs") are present within 5km. There is not believed to be any material hydrological influence beyond the 15km study area.

2.64. Within 2km of the Application Site boundary there are seven County Wildlife Sites ("CWS") which are non-statutory designated sites, the closest of these is Monk's Farm CWS located circa 260m northwest of the Application Site.

2.65. Each of these sites are outlined in **Table 2-7** below, and statutory designated sites are further detailed within **Figure 2.1** of **Appendix A**.

2.66. The site descriptions are derived from the original site citations available from JNCC[20], Natural England[21] MAGIC[22], and information provided by DBRC.

Table 2-7: Designated Sites

Site Code	Site Name	Qualifying Features	Distance & Direction	Connectivity
SPA				
UK0012679	Culm Grasslands	• [6410] *Molinia* Meadows on calcareous, peaty or clayed-silt-laden soils (*Molinion caeruleae*)	5.6 km North	None

[20] Available at: https://sac.jncc.gov.uk/
[21] Available at: https://designatedsites.naturalengland.org.uk/
[22] Available at: https://magic.defra.gov.uk/magicmap.aspx

		• [4010] Northern Atlantic wet heaths with *Erica tetralix* • [1065] Marsh fritillary butterfly *Euphydryas (Eurodryas, Hypodryas) aurinia*		
UK0013047	Tintagel-Marsland-Clovelly Coast	• [1230] Vegetated sea cliffs of the Atlantic and Baltic Coasts • [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles • [4030] European dry heaths	10.4 km West	None
UK0030396	Bristol Channel Approaches	• [1351] Harbour porpoise (*Phocoena phocoena*)	10.7 km West	None
SSSI				
1001054	Kingford Fen	• Acidic grassland, flushes and neutral marshland • Herb-rich plant communities • Invertebrates including marsh fritillary (*Eurodryas aurinia*) and wood white (*Leptidea sinapis*)	4.2 km Northwest	None

1001076	Small Brook	• Culm grassland • Species-rich fen meadow communities • Whorled caraway (*Carum verticillatum*) • Wavy St John's-wort (*Hypericum undulatum*) • Marsh fritillary	4.4 km North	None
1001135	Brendon and Vealand Fen	• Herb-rich mire and swamp communities, several of which are nationally scarce • Wavy St John's-wort • Marsh fritillary • Otter (*Lutra lutra*)	4.9 km Northwest	Ecological
CWS				
SS30/040	Monk's Farm	• Culm grassland	0.26 km Northwest	Hydrological
SS30/038	Lower Hopworthy	• Culm grassland	0.65km North	Hydrological
SS20/002	Hopworthy	• Culm grassland • Unimproved acid grassland	0.7km Northwest	Hydrological
SS20/030	Dux	• Culm grassland • Marshy grassland	1.03 km Northwest	None
SS20/029	Heatherley	• Culm grassland (M23)	1.43 km North	None

SS20/026	Tinneymoor	• Culm grassland (rush-pasture and tall herb fen) • Small wooded copses with dormice evidence	1.61 km South	Hydrological
SS20/028	Springfield	• Culm grassland (rush-pasture)	1.74km Northwest	None

PROTECTED AND NOTABLE SPECIES

Desk-based

2.67. The potential presence of protected species within the study area was assessed though a data search conducted via DBRC. This identified records of invasive, rare, scarce, protected and Priority species within 2km of the Application Site boundary.

2.68. Table 2-8 below summarises the most relevant protected, Priority and invasive non-native species recorded within the search area, and their potential to be present within the Application Site at Stoneworthy.

Table 2-8: Summary of Protected Species Records.

SPECIES	NUMBER OF RECORDS	FIELD SIGNS OR SIGHTINGS OBSERVED WITHIN SURVEY AREA	POTENTIAL FOR SPECIES WITHIN PROPOSED DEVELOPMENT SITE
Florea			
Greater Duckweed (*Spirodela polyrhiza*)	1	Yes	Yes
Mammals			
Brown Long-eared Bat (*Plecotus auritus*)	1	No	Yes

Long-eared bat (*Plecotus*)	1	No	Yes
Lesser Horseshoe Bat (*Rhinolophus hipposideros*)	1	No	Yes
Western Barbastelle (*Barbastella barbastellus*)	2	No	Yes
Noctule Bat (*Nyctalus noctula*)	1	No	Yes
Myotis spp.	2	No	Yes

Habitat Survey

2.69. The UK habitat surveys undertaken in January 2024 identified five habitat types within the ESA. Each of these is listed below, with the relevant habitat codes beforehand. Priority habitats are indicated in bold. Given the size of the Application Site, the minimal mappable unit used was fine-scale (25m^2 area, 5m length).

- g4 – Modified Grassland
- **h2a – Native Hedgerow**
- **h2a5 – Species-rich Native Hedgerow**
- h3h – Mixed Scrub
- w1g – Other Woodland (Broadleaved)

2.70. A map of the habitats is given in **Figure 2.2, Appendix A**. The habitats are described in **Table 2-9** below;

Table 2-9: Habitat Descriptions. Scientific botanical names are given only where there is potential confusion over the vernacular name of the plant.

Primary Habitat Code and Type	Description (Secondary UK Habitat Code Number in Parentheses)
g4 – Modified Grassland	The vast majority of the site and ESA are comprised of this habitat, it shows very low overall botanical diversity of dominated by perennial ryegrass. Other species recorded include common dandelion, white clover, annual meadow grass, spear thistle, broad-leaved dock, meadow buttercup and common mouse-ear at a density of <6 species/m^2. Grass shows signs of being actively managed (516) and extensively grazed. A small patch of soft rush was noted (14).

h2a – Native Hedgerow	This hedgerow contains a ditch (50) at the base and runs adjacent to a post and wire fence. The associated ditch contained shallow water. The aquatic species present in the ditch include duckweed. The species recorded within the hedgerow include elder, hawthorn, gorse, holly and oak. The approximate height of the hedgerow is 2m and the hedgerow is approximately 5m wide. The southern compartment of the hedgerow is generally unmanaged, however as this hedgerow travels north the hedgerow becomes more intensively managed.
h2a5 – Species-rich Native Hedgerow	This hedgerow is located at the southern boundary of the Application Site contains a number of mature trees (203) (some of which have suitability to support roosting bats) and an associated ditch (50). Species noted within the hedgerow include ash, oak, beech, blackthorn, elder, hawthorn, bramble, and field maple.
h3h – Mixed Scrub	Located along the outside of a fence line (UK Habitat Secondary Code 612) within the ESA adjacent to the Derill Water watercourse (just outside the ESA) The species recorded show good age variety and include bramble (Rubus fruticosus), alder (Alnus glutinosa), hawthorn (Crataegus monogyna) goat willow (Salix caprea), grey willow (Salix cinerea) and elder (Sambucus nigra).
w1g – Other Woodland (Broadleaved)	Non-priority woodland habitat with recorded species including oak, beech, hawthorn, bramble, and holly. Planting is generally uniform with a limited age structure with the exception of oak trees which were generally more mature than other woody species.

2.71. Overall, the Application Site has a grazed agricultural character. Some areas of higher distinctive habitat exist within the 50m buffer, but these are relatively limited in extent. The site is considered to be of low intrinsic ecological value at the local level in terms of habitats. The habitats present are not considered to meet the relevant criteria to qualify as priority habitats with the exception of hedgerows. It should be noted that the Derill Water watercourse exists within the local area to the west of the Application Site, and whilst not within the scope of the habitat survey for the purposes of Biodiversity Net Gain assessment, has been considered for all other aspects of reporting, such as connectivity, protected species, and impacts of any potential pollutants.

Flora

2.72. No invasive non-native flora listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), or Schedule 2 of Invasive Alien Species (Enforcement and Permitting) Order 2019

were recorded during survey within the Proposed Development boundary. No plant species of particular note were recorded within the ESA. The site is considered to be of low botanical interest at the local level. Local interest is likely to be concentrated in nearby designated sites.

Protected Species Scoping Survey

2.73. The UK habitat survey included a species scoping survey in order to assess the potential of the site to support protected species.

2.74. Target Notes are included in the map of the habitats given in **Figure 2.2, Appendix A**. The habitats are described in **Table 2-10** below;

Table 2-10: Target Notes.

Number	Description
1	Tree with moderate bat roost potential
2	Tree with low bat roost potential
3	Tree with low bat roost potential
4	Badger track
5	Tree with moderate bat roost potential
6	Log piles with potential suitability as hibernacula
7	Tree with low bat roost potential
8	Tree with low bat roost potential
9	Tree with low bat roost potential
10	Tree with moderate bat roost potential
11	Tree with high bat roost potential
12	Tree with moderate bat roost potential

13	Tree with high bat roost potential
14	Two trees with low bat roost potential
15	Tree with high bat roost potential

Bats

2.75. Hedgerows and woodland (and, to a much lesser extent, the grassland which comprises the vast majority of the Application Site) within the ESA offers suitable foraging and commuting habitat for bats. Additional commuting opportunities and foraging interest are offered by the offsite watercourse to the west. Overall commuting and foraging interest is judged as moderate, as per Bat Conservation Trust guidelines[23]. It is considered likely that higher levels of bat activity will be confined to areas of local woodland and nearby designated sites.

2.76. Within the ESA there are multiple trees with the potential to support roosting bats; three of high suitability, four of moderate suitability, and seven of low suitability.

Otter and Water Vole

2.77. The Application is of limited suitability for otters, however the scrub in the ESA and watercourse beyond that have greater suitability. Overall, given that otters are a very mobile species, there is the potential (though unlikely) could potentially commute within the Application Site.

2.78. The stream within the ESA appears highly unsuitable for water vole. This is due to the limited vegetation cover, herbaceous plant species or other potential water vole food sources.

Badger

2.79. Despite the lack of biological records, badger is noted as present within the local area as the Application Site is within a cull zone. One set of badger tracks was noted during the survey northeast of the Application Site within the ESA, no other signs of badger were observed during the survey. Badger and hedgehog could use the hedgerow and (to a lesser extent) the grassland within the site. Badgers could also feasibly build setts within the hedgerow and adjacent woodland.

Dormouse

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

2.80. The hedgerows and boundary woodlands within the site are assessed to provide suitable habitat for dormice. The connectivity between the site and the wider surrounding area is considered to provide optimal suitability for this species.

Other Mammals

2.81. Species such as fox, house mouse and brown rat may use the site due to the nearby habitats in the local area. The presence of these species is likely to be of little intrinsic conservation interest in the local area. Overall, the site is likely to be of low value for mammals within a local context due to the grazing practices of the Application Site.

Birds

2.82. A number of bird species were recorded within the site during the site survey. The species recorded included woodpigeon (Columba palumbus), redwing (Turdus iliacus), fieldfare (Turdus pilaris), meadow pipit (Anthus pratensis), great spotted woodpecker (Dendrocopos major), long-tailed tit (Aegithalos caudatus), buzzard (Buteo buteo), great tit (Parus major), blue tit (Cyanistes caeruleus), chaffinch (Fringilla coelebs), dunnock (Prunella modularis), robin (Erithacus rubecula), wren (Troglodytes troglodytes), blackbird (Turdus merula) and goldfinch (Carduelis carduelis).

Herptiles

2.83. The modified grasslands within the site were assessed to provide limited suitability for foraging and sheltering habitat for reptiles due to agricultural the nature of the grasslands. However, the watercourse woodlands and scrub within the ESA and wider local area are assessed to provide some potential foraging and commuting habitat for common reptile species.

2.84. In addition, there was a section of log piles present onsite that may provide suitable sheltering habitat suitability for reptiles.

Invertebrates

2.85. Given the habitats present, a small assemblage of common invertebrates is considered likely to use the site. Local interest is likely to be concentrated in nearby designated sites and adjacent woodland.

2.86. No notable or protected invertebrate species were recorded during the surveys.

IMPACT ASSESSMENT

Best Practice Pollution Prevention Measures

2.87. Standard best practice pollution prevention measures will be adhered to. This will reduce the potential for impacts on ecology during the construction stage. As these are standard measures, they are separate to mitigation measures (outlined later in this report). More detailed drainage measures should be included as part of the design and provided by a suitable drainage expert involved with the Proposed Development.

2.88. Relevant measures include but are not limited to:

Pollution Prevention

- Hydrocarbons, greases and hydraulic fluids will be stored in a secure compound area;
- All plant machinery will be properly serviced and maintained, thereby reducing risk of spillage or leakage;
- All waste produced from construction will be collected in skips with the construction site kept tidy at all times;
- Excavated soil will be stored on site or removed by a licensed waste disposal unit;
- All materials and substances used for construction will be stored in a secure compound and all chemicals will be stored in secure containers to avoid potential contamination; and
- Location of spill kit to be known by all construction workers and implemented in the event of spillage or leakage.

Waste Management

- Skips are to be used for site waste/debris at all times and collected regularly or when full;
- All hydrocarbons and fluids are to be collected in leak-proof containers and removed from site for disposal or recycling; and
- All waste from construction is to be stored within the site confines and removed to a permitted waste facility.

Environmental Monitoring

- Contractor to nominate member of staff as the environmental officer with the responsibility to ensure best practice measures are implemented and adhered to, with any incidents or non-compliance issues being reported to project team.

Designated Sites

Statutory Sites

2.89. Within the ZoI surrounding the Application Site, there are three Special Areas of Conservation ("SACs"). There is no connectivity between the Application Site and these statutory designated sites.

2.90. No ecological connection exists with any of these sites as they do not contain any non-avian qualifying species with suitable mobility to travel to the Application Site. No ornithological connectivity exists between the Application Site and any of these internationally designated sites, as the Designated Sites lack avian qualifying species. No hydrological connection exists as the sites are not close enough to be connected by groundwater flow or runoff, when considering the scale of development, best practice pollution prevention measures, and dilution factor involved in any potential pollutants resulting from the Proposed Development. Therefore, these sites have been dismissed from further assessment.

2.91. Within the national designation ZoI surrounding the Application Site, there are three nationally designated statutory sites, all of which are SSSIs. The only site with potential connectivity is Brendon and Vealand Fen SSSI, which is designated for otter, a highly mobile species.

2.92. No ecological connection exists with any of the other sites as they do not contain any non-avian qualifying species with suitable mobility to travel to the Application Site. No ornithological connectivity exists between the Application Site and any of the other internationally designated sites, as the Designated Sites lack avian qualifying species. No hydrological connection exists as the other sites are not close enough to be connected by groundwater flow or runoff, when considering the scale of development, best practice pollution prevention measures, and dilution factor involved in any potential pollutants resulting from the Proposed Development. Therefore, these sites have been dismissed from further assessment.

Non-statutory Sites

2.93. Hopworthy CWS, Lower Hopworthy CWS, Monk's Farm CWS, Tinneymoor CWS, and Tinney CWS are hydrologically connected to the site via Derril Water.

2.94. There is no connectivity between the Application Site and the other non-statutory designated sites. As a result, there are no pathways for potential impacts on these sites from the Proposed Development and they have therefore been dismissed from further assessment.

In the Absence of Mitigation

Habitats

In the Absence of Mitigation

2.95. The construction of the Proposed Development will occur entirely over land which has been identified primarily as agricultural use modified grassland habitat. This habitat is generally of very low ecological value and currently offers very limited potential to support wildlife.

2.96. No specialist invasive species management prior to the construction phase is required, as no invasive species are present within the Application Site.

2.97. Impacts on habitats adjacent to the Application Site are limited to dust and other pollution emitted during the construction phase of the Proposed Development. However, the current size of the Proposed Development and mitigation to be implemented means it is considered that impacts on habitat from the Proposed Development **will not be significant**. Based upon the nature of the Proposed Development, polluting impacts will be limited to the construction phase, however, best practice measures should be taken where viable.

2.98. **Table 2-11** below details common water pollutants and their effect on the aquatic environment. The table adapted is from Ciria guidance[24].

Table 2-11: Common Water Pollutants and their Effects on the Aquatic Environment

Common Water Pollutants	Adverse Effect on Aquatic Environment
Silt	Reduces water quality, clogs fish gills, covers aquatic plants, impacts aquatic invertebrates, leads to a reduction in prey for insectivorous/carnivorous species, leads to degradation of habitat
Bentonite (very fine silt)	Reduces water quality, clogs fish gills, covers aquatic plants, impacts aquatic invertebrates, leads to a reduction in prey for species including otter and fish species, leads to degradation of habitat including that of wetland invertebrates

[24] Ciria (2015) Environmental good practice on site guide, 4th edition

Cement or concrete wash water (highly alkaline)	Changes the chemical balance, is toxic to fish and other wildlife. This can lead to direct impacts for aquatic species, or indirect impacts through loss of prey resources
Detergent	Removes dissolved oxygen, can be toxic to wildlife present within the aquatic environment
Hydrocarbons (e.g. oil, diesel)	Suffocates aquatic life, damaging to the wildlife (e.g. birds) and to water supplies including industrial abstractions
Sewage	Reduces water quality, is toxic to aquatic wildlife, and damages water supplies

2.99. The potential occurrence of these contaminants and their capability of affecting water quality has been considered during the various phases of the Proposed Development. Potential contaminants are capable of undermining water quality and impacting the qualifying habitats occurring within the ZoI of the Proposed Development. As there are no watercourses directly on site, runoff potential is greatly reduced.

2.100. The Proposed Development will be subject to mandatory pollution prevention measures under the Control of Pollution Act 1974 (as amended)[25]. Additional measures can be secured by requesting a CEMP with a suitably worded planning condition, if necessary.

Recommended Enhancement Measures

2.101. The proposed wildlife enhancements designed into the Proposed Development (see **Appendix 2B: Biodiversity Net Gain Assessment**) include the creation of hedgerow and wildflower grassland.

Residual Effects

2.102. With the implemented during the construction phase, and implementation of the Proposed Development's design measures, best practice measures the habitat management outlined, there will be **beneficial effects** on habitats on a local scale.

[25] Available at: https://www.legislation.gov.uk/ukpga/1974/40/part/III/crossheading/construction-sites

Protected and Notable Species

In the Absence of Mitigation

2.103. The sections below detail the potential impacts and effects in the absence of mitigation for protected and notable species during the construction phase (approximately twelve months) and operational phase of the Proposed Development.

2.104. In accordance with CIEEM guidelines[26], the duration of disturbance during construction is considered to be **short term** for the species groups below (except invertebrates). All groups except invertebrates live for several years in the UK. However, it is noted that short-term impacts can lead to long-term effects if e.g., they cause breeding failure in a given year. Invertebrates are assessed in line with their specific life history characteristics.

Badger

2.105. During the habitat survey, one badger track was noted at the northeast of the ESA. No other field signs indicating presence of badger, including badger setts, hair or snuffle holes were found either on site, or within the ESA surrounding the site.

2.106. The data search returned no records of badger within 2km, however, given the limited records available and habitat present, it is believed likely the species is present in the local area. There are some multiple stands of woodland (within 1km of the Proposed Development boundary) which provide more suitable habitat for badger. The woodland provides sett-building habitat for this species, while all the terrestrial semi-natural habitats within the Application Site offer limited foraging opportunities.

2.107. Given that badgers are a highly mobile species and new setts may be built prior to construction, there is the potential for the disturbance of badger during the construction phase of the Proposed Development. During the construction phase, the Proposed Development can cause undue stress in a number of ways. Installation of security fencing or hoarding can disrupt badger paths and cut off foraging areas within a clan's territory. Excavations can destroy badger setts, and any excavations lefts overnight can trap badgers.

2.108. In the absence of mitigation, badger **may be significantly affected** by the Proposed Development. The loss of any newly-created sett would be classed as **moderate to high spatial** and **long-term temporal** magnitude.

Bats

2.109. The local area contains multiple trees suited to bats with roost potential. No signs of bats were observed during the habitat survey. The data search returned 8 records of bat species,

[26] CIEEM (2022) Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Costal and Marine. Version 1.2.

showing presence of species such as brown long-eared bat and noctule bat within the local area.

2.110. Due to the hours of operation requiring lighting, and the nocturnal nature of bats, the operational phase of the development will not lead to a significant difference in lighting compared to the current baseline. Light spillage on bat habitats adjacent to the Application Site will therefore be negligible.

2.111. In the absence of mitigation, bats **may be negatively affected** by the Proposed Development in the event trees with roost potential are required to be removed. The loss of a day roost would be classed as **low spatial** and **medium-term temporal** magnitude in the context of available roosts in the local area. However, it should be noted that under the current design, this is no removal of trees is anticipated to be required.

Other Mammals

2.112. No evidence of other protected or priority mammals was noted. It is likely that the Application Site may support a small assemblage of common mammal species.

2.113. There will be some loss of habitats, however due to the baseline quality of the habitat, and the surrounding habitats available in the local area, this habitat loss is not likely to be significant to the local populations. Impacts on hedgehog and fox are likely to include dust, noise and vibration disturbance during the construction phase of the Proposed Development.

2.114. There are no suitably relevant records or field signs of dormice, however this does not constitute a confirmation of absence. However, no habitats of potential suitability (hedgerow and woodland) are proposed to be removed as part of the Proposed Development.

2.115. Whilst there are no record or field signs of otter, it is possible, though unlikely, that they are present utilising the stream within the ESA. As otter are a highly mobile species there is the potential for impacts upon the species if they are using the area during the construction period, and without mitigation the species **may be negatively affected**.

2.116. Barring otter, **no significant effects** are anticipated upon other species of mammal in the absence of mitigation.

Herptiles

2.117. Hedgerow on site and woodland, scrub and the stream within the local area provide some limited habitat for herptiles, and whilst an access track is proposed through existing hedgerow, this is to utilise an existing gap, and will not result in any habitat loss or fragmentation. In the absence of mitigation, **no significant effects** are anticipated upon herptiles.

Birds

2.118. Main impacts on bird species from developments include:

- Direct loss or deterioration of habitats;
- Indirect habitat loss as a result of displacement by disturbance.

2.119. Whilst no records were returned for birds during the data search, it can be assumed the local area comprises a mixture of common, uncommon, and protected species beyond those identified during the habitat survey. Despite this, the majority of habitats on site are managed in a way that has very low potential to support avian species.

2.120. Therefore, as the majority of habitats found on site which will be impacted have little ecological importance to birds from either a foraging or breeding perspective, **no reasonably likely significant effects** are anticipated upon birds in the absence of mitigation. However, following the precautionary principle, if construction is to commence between March and August inclusive, a pre-commencement survey of all habitats within the Application Site to be affected by works should be undertaken.

Invertebrates

2.121. The vast majority of the Application Site (modified grassland) is considered to be of limited value to invertebrates due to the management of the land. However, the hedgerow and the margins of these grassland areas may support a small assemblage of common invertebrate species.

2.122. Impacts on these species are likely to be limited to dust and other pollution emitted during the construction phase of the Proposed Development. However, as no notable species were highlighted in the data records or field surveys, **no significant effect** is anticipated during the construction phase in the absence of mitigation.

Mitigation and Enhancement Measures and Further Survey

Badger

2.123. Given that badger is a highly mobile species and present within the local area, it is recommended that a pre-construction badger survey of the Application Site and 30m buffer is undertaken to assess the presence of badger immediately before construction. Any necessary mitigation will then be designed in accordance with relevant ecological guidance and legislative requirements.

2.124. Due to the species presence in the local area, all dug ground should be levelled and compacted wherever possible. All excavations are to be covered or closed off securely at the end of each working day to prevent the accidental trapping of badgers.

Bats

2.125. In the event any mature trees are required to be removed as a result of the Proposed Development, if they were identified as having bat roost potential during the initial habitat survey, they should be appropriately surveyed for bat roosts. Subsequent mitigation and feature measures will then be determined according to the results of this survey. In the event that two years (or more) has passed since the initial habitat survey, it is recommended that any tree proposed to be removed is resurveyed for bat roost potential, and suitable mitigation implemented accordingly.

Otters

2.126. Given that otter is a highly mobile species and cannot definitively be ruled out as present within the Application Site (though it is considered highly unlikely), it is recommended that a pre-construction otter survey of the Application Site and nearby suitable habitat is undertaken to assess the presence of otter immediately before construction. Any necessary mitigation will then be designed in accordance with relevant ecological guidance and legislative requirements.

Other Mammals

2.127. No further survey or mitigation is considered necessary in connection with other mammal species, however any incidental findings relating to herptiles during other recommended pre-commencement survey should be recorded and considered accordingly.

Reptiles and Amphibians (Herptiles)

2.128. No further dedicated survey is considered necessary for herptile species, however any incidental findings relating to herptiles during other recommended pre-commencement survey should be recorded and considered accordingly.

2.129. In the very unlikely event of occurrence, any amphibians or reptiles found should be moved carefully by an ecologist to suitable location (such as a County Wildlife Site) within the local area.

Birds

2.130. Breeding birds are highly susceptible to disturbance. As the construction phase may have a significant impact on breeding birds within and adjacent to the Application Site (in the event land use/management has changed significantly between time of survey and the construction period), mitigation measures have been recommended to ensure that no significant impacts occur.

2.131. Where works are to commence during the breeding season (March to August inclusive), pre-commencement checks of possible nesting sites should be undertaken by a suitably experienced ecologist prior to works commencing. An appropriate buffer zone must be established around nesting birds until the young have fully fledged.

Invertebrates

2.132. No further survey or mitigation is considered necessary in connection with invertebrates.

Residual Effects

2.133. With the implementation of pre-commencement surveys and the proposed mitigation measures, it is considered that there will be **no significant negative effects** upon protected or notable species during the construction phase. The BMP proposes planting of a species diverse grass and wildflower mix and creation of three species rich hedgerow to be created in the style of Devon hedgerows. With the implementation of these combined with the reduced disturbance from agricultural activities, **the potential of the Application Site to support local wildlife will increase**. The Proposed Development will lead to a **positive effect** on biodiversity on a local scale.

- Residual effects on badgers are considered **minor and positive**.
- Residual effects upon bats are considered **minor and positive**.
- Residual effects on hedgehog and common small mammals are considered **minor and positive**.
- Residual effects on other mammals including brown hares and foxes are considered **minor and positive.**
- Residual effects upon reptiles and amphibians are considered **not to be significant**.
- Residual effects upon birds are considered **minor and positive**.
- Residual effects upon invertebrates are considered **minor and positive**.

CONCLUSION

2.134. To minimise potential impacts on local wildlife, standard best practice pollution prevention measures for the construction stage have been outlined and considered as part of the impact assessment, prior to mitigation. These measures are also outlined within Table 8-2

2.135. A total of five habitat types were noted during the UK Habitats Classification survey undertaken in January 2024. The main unmitigated impacts during the construction phase would include the direct loss of habitat under the Proposed Development footprint and indirect loss of habitat due to noise and vibration disturbance, and dust and water pollution. The **loss of these low condition habitat areas is considered to be of negligible significance** to nature conservation interest within the local area.

2.136. Within 15km there are three internationally designated sites: all of which are SACs, however no connectivity is present between any internationally designated sites and the Application Site. There are three SSSIs within 5km of the Application Site, of which Brendon and Vealand Fen has potential ecological connectivity with the Application Site. There are seven non-statutory sites within 2km of the Application Site, of which four have potential hydrological connectivity. Details of the designated sites have been provided and assessed above, as appropriate.

2.137. Based on these sites respective qualifying features, and proposed mitigation measures, it has been determined that the Proposed Development will result in **no adverse effects** on any designated nature conservation site as a result of the Proposed Development.

2.138. Recommendations for further survey work have been provided within this report as part of the relevant mitigation measures. Please refer to Table 8-1 below for details.

2.139. The Proposed Development conserves and enhances biodiversity, minimising impacts, and providing net gains. This accords with national planning policy, and with the north Devon and Torridge Local Plan.

2.140. It is considered that the short-term disturbance from the Proposed Development **will not be significant** if the recommended mitigation is undertaken. With the implementation of pre-commencement surveys and the proposed mitigation measures, it is considered that there will be **no significant negative effects** upon protected or notable species during the construction phase. The BMP and Net Gain Assessment proposes habitat creation and enhancement measures centred around planting a species diverse grass and wildflower mix and species rich hedgerows with atop banks. With the implementation of these, **the potential of the local area to support local wildlife will increase**.

SUMMARY OF POTENTIAL MITIGATION MEASURES

2.141. **Table 2-12** below summarises the mitigation recommendations derived from the above results. **Table 2-13** below summarises the Integral Design Measures and Standard Best Practice.

Table 2-12: Recommendations for mitigation

Site/ Species	Potential Development Impact	Phase of Development	Further Survey Requirements	Mitigation Options
Bats	Loss of roosting habitat; disturbance, injury and/or death	Construction	Trees identified with bat roosting potential - Dusk Emergence Survey(s) All other trees in the event of two years or more passing prior to construction - Potential Roost Feature ("PRF") Assessment of any trees adjacent to site proposed for significant works	Soft Felling Techniques for removal. Low Impact Class Licence from Natural England.
Badgers	Loss of setts; disturbance, injury and/or death	Construction	Pre-commencement badger survey of site and adjacent lands to within 30m	Dependent on survey findings. May need a Natural England sett closure licence or a design variation if a sett has been dug in the interim.
Birds	Disturbance, injury or loss of breeding birds, nests, eggs or young	Construction	Pre-commencement breeding bird surveys if works are to be undertaken during the breeding season (March to August inclusive)	Dependent on pre-commencement survey results. May include temporary exclusion zones.

Otter	Loss of holts; disturbance, injury and/or death	Construction	Pre-commencement otter survey of site and adjacent watercourse to within 50m	Dependent on survey findings.

Table 2-13: Integral Design Measures and Standard Best Practice

Receptor	Potential Development Impacts	Phase of Development	Measures Implemented
INTEGRAL DESIGN MEASURES			
Aquatic environment	Pollution	Construction	Avoidance of all surface water areas including ponding
Aquatic environment	Pollution	Construction and Operation	Creation and maintenance of attenuation pond
STANDARD BEST PRACTICE MEASURES			
Aquatic environment	Pollution	Construction	Best practice pollution prevention measures implemented prior to and throughout the construction phase to prevent contaminants entering the aquatic environment
Badger	Accidental trapping with excavations	Construction	All excavations should be securely covered at the end of each working day

APPENDICES

APPENDIX 2A – FIGURES

- Figure 2.1 – Habitat Map
- Figure 2.2 – Environmental Designations

APPENDIX 2B – BIODIVERSITY MANAGEMENT PLAN

APPENDIX 2C – BIODIVERSITY NET GAIN ASSESSMENT

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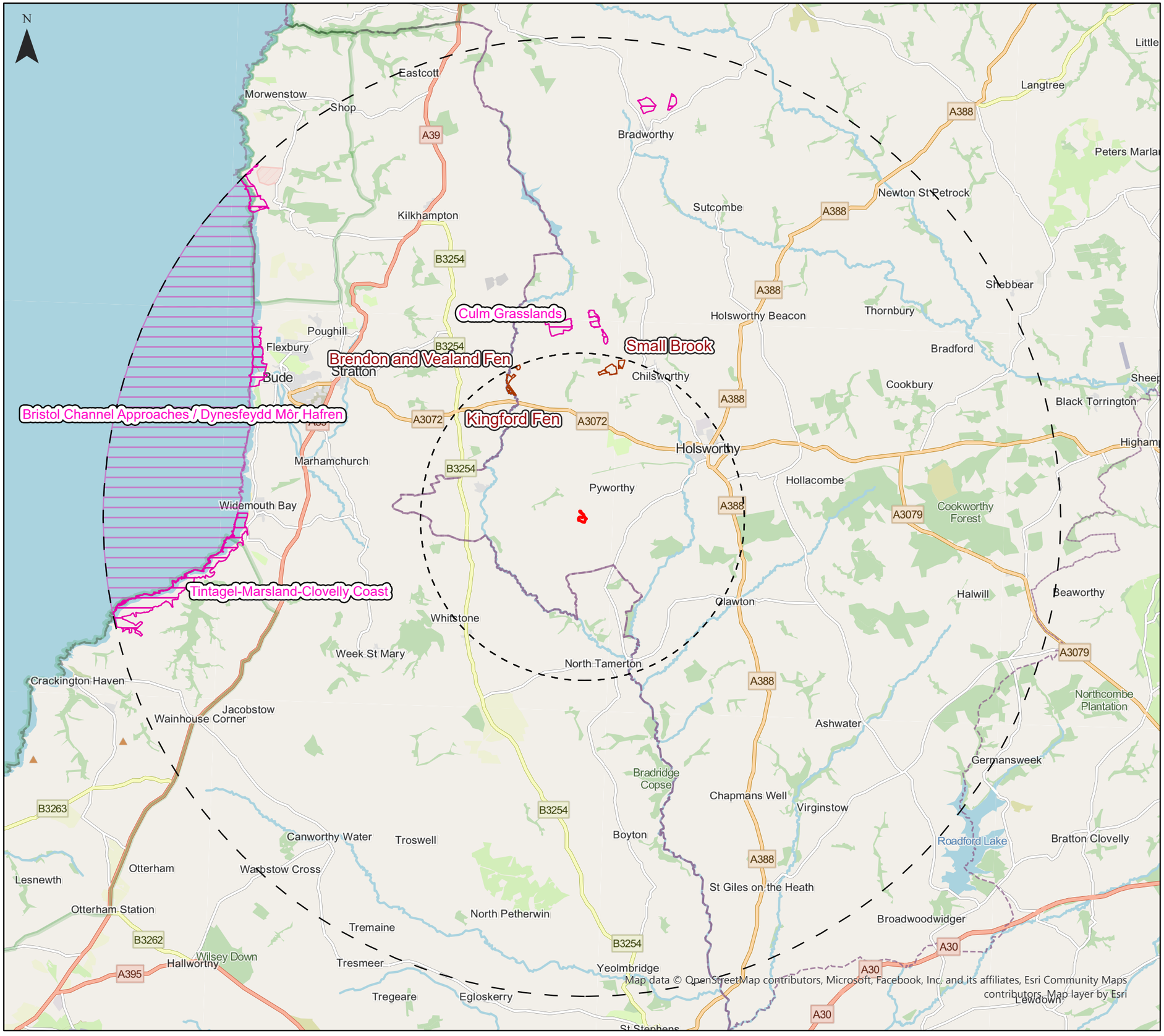
Appendix 2A

Stoneworthy BESS Environmental Designations Figure 2.1



Key

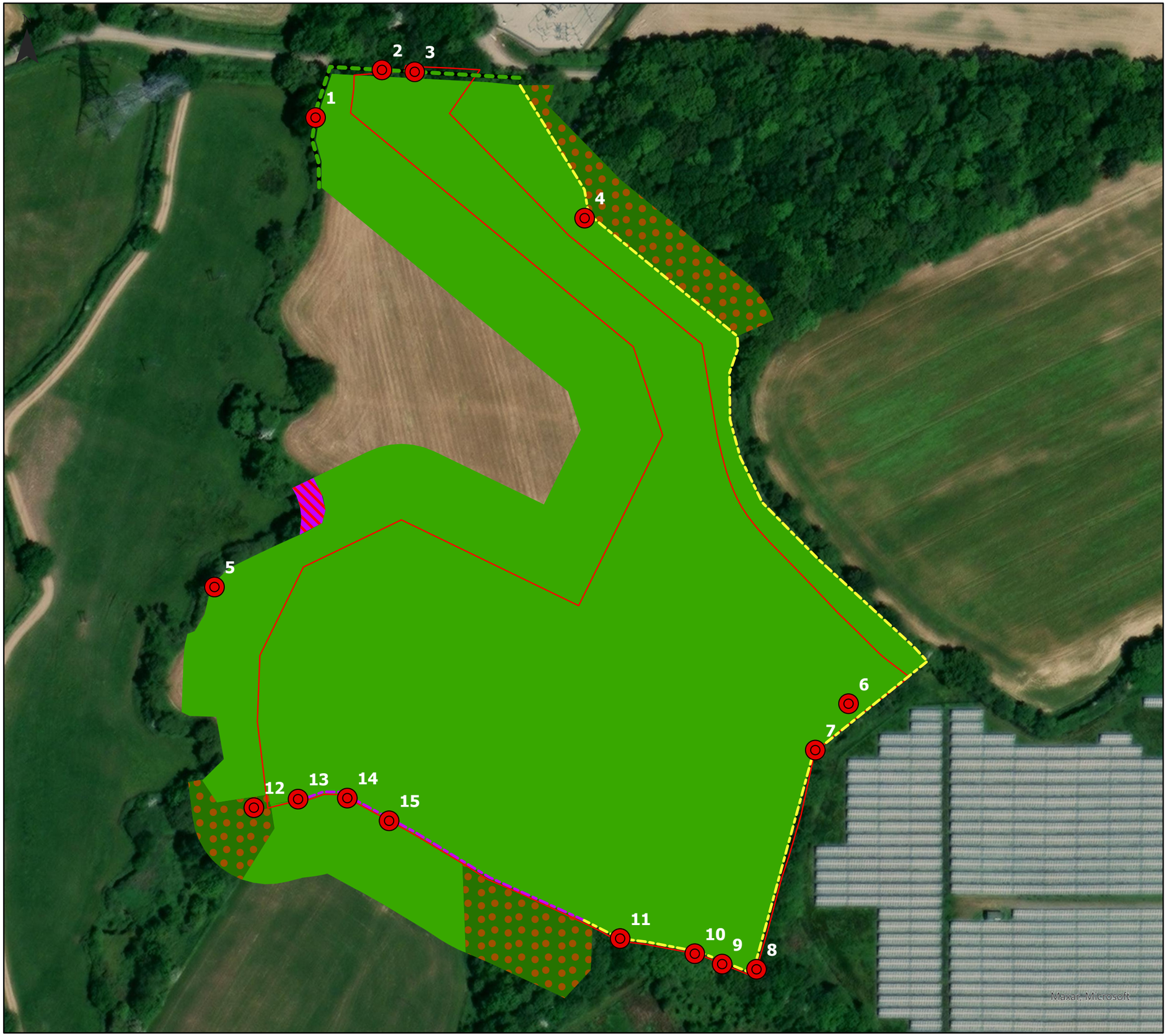
- Development Boundary
- 5 km Study Area
- 15km Study Area
- Sites of Special Scientific Interest (SSSIs)
- Special Areas of Conservation (SACs)
- Marine Special Areas of Conservation (SAC)

Neo Office Address:
Wright Business Centre, 1 Lonmay Road, Glasgow, G33 4EL

Date: 17/05/2024
Drawn By: Eiméar Rose Cunningham
Scale (A3): 1:120,000
Drawing No: NEO01389/006I/B

NEO ENVIRONMENTAL

Stoneworthy BESS
Habitat Map
Figure 2.2



0 0.05 0.1 0.2 Kilometers

Key

- Development Boundary
- Target Notes
- h2a5 Species - Rich Hedgrow
- h2a Native Hedgerow
- w1g - Other Woodland (Broadleaved) (Linear)
- g4 Modified Grassland
- h3h Mixed Scrub
- w1g - Other Woodland (Broadleaved)

Neo Office Address:
Wright Business Centre, 1 Lonmay Road, Glasgow, G33 4EL

Date: 20/05/2024
Drawn By: Beth Logan
Scale (A3): 1:1,500
Drawing No: NEO001389/016I/A

neo ENVIRONMENTAL

Appendix 2B: Biodiversity Management Plan

Stoneworthy Battery Energy Storage System (BESS)

23/05/2024

Disclaimer

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Prepared By:

Thomas Hill MEnv (Hons)

	Name	Date
Checked By:	Chloe McDonnell	23/05/2024
	Name	**Signature**
Approved By	Paul Neary	

Contents

1. EXECUTIVE SUMMARY

1.1. Objectives have been established to enhance and maintain the biodiversity of lands near Lower Hoppaworthy, Pyworthy, Torridge District, Devon, associated with a proposed Battery Energy Storage System ("BESS") Development (the "Proposed Development").

1.2. The objectives include developing a species diverse wildflower grassland across the site, planting of species-rich native hedgerows and creation of a sustainable drainage pond, to enhance the floristic diversity of the site and provide a plentiful source of food and shelter for a range of fauna species.

1.3. Actions have been formulated within this document to enable the objectives to be met and to maximise the Application Site's potential for supporting wildlife. Species which have been given priority within this management and enhancement plan include passerine birds, bats, and invertebrates.

1.4. A habitat survey of the Application Site was undertaken using the UK Habitats Classification system on 23rd May 2023 by Steven Pagett. As part of the planning application, an Ecological Assessment has been conducted to assess the Application Site's ability to support a range of wildlife both now and during all phases of the Proposed Development. The enhancements set out in this document have been developed in accordance with the findings of the habitat surveys conducted on site.

1.5. Management recommendations have been made for new and existing habitats. This will ensure that the Application Site can not only be restored to its current agricultural use upon decommissioning but will result in overall biodiversity gain.

2. INTRODUCTION

Background

2.1. Neo Environmental Ltd has been appointed by RES Ltd (the "Applicant") to undertake a Biodiversity Management Plan ("BMP") for a proposed battery storage development (BESS) (the "Development") on lands near Lower Hoppaworthy, Pyworthy, Torrige District, Devon, England, EX22 6LA (the "Application Site").

Development Description

2.2. Stoneworthy Energy Storage System is a proposed battery energy storage system (BESS) comprising approximately 32no. battery enclosures, 16no. PCS (power conversion systems), 16no. MV skids (PCS transformer and switchgear), a 33kV substation building with a high voltage area containing auxiliary transformer and grid compliance equipment, a 132kV grid transformer with associated equipment and a grid connection to a National Grid Electricity Distribution (NGED) overhead line.

Site Description

2.3. The area of the proposed Development (the "Application Site") lies at an elevation of approximately 98 - 110 m AOD and covers a total area of c. 3.6 hectares. It is centred at approximate National Grid Reference (NGR) E 230354 N 101885 and is located c.1km southwest from the village of Pyworthy, c. 1.3km southwest from the village of Derril, and c. 3.8km southwest from Holsworthy town.

2.4. Comprising of a single field of agricultural land, the site is currently being used for pastoral farming. The field itself is bound by a mixture of trees, hedgerows and post-and-wire fencing. The land slopes from east to west and there is an area of scrub present towards the north/ northeast. Small pockets of woodland are adjacent to the Application Site's boundaries to the northeast, south and southwest.

2.5. Access will be gained from an unnamed local road adjacent to the northern boundary of the Application Site. This road originates from the Derriton Road c. 1.35km east from the Application Site.

2.6. Recreational Routes include the Public Right of Way (PRoW) Pyworthy 7 located c.0.04km northwest and Pyworthy 3 located c.0.17km southeast of the Proposed Development.

2.7. Electrical infrastructure is present within the Application Site and a solar Farm development is directly adjacent to its southeastern boundary. Two other solar farms are within close proximity to the Application site with one c. 1.9km southwest and another c. 2.6km northeast from the Application site. There are also turbines present within the landscape.

2.8. The area surround the Application Site is predominantly agricultural, punctuated by individual properties and farmsteads and renewable energy infrastructure.

Adopted Design Principles

2.9. Where possible, measures have been implemented as part of the iterative design process to prevent the various phases of the Proposed Development affecting sensitive ecological features. Ecological measures incorporated into the Proposed Development design include the following:

- NGED 132 kV Overhead Line Buffer (15m)
- NGED 33kV Overhead Line Buffer (15m)
- Flood Zone (Avoided)
- Watercourse Buffer (10m)
- Hedgerow Buffer (5m)
- Woodland Buffer (10m)
- Tree Buffer (Dependent on Height & Crown) (Avoided)
- Root Protection Area Determined via Arboricultural Survey (Avoided)
- Trees with bat roost potential (Avoided)

3. LEGISLATION, PLANNING POLICY AND GUIDANCE

3.1. Biodiversity is declining across the UK; however, recent agri-environment schemes indicate that biodiversity can significantly increase through appropriate land management. Well-designed developments have the potential to support wildlife and increase biodiversity through appropriate management when located on agricultural land.

3.2. Due to the nature of development, a Biodiversity Management Plan ("BMP") has been produced, the purpose of which is to identify objectives for biodiversity and the means by which these objectives will be achieved. This can include the protection of existing species and habitats and the establishment of new habitats, as well as their maintenance and monitoring.

3.3. This BMP has been informed by the UK Habitats Classification survey that was conducted in January 2024.

OBJECTIVE OF THE BIODIVERSITY MANAGEMENT PLAN

3.4. The objective of this BMP is to minimise any potential negative impacts arising from the Proposed Development, while increasing the habitat diversity. Through generation/storage of renewable energy, the enhancement of the land within the development boundary will increase the site's capability of supporting wildlife.

3.5. This will be achieved by:

- Creating and maintaining a diverse species-diverse neutral grassland with a varied sward structure;
- Creating and maintaining native species-rich hedgerows with associated banks;
- Ensuring no net loss of biodiversity from the site as a result of the habitat creation scheme; and
- Maximising the floral and faunal biodiversity of the created habitats.

CURRENT POLICY

INTERNATIONAL LEGISLATION

3.6. International legislation relevant to the Proposed Development is outlined within Table 2-1 below.

Table 2--1: Relevant International Legislation

Directive	Main Provisions
Bern Convention	The Bern Convention[1] came into force in 1982, with the principal aims to ensure conservation and protection of wild plant and animal species and their natural habitats (listed in Appendices I and II of the Convention), to increase cooperation between contracting parties, and to regulate the exploitation of those species (including migratory species) listed in Appendix III.
Bonn Convention	The Bonn Convention[2] came into force in 1985. Contracting Parties work together to conserve migratory species and their habitats by providing strict protection for endangered migratory species (listed in Appendix I of the Convention), concluding multilateral Agreements for the conservation and management of migratory species which require or would benefit from international cooperation (listed in Appendix II), and by undertaking cooperative research activities.
Ramsar Convention	The Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention)[3] came into force in 1975. It is an international treaty for the conservation and wise use of wetlands.

NATIONAL LEGISLATION

Wildlife & Countryside Act 1981 / Conservation of Habitats and Species Regulations 2017

3.7. The Wildlife and Countryside Act 1981[4] (as amended), formerly used to implement EU

[1] Available at: https://www.coe.int/en/web/bern-convention

[2] Available at: https://www.cms.int/en/convention-text

[3] Available at: https://www.ramsar.org/about-the-convention-on-wetlands-0

[4] Parliament of the United Kingdom, 1981. Wildlife and Countryside Act 1981 (as amended). Available at: http://www.legislation.gov.uk/ukpga/1981/69

legislation, has more recently been strengthened by the Conservation of Habitats and Species Regulations 2017. This consolidates and amends existing national legislation, making it an offence to:

- "*Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting*
- *Intentionally kill, injure or take any wild animal listed under Schedule 5 of the Act; intentionally damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 of the Act; disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection*
- *Pick or uproot any wild plant listed under Schedule 8 of the Act"*

Environment Act 2021

3.8. This Act introduced a legally binding target on species abundance for 2030, aiming to reverse declines of key wild species. It creates a requirement for 10% net biodiversity gain as part of development projects, and for a series of Nature Recovery Strategies to cover England. The new Act makes minor amendments to the 1981 Act and 2017 Regulations (see above). It expands measures taken against illegal deforestation, enshrines a legal duty for water companies to reduce adverse impacts from storm overflow discharge, and gives statutory effect to conservation covenants. To assist in the above, it also creates an Office for Environmental Protection.

3.9. The Environment Act supersedes the former UK Post-2010 Biodiversity Framework and UK Biodiversity Action Plan ("BAP"). The BMP and Net Gain Assessment at **Technical Appendices 2B and 2C** aim to demonstrate how the Proposed Development will assist in achieving the Act's net gain targets.

Natural Environment and Rural Communities Act 2006

3.10. The Natural Environment and Rural Communities ("NERC") Act[5] places a duty on planning authorities to have due regard for biodiversity and nature conservation during operations, ensuring that biodiversity is a key consideration in the local planning process.

3.11. Section 41 of the NERC Act lists a number of habitats and species of principal importance for the conservation of biodiversity in England.

[5] Available at https://www.legislation.gov.uk/ukpga/2006/16/contents

Hedgerows Regulations 1997

3.12. Under the Hedgerows Regulations 1997, certain hedgerows[6] are classified as 'Important' based on factors such as the presence of a certain number of woody native plant species. Subject to certain exceptions, the removal of an 'Important' hedgerow is prohibited.

3.13. 'Removal' includes uprooting all or part of the hedgerow, as well as any acts that could lead to the hedgerow's destruction. Removal is permitted under Section 6 of the Act under a small number of exemptions, including:

"for carrying out development for which planning permission has been granted or is deemed to have been granted, except development for which permission is granted by article 3 of the Town and Country Planning General Permitted Development Order 1995 in respect of development of any of the descriptions contained in Schedule 2 to that Order other than Parts 11 (development under local or private Acts or orders) and 30 (toll road facilities)."

Planning Policy

National Planning Policy Framework (2023)

3.14. The National Planning Policy Framework ("NPPF")[7] sets out the government planning policies for England and how they should be applied. Further details can be found within the Ecological Assessment, to which this Net Gain Assessment is appended.

Biodiversity Action Plans

3.15. The UK Biodiversity Action Plan ("UKBAP"; 1994)[8] was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. Lists of national Priority species and habitats were produced with all listed species/habitats having specific action plans, defining the measures required to ensure their conservation.

3.16. While the UKBAP has since been superseded by the Environment Act (see above), regional and local BAPs have been produced to develop plans for species/ habitats of nature conservation importance at regional and local levels. The Devon BAP[9] contains a long list of Priority habitats and species, further details can be found within the Ecological Assessment, to which this Net Gain Assessment is appended.

[6] Available at https://www.legislation.gov.uk/uksi/1997/1160/contents/made

[7] Department for Housing, Communities and Local Government (2023) National Planning Policy Framework. Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

[8] Available at https://data.jncc.gov.uk/data/cb0ef1c9-2325-4d17-9f87-a5c84fe400bd/UKBAP-BiodiversityActionPlan-1994.pdf

[9] Available at: https://www.devon.gov.uk/environment/wildlife/the-devon-biodiversity-action-plan-bap

North Devon and Torridge Local Plan 2011 – 2031

3.17. Adopted in October 2018, this is the current Local Plan for Torridge, the district in which the Application Site falls. The relevant policies set out within the Plan include the following ecological provisions. Further information on the policies outlined below can be found in the accompanying Ecological Assessment to which this Net Gain Assessment is appended.

Policy ST03: Adapting to Climate Change and Strengthening Resilience

Policy ST14: Enhancing Environmental Assets

Policy DM04: Design Principles

Policy DM08: Biodiversity and Geodiversity

Policy DM09: Safeguarding Green Infrastructure

3.18. The ecological reporting of the Proposed Development will consider each of the policies outlined above.

Guidance Documents

BS 42020:2013 Biodiversity

3.19. The British Standards Institute has published *BS 42020:2013 Biodiversity*[10]*. Code of Practice for Planning and Development* which offers a coherent methodology for biodiversity management. This document seeks to promote transparency and consistency in the quality and appropriateness of ecological information submitted with planning applications and applications for other regulatory approvals. This document cites CIEEM's EcIA Guidelines as the acknowledged reference on EcIA reporting, as such where relevant the two should be used in tandem.

CIEEM Guidelines

3.20. CIEEM have produced guidance on Ecological Impact Assessment[11] and Ecological Report Writing[12].

[10] BS 42020:2013 Biodiversity. Code of practice for planning and development

[11] CIEEM (2022) Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine. Version 1.2. Available at: ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.2-April-22-Compressed.pdf (cieem.net)

[12] CIEEM (2017) Guidelines for Ecological Report Writing. Available at: https://cieem.net/wp-content/uploads/2019/02/Ecological-Report-Writing-Dec2017.pdf

3.21. EcIAs is a process of identifying, quantifying and evaluating potential effects from activities such as those related to development on habitats, species and ecosystems. This EcIA process follows the steps set out in Table 2-2 below.

Table 2-2: EcIA Process

Task	Description
Scoping	Determining the matters to be addressed in the EcIA, including consultation to ensure the most effective input to defining the scope. Scoping is an ongoing process – the scope of the EcIA may be modified following further ecological survey/research and during impact assessment.
Establishing the baseline	Collecting information and describing the ecological conditions in the absence of the proposed project, to inform the assessment of impacts.
Important ecological features	Identifying important ecological features (habitats, species and ecosystems, including ecosystem function and processes) that may be affected, with reference to a geographical context in which they are considered important.
Impact assessment	An assessment of whether important ecological features will be subject to impacts and characterisation of these impacts and their effects. Assessment of the significance of the residual ecological effects of the project (those remaining after mitigation), including cumulative effects.
Avoidance, mitigation, compensation and enhancement	Incorporating measures to avoid, reduce and compensate negative ecological impacts and their effects, and the provision of ecological enhancements. Monitoring impacts and their effects. Evaluation of the success of proposed mitigation, compensation and enhancement measures.

3.22. The aims of their EcIA guidelines are to:

- promote good practice;
- promote a scientifically rigorous and transparent approach to EcIA;
- provide a common framework to EcIA in order to promote better communication and closer cooperation between ecologists involved in EcIA; and
- provide decision-makers with relevant information about the likely ecological effects of a project.

Natural England

3.23. Natural England have published standing advice for various protected species and habitats in England. The advice covers accepted and recommended survey, avoidance, mitigation and compensation standards for development affecting these ecological features. These advice documents have been borne in mind where relevant to the Proposed Development.

4. BASELINE

DESIGNATED SITES

4.1. The Proposed Development does not lie within or adjacent to any designated environmental sites.

4.2. Within 15km of the Application Site boundary there are three internationally designated sites: these are all Special Areas of Conservation ("SACs"). The closest of these is the Culm Grasslands SAC, located 5.6km north of the Application Site at its closest point. No Ramsar Sites, possible SACs ("pSACs") or potential SPAs ("pSPAs") were recorded within 15km. There are three Sites of Special Scientific Interest ("SSSIs") within 5km of the Application Site, namely Kingford Fen SSSI, Small Brook SSSI and Brendon and Vealand Fen SSSI. No National Nature Reserves ("NNRs") or Local Nature Reserves ("LNRs") are present within 5km. There is not believed to be any material hydrological influence beyond the 15km study area.

4.3. Within 2km of the Application Site boundary there are seven County Wildlife Sites ("CWS") which are non-statutory designated sites, the closest of these is Monk's Farm CWS located circa 260m northwest of the Application Site.

Habitats

4.4. The UK habitat surveys undertaken in January 2024 identified five habitat types within the Ecological Survey Area (ESA). Each of these is listed below, with the relevant habitat codes beforehand. Priority habitats are indicated in bold. Given the size of the Application Site, the minimal mappable unit used was fine-scale (25m^2 area, 5m length).

- g4 – Modified Grassland
- **h2a – Native Hedgerow**
- **h2a5 – Species-rich Native Hedgerow**
- h3h – Mixed Scrub
- w1g – Other Woodland (Broadleaved)

Flora

4.5. No invasive non-native flora listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), or Schedule 2 of Invasive Alien Species (Enforcement and Permitting) Order 2019 were recorded during survey within the Proposed Development boundary. No plant species

of particular note were recorded within the ESA. The site is considered to be of low botanical interest at the local level. Local interest is likely to be concentrated in nearby designated sites.

Fauna

Badger

4.6. Despite the lack of biological records, badger is noted as present within the local area as the Application Site is within a cull zone. One set of badger tracks was noted during the survey northeast of the Application Site within the ESA, no other signs of badger were observed during the survey. Badger and hedgehog could use the hedgerow and (to a lesser extent) the grassland within the site. Badgers could also feasibly build setts within the hedgerow and adjacent woodland.

Bats

4.7. Hedgerows and woodland (and, to a much lesser extent, the grassland which comprises the vast majority of the Application Site) within the ESA offers suitable foraging and commuting habitat for bats. Additional commuting opportunities and foraging interest are offered by the offsite watercourse to the west. Overall commuting and foraging interest is judged as moderate, as per Bat Conservation Trust guidelines[13]. It is considered likely that higher levels of bat activity will be confined to areas of local woodland and nearby designated sites.

4.8. Within the ESA there are multiple trees with the potential to support roosting bats; three of high suitability, four of moderate suitability, and seven of low suitability.

Dormouse

4.9. The hedgerows and boundary woodlands within the site are assessed to provide suitable habitat for dormice. The connectivity between the site and the wider surrounding area is considered to provide optimal suitability for this species.

Otter and Water Vole

4.10. The Application is of limited suitability for otters, however the scrub in the ESA and watercourse beyond that have greater suitability. Overall, given that otters are a very mobile species, there is the potential (though unlikely) could potentially commute within the Application Site.

4.11. The stream within the ESA appears highly unsuitable for water vole. This is due to the limited vegetation cover, herbaceous plant species or other potential water vole food sources.

[13] Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines. 4th edition. The Bat Conservation Trust, London.

Other Mammals

4.12. Species such as fox, house mouse and brown rat may use the site due to the nearby habitats in the local area. The presence of these species is likely to be of little intrinsic conservation interest in the local area. Overall, the site is likely to be of low value for mammals within a local context due to the grazing practices of the Application Site.

Birds

4.13. A number of bird species were recorded within the site during the site survey. The species recorded included woodpigeon (Columba palumbus), redwing (Turdus iliacus), fieldfare (Turdus pilaris), meadow pipit (Anthus pratensis), great spotted woodpecker (Dendrocopos major), long-tailed tit (Aegithalos caudatus), buzzard (Buteo buteo), great tit (Parus major), blue tit (Cyanistes caeruleus), chaffinch (Fringilla coelebs), dunnock (Prunella modularis), robin (Erithacus rubecula), wren (Troglodytes troglodytes), blackbird (Turdus merula) and goldfinch (Carduelis carduelis).

Herptiles

4.14. The modified grasslands within the site were assessed to provide limited suitability for foraging and sheltering habitat for reptiles due to agricultural nature of the grasslands. However, the watercourse woodlands and scrub within the ESA and wider local area are assessed to provide some potential foraging and commuting habitat for common reptile species.

4.15. In addition, there was a section of log piles present onsite that may provide suitable sheltering habitat suitability for reptiles.

Invertebrates

4.16. Given the habitats present, a small assemblage of common invertebrates is considered likely to use the site. Local interest is likely to be concentrated in nearby designated sites and adjacent woodland.

4.17. No notable or protected invertebrate species were recorded during the surveys.

Other Species

4.18. No evidence of other protected or Priority species was found within the Application Site.

5. POTENTIAL IMPACTS

5.1. Potential impacts which could arise from the development of the BESS include;

- Potential habitat loss and fragmentation;
- Disturbance during construction and decommissioning; and
- Potential contamination of surface waters.

Potential Habitat Loss and Fragmentation

5.2. The main impacts during the construction phase include the direct loss of habitat under the Proposed Development footprint, and indirect loss of habitat due to noise and vibration disturbance, and dust and water pollution. The loss of habitat will be limited to the areas of grassland. As this grassland is utilised for grazing and is classified as poor condition within the condition assessment metric, this is considered to be of negligible significance to nature conservation interest within the local area.

5.3. The Proposed Development has been designed in such a way to avoid significant losses of agricultural land during the operational stage. Agriculture can continue on land not proposed for planting or site elements. While some trimming of hedgerow may be required to enhance visibility to allow safe access into the site, no removal is required.

5.4. The main habitat loss will occur under the Proposed Development footprint in regard to structures such as access tracks, cable trenches and hardstanding for buildings. The Application Site can be fully restored upon termination of its use as a BESS.

5.5. New habitats will be created using native species appropriate to the Application Site, and overall, biodiversity value will increase as a result of the Proposed Development. The proposals will limit fragmentation. It is therefore considered that habitat loss and fragmentation from the Proposed Development **will not be significant**.

Disturbance During Construction and Decommissioning

5.6. The construction and decommissioning phases of a development have the potential to impact upon local wildlife.

5.7. To minimise any potential disturbance to wildlife, several measures will be implemented prior to construction and decommissioning work taking place. Avoidance and precautionary survey work recommended within the Ecological Assessment (**Technical Appendix 2 of Volume 3**) include:

- Avoidance of hedgerows, watercourses/field drains, trees, and all surface water areas including ponding;
- Pre-construction badger survey;
- Pre-construction otter survey;
- Pre-construction bird surveys if works commence between March and August inclusive; and
- Securely covering all excavations at the end of each working day to prevent accidental trapping of badger or other mammals.

5.8. During the operational phase, the disturbance to local wildlife will be reduced compared to the levels of disturbance the land is subject to from current agricultural practice.

5.9. With the creation of new species diverse wildflower grassland and screening hedgerow planting with associated banks, along with management, the site's overall biodiversity and potential for supporting local wildlife is anticipated to increase post-construction.

6. HABITAT CREATION

6.1. Areas of existing modified grassland groundcover will be replaced by a mix of tussocky grass and wildflower species. New hedgerow planting will be undertaken within the Application Site. These habitats will be in place and managed for the duration of the Proposed Development's lifespan.

6.2. Various options exist to enhance the biodiversity value of the Proposed Development Site, including the creation of different habitats, such as hedgerows, field margins, wildflower meadows and nectar-rich areas. Habitat creation planned as part of the Proposed Development is summarised in Table 2B-1 below. Habitats that will be created include:

- Species diverse wildflower grassland;
- Native species-rich hedgerows with associated bank; and
- Sustainable drainage pond (though this will not be managed to optimise it's ecological value).

6.3. These habitats individually offer shelter and a food source for supporting a variety of wildlife. Existing and new habitats, combined with the existing hedgerows, will support the existing wildlife within the Application Site. By offering a wider range of habitats and flora that benefit local wildlife, they also have excellent potential to increase the biodiversity of the site.

6.4. Whilst created purely to benefit the hydrology and construction of the Proposed Development the sustainable drainage pond will provide auxiliary benefits to local populations of amphibians and a small range of avian species.

7. MANAGEMENT RECOMMENDATIONS

7.1. Management recommendations have been made below for new and existing habitats with the aim of achieving the following:

- to maintain and improve species biodiversity within the site;
- to enhance the quality of the habitats;
- increase the site's potential for supporting wildlife; and
- to avoid any potential negative impacts arising from the development of the site.

7.2. Recommended management actions required to achieve the desired site conditions are summarised in Table 2B-3 of this document. The table also provides a brief résumé of the rationale for, and possible constraints on, adopting the recommended management.

Responsibilities

7.3. It will be the responsibility of the owner of the BESS to ensure that the proposed biodiversity management and monitoring is undertaken. It is expected that suitably qualified and experienced vegetation management contractors, arboriculturists and ecologists will be engaged by the Applicant for this purpose.

Grassland

7.4. The planting of species diverse neutral grassland and wildflower will occur within the Application Site over areas of current modified grassland habitat that will be disturbed during the construction phase. The existing and continued management regime will ensure a varied sward structure.

7.5. Among other wildlife, this habitat is of benefit to invertebrates such as locally important species of marsh fritillary butterfly. This will in turn encourage foraging by species such as the common pipistrelle, a UK and local priority species anticipated to be present, based upon local biological records.

7.6. It is recommended that an appropriate management technique take place prior to grassland sowing to optimise the uptake of new species and habitat.

Soil Stabilisation and Sward Establishment

7.7. Prior to sowing, soil management should be undertaken, if necessary. Methods such as soil inversion to homogenise any nutrients sourced from fertiliser application and kill any weeds or herbicide application could be utilised with agreement from Torridge Council. The fields

will be sown with a low growing species rich grassland mix, which will be managed by cutting. This seeding mix should be applied only to areas of disturbed lands within the areas indicated on the plan. The areas of wildflower seed mixes will be separated from retained habitat by a stock-proof fencing to prevent any possible grazing by animals. Species rich grassland and wildflower mixes are provided in Table 2B-1 below. Recommended sowing rate of 40kg/ha with 70% grass and 30% wildflower ration for the wildflower areas.

7.8. Species such as common couch, broad-leaved dock, stinging nettle and creeping thistle can be difficult to eradicate and may cause problems with sward establishment. These species should therefore be monitored when undertaking weed control on site. If required, they may need to be targeted by selective scything before they seed in late summer / autumn.

Table 2B-1: Grassland and Wildflower Mixes

GRASSLAND MIX		
SCIENTIFIC NAME	**ENGLISH NAME**	**MIX %**
Agrostis capillaris	Common Bent	4
Festuca rubra	Red Fescue	35
Poa pratensis	Smooth Stalked Meadow Grass	15
Cynosurus Cristatus	Crested Dog's Tail	4
Festuca ovina	Sheep's Fescue	27
Poa trivialis	Rough Stalked Meadow Grass	15
WILDFLOWER MIX		
SCIENTIFIC NAME	**ENGLISH NAME**	**MIX %**
Lotus corniculatus	Birds Foot Trefoil	8
Centaurea nigra	Black Knapweed	5
Medicago lupulina	Black Medick	3
Vicia sativa	Common Vetch	4
Galium verum	Lady's Bedstraw	2
Lathyrus pratensis	Meadow Vetchling	3
Ranunculus acris	Meadow Buttercup	3
Leucanthemum vulgare	Ox-eye Daisy	8
Silene dioicia/latifolia	Red/White Campion	2
Trifolium repens	Red Clover	10
Prunella vulgaris	Selfheal	5
Onobrychis viciifolia	Sainfoin	36
Achillea milliefolium	Yarrow	6

Rhinanthus minor	Yellow Rattle	3

7.9. Creating hedgerows will benefit a range of local species including multiple Priority Species. If the correct species are planted and maintained correctly, a hedgerow's potential can be maximised, providing food and shelter throughout the year, as well as connecting existing green infrastructure and wildlife movement corridors.

7.10. New hedgerows will be planted atop a bank in the style of Deven hedgerow as outlined by a suitable methodology, such as provided by the Devon Hedge Group[14]. The bank should measure approximately 1200mm in height and have a top width of 900mm to allow long term establishment and cultivation of the planted hedge.

7.11. No hedgerow loss is expected as a result of the Proposed Development, though limited hedgerow trimming may be required in order to facilitate safe access.

7.12. They will contain the species proposed in **Table 2B-2**. Planting will be doubled staggered at 6 plants per metre with 300-400mm between rows.

Table 2B-2: Devon Hedgerow Planting Mix

SCIENTIFIC NAME	ENGLISH NAME	MIX %
Crataegus monogyna	Hawthorn	20
Corylus avellana	Hazel	20
Ilex aquifolium	Holly	20
Prunus spinosa	Blackthorn	20
Viburnum opulus	Guelder Rose	20

7.13. It is also important to maintain ground flora along the hedgerows to provide suitable commuting corridors for small mammals and herptiles. This will be achieved by allowing natural colonisation of ground flora from nearby hedgerows. These will be best suited to flourish in the shaded conditions created.

Management Regime for Application Site

7.14. New hedgerows will be planted within the first available planting season (November to March inclusive).

7.15. In year 2, newly planted hedgerow sections will be pruned (see **Figure 1.10 of Volume 3, Technical Appendix 1: Landscape and Visual Assessment** for further details). Existing hedgerows will be cut on a two- (where hawthorn is present) or three-year cycle, with no more than 1/2 cut in any one year. From year 5, new hedgerows will also enter this cycle.

[14] Available at: https://devonhedges.org/management-advice/new-hedges/

7.16. For all hedgerows, any pruning or cutting should be done outside of the breeding bird season (which is March to August inclusive) to minimise disturbance to nesting birds. All hedgerow management will be undertaken by a suitably qualified and experienced arboricultural professional.

8. GENERAL CONSIDERATIONS

Obligations

8.1. During each of the development phases there are a number of legal obligations that should be considered by all those involved in site work:

- Ensure obligations of the Conservation of Habitats and Species Regulations 2017[15] are met by all involved with the site.
- Ensure obligations of the Wildlife & Countryside Act 1981 (as amended)[16] are met by all involved with the site (see **Technical Appendix 2: Preliminary Ecological Appraisal, Volume 3** for further detail).
- Ensure all relevant Health & Safety at Work Act obligations[17] are met.

Good Ecological Practice

8.2. Whilst management practices should only be altered if there is a good ecological reason for doing so, they should not rigidly be adhered to if they are obviously detrimental to wildlife.

[15] Parliament of the United Kingdom, 2017. The Conservation of Habitats and Species Regulations 2017. Available at https://www.legislation.gov.uk/uksi/2017/1012/contents/made

[16] Parliament of the United Kingdom, 1981. Wildlife and Countryside Act 1981 (as amended). Available at http://www.legislation.gov.uk/ukpga/1981/69

[17] Parliament of the United Kingdom, 1974. Health and Safety at Work etc. Act 1974 (as amended). Available at https://www.legislation.gov.uk/ukpga/1974/37/contents

INDICATIVE MANAGEMENT SCHEDULE

8.3. **Table 2B-4** below shows possible months in which activities will occur during habitat establishment and continued management.

Table 2B-4: Timeframes for Management Activities

MANAGEMENT ACTIVITY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Year 1 – Initial Habitat Enhancement												
Hedgerow planting	✓	✓								✓	✓	✓
Removal of existing vegetation and seeds			✓	✓	✓							
Cultivate and allow soil to settle						✓	✓					
Grassland sowing								✓	✓			
Years 2 and 3 - Annual Habitat Management												
Cutting of grassland (once sward is established)								✓	✓	✓	✓	
Pruning of newly-planted hedgerow sections	✓	✓							✓			
Checks by contractor through the initial maintenance			✓	✓	✓	✓	✓	✓				

period to comprise weed clearance, watering and pruning												
Replacement of any dead, dying or diseased newly planted trees or hedgerow										✓	✓	✓
Existing hedgerows cut on a 2- or 3-year cycle, with no more than 1/2 cut in any one year	✓	✓										
Ongoing Annual Management – Year 3 onwards												
Grazing/cutting of grassland				✓					✓			
Ongoing Annual Management – Year 4 onwards												
Light pruning of newly planted hedgerow sections	✓	✓							✓			
Existing hedgerows cut on a 2- or 3-year cycle, depending on species. All hedgerows from year 5, with no more than 1/2 cut in any one year.	✓	✓										

9. DECOMMISSIONING

9.1. At the end of the operational period, decommissioning will take place. This will entail dismantling and removing all of the materials and equipment in order to reinstate the land back to its original condition. Where possible, retaining features such as species diverse grassland and maintaining the hedgerow boundary beyond the lifespan of the Proposed Development will be of benefit to wildlife. This will enable net biodiversity gain to be sustained in the long term.

APPENDIX 2C: BIODIVERSITY NET GAIN ASSESSMENT

Stoneworthy Battery Energy Storage System (BESS)

23/05/2024

Disclaimer

Neo Environmental Limited shall have no liability for any loss, damage, injury, claim, expense, cost or other consequence arising as a result of use or reliance upon any information contained in or omitted from this document.

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Contents

1. INTRODUCTION

Background

1.1. Neo Environmental Ltd has been appointed by RES Ltd (the "Applicant") to undertake a Biodiversity Net Gain (BNG) for a proposed battery storage development (BESS) (the "Development") on lands near Lower Hoppaworthy, Pyworthy, Torrige District, Devon, England, EX22 6LA (the "Application Site").

Development Description

1.2. Stoneworthy Energy Storage System is a proposed battery energy storage system (BESS) comprising approximately 32no. battery enclosures, 16no. PCS (power conversion systems), 16no. MV skids (PCS transformer and switchgear), a 33kV substation building with a high voltage area containing auxiliary transformer and grid compliance equipment, a 132kV grid transformer with associated equipment and a grid connection to a National Grid Electricity Distribution (NGED) overhead line.

Site Description

1.3. The area of the proposed Development (the "Application Site") lies at an elevation of approximately 98 - 110 m AOD and covers a total area of c. 3.6 hectares. It is centred at approximate National Grid Reference (NGR) E 230354 N 101885 and is located c.1km southwest from the village of Pyworthy, c. 1.3km southwest from the village of Derril, and c. 3.8km south west from Holsworthy town.

1.4. The site comprises a single agricultural field currently in use for pastoral farming. The field itself is bound by a mixture of trees, hedgerows and post-and-wire fencing. The land slopes from east to west and there is an area of scrub present towards the north/ northeast. Small pockets of woodland are adjacent to the Application Site's boundaries to the northeast, south and southwest.

1.5. Access will be gained from an unnamed local road adjacent to the northern boundary of the Application Site. This road originates from the Derriton Road c. 1.35km east from the Application Site.

1.6. Recreational Routes include the Public Right of Way (PRoW) Pyworthy 7 located c.0.04km northwest and Pyworthy 3 located c.0.17km southeast of the Proposed Development.

1.7. Electrical infrastructure is present within the Application Site and a solar Farm development is directly adjacent to its southeastern boundary. Two other solar farms are within close proximity to the Application site with one c. 1.9km southwest and another c. 2.6km northeast from the Application site. There are also turbines present within the landscape.

1.8. The area surround the Application Site is predominantly agricultural, punctuated by individual properties and farmsteads and renewable energy infrastructure.

Adopted Design Principles

1.9. Where possible, measures have been implemented as part of the iterative design process to prevent the various phases of the Proposed Development affecting sensitive ecological features. Ecological measures incorporated into the Proposed Development design include the following:

- NGED 132 kV Overhead Line Buffer (15m)
- NGED 33kV Overhead Line Buffer (15m)
- NGED 33kV Buried Line (10m)
- Flood Zone (Avoided)
- Watercourse Buffer (10m)
- Hedgerow Buffer (5m)
- Woodland Buffer (10m)
- Tree Buffer (Dependent on Height & Crown) (Avoided)
- Root Protection Area Determined via Arboricultural Survey (Avoided)
- Trees with bat roost potential (Avoided)

STATEMENT OF AUTHORITY

1.10. All work has been carried out in line with the relevant professional guidance, including CIEEM's Guidelines for Report Writing[1] .

1.11. Thomas Hill, who calculated the net gain, has over five years of experience as an ecologist in a mixture of field and office-based work. Thomas has experience in many surveys and assessments including phase 1 and UK habitat surveys, bat, badger, otter and water vole alongside other protected species surveys. He has worked on projects of varying scales, from simple residential extension developments up to national scale transport infrastructure projects.

[1] CIEEM, 2017. Guidelines for Ecological Report Writing. Second Edition. Available at www.cieem.net

2. LEGISLATION, PLANNING POLICY AND GUIDANCE

INTERNATIONAL LEGISLATION

2.1. International legislation relevant to the Proposed Development is outlined within Table 2-1 below.

Table 2--1: Relevant International Legislation

Directive	Main Provisions
Bern Convention	The Bern Convention[2] came into force in 1982, with the principal aims to ensure conservation and protection of wild plant and animal species and their natural habitats (listed in Appendices I and II of the Convention), to increase cooperation between contracting parties, and to regulate the exploitation of those species (including migratory species) listed in Appendix III.
Bonn Convention	The Bonn Convention[3] came into force in 1985. Contracting Parties work together to conserve migratory species and their habitats by providing strict protection for endangered migratory species (listed in Appendix I of the Convention), concluding multilateral Agreements for the conservation and management of migratory species which require or would benefit from international cooperation (listed in Appendix II), and by undertaking cooperative research activities.
Ramsar Convention	The Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention)[4] came into force in 1975. It is an international treaty for the conservation and wise use of wetlands.

NATIONAL LEGISLATION

Wildlife & Countryside Act 1981 / Conservation of Habitats and Species Regulations 2017

2.2. The Wildlife and Countryside Act 1981[5] (as amended), formerly used to implement EU

[2] Available at: https://www.coe.int/en/web/bern-convention

[3] Available at: https://www.cms.int/en/convention-text

[4] Available at: https://www.ramsar.org/about-the-convention-on-wetlands-0

[5] Parliament of the United Kingdom, 1981. Wildlife and Countryside Act 1981 (as amended). Available at: http://www.legislation.gov.uk/ukpga/1981/69

legislation, has more recently been strengthened by the Conservation of Habitats and Species Regulations 2017. This consolidates and amends existing national legislation, making it an offence to:

- "*Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting*
- *Intentionally kill, injure or take any wild animal listed under Schedule 5 of the Act; intentionally damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 of the Act; disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection*
- *Pick or uproot any wild plant listed under Schedule 8 of the Act"*

Environment Act 2021

2.3. This Act introduced a legally binding target on species abundance for 2030, aiming to reverse declines of key wild species. It creates a requirement for 10% net biodiversity gain as part of development projects, and for a series of Nature Recovery Strategies to cover England. The new Act makes minor amendments to the 1981 Act and 2017 Regulations (see above). It expands measures taken against illegal deforestation, enshrines a legal duty for water companies to reduce adverse impacts from storm overflow discharge, and gives statutory effect to conservation covenants. To assist in the above, it also creates an Office for Environmental Protection.

2.4. The Environment Act supersedes the former UK Post-2010 Biodiversity Framework and UK Biodiversity Action Plan ("BAP"). The BMP and Net Gain Assessment at **Technical Appendices 2B and 2C** aim to demonstrate how the Proposed Development will assist in achieving the Act's net gain targets.

Natural Environment and Rural Communities Act 2006

2.5. The Natural Environment and Rural Communities ("NERC") Act[6] places a duty on planning authorities to have due regard for biodiversity and nature conservation during operations, ensuring that biodiversity is a key consideration in the local planning process.

2.6. Section 41 of the NERC Act lists a number of habitats and species of principal importance for the conservation of biodiversity in England.

[6] Available at https://www.legislation.gov.uk/ukpga/2006/16/contents

Hedgerows Regulations 1997

2.7. Under the Hedgerows Regulations 1997, certain hedgerows[7] are classified as 'Important' based on factors such as the presence of a certain number of woody native plant species. Subject to certain exceptions, the removal of an 'Important' hedgerow is prohibited.

2.8. 'Removal' includes uprooting all or part of the hedgerow, as well as any acts that could lead to the hedgerow's destruction. Removal is permitted under Section 6 of the Act under a small number of exemptions, including:

"for carrying out development for which planning permission has been granted or is deemed to have been granted, except development for which permission is granted by article 3 of the Town and Country Planning General Permitted Development Order 1995 in respect of development of any of the descriptions contained in Schedule 2 to that Order other than Parts 11 (development under local or private Acts or orders) and 30 (toll road facilities)."

Planning Policy

National Planning Policy Framework (2023)

2.9. The National Planning Policy Framework ("NPPF")[8] sets out the government planning policies for England and how they should be applied. Further details can be found within the Ecological Assessment, to which this Net Gain Assessment is appended.

Biodiversity Action Plans

2.10. The UK Biodiversity Action Plan ("UKBAP"; 1994)[9] was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. Lists of national Priority species and habitats were produced with all listed species/habitats having specific action plans, defining the measures required to ensure their conservation.

2.11. While the UKBAP has since been superseded by the Environment Act (see above), regional and local BAPs have been produced to develop plans for species/ habitats of nature conservation importance at regional and local levels. The Devon BAP[10] contains a long list of Priority habitats and species, further details can be found within the Ecological Assessment, to which this Net Gain Assessment is appended.

[7] Available at https://www.legislation.gov.uk/uksi/1997/1160/contents/made

[8] Department for Housing, Communities and Local Government (2023) National Planning Policy Framework. Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

[9] Available at https://data.jncc.gov.uk/data/cb0ef1c9-2325-4d17-9f87-a5c84fe400bd/UKBAP-BiodiversityActionPlan-1994.pdf

[10] Available at: https://www.devon.gov.uk/environment/wildlife/the-devon-biodiversity-action-plan-bap

North Devon and Torridge Local Plan 2011 – 2031

2.12. Adopted in October 2018, this is the current Local Plan for Torridge, the district in which the Application Site falls. The relevant policies set out within the Plan include the following ecological provisions. Further information on the policies outlined below can be found in the accompanying Ecological Assessment to which this Net Gain Assessment is appended.

Policy ST03: Adapting to Climate Change and Strengthening Resilience

Policy ST14: Enhancing Environmental Assets

Policy DM04: Design Principles

Policy DM08: Biodiversity and Geodiversity

Policy DM09: Safeguarding Green Infrastructure

2.13. The ecological reporting of the Proposed Development will consider each of the policies outlined above.

Guidance Documents

BS 42020:2013 Biodiversity

2.14. The British Standards Institute has published *BS 42020:2013 Biodiversity*[11]*. Code of Practice for Planning and Development* which offers a coherent methodology for biodiversity management. This document seeks to promote transparency and consistency in the quality and appropriateness of ecological information submitted with planning applications and applications for other regulatory approvals. This document cites CIEEM's EcIA Guidelines as the acknowledged reference on EcIA reporting, as such where relevant the two should be used in tandem.

[11] BS 42020:2013 Biodiversity. Code of practice for planning and development

3. METHODOLOGY

3.1. Net gain assessment is currently carried out using the Statutory Biodiversity Metric. According to Natural England (the DEFRA agency responsible for originally creating the biodiversity metric assessment methodology):

"The Biodiversity Metric is a biodiversity accounting tool that can be used for the purposes of calculating biodiversity net gain."

3.2. During the onsite habitat survey, habitats were classified utilising the parameters set out within the UK Habitat Classification survey methodology and adapted (where necessary) into the habitats applicable with the Statutory Biodiversity Net Gain Metric by a suitably qualified ecologist.

3.3. This report uses the methodology and calculation tool referenced above. Broadly speaking, the metric assessment involves calculating scores for 'biodiversity units' (indicators of site's biodiversity value) pre- and post-development. Each score is based on the area (or, for linear habitats, the length) of different habitats present or proposed, their ecological distinctiveness, connectivity, condition, how long they take to create, and how likely it is that any proposed habitat creation will succeed.

4. NET GAIN ASSESSMENT

4.1. The Application Site comprises 3.6ha of poor condition modified grassland calculated to a total value of 7.2 habitat units, and contains hedgerow calculated to a total value of 6.53 hedgerow units. of Further details of baseline habitats can be found in the accompanying Technical Assessment 2: Ecological Assessment.

4.2. As outlined within the Landscape and Ecological Management Plan ("LEMP") Figure 1.10 of the Landscape and Visual Impact Assessment ("LVIA") the Proposed Development includes the planting of 7678m^2 species diverse grass and wildflower mix and 200m of species-rich native hedgerow with associated bank, to be created in the style of Devon hedges. Further details on planting regimes and management can be found within the aforementioned LEMP and Appendix 2B – Biodiversity Management Plan.

4.3. Site design elements will be built solely atop poor condition modified grassland, resulting a total loss of 1.88ha / 3.76 units of habitat.

4.4. Overall, the Proposed Development will result in an increase of **21.90%** (7.20 to 8.78) in habitats units and **34.06%** (6.65 to 8.92) in hedgerow units. These amounts exceed the statutory 10% requirement of the Environment Act, showing that the Proposed Development will lead to an overall net gain in biodiversity for the Application Site.