environmental solutions ltd

ecology • arboriculture • fisheries • licencing

RHEDA CROSS EAST, FRIZINGTON

ECOLOGICAL APPRAISAL

Prepared for: Dr McKay

Date: December 2024

Report Reference: JN00737/D01

CONTENTS

1.	INTRODUCTION	2
2.	METHODOLOGY	5
3.	STATUTORY PROTECTION & POLICY	14
4.	DESK STUDY RESULTS	19
5.	SURVEY RESULTS	24
6.	IMPACT ASSESSMENT	33
7.	REFERENCES	38

DRAWINGS

JN00737/DW01	Habitat Plan

APPENDICES

Appendix 1	Target Notes
Appendix 2	Protected Species Legislation
Appendix 3	CBAP Species List

INTRODUCTION

Background

1.1 SK Environmental Solutions Limited was commissioned by Simon Blacker on behalf of Dr McKay to undertake an Ecological Appraisal of land located at Rheda Cross, Frizington, Cumbria. The site is located at an approximate central grid reference of NY 02523 16732 and the nearest postcode is CA26 3EA.

Aims and Objectives

1.2 The purpose of the Ecological Appraisal is to identify:

- the major habitats present within the site and the immediate vicinity;
- the potential for legally protected and / or notable species to be present;
- the need for additional specialist ecological surveys; and
- potential impacts and mitigation requirements.

1.3 This Ecological Appraisal does not constitute a full survey for protected species to standard survey methodologies but is used as a tool to determine the potential of a site to support protected/notable species and whether any additional specialist species surveys are likely to be required to inform a mitigation strategy.

1.4 These results have been used to assess the nature conservation importance of the site and its immediate surroundings, with regards to the habitats and species present.

Definition of Terms

1.5 For the purpose of this report, the term ‘site’ is used to describe the location of the proposed development, as shown below in Figure 1, Site Location.

Figure 1. Site Location.

Site Description

1.6 The site comprises an area of land situated within a residential area, to the south of Rheda Park Road, Frizington, Cumbria. Rheda Cross, which is an existing bungalow built in 1988, located to the west of the site sits on the original site of Rheda Mansion, which fell into disrepair and was demolished in the 1950s.

1.7 Cross Lacon, a scheduled ancient and Grade II listed monument is located within the garden of Rheda Cross, adjacent to the site's western boundary. Erected during the medieval period between the 9th to 15th centuries AD the Christian cross is well preserved and marks the routeways and religious customs of the medieval period.

1.8 The site itself comprises of rough grassland surrounded by lines of trees, with ornamental planting that then form the boundaries with the adjacent properties. The site can be accessed by stone steps, remnants of Rheda mansion, from Rheda Cross. The wider area surrounding the site is comprised of the Rheda Park estate to the north-west and south-east, with further residential areas carrying on towards the village of Frizington located approximately 0.9km east. To the north and south lies grassland and grazing pasture with areas of woodland.

Planning History and Development Proposals

1.9 Outline planning permission to develop the site for a single dwelling was granted by Copeland Council in 1988. The current proposed application is for the construction of a residential property on the same plot of land.

1.10 Outline planning was also granted in May 1989 for the erection of a single dwelling on the opposite side of Rheda Cross. The plot was located to the north of The Cottage and Westerlea and shared a secondary driveway with these properties. An outline planning application was submitted again for this site in 2019 and was eventually withdrawn in January 2022.

2. METHODOLOGY

2.3 Ecological receptors, including designated sites and protected/notable habitats and species, which could be affected by the proposed development have been identified through a desk-based assessment of available records, published sources and ecological survey work. From this information, the potential 'Ecological Zone of Influence' (EZoI) relating to the proposed development has been established.

2.4 The assessment has been undertaken in accordance with the Chartered Institute for Ecology and Environmental Management (CIEEM) guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018) and British Standards for Biodiversity Code of Practice for Planning and Development BS4202013 (BSI Standards Limited, 2013).

Baseline Methodology

Study Area

2.5 To inform the scope of the assessment, consideration has been given to the Ecological Zone of Influence (EZoI) of the proposed development. The EZoI is defined as an area over which important ecological features may be affected as a result of biophysical changes caused by the proposals and associated activities. The extent of such changes will typically reduce as the distance from the proposed development increases, and whether effects are experienced is dependent on the sensitivity of individual habitats, species or other ecological features. As such it is problematic to define a specific EZoI which captures all potential effects arising from the proposed development on all ecological features that may be present and different search areas/study areas have been used for different species/habitats. The EZoI for the ecological features, which were subject to specific desktop or site survey work, are set out below.

Ecological Zones of Influence

- Statutory designated sites within 2km of the site;
- EPSM search for protected/notable habitats and species within 2km of the site; and
- UKHab Survey – the site.

Desk Study

2.1 The desktop study involved conducting database searches for statutory designated sites and features of interest within and surrounding the site up to 2km from its red line boundary. EPSM

records for legally protected / notable species or habitats, were obtained from Natural England's Magic Map. The baseline conditions are based on a review of the following:

- Multi-Agency Geographical Information for the Countryside (MAGIC) website - to identify statutory designated sites and Priority Habitats;
- Ordnance survey mapping (to identify potentially notable habitats);
- Aerial photography (to identify potentially notable habitats);
- Cumbria Biodiversity Action Plan (CBAP); and

2.2 The consultation and desk study dataset are a large document and can be provided on request.

UK Habitat Classification (UKHab) Survey

2.3 SK Environmental Solutions Limited undertook a UK Habitat Classification Survey (UKHab) of the site and its immediate surroundings on 14th November 2024. Experienced SKE ecologist Bridie Hamilton conducted the surveys.

2.4 The UKHab is a habitat classification system for the UK that has been developed to provide a rapid system for recording and classifying habitats which can be used for field-based surveys. It is intended to assist ecologists to identify and map habitats in a consistent and unified way and has been designed to provide outputs that are suitable for ecological impact assessment, habitat metrics and better data integration and sharing between organisations.

2.5 The field survey broadly followed the methodology as set out in Data Collection and Mapping, Chapter 3 of 'The UK Habitat Classification User Manual, Version 2.01' and The Chartered Institute of Ecology and Environmental Management's (CIEEM's) Guidelines for Preliminary Ecological Appraisal (2013). It provides information on the habitats within the survey area as well as identifying the actual or potential presence of legally protected or otherwise notable species in or immediately adjacent to the working areas. The main habitats within the site were mapped and are shown on JN00737_DW01 Habitat Plan.

2.6 Target Notes were taken to provide a more detailed description of a particular habitat in terms of species composition or as a means of highlighting a particular feature of ecological interest; these are provided in Appendix 1.

2.7 Plant names follow 'New Flora of the British Isles' (Stace 2019). The common and scientific names of all botanical species identified are provided when first mentioned in the text, but only the common name is stated thereafter.

2.8 In addition to establishing the baseline ecological interest within the area, it was intended that the survey should identify areas where further surveys may be required during the appropriate season. Habitat potential for legally protected or national / local BAP species including, but not limited to, bats, badger *Meles meles*, breeding birds, flora, amphibians, and reptiles was recorded.

Visual Survey for Badgers

2.9 The site was systematically surveyed for evidence of badgers, in the form of:

- Setts - comprising either single isolated holes or a series of holes, which may be link to each other underground;
- Faeces - badgers deposit faeces in characteristic excavated pits, concentrations of which (latrine sites) are typically found at home range boundaries, field boundaries and around setts;
- Paths - worn paths used by badger, often linked to setts or foraging grounds;
- Scratching posts - typically at the base of tree trunks;
- Snuffle holes - scrapes where badgers have searched for food;
- Day nests - bundles of grass and other vegetation where badgers may sleep above ground; and
- Hairs - usually found outside setts or caught under fencing.

2.10 Where badger setts were found (if any), evidence was recorded as follows:

- Number of well-used holes - one or more of the features: well-worn entrance; freshly excavated soil; and bedding material;
- Number of partially used holes - leaves or twigs in entrance and/or mosses and other plants growing in or around entrance;

- Number of disused holes - partially or completely blocked, with considerable amount of excavation required for reoccupation; and
- The presence of cobwebs, leaf litter, droppings, footprints and hair in the immediate vicinity and at the opening.

2.11 Where feasible, badger setts (if identified) were broadly categorised in accordance with The classification of badger *Meles meles* setts in the UK: A review and Guidance for Surveyors (Andrews R. (2013)):

- Main sett - continuously used, breeding and over-wintering sett for a social group of badgers. Only one main sett will exist in each social group's territory, and will be relatively centrally located within the group's range;
- Annexe sett - annexe of the main sett, linked by well-used paths to the main sett (but not connected underground) and not continuously used;
- Subsidiary sett - distant from the main sett. Several entrances, but with no well-used paths connecting to the main sett, and only used seasonally; and
- Outlier sett - distant from the main sett. Small, with only one of two entrances only. Used for short periods sporadically, with no obvious, well-used paths connecting to other setts.

Ground Level Tree Assessment for Roosting Bats

2.12 A ground level tree assessment for roosting bats was undertaken during the site survey. All trees within the site were assessed for their potential to support roosting bats following Bat Surveys for Professional Ecologists Good Practice Guidelines (4th Edition, 2023). The trees were classified as per Table 1 below.

Table 1: Tree classification system (BCT 2023)

Suitability	Description of roosting habitats
Negligible	Negligible habitat features that could be used by roosting bats.
PRF - I	The Potential Roost Feature (PRF) is only suitable for individual bat use, or very small numbers of bats, either due to size or lack of suitable surrounding habitat.
PRF - M	The PRF is suitable to multiple bats and may be, therefore, used as a maternity colony.

Limitations

2.13 Ecological surveys are limited by factors that affect presence of plants and animals such as time of year, weather, migration patterns and behaviour. The timing of the survey (November) is considered a sub-optimal time of year to carry out such work. However, the aim of the survey is not to present an exhaustive list of vegetation present but to provide an indication of broad habitat types and whether there is the potential to support notable or protected species.

Assessment Criteria and Assignment of Significance

Valuation

2.14 The evaluation of ecological features and resources has been based on sound professional judgement whilst also drawing on the latest available industry guidance and research. The approach taken in this report is based on that described in 'Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal' published by the Chartered Institute of Ecology and Environmental Management (CIEEM 2018), whereby important ecological features are identified, and these are considered within a defined geographical context using the following frame of reference:

- International;
- UK;
- National (i.e. England);
- Regional;
- County;
- District;
- Local; and
- Neighbourhood (site and its vicinity, including areas of habitats contiguous with or linked to those on site).

2.15 The valuation of sites makes use of established value systems e.g. Sites of Special Scientific Interest are of national importance and Sites of Importance for Nature Conservation are of county

importance. Professional judgement is however required for the valuation of sites of less than district value.

2.16 The valuation of species populations, assemblages of species and habitats also uses accepted criteria, examples include:

- Species populations: the importance of populations can be evaluated on the basis of their size, recognised status (e.g. published lists of species of conservation concern, Biodiversity Action Plan (BAP) status) and legal protection status. Bird populations, for example, exceeding 1% of published bio-geographic populations are considered to be of international importance, and those exceeding 1% of published national populations are considered to be of national importance, and so forth;

- Species assemblages: in some instances, it is the species assemblage that is of importance. Criteria of use to evaluate the importance of assemblages included SSSI selection criteria. Fuller (1980) provides a framework for evaluating the relative importance of bird assemblages; and

- Habitats: criteria for the evaluation of habitats and plant communities include Annex III of the EC Habitats Directive, guidelines for the selection of biological SSSIs and, where available, Local Authority criteria for the selection of Local Sites (e.g. County Wildlife Sites). Legal protection status is also a consideration for certain habitats.

2.17 In this assessment, designated sites, species and habitats are considered to be Valued Ecological Receptors (VER) if they meet the following minimum level of importance:

- Sites – local importance;

- Species – local importance; and

- Habitats – local importance.

2.18 Any potential impacts to identified VERs will be fully considered within this assessment. Any ecological features that do not meet the VER criteria, above, will be scoped out of the assessment. This is because it is considered that no significant effect can occur to features of less than local importance, except where a feature has high social or economic value.

2.19 The description and valuation of ecological features has taken account of any likely changes, including, for example, trends in the population size or distribution of species; likely changes to the extent of habitats; and the effects of other proposed developments or land-use changes.

Identification and Magnitude of Impacts

2.20 The CIEEM guidance also sets out a methodology for the assessment of likely impacts arising from proposed developments. The method used in this assessment is based on the CIEEM guidance and the *British Standards for Biodiversity: Code of Practice for Planning and Development* (BS42020:2013), is summarised below.

2.21 Based on the parameters of the proposals, likely impacts have been determined with reference to aspects of the ecological structure and function on which the feature or resource depends. This includes factors such as the available resources, ecological processes, human influences, historical context, ecological relationships, ecological role or function and ecosystem properties. In this context, the nature of the impact has been characterised and considered using the following parameters set out in the CIEEM guidance:

- Positive or negative – will the activity lead to a beneficial or an adverse effect;
- Extent – the spatial or geographical area over which the impact may occur, the area of habitat or number of individuals affected;
- Magnitude – this refers to size, amount, intensity and volume, and should be expressed as quantitatively as possible;
- Duration – the time for which the impact is expected to last prior to recovery or replacement, i.e. short-term or long-term, as defined in relation to ecological characteristics (such as a species' lifecycle);
- Frequency and Timing – some changes may only cause an impact if they coincide with critical life-stages or seasons, whilst frequent events may cause a greater effect than a single event; and
- Reversibility – an effect may be irreversible in that recovery is not possible within a reasonable timescale or there is no reasonable chance of action being taken to reverse it, i.e. permanent or temporary.

2.22 Based on the parameters outlined above, a broad scale has been produced using the terminology summarised in Table 2.

Table 2. Definition of Magnitude

Magnitude	Definition
High	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements (Adverse).
	Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality (Beneficial).
Medium	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements (Adverse).
	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Beneficial).
Low	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements (Adverse).
	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial).
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements (Adverse).
	Very minor benefit to or positive addition of one or more characteristics, features or elements (Beneficial).
No Change	No loss or alteration of characteristics, features or elements; no observable impact in either direction.

Significance of Effects

2.23 The effect is the term used to express the consequence of an impact (expressed as the significance of effect), which is determined by correlating the magnitude of the impact to the value of the receptor.

2.24 The CIEEM Guidance defines a ‘significant effect’ as:

2.25 “an effect that either supports or undermines biodiversity conservation objectives for ‘important ecological features’ or for biodiversity in general”, [going on to state that] “significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution).”

2.26 For habitat areas and species, an effect is considered to be significantly adverse if the favourable conservation status of a VER is compromised as a result of the proposed development. Conservation status is defined by CIEEM as being:

- Habitats – "conservation status is determined by the sum of the influences acting on the habitat and its typical species that may affect its long-term distribution, structure and functions as well as the long-term survival of its typical species within a given geographical area".

- Species – "conservation status is determined by the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within a given geographical area".

2.27 The decision as to whether the favourable conservation status of a VER is likely to be compromised is made using professional judgement, based on an analysis of the predicted effects of the development.

2.28 A similar process is used for designated sites that could be affected by the development, except that the focus is on the effects on the integrity of each site, defined as "the coherence of ecological structure and function, across a site's whole area, that enable it to sustain the habitat, complex of habitats and/or levels of populations of species for which it was classified." This assessment is made with reference to the features for which a site has been classified/notified and involves combining assessments of the effects on the conservation status of each of these features.

2.29 For non-statutory designated sites, such features may not have been formally defined and will need to be agreed with the designating authority (e.g. local authority or county wildlife trust).

2.30 An effect is considered to be significantly beneficial if development activities cause:

- A non-valued ecological receptor to become valued;

- Restoration of favourable conservation status for a habitat/species population; and/or,

- Restoration of a site's integrity (where this has been previously undermined.

3. STATUTORY PROTECTION & POLICY

Legislative Framework

3.1 The following legislation and guidance documents have been used to underpin the ecological impact assessment reported in this Section:

- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019;
- Bern Convention (on the Conservation of European Wildlife & Natural Habitats; and on the Conservation of Migratory Species of Wild Animals) 1979;
- The Conservation of Habitats and Species Regulations 2010;
- The Birds Directive 2009;
- Wildlife & Countryside Act 1981 (and subsequent amendments);
- Countryside and Rights of Way Act 2000;
- Natural Environment and Rural Communities (NERC) Act 2006. Section 41 includes lists of habitats and species recognised as of 'principal importance' for the conservation of biodiversity. Section 40 of the NERC Act 2006 requires all public bodies to have regard for biodiversity conservation when carrying out their function. This is commonly referred to as the 'biodiversity duty';
- Protection of Badgers Act 1992;
- Environment Act 2021; and
- The Hedgerow Regulations 1997.

3.2 How the legislation relates to protected species is set out in Appendix 1.

Planning Policy

3.3 Chapter 2 of the National Planning Policy Framework (NPPF, 2019) describes the Government's objectives on achieving sustainable development. The environmental objective is "*to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste*

and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."

3.4 The NPPF Chapter 15 sets out the Government's objectives for planning in regard to the protection of habitats and biodiversity. The planning objectives in relation to biodiversity and the natural environment are laid out in paragraph 170 as follows: "*Planning policies and decisions should contribute to and enhance the natural and local environment by:*

a) 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);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) 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

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."

3.5 The Copeland Local Plan 2021-2038 (draft publication) contains a number of policies which relate to the natural environment. The policies listed below are considered to be of particular relevance to ecology:

Strategic Policy N1PU: Conserving and Enhancing Biodiversity and Geodiversity

> "The Council is committed to conserving the borough's biodiversity and geodiversity including protected species and habitats.

Potential harmful impacts of any development upon biodiversity and geodiversity must be identified and considered at the earliest stage.

Proposals must demonstrate, to the satisfaction of the Council, that the following mitigation hierarchy must have been undertaken:

Avoidance – Biodiversity and geodiversity must be considered when drafting up proposals and any potential harmful effects on biodiversity and geodiversity must be identified along with appropriate measures that will be taken to avoid these effects

Mitigation – Where harmful effects cannot be avoided, they must be appropriately mitigated in order to overcome or reduce negative impacts.

Compensation – Where mitigation is not possible or viable or in cases where residual harm would remain following mitigation, harmful effects should be compensated for. Where this is in the form of compensatory habitat of an area of equivalent or greater biodiversity value should be provided. Compensation is a last resort and will only be accepted in exceptional circumstances.

Where harm remains to a National Site Network or Ramsar site, or functionally linked land, development will only be approved where it can be demonstrated that there are imperative reasons of overriding public interest. In such cases, compensatory measures must ensure the overall coherence of the network of European sites as a whole is protected.

Planning permission will be refused for any development if significant harm cannot be avoided, mitigated or compensated for.

A Construction Environmental Management Plan should be submitted where appropriate and sustainable construction methods must be used where possible.

Development proposals where the principal objective is to conserve or enhance biodiversity and geodiversity interests will be supported in principle."

3.6 Strategic Policy N3PU: Biodiversity Net Gain

"All development, with the exception of that listed in the Environment Act must provide a minimum of 10% biodiversity net gain over and above existing site levels, following the application of the mitigation hierarchy set out in Policy N1PU above. This is in addition to any compensatory habitat provided under Policy N1PU.

Net gain should be delivered on site where possible. Where on-site provision is not appropriate, provision must be made elsewhere in order of the following preference: 1. Off site in an area identified as a Local Nature Recovery Network; 2. Off site on an alternative suitable site within the borough; 3. Through the purchase of an appropriate amount of national biodiversity units/credits.

Planning applications must include a Biodiversity Gain Plan which will identify the biodiversity merit of onsite habitats both prior to and after development (using the relevant Metric system), set out details to reduce or prevent adverse effects and demonstrate how net gains will be obtained.

Sites where net gain is provided (on or off site) must be managed and monitored by the applicant or an appropriate body funded by the applicant for a minimum period of 30 years. Annual monitoring reports detailing the sites condition post-enhancement must be submitted to the Council each year over this period.

Where there is evidence of deliberate neglect or damage to any of the habitats on development sites in order to reduce its biodiversity value their deteriorated condition will not be taken into consideration and previous ecological records of the site and/or the ecological potential of the site will be used to decide the acceptability of any development proposals."

3.7 Policy N13PU: Woodlands, Trees and Hedgerows

"Existing trees and hedgerows which contribute positively to the visual amenity and environmental value of their location will be protected. Developers are encouraged to incorporate tree planting and hedgerows into new developments where possible and appropriate.

Development proposals which are likely to affect any trees within the borough will be required to:

1) Include an arboricultural assessment as to whether any of those trees are worthy of retention and protection by means of a Tree Preservation Order

2) Submit proposals to replace or relocate any trees that are to be removed with net provision at a minimum ratio of 2:1. Replacement trees should be on site and with native species where possible.

Any proposed works to trees within Conservation Areas, or those with Tree Protection Orders, will be required to include an arboricultural survey to justify why works are necessary and that the works proposed will, where possible, not adversely affect the amenity value of the area. New development should not result in the loss of or damage to ancient woodland or veteran or aged trees outside woodland unless there are wholly exceptional reasons and a compensation strategy exists. This could include Nationally Significant Infrastructure Projects and Orders under the Transport and Works Act."

3.8 Specific legislation relating to protected species in England can be found at Appendix 2.

4. DESK STUDY RESULTS

Aerial Photography and OS Maps

4.1 Aerial photography and Ordnance Survey (OS) maps were used to identify any waterbodies or watercourses within 500m of the site, shown in Figure 2, below.

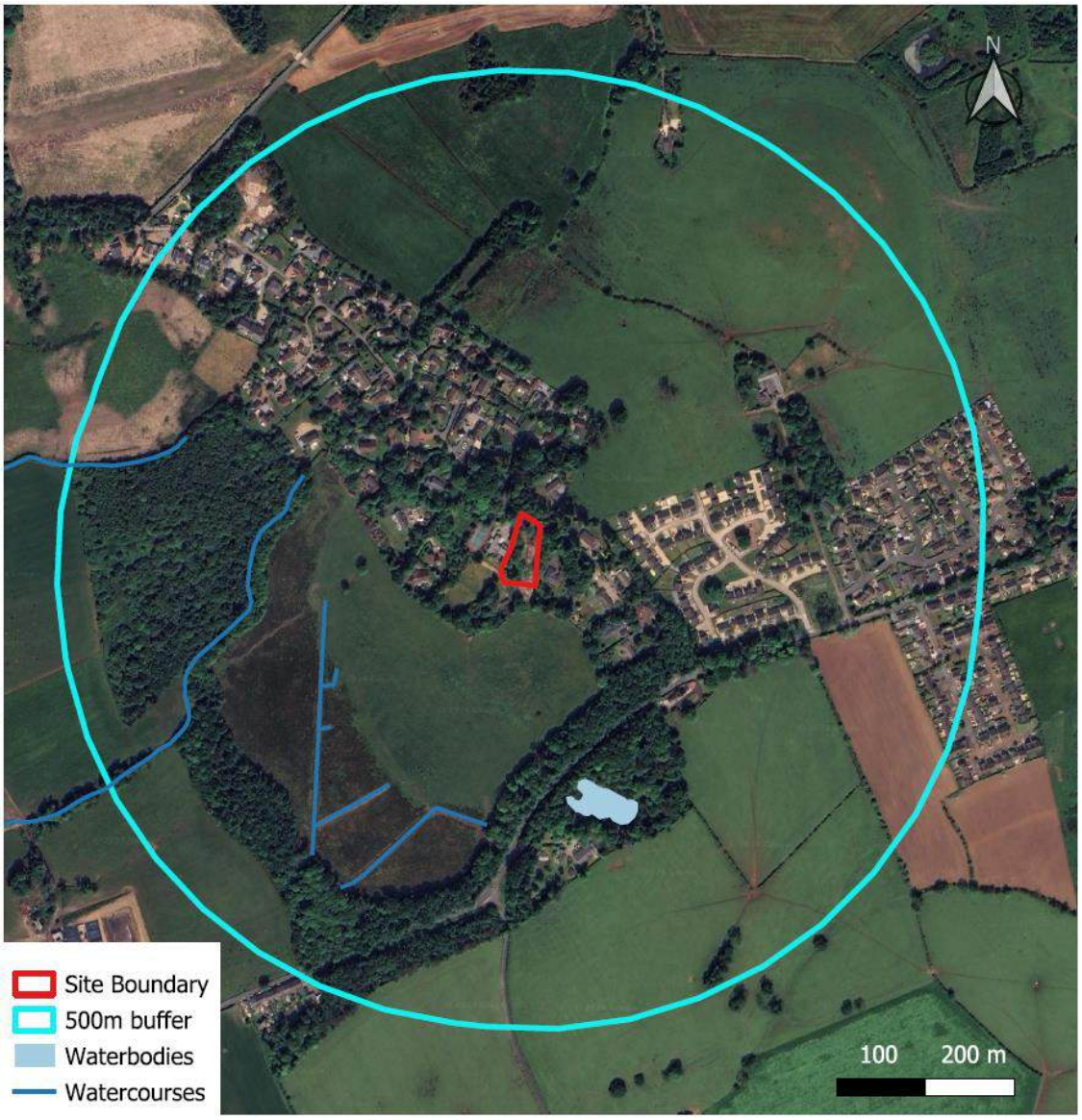


Figure 2. Mapped water features within 500m of the site. Scale as a guide only.

4.2 The following watercourses are mapped in Figure 2:

- Two sets of field drains are located south of the site, the closest of which is 200m west of the south-west corner of the site boundary. These were most likely dug as drainage for the surrounding grassland; and

- Two small watercourses are located to the west of the site, the closest of which is located approximately 250m from the site boundary. Both watercourses stem from Bowthorn Beck which then merges with Nor Beck further south of the site, in the town of Cleator Moor

4.3 A single pond, extending to an area of approximately 2087m^2, is situated approximately 230m south of the site in an area of woodland located across the B5294 road.

Statutory & Non-Statutory Designated Sites for Nature Conservation

Statutory Designated Sites

4.4 Natural England's Magic Map identified one statutory designated site located within 2km of the site boundary. These areas shown on Figure 3, below.

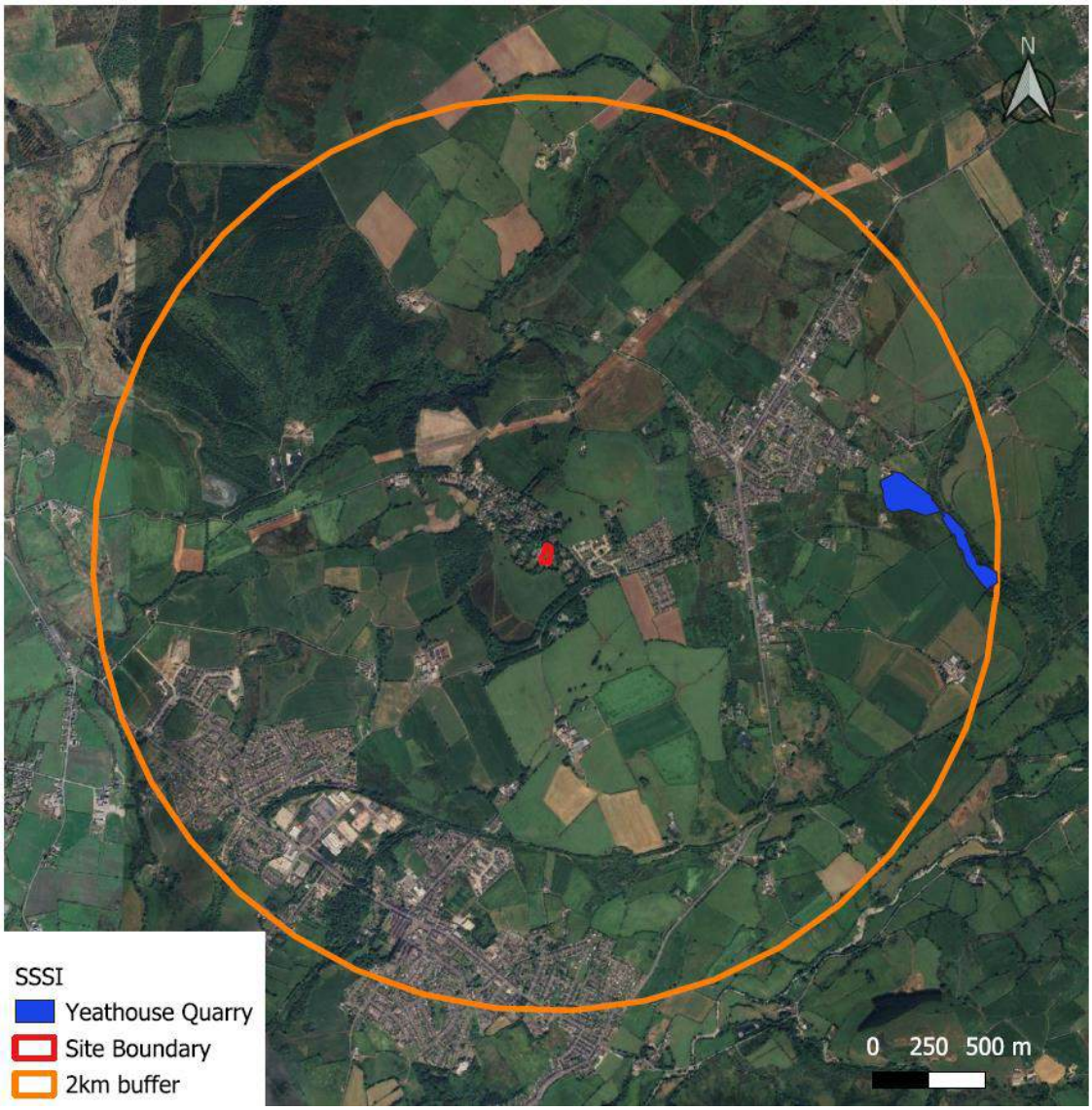


Figure 3. Statutory designations within 2km of the site.

4.5 The Yeathouse Quarry Site of Special Scientific Interest (SSSI) located approximately 1.5km east of the site. Measuring an area of 5.17ha the SSSI is designated for its geological exposures located within the quarry cuttings that include significant unconformity between the Dinantian and Lower Palaezoic rocks of the Skiddaw Group.

4.6 Yeathouse Quarry SSSI is considered to be of **negligible importance** for nature conservation, as it is designated for its geological features.

Trees and Woodland

4.7 No areas of ancient woodland within, or adjacent to, the site have been identified by CBDC or Natural England's Magic Map.

4.8 The Woodland Trust's database of notable, veteran and ancient trees identified no such trees within, or adjacent to, the site.

Local Biodiversity Action Plan

4.9 The Cumbria Biodiversity Action Plan (CBAP) is relevant to the proposed development site. The CBAP lists action plans for the following habitats:

- Mesotrophic standing waters;
- Rivers and streams;
- Cities, towns and villages;
- Coastal habitats;
- Honeycomb worm reefs;
- Ancient and/or species rich hedgerows;
- Calcareous grassland;
- Hay meadows and lowland pastures;
- Limestone pavement;
- Purple moor-grass and rush pasture;
- Blanket bog;
- Upland heathland;
- Basin mire;
- Lowland raised mire;
- Reedbed;

- Upland oak woodland;
- Upland mixed ashwood; and
- Wet woodland.

4.10 In 2009 the CBAP was updated to include all species listed in the UK BAP at the time (now S41 of the NERC act). The full list of species included within the CBAP can be found in Appendix 2.

Sites of Priority (BAP) Habitat

4.11 Natural England's Magic Map identified areas several areas of deciduous woodland within 500m of the site.

4.12 Frizington Hall Wood located approximately 370m north also contains an area of ancient woodland and a small area of replanted ancient woodland.

Notable Species License Return Records

4.13 A detailed search of Natural England's Magic Map was undertaken to identify any granted European protected species applications within a 2km area of the site. One granted European species license was identified for whiskered *Myotis mystacinus*, brandts *Myotis brandti* and natterers bat *Myotis nattereri*: EPSM2013-6035, located approximately 1.9km south-west of the site in the town of Cleator Moor.

5. SURVEY RESULTS

General Site Description

5.1 The site primarily comprises of rough grassland with trees surrounding the east and west boundaries of the site. Ornamental stone steps, remnants of the demolished Rheda mansion, can be found leading up the site from Rheda Cross house located on the western boundary between a line of elm *Ulmus procera*, beech *Fagus sylvatica* and ash *Fraxinus excelsior* trees. The eastern boundary comprises Leyland cypress *Cupressus* × *leylandii* along its southern end with birch *Betula pendula*, goats willow *Salix caprea*, elm and beech to the north. A mature, stand-alone elm tree is located just outside the southern boundary of the site.

Field Survey

Habitats

Overview

5.2 The main habitats recorded within the site are described below. Habitats and other ecological features of interest are shown JN00737_DW01 Habitat Plan. The main habitats recorded include:

- g4 – modified grassland; and
- 33 – line of trees.

g4 – modified grassland

5.3 The site is comprised of wet, modified grassland (TN1) with a dominance of soft rush *Juncus effusus* that has occurred over time as management on the site has lowered. Small remnant patches of landscaped planting in the form of rhododendron and St John's wort *Hypericum perforatum* are present in small areas however other species associated with modified grassland such as cocks foot *Dactylis glomerata*, curly dock *Rumex crispus*, creeping thistle *Cirsium arvense*, foxglove *Digitalis purpurea* and creeping buttercup *Ranunculus repens* have now grown through these and over the rest of the site. The grassland is considered to be of **neighbourhood** importance.

Photograph 1. Modified grassland area with a dominance of soft rush.

33 – line of trees

5.4 The site is bordered to the east (TN2) and west (TN3) by lines of trees. The eastern line comprises a group of Leyland cypress located centrally with goat willow, sycamore *Acer pseudoplatanus*, elm and ash to the north and sycamore and a group of laurels to the south. The western tree line consists of a group of laurels, elm, ash, birch, holly *Ilex aquifolium*, oak *Quaercus robur* and Holme oak *Quaercus ilex*.

Photograph 2. Tree line east.

5.5 The eastern tree line is comprised of a line of planted Leyland Cypress that demarcate the boundary of the site. Towards the northern end of these Leyland Cypress is a line of sycamore and a goat willow.

Photograph 3. Tree line west.

5.6 The line of trees located along the western boundary is a mix of native oak, elm, ash, birch and holly with ornamental planting in the form of laurels and Japanese maple *Acer palmatum*.

Individual trees

5.7 One standalone tree is set back from the two main groups, situated just outside the southern boundary of the site, the tree, a large elm, has a broad crown with some minor deadwood and ivy.

Photograph 4. Individual elm tree

5.8 The individual trees are considered to be of **local importance** for nature conservation.

Notable Species

Badger

5.9 No badger field signs were recorded within the site boundary during the site survey. Additionally, no field signs were recorded within the area of Rheda Park that lies within 30m of the site boundary. The surrounding grassland and woodland around the site is likely to provide appropriate habitat for badgers and it is likely commuting badgers may use the surrounding area.

5.10 The site is considered to be of **neighbourhood importance** with respect to badgers.

Bats

5.11 The habitats within the site are considered to provide some suitability for foraging bats, particularly along the boundary tree lines and the wider woodland and hedgerow habitats.

5.12 No suitable Potential Roost Features (PRFs) were identified in any of the individual trees present however some of the deadwood areas covered in ivy may have PRF's that are currently hidden, if any of these are affected by the development it is recommended, they are soft felled with a licensed ecologist present.

5.13 The site is therefore considered to be of **neighbourhood importance** for bats.

Otter and Water Vole

5.14 No field evidence of otter presence was identified within the site. A small watercourse is located approximately 250m west of the site that is an offshoot of Bowthorn Beck located 250m west of the site. As otters have been identified as being present in some form in most of the watercourses in Cumbria it should be assumed that they may be using the watercourses nearby.

5.15 The site is considered to be of **neighbourhood importance** for otter.

5.16 There are no records of water vole within 2km of the site, the species are not known to be present in the locale and there is no suitable habitat on site. The site is considered to be of **negligible importance** for water vole.

Red Squirrel

5.17 No squirrel feeding signs were recorded within the trees and surrounding woodland during the site survey, nor were any dreys identified within the canopy adjacent to the site.

5.18 The site itself does contain suitable habitat for squirrels within the mature trees and lines of trees that surround the east and west boundary. The nearby woodland will also provide suitable drey building habitat.

5.19 Overall, the site is considered to be of **negligible importance** for red squirrel.

Birds

5.20 The grassland within the site offers little suitable habitat for ground nesting species and is not open enough to be suitable for loafing or foraging wintering species. The trees present within and adjacent to the site will provide suitable nesting habitat for common passerines.

5.21 The site is considered to be of **neighbourhood importance** for breeding birds.

Reptiles

5.22 The longer sward grassland of the site is considered to provide some suitability for reptiles.

5.23 Suitable hibernacula habitat is limited to the boundary habitats of the site consisting of younger shrubs and longer sward grassland which also have potential to be used as commuting corridors as they provide connectivity to the wider landscape. In isolation, the habitats within the site are not considered to be of sufficient size or quality to support a stable population of reptiles.

5.24 Therefore, the site is considered to be of **neighbourhood importance** for reptiles.

Amphibians

5.25 A single pond is located within 500m of the site across the B5294. The pond is on private land and could not be assessed during the site survey. No EPSM license return records of great crested newt were returned by MAGIC and this is the only pond located within 500m of the site.

5.26 The habitats within the site provide limited terrestrial habitat for amphibians including great crested newt. Given the location of the pond and the barrier of the B5294 road, overall, the site is considered to be of **neighbourhood importance** for common amphibians.

Terrestrial Invertebrates

5.27 No invertebrates of note were recorded during the site survey. The habitats on site are of high quality and are therefore likely to only support common and widespread invertebrate assemblages. The site is considered to be of **neighbourhood importance** with respect to invertebrates.

Other Notable Species

5.28 The site has some potential to support hedgehog. However, the habitats are common in the surrounding area and therefore the proposed site is considered to be of **neighbourhood importance** for hedgehog.

Invasive Non-Native Species

5.29 No invasive non-native flora or fauna were recorded on site during the site survey.

5.30 The site is considered to be of **negligible importance** for invasive non-native flora and fauna.

Protected & Notable Flora

5.31 No protected or notable flora were recorded during the site survey. The site is considered to be of **negligible importance** for protected/notable flora.

Summary of Valued Ecological Receptors

5.1 Valued ecological receptors (VERs) are those features/sites that are considered to be valued at a local level or higher. Only VERs are considered further within this assessment.

5.2 A summary of the valuation assessment and the identified VERs that have been identified for the proposed development are summarised in Table 5 below.

Table 5. Valued Ecological Receptors

Site/Habitat/Species	Value	VER?
Designated Sites		
Statutory sites - SSSI	Negligible (Geological)	Not VER
Habitats located within the proposed site		
Modified grassland	Neighbourhood	Not VER
Native trees / tree lines	Local	**VER**
Species		
Invertebrates	Neighbourhood	Not VER
Amphibians	Neighbourhood	Not VER
Reptiles	Neighbourhood	Not VER
Bird species	Neighbourhood	Not VER
Bat species	Neighbourhood	Not VER
Otter	Neighbourhood	Not VER
INNS	Neighbourhood	Not VER

Site/Habitat/Species	Value	VER?
Notable flora	Neighbourhood	Not VER

6. IMPACT ASSESSMENT

Future Baseline Conditions – Do Nothing Scenario

6.3 In the absence of the proposed development, it is not anticipated that the features of the site would change significantly, although some habitats will mature, and trees will grow taller/larger over time.

6.4 Climate change could influence future ecological baseline if changes in temperature were to put stress on local ecosystems. However, changes resulting from climate change will be gradual and over a long period of time. Therefore, any changes would be predicted to be very small.

Mitigation, Compensation and Enhancement Measures adopted as part of the Scheme (Embedded Mitigation)

6.5 The potential ecological constraints have been taken into consideration at an early stage and as such the 'mitigation hierarchy' of avoidance, mitigation, compensation and habitat enhancement has been built into the proposed design at the outset.

6.6 The proposed design has been carefully considered so as to reasonably minimise impacts upon ecological receptors. The habitats of greatest value on and adjacent to the site are considered to be the trees.

6.7 As far as possible the tree lines within and adjacent to the site are to be retained. Small losses of these habitats will be required to create the access the proposed development will require, likely through widening of existing access gaps, this results in two trees being lost as per the current landscape plan.

6.8 Small areas of landscaping, including individual tree and ornamental planting are designed into the scheme.

6.9 A Biodiversity Net Gain Assessment has been carried out for the proposed development using the Statutory Defra Metric. The Metric 'provides a way to measure biodiversity loss and gain in a consistent and robust way'. It generates a biodiversity value measured in biodiversity units for a site before development commences and after development is completed, allowing the difference (positive or negative) to be measured.

6.10 Removal of the two trees will be undertaken outside of the breeding bird season (March – August inclusive) to minimise the risk of impacting upon birds nesting in these habitats. Should removal need to take place during the breeding bird season, any vegetation to be removed should be

thoroughly inspected by a suitably experienced Ecological Clerk of Works (ECoW) in order to confirm that no nests are present. Should a nest be present, clearance of that vegetation would not be able to take place until all chicks had fledged from it.

6.11 Best practice methods will be adhered to during construction in order to limit the generation of litter, dust, noise, traffic pollution relating to vehicles coming onto and off the site and vibration. Measures will be implemented to avoid/minimise potential for problems such as fuel and other chemical spills and well as managing surface water and silt to ensure that watercourses are not impacted by sediment. The following measures will be followed during construction works and should be written into a Construction Environmental management Plan (CEMP):

- Ensure that work compounds and access tracks etc. are not located in, or adjacent to, areas that maintain habitat value such as hedgerows;
- Establish site fencing to prevent access to areas outside working areas, particularly in areas adjacent to features of interest/value;
- Provide briefings and instruction to contractors regarding the biodiversity issues present on the site; and
- Follow best practice guidelines to manage surface water and implement silt fencing as appropriate to prevent sediment entering the water courses;
- Follow pollution prevention guidelines provided by the Environment Agency to prevent pollution from dust or chemical spills.

6.12 Measures to safeguard otters and other mammals, such as hedgehogs and hares, during the construction phase will be followed:

- Any man-made excavations, trenches or pits relating to the development will either be securely fenced off or covered up overnight to avoid entrapment or, if left open, an egress point (e.g. mammal ladders or a roughened plank) will be placed within the excavation to form a ramp to allow mammals to escape; and
- Any excavations will be inspected each morning to ensure no mammals have become trapped overnight. Contractors will be made aware that trapped animals such badgers may dig a temporary sett into the side of a trench. If a badger is found within any excavations, an ecologist must be contacted immediately for further advice.

Impact Assessment VER's

Site Preparation and Construction Impacts

Habitats

6.13 The construction phase will result in the loss of modified grassland and two individual trees.

6.14 The loss of these habitats will be mitigated through the addition of native woodland planting and landscaping throughout the site.

6.15 In-built mitigation means that construction works will adhere to best practice guidelines to prevent dust and pollution, including were necessary silt fencing to protect watercourses.

6.16 Increased traffic during construction will be temporary and is considered unlikely to impact any habitats that aren't to be lost to facilitate the scheme.

6.17 There will be no additional lighting required during construction.

6.18 The impact of the construction phase on habitats will be negligible (adverse) and a non-significant negligible (adverse) effect is anticipated.

Impact Assessment Non-VER's

Bats

6.19 The habitats on site are considered to have some suitability for bat foraging habitat, primarily within the boundary features of the site (tree lines). As the vast majority of this habitats is to be retained, no further survey work is considered to be required.

6.20 No trees containing PRFs will be lost as a result of the proposed development.

6.21 New tree planting will provide a new, more diverse foraging resource for bats across the site.

6.22 To minimise risk of disturbance to foraging and commuting bats on the site, the following lighting minimisation precautions will be followed:

- No works on site should be conducted after sunset if possible. If necessary and if lighting is required then this should be kept to the minimal level (as necessary for safety and security);
- Any post-construction lighting necessary should be directed away from boundary trees and vegetation, and away from trees with bat roost potential; and
- If required any installation of lighting columns will be set at the lowest practical height level with box shield fittings will minimise glare and light spillage.

6.23 In-built mitigation means that construction works will adhere to best practice guidelines to prevent dust and pollution as well as managing surface water and silt.

6.24 Therefore, the impact of the construction phase on bats would be negligible (adverse) and a non-significant negligible (adverse) effect is anticipated.

Birds

6.25 It is not anticipated that habitat loss will have a significant effect on breeding birds given the small scale of these losses.

6.26 In order to ensure nesting birds are safeguarded during the construction phase, works within suitable habitat areas will be undertaken outside of the breeding bird season. If this is not possible any areas of suitable nesting bird habitat will be subject to a nesting bird check no more than 24 hours prior to works / vegetation removal commencing. Should any nests be identified then they must remain undisturbed with a suitable stand off until such time as the young have fledged (this must be confirmed by a suitably experienced ecologist).

6.27 The following advice should be adhered to at all times:

The Wildlife and Countryside Act 1981 states that, it is an offence for any person to intentionally (subject to Provisions of this Part) -

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird whilst it is in use or being built; or
- take or destroy an egg of any wild bird.

6.28 If any nesting birds are found during works then works on that area should cease and an ecologist should be contacted immediately and advice sought to the best course of action.

6.29 Native woodland planting and associated landscaping will increase the potential availability of nesting habitat present within the site. It is also proposed that four bird boxes be erected at suitable locations across the site.

6.30 In-built mitigation means that construction works will adhere to best practice guidelines to prevent dust and pollution.

6.31 Increased traffic and noise during construction and decommissioning will be temporary and is considered unlikely to be sufficient to alter the behaviour of birds within the site for any period of time.

6.32 Therefore, the impact of the construction/decommission phase on birds would be negligible (adverse) and a non-significant negligible (beneficial) effect is anticipated.

Operational Impacts

6.33 The lighting scheme has been designed to minimise light spillage into retained/adjacent habitat.

6.34 It is not anticipated that there will be any further any impacts arising from the operational phase of the proposed development.

Summary of Impacts

6.35 Table 6 below summarises the potential impacts and their significance for all VERs associated with the proposed development.

Table 6: Summary of Impacts

VER	Value	Phase	Type of Impact	Magnitude and extent of impacts	Confidence, duration and reversibility	Significance of impact
Habitats	Local - County	Construction	Habitat loss/ creation	Negligible (adverse)	Certain Long term Not Reversible	Not significant
			Disturbance	Negligible (adverse)	Potentially Temporary Not Reversible	Not significant
			Pollution	Negligible (adverse)	Unlikely Temporary Not Reversible	Not significant

7. REFERENCES

Bat Conservation Trust (2014) *Artificial lighting and wildlife: Interim Guidance: Recommendations to help minimise the impact artificial lighting* Bat Conservation Trust

Benatt (2012). CIEEM Guidelines for Preliminary Ecological Appraisals.

British Standards Institution (2012) BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations.

Chanin, P. (2003a). Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers. Monitoring Series No. 10, English Nature, Peterborough.

Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edn). The Bat Conservation Trust, London.

Department for Communities and Local Government (2019). National Planning Policy Framework.

HMSO (2005) Biodiversity and Geological Conservation – Statutory Obligations and Their Impact Within the Planning System. Office of the Deputy Prime Minister (ODPM) Circular 06/2005 HMSO, Norwich.

Harris S., Creswell P., & Jefferies, D.J. (1988). *Surveying Badgers*. The Mammal Society, London.

HMSO (2006) Natural Environment and Rural Communities Act.

JNCC. 2010. Handbook for Phase 1 habitat survey - a technique for environmental audit. JNCC, UK.

Multi-Agency Geographic Information Centre (MAGIC) website: http://magic.defra.gov.uk/

Natural England (2009). *Badgers and Development: A Guide to Best Practice and Licensing*. Neal E. & Cheeseman C. (1996). *Badgers*. Poyser, London.

Natural England (undated). *Standing Advice Species Sheet: Bats*

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*

Rodwell, J.S. (1992). British Plant Communities Volume 1: Woodlands and scrub communities. Cambridge University Press, UK.

The UK Habitat Classification Working Group. The UK Habitat Classification User Manual, Version 2.01.

The UK Habitat Classification Working Group. UK Habitat Field Key.

The UK Habitat Classification Working Group. Habitat Definitions Version 2.01.

Stace, C. 2019. New Flora of the British Isles. Cambridge University Press.

Stroh, P.A., Leach, S.J., August, T.A., Walker, K.J., Pearman, D.A., Rumsey, F.J., Harrower, C.A., Fay, M.F., Martin, J.P., Pankhurst, T., Preston, C.D. & Taylor, I. 2014. A Vascular Plant Red List for England. Botanical Society of Britain and Ireland, Bristol.

UK Biodiversity Action Plan (2007) UK List of Priority Species and Habitats. Joint Nature Conservation Committee. Available at: http://www.ukbap.org.uk/NewPriorityList.aspx

DRAWING

DRAWING TITLE: Habitat Plan

KEY:

Site Boundary

UKHabs

Target notes

g4, 15 - modified grassland, rush dominant

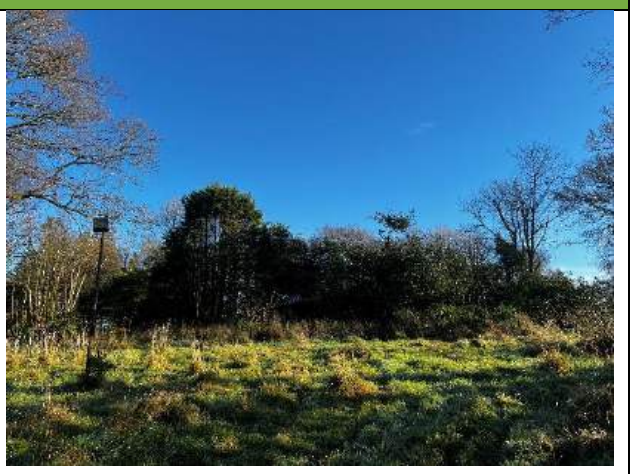
w1g6 - line of trees

SITE: Rheda Cross
CLIENT:Dr McKay
JOB NUMBER: JN00737
DRAWING NUMBER: JN00737_DW01
DATE: Dec 2024
DRAWN/CHECKED: BH/MK
SCALE: NTS

environmental solutions ltd
ecology • arboriculture • fisheries • licencing

APPENDIX 1

APPENDIX 1 – TARGET NOTES

Target Note	Habitat Description	Photograph(s)
TN1 **g4, 15– modified grassland; rushes dominant**	The majority of the site is comprised of wet, modified grassland with a dominance of soft rush *Juncus effusus* that has occurred over time as management on the site has lowered. Small remnant patches of landscaped planting in the form of rhododendron and St John's wort *Hypericum perforatum* remain however other species including cocks foot *Dactylis glomerata*, curly dock *Rumex crispus*, creeping thistle *Cirsium arvense*, foxglove *Digitalis purpurea* and creeping buttercup *Ranunculus repens* have now grown through these and over the rest of the site.	
TN2 **w1g6 – line of trees**	The eastern tree line is comprised of a line of planted Leyland cypress *Cupressus × leylandii* trees that mark the boundary of the site. Towards the northern end of this line sycamores *Acer pseudoplatanus* and a goat willow *Salix caprea*, are present where it meets the boundary of the road.	

TN3 **w1g6 – line of trees**	The line of trees located along the western boundary is a mix of native oak *Quaercis robur*, elm *Ulmus procera*, ash *Fraxinus excelsior*, birch *Betula pendula* and holly *Ilex aquifolium* with ornamental planting in the form of laurels and Japanese maple *Acer palmatum*.	
TN4 **Standalone tree**	One standalone tree is set back from the two main groups, situated just outside the southern boundary of the site, the tree is a large elm *Ulmus procer* has a broad crown with some minor deadwood and ivy.	

APPENDIX 2

Badgers

Badgers and their setts are protected under the Protection of Badgers Act (1992), which consolidated and added to previous legislation. It is illegal to wilfully kill or injure a badger or to interfere with a sett, unless a license is granted. A license may be granted by Natural England for the purpose of development (amongst other reasons) as defined in Section 55 (1) of the Town and Country Planning Act 1990.

Bats

Bats are protected under Schedule 5 of the Wildlife & Countryside Act (1981, as amended) and are also listed under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act). They are protected by law against all of, but not limited to, the following:

- intentional or reckless killing, injuring, taking;
- damage to, destruction of, obstruction of access to any structure or place used by a scheduled animal for shelter or protection; and
- disturbance of animal occupying such a structure or place.

The conservation (Natural Habitats &c.) Regulations (1994) provide additional protection for the breeding sites and resting places of bats.

Red Squirrel

Red squirrels receive full protection under the Wildlife and Countryside Act 1981 (as amended).

Red squirrels and their resting places are fully protected in Britain; it is an offence to:

- deliberately, capture, injure or kill them;
- to damage, destroy or obstruct their breeding or resting places; and
- disturb them in their breeding or resting places.

Breeding Birds

Under the Wildlife & Countryside Act (1981), a wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Game birds, however, are not included in this definition (except for limited parts of the Act). They are covered by the Games Acts, which fully protect them during the closed season.

All birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to;

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built;
- intentionally take or destroy the egg of any wild bird;
- have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- use traps or similar items to kill, injure or take wild birds;
- have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations;
- intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs of young, or disturb the dependent young of such a bird.

Rare species listed in Schedule 1 Part1 are given further protection, including special increased penalties under Subsection 1 (5) as amended by the Countryside and Rights of Way Act 2000. If any person intentionally or recklessly disturbs any wild bird included in Schedule 1 while it is building a nest or is in, or near containing eggs or young.

The British Trust for Ornithology (BTO) has a list of birds that are Species of Conservation Concern. These birds are not legally protected but where they are found on site they should be given planning consideration. The criteria for birds listed as amber (medium conservation concern) include:

- Historical population decline during 1800-1995, but recovering: population has more than doubled over last 25 years;
- Moderate (25-49%) decline in UK breeding population over last 25 years;
- Moderate (25-49%) contraction of UK breeding range over last 25 years;
- Moderate (25-49%) decline in UK non breeding population over last 25 years;
- Species with unfavourable conservation status in Europe (Species of conservation Concern);
- Five year mean of breeding pairs in the UK;
- $\geq$50% of UK breeding population in 10 or fewer sites.
- $\geq$50% of UK non breeding population in 10 or fewer sites;

- ≥20% of European breeding population in UK;
- ≥20% of NW European (wildfowl), East Atlantic Flyway (waders) or European (others) non breeding populations in UK.

Otter

Otters are fully protected by their inclusion in Annex II of the Habitats Directive (92/43/EEC) and Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) and it is therefore subject to the provisions of Section 9, which makes it an offence to:

- intentionally kill, injure or take an otter [Section 9 (1)];
- possess or control any live or dead specimen or anything derived from an otter [Section 9(2)];
- intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by an otter [Section 9(4) (a)];
- intentionally or recklessly disturb an otter while it is occupying a structure or place which it uses for that purpose [Section 9 (4)(b)];
- sell, offer for sale, possess or transport for the purpose of sale or publish advertisements to buy or sell an otter.

A license is required from Natural England if the potential to commit an offence exists in order for the development to take place.

Reptiles

There are six species of native reptile in the UK. Only two species, smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) are fully protected under UK and European Legislation. They are listed on Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) and under Schedule 2 of the Conservation (Natural Habitats &c.) Regulations 1994. Under these legislations it is unlawful to:

- deliberately or intentionally kill, injure or take (capture) or disturb sand lizards and smooth snakes;
- deliberately take or destroy the eggs of sand lizards;
- damage or destroy a breeding site or resting place, or intentionally damage a place used for shelter and protection;
- intentionally obstruct access to places used for shelter; and
- keep, transport, sell or exchange, or offer for sale or advertising.

APPENDIX 3

Appendix 3 – Cumbria Biodiversity Action Plan - Species List Updated 2009

Cumbria's Biodiversity Action Plan (CBAP) was designed to implement national biodiversity targets at a local level, but with a focus on local priorities. It has many functions, from seeking to raise awareness of the major issues facing nature conservation in Cumbria, guiding work of partners and promoting and protecting BAP species within Cumbria.

At it's inception the CBAP species list contained 40 species/grouped species, 21 of which had dedicated action plans with a further 19, without action plans, included in a Phase 2 list. It was originally envisaged that work on producing a further species action plans would continue apace to ensure that full recognition is given to the wide range of priority species that inhabit Cumbria. At the time of writing this means that over 200 UK BAP species are not included within Cumbria's plan. The failure to link UK and Local plans in this way means that it is not possible for all UK BAP species, present in Cumbria, to be fully conserved.

This partial list, currently in place, also presents a number of other issues. Two lists can be confusing for those not directly involved with the BAP process, not only the general public but also planners and conservation practitioners, providing mixed messages about those species considered important in Cumbria.

This is also true of funding bodies, which may consider exclusion of a species from the Cumbria list, as an admission of its relative lack of importance. Thus, those not on the list may be effectively excluded from conservation action, at a local level, when need or opportunity arise.

To address the issues identified above, it is proposed that all of the UK BAP species, that are present in Cumbria, and not already included in the CBAP be added and a new single CBAP species list created. This would increase the CBAP species list from its current level of 40 species/grouped species to a total of 268. By extending the list, we can properly reflect the importance of the county for this wide variety of priority species, highlight their importance to all stakeholders and facilitate conservation measures to protect them.

Note 1: Those species that are not UK BAP species but were contained within the CBAP will be retained in the revised 2009 list as Local BAP species. This will reinforce the local nature of the CBAP.

Note 2: The original Cumbria BAP Phase 2 (no action plan) species list included a moss or liverwort however the exact species had not been decided at the CBAP's incept. This has therefore been omitted from the revised 2009 list.

Note 3: The 248 UK BAP species are those present on the Biodiversity Evidence Database's Cumbria Key Species Designations table under the heading UK Priority Species/ NERC Act S4. This table is maintained by Tullie House Museum and is accessible at www.lakelandwildlife.co.uk.

Common Name	Scientific Name	UK BAP Species Recorded in Cumbria	2009 Cumbria BAP Species Updated List
FUNGI & LICHENS			
Olive Earth-tongue	*Microglossum olivaceum*	X	X
River Jelly Lichen	*Collema dichotomum*	X	X
a lichen	*Usnea florida*	X	X
a lichen	*Lobaria amplissima*		X

Purple Spindles	*Clavaria purpurea*	X	X
Bearded Tooth (fungus)	*Hericium erinaceum*	X	X
Big Blue Pinkgill	*Entoloma bloxamii*	X	X
Pink Waxcap	*Hygrocybe calyptraeformis*		X
Date-coloured Waxcap	*Hygrocybe spadicea*	X	X
Scaly Stalkball	*Tulostoma melanocyclum*	X	X
Totals		**8**	**10**
STONEWORTS			
Lesser Bearded Stonewort	*Chara curta*	X	X
Totals		**1**	**1**
MOSSES & LIVERWORTS			
Pitted Frillwort	*Fossombronia foveolata*	X	X
Veilwort	*Pallavicinia lyellii*	X	X
Waved Fork-moss	*Dicranum bergeri*	X	X
Brown Grimmia	*Grimmia elongata*	X	X
Carrion Moss	*Aplodon wormskjoldii*	X	X
Rugged Collar-moss	*Splachnum vasculosum*	X	X
Slender Thread-moss	*Orthodontium gracile*	X	X

Derbyshire Feather-moss	*Thamnobryum angustifolium*	X	X
Slender Green Feather-moss	*Hamatocaulis vernicosus*		X
Totals		**8**	**9**
VASCULAR PLANTS			
Marsh Clubmoss	*Lycopodiella inundata*	X	X
Pillwort	*Pilularia globulifera*	X	X
Oblong Woodsia	*Woodsia ilvensis*	X	X
Holly-fern	*Polystichum lonchitis*	X	X
Juniper	*Juniperus communis*	X	X
Corn Buttercup	*Ranunculus arvensis*	X	X
Upright Goosefoot	*Chenopodium urbicum*	X	X
Prickly Saltwort	*Salsola kali kali*	X	X
Marsh Stitchwort	*Stellaria palustris*	X	X
Annual Knawel	*Scleranthus annuus*	X	X
Small-flowered Catchfly	*Silene gallica*	X	X
Downy Willow	*Salix lapponum*	X	X
Yellow Bird's-nest	*Monotropa hypopitys/ssp. hypophegea*	X	X
Marsh Saxifrage	*Saxifraga hirculus*	X	X
a lady's mantle	*Alchemilla minima*	X	X

Tubular Water-dropwort	*Oenanthe fistulosa*	X	X
Caraway	*Carum carvi*	X	X
Field Gentian	*Gentianella campestris*	X	X
Pyramidal Bugle	*Ajuga pyramidalis*	X	X
Basil Thyme	*Clinopodium acinos*	X	X
an eyebright	*Euphrasia rostkoviana montana*	X	X
an eyebright	*Euphrasia rivularis*	X	X
an eyebright	*Euphrasia ostenfeldii*	X	X
Northern Hawk's-beard	*Crepis mollis*	X	X
a hawkweed	*Hieracium subgracilentipes*	X	X
Floating Water-plantain	*Luronium natans*	X	X
Slender Naiad	*Najas flexilis*	X	X
Flat-sedge	*Blysmus compressus*	X	X
Rare Spring-sedge	*Carex ericetorum*	X	X
Glaucous Meadow-grass	*Poa glauca*	X	X
Narrow-leaved Helleborine	*Cephalanthera longifolia*	X	X
Lesser Butterfly-orchid	*Platanthera bifolia*	X	X
Small White Orchid	*Pseudorchis albida*		X
Frog Orchid	*Coeloglossum viride*	X	X

Fly Orchid	*Ophrys insectifera*	X	X
Totals		**33**	**34**
MOLLUSCS			
Mud Snail	*Omphiscola glabra*	X	X
Sandbowl Snail	*Quickella arenaria*	X	X
a whorl snail	*Vertigo geyeri*	X	X
a whorl snail	*Vertigo genesii*	X	X
Freshwater Pearl Mussel	*Margaritifera margaritifera*	X	X
Totals		**5**	**5**
LEECHES			
Medicinal Leech	*Hirudo medicinalis*		X
Totals		**0**	**1**
MAYFLIES			
Iron Blue Mayfly	*Nigrobaetis niger*	X	X
Totals		**1**	**1**
DRAGONFLIES			
Variable Damselfly	*Coenagrion pulchellum*		X
White-faced Dragonfly	*Leucorrhinia dubia*		X
Totals		**0**	**2**

BEETLES			
Northern Dune Tiger Beetle	*Cicindela hybrida*	X	X
Lesser Searcher	*Calosoma inquisitor*	X	X
a ground beetle	*Dyschirius angustatus*		X
a ground beetle	*Bembidion testaceum*	X	X
St. Bees Seed-Eater	*Harpalus honestus*	X	X
Oxbow Diving Beetle	*Hydroporus rufifrons*	X	X
Hairy Click Beetle	*Synaptus filiformis*	X	X
Black Oil-beetle	*Meloe proscarabaeus*	X	X
Violet Oil-beetle	*Meloe violaceus*	X	X
Zircon Reed Beetle	*Donacia aquatica*	X	X
Totals		**9**	**10**
CADDISFLIES			
a caddisfly	*Glossosoma intermedium*	X	X
Totals		**1**	**1**
BUTTERFLIES & MOTHS			
Ghost Moth	*Hepialus humuli*	X	X
Currant Shoot Borer	Lampronia capitella	X	X
The Forester	*Adscita statices*	X	X

Greenweed Flat-body Moth	*Agonopterix atomella*	X	X
White-spotted Sable Moth	*Anania funebris*	X	X
Dingy Skipper	*Erynnis tages*	X	X
White Letter Hairstreak	*Satyrium w-album*	X	X
Small Blue	*Cupido minimus*	X	X
Northern Brown Argus	*Aricia artaxerxes*	X	X
Duke of Burgundy	*Hamearis lucina*	X	X
Small Pearl-bordered Fritillary	*Boloria selene*	X	X
Pearl Bordered Fritillary	*Boloria euphrosyne*	X	X
High Brown Fritillary	*Argynnis adippe*	X	X
Marsh Fritillary	*Eurodryas aurinia*	X	X
Wall	*Lasiommata megera*	X	X
Mountain Ringlet	*Erebia epiphron*	X	X
Grayling	*Hipparchia semele*	X	X
Small Heath	*Coenonympha pamphilus*	X	X
Large Heath	*Coenonympha tullia*	X	X
Pale Eggar	*Trichiura crataegi*	X	X
Oak Hook-tip	*Watsonalla binaria*	X	X
Oak Lutestring	*Cymatophorima diluta*	X	X

Small Emerald	*Hemistola chrysoprasaria*	X	X
Mullein Wave	*Scopula marginepunctata*	X	X
Oblique Carpet	Orthonama vittata	X	X
Red Carpet	*Xanthorhoe decoloraria*	X	X
Dark-barred Twin-spot Carpet	*Xanthorhoe ferrugata*	X	X
Shaded Broad-bar	*Scotopteryx chenopodiata*	X	X
Galium Carpet	*Epirrhoe galiata*	X	X
Grey Mountain Carpet	*Entephria caesiata*	X	X
Dark Spinach	*Pelurga comitata*	X	X
The Spinach	*Eulithis mellinata*	X	X
Small Phoenix	*Ecliptopera silaceata*	X	X
Netted Carpet	*Eustroma reticulata*	X	X
Pretty Chalk Carpet	*Melanthia procellata*	X	X
Argent and Sable	*Rheumaptera hastata*	X	X
Grass Rivulet	*Perizoma albulata albulata*	X	X
The Streak	*Chesias legatella*	X	X
Barred Tooth-striped	*Trichopteryx polycommata*	X	X
Latticed Heath	*Chiasmia clathrata*	X	X
V-moth	*Macaria wauaria*	X	X

August Thorn	*Ennomos quercinaria*	X	X
Dusky Thorn	*Ennomos fuscantaria*	X	X
September Thorn	*Ennomos erosaria*	X	X
Figure of Eight	*Diloba caeruleocephala*	X	X
Garden Tiger	*Arctia caja*	X	X
White Ermine	*Spilosoma lubricipeda*	X	X
Buff ermine	*Spilosoma luteum*	X	X
The Cinnabar	*Tyria jacobaeae*	X	X
Garden Dart	*Euxoa nigricans*	X	X
Double Dart	*Graphiphora augur*	X	X
Autumnal Rustic	*Eugnorisma glareosa*	X	X
Small Square-spot	*Diarsia rubi*	X	X
Northern Dart	*Xestia alpicola alpina*	X	X
Neglected Rustic	*Xestia castanea*	X	X
Heath Rustic	*Xestia agathina*	X	X
Dot Moth	*Melanchra persicariae*	X	X
Broom Moth	*Melanchra pisi*	X	X
Hedge Rustic	*Tholera cespitis*	X	X
Feathered Gothic	*Tholera decimalis*	X	X

Powdered Quaker	*Orthosia gracilis*	X	X

Shoulder-striped Wainscot	*Mythimna comma*	X	X
Minor Shoulder-knott	*Brachylomia viminalis*	X	X
The Sprawler	*Asteroscopus sphinx*	X	X
Brindled Ochre	*Dasypolia templi*	X	X
Deep-brown Dart	*Aporophyla lutulenta*	X	X
Green-brindled Crescent	*Allophyes oxyacanthae*	X	X
Dark Brocade	*Blepharita adusta*	X	X
Flounced Chestnut	*Agrochola helvola*	X	X
Brown-spot Pinion	*Agrochola litura*	X	X
Beaded Chestnut	*Agrochola lychnidis*	X	X
Centre-barred Sallow	*Atethmia centrago*	X	X
The Sallow	*Xanthia icteritia*	X	X
Dusky-lemon Sallow	*Xanthia gilvago*	X	X
Grey Dagger	*Acronicta psi*	X	X
Knott Grass	*Acronicta rumicis*	X	X
Mouse Moth	Amphipyra tragopoginis	X	X
Dusky Brocade	*Apamea remissa*	X	X

Rosy Minor	*Mesoligia literosa*	X	X
Least Minor	*Photedes captiuncula*		X
Ear Moth	*Amphipoea oculea*	X	X
Rosy Rustic	*Hydraecia micacea*	X	X
Haworth's Minor	Celaena haworthii	X	X
The Crescent	*Celaena leucostigma*	X	X
The Rustic	*Hoplodrina blanda*	X	X
Mottled Rustic	Caradrina morpheus	X	X
The Anomalous	*Stilbia anomala*	X	X
Totals		**86**	**87**
FLIES			
River-shore Cranefly	*Rhabdomastix japonica*	X	X
Scottish Yellow Splinter	*Lipsothrix ecucullata*	X	X
Northern Yellow Splinter	*Lipsothrix errans*	X	X
Scarce Yellow Splinter	*Lipsothrix nigristigma*	X	X
Southern Silver Stiletto-fly	*Cliorismia rustica*	X	X
Northern Silver Stiletto-fly	*Dyschirius angustatus*		X

Phantom Hoverfly	*Dorus profuges*		X
Totals		**5**	**7**
BEES, WASPS & ANTS			
Shining Guest Ant	*Formicoxenus nitidulus*	X	X
Red Wood Ant	*Formica rufa*		X
The Northern Colletes	*Colletes floralis*	X	X
Tormentil Mining Bee	*Andrena tarsata*	X	X
Wall Mason Bee	*Osmia parietina*	X	X
Moss Carder-bee	*Bombus muscorum*	X	X
Totals		**5**	**6**
CRUSTACEANS			
Freshwater Crayfish	*Austropotamobius pallipes*	X	X
Totals		**1**	**1**
SPIDERS			
Sedge Jumper	*Sitticus caricis*	X	X
Broad Groove-head Spider	*Monocephalus castaneipes*	X	X
Cloud-living Spider	*Semljicola caliginosus*	X	X

Triangle Hammock-spider	*Saaristoa firma*	X	X
Totals		**4**	**4**
FISH			
Sea Lamprey	*Petromyzon marinus*	X	X
River Lamprey	*Lampetra fluviatilis*	X	X
Basking Shark	*Cetorhinus maximus*	X	X
Allis Shad	*Alosa alosa*	X	X
Twaite Shad	*Alosa fallax*	X	X
Atlantic Salmon	*Salmo salar*	X	X
Trout	*Salmo trutta*	X	X
Arctic Charr	*Salvelinus alpinus*	X	X
Schelly	*Coregonus lavaretus*	X	X
Vendace	*Coregonus albula*	X	X
Sparling (Smelt)	*Osmerus eperlanus*	X	X
Eel	*Anguilla anguilla*	X	X
Plaice	*Pleuronectes platessa*	X	X
Lesser Sand Eel	*Ammodytes marinus*		

Ling	*Molva molva*	X	X
Whiting	*Merlangius merlangus*	X	X
Cod	*Gadus morhua*	X	X
Herring	*Clupea harengus*	X	X
Sole	*Solea solea*	X	X
Totals		**18**	**18**
AMPHIBIANS			
Great Crested Newt	*Triturus cristatus*	X	X
Common Toad	*Bufo bufo*	X	X
Natterjack Toad	*Bufo calamita*	X	X
Totals		**3**	**3**
REPTILES			
Leatherback Turtle	*Dermocheles coriacea*	X	X
Loggerhead Turtle	*Caretta caretta*	X	X
Viviparous Lizard	*Zootoca vivipara*	X	X
Slow-worm	*Anguis fragilis*	X	X
Grass Snake	*Natrix natrix*	X	X

Adder	*Vipera berus*	X	X
Totals		**6**	**6**
BIRDS			
Black-throated Diver	*Gavia arctica*	X	X
Bittern	*Botaurus stellaris*	X	X
Tundra Swan	*Cygnus columbianus bewickii*	X	X
Greater Scaup	*Aythya marila*	X	X
Common Scoter	*Melanitta nigra*	X	X
Hen Harrier	*Circus cyaneus*	X	X
Red Grouse	*Lagopus lagopus*	X	X
Black Grouse	*Tetrao tetrix*	X	X
Grey Partridge	*Perdix perdix*	X	X
Northern Lapwing	*Vanellus vanellus*	X	X
Black-tailed Godwit	*Limosa limosa limosa*	X	X
Eurasian Curlew	*Numenius arquata*	X	X
Arctic Skua	*Stercorarius parasiticus*	X	X
Herring Gull	*Larus argentatus argenteus*	X	X
Common Cuckoo	*Cuculus canorus*	X	X

Barn Owl	*Tyto alba*		X
Nightjar	*Caprimulgus europaeus*	X	X
Lesser Spotted Woodpecker	Dendrocopos minor	X	X
Skylark	*Alauda arvensis*	X	X
Tree Pipit	*Anthus trivialis*	X	X
Yellow Wagtail	*Motacilla flava flavissima*	X	X
Hedge Accentor (Dunnock)	*Prunella modularis*	X	X
Ring Ouzel	*Turdus torquatus*	X	X
Song Thrush	*Turdus philomelos*	X	X
Grasshopper Warbler	*Locustella naevia*	X	X
Wood Warbler	*Phylloscopus sibilatrix*	X	X
Spotted Flycatcher	*Muscicapa striata*	X	X
Marsh Tit	*Parus palustris*	X	X
Willow Tit	*Parus montanus*	X	X
Common Starling	*Sturnus vulgaris*	X	X
House Sparrow	*Passer domesticus*	X	X
Tree Sparrow	*Passer montanus*	X	X
Linnet	*Carduelis cannabina*	X	X

Twite	*Carduelis flavirostris*	X	X
Lesser Redpoll	*Carduelis cabaret*	X	X
Bullfinch	*Pyrrhula pyrrhula*	X	X
Hawfinch	*Coccothraustes coccothraustes*	X	X
Yellowhammer	*Emberiza citrinella*	X	X
Reed Bunting	*Emberiza schoeniclus*	X	X
Corn Bunting	*Miliaria calandra*	X	X
Totals		**39**	**40**
MAMMALS			
Hedgehog	*Erinaceus europaeus*	X	X
Whiskered Bat	*Myotis mystacinus*		X
Brandt's Bat	*Myotis brandtii*		X
Natterer's Bat	*Myotis nattereri*		X
Daubenton's Bat	*Myotis daubentonii*		X
Noctule	*Nyctalus noctula*		X
Common Pipistrelle	*Pipistrellus pipistrellus*		X
Soprano Pipistrelle	*Pipistrellus pygmaeus*	X	X
Brown Long-eared Bat	*Plecotus auritus*		X

Brown Hare	*Lepus europaeus*	X	X
Red Squirrel	*Sciurus vulgaris*	X	X
Water Vole	*Arvicola terrestris*	X	X
Harvest Mouse	*Micromys minutus*	X	X
Hazel Dormouse	*Muscardinus avellanarius*	X	X
Bottle-nosed Dolphin	*Tursiops truncatus*	X	X
Common Dolphin	*Delphinus delphis*	X	X
Harbour Porpoise	*Phocoena phocoena*	X	X
Long-finned Pilot Whale	*Globicephala melas*	X	X
Polecat	*Mustela putorius*	X	X
Otter	*Lutra lutra*	X	X
Common Seal	*Phoca vitulina*	X	X
Totals		**14**	**21**
Overall Species Totals		**248**	**268**

Note: The original Cumbria BAP Phase II (no action plan) species list included a moss or liverwort however the exact species had not been decided at the time of writing. This has therefore been omitted from the revised 2009 list.