

PRELIMINARY ECOLOGICAL APPRAISAL

January 2022

Edgehill Park - Phase 4

Gameriggs Road

Whitehaven

CA28 9RA

U R B A N
G R E E N



QUALITY MANAGEMENT

Project No.:	UG1415			
Project:	Edgehill Park Phase 4			
Location:	Edgehill Park, Gameriggs Road, Whitehaven, CA28 9RA			
Title:	Preliminary Ecological Appraisal			
Document Type:	PEA	Issue No.:	01	
Date:	31/01/2022			
Prepared By:	Jake Healy	Signature:		Qualifications: Assistant Ecologist, Qualifying CIEEM, MSc
Checked By:	Maisie McKenzie	Signature:		Qualifications: Senior Biodiversity Consultant, ACIEEM, MSc
Checked By:	Mark Blacker	Signature:		Qualifications: Senior Ecologist, MSc, ACIEEM
Revision Status:				
Rev:	Date:	Issue/Purpose / Comment:	Prepared:	Checked:

NON-TECHNICAL EXECUTIVE SUMMARY

Story Homes are proposing to develop land at Edgehill, Gameriggs Road in Whitehaven (hereafter referred to as ‘the site’). The proposals include the development of a residential housing scheme with associated hard and soft landscaping.

Urban Green have been appointed to complete a Preliminary Ecological Appraisal of the site. The objectives of the assessment are to identify habitats on site and determine the suitability for any ‘protected and/or notable’ species that may occur on site. Further ecological surveys and mitigation are recommended to aim to minimise potential impacts on ecology, due to the proposed development.

Following the survey work, the key recommendations are summarised in the following table

Current Site Use and Adjacent Site Use	The site consisted of agricultural land which showed evidence of being utilised for livestock grazing. A construction site was present to the west of the site and residential properties were present to the north, east, and south
Potential Impacts on Designated Sites	No potential impacts on designated sites nearby to the site are anticipated to occur due to the proposed development. The site is located at a sufficient distance from nearby designated sites, and the proposed development activities have been considered.
Habitats	The site comprised predominantly poor semi-improved grassland, marshy grassland, dense scrub, ditch, standing water, and tall ruderal vegetation. Areas of hardstanding and bare ground were also present.
Ecological Constraints	The following potential ecological constraints were identified during the assessment: • Building 1 was assessed as having moderate bat roosting potential. • Suitable habitats for nesting notable bird species, hedgehog, amphibians, bats, and badgers. • Standing water ponds present on site and within the surrounding area, potential for GCN and common amphibians.
Recommended Ecological Mitigation	The following mitigation measures are recommended to minimise potential impacts due to the proposed development: • Precautionary Working Methods during the construction phase for GCN, common amphibians, badgers, and hedgehogs. • If any vegetation require removal, it should be completed outside of the breeding bird season (March to September, inclusive). If this is not feasible, a Nesting Bird Check is to be completed by a qualified ecologist within 48 hours before removal is completed.
Recommended Further Surveys and Reports	Further eDNA surveys are required to confirm presence or likely absence of GCN in order for the development to proceed.
Recommended Ecological Enhancements	The National Planning Policy Framework (NPPF) (2021) highlights the requirement for planning policies and decisions to conserve and enhance the natural environment. The proposed development provides the opportunity to enhance the site and ecological enhancements have been recommended.

CONTENTS

1	Introduction	1
1.1	Background to the Scheme.....	1
1.2	Site Context.....	1
1.3	Purpose of this Report	2
2	Methods	3
2.1	Desk Study.....	3
2.1.1	Online Resources and Local Records Centre.....	3
2.2	Field Survey	3
2.2.1	Vegetation.....	3
2.2.2	Fauna	4
2.3	Bat Assessment.....	5
2.3.1	Preliminary Roost Assessment	5
2.3.2	Commuting and Foraging Bats	5
2.4	Habitat Suitability Index.....	6
2.5	Constraints to the Survey	7
2.6	Lifespan of Report	8
2.7	Definitions	8
3	Baseline Ecological Conditions	9
3.1	Desk Study.....	9
3.1.1	Site Location	9
3.1.2	Designated Sites	9
3.1.3	Flora and Fauna.....	10
3.2	Field Survey	14
3.2.1	Poor Semi-Improved Grassland.....	14
3.2.2	Marshy Grassland	15
3.2.3	Ditch	15
3.2.4	Dense Scrub	15
3.2.5	Hardstanding.....	16
3.2.6	Tall ruderal	17
3.2.7	Bare ground.....	17
3.2.8	Standing Water	18

3.3	Site Suitability for Protected and Notable Species.....	19
3.3.1	Species Discounted from Assessment	19
3.3.2	Invertebrates.....	19
3.3.3	Amphibians.....	19
3.3.4	Reptiles.....	19
3.3.5	Birds.....	19
3.3.6	Bats.....	20
3.3.7	Hedgehog	20
3.3.8	Red squirrel.....	20
3.3.9	Badger.....	20
3.4	Invasive Species	21
3.4.1	Flora.....	21
4	Ecological Constraints and Recommended Mitigation.....	22
4.1	Proposed Development.....	22
4.2	Designated Sites	22
4.3	Habitats	22
4.4	Fauna	22
4.4.1	Amphibians.....	22
4.4.2	Birds.....	22
4.4.3	Bats	22
4.4.4	Hedgehog	23
4.4.5	Badgers.....	23
5	Further Surveys.....	25
5.1	Great Crested Newts	25
6	Opportunities for Enhancement.....	26
7	Conclusion	27
8	References	28
	Appendix 1 – Relevant Legislation.....	29
	Appendix 2 – Preliminary Roost Assessment.....	32
	Appendix 3 – Habitat Suitability Index Assessment.....	33
	Appendix 4 – Habitat Map and Target Notes	39

1 Introduction

1.1 Background to the Scheme

Story Homes are proposing to develop land at Edgehill, Gameriggs Road in Whitehaven (hereafter referred to as ‘the site’). The proposals include the development of a residential housing scheme with associated hard and soft landscaping. Urban Green have been appointed to undertake a Preliminary Ecological Appraisal (PEA) of the site.

The author of the report is Jake Healy, MSc, Qualifying CIEEM, Assistant Ecologist at Urban Green. Jake has experience providing ecological consulting services for a range of development schemes across the UK, including residential and commercial schemes.

1.2 Site Context

The site is located at National Grid Reference NX 97427 15703 and comprises a total area of approximately 6.6ha (see Figure 1).

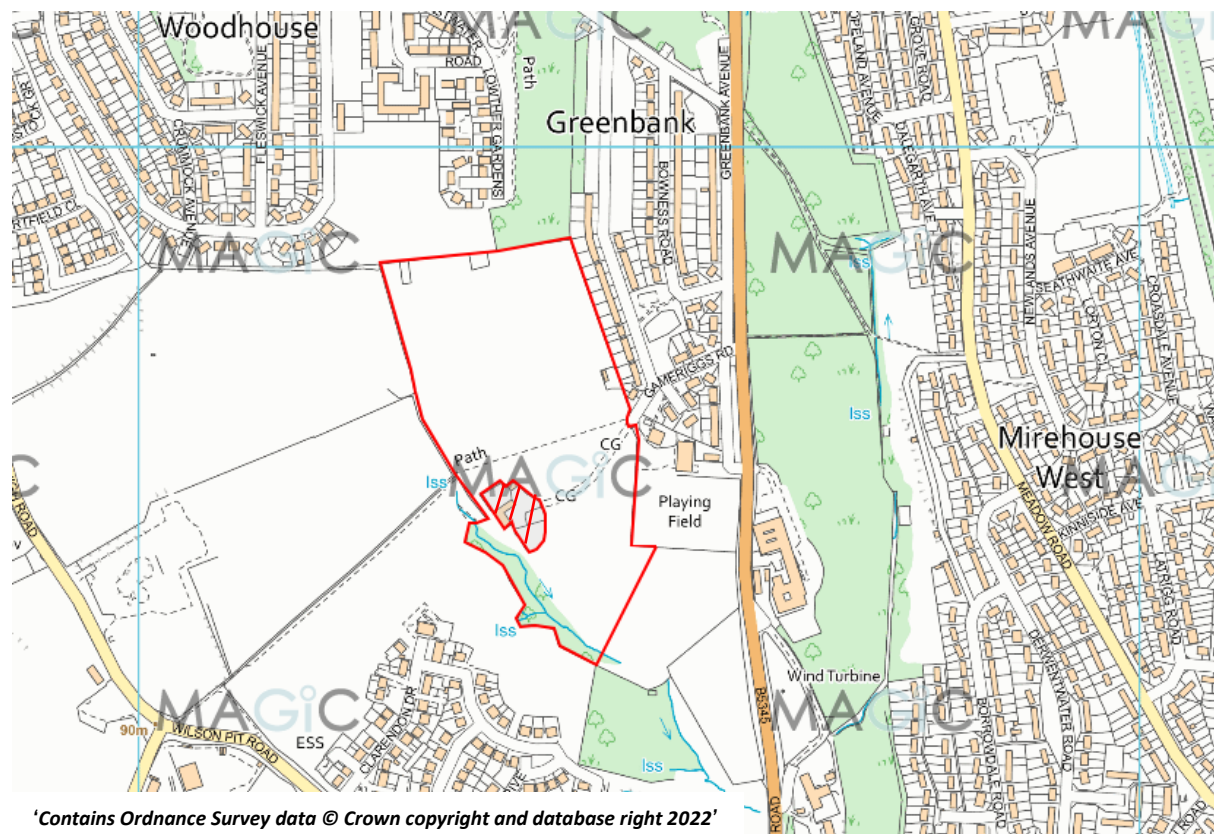


Figure 1 – Site Extent

The site is located in a predominantly rural area of Whitehaven, approximately 2.4km south of the town centre. Residential estates are present immediately to the north, east and south of the site. Areas of woodland are also present immediately to the north and south of the site, with a larger area of woodland present approximately 200m to the east. Land immediately to the west of the site is an active construction site for a residential development. Arable fields and pastureland are present in the wider area to the south and west. Saltom Bay is present approximately 1.4km to the north-west of the site.

1.3 Purpose of this Report

This report has been produced to set out the methods, results, and conclusions of a PEA. The purpose of the PEA report is to identify habitats on site and determine the sites potential value for protected and/or notable fauna and flora, with the addition of potential impacts on designated sites. This will inform the need for any further ecological surveys and/or mitigation to minimise the potential impacts on ecology on site and within the local area.

Further information and details of UK legislation for those species which are formally protected is defined in Appendix 1, which are considered throughout the assessment.

The National Planning Policy Framework (NPPF) (2021) and other Local Planning Policies are considered within the PEA. Ecological enhancements are advised to be in line with relevant Planning Policies.

2 Methods

The PEA assessment and Report follows the good practice methodology as detailed within the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2019).

2.1 Desk Study

2.1.1 Online Resources and Local Records Centre

Due to the size and low impact of the proposed development and being located within a predominantly rural area of Whitehaven, a 1 km Local Data Search was conducted as it is deemed an appropriate distance for the Zone of Influence.

Sources of information used in the desk study are presented in Table 1.

Table 1 – Desk Study Sources of Information

Source	Date Consulted	Information Sought
MAGIC website (www.magic.gov.uk)	11/01/2022	Locations of statutory designated sites within 1km of the site boundary. Locations of Natura 2000 sites (Ramsar, Special Area of Conservation (SAC) and Special Protection Area (SPA)) within 5km of the site boundary. Locations of European Protected Species Licences (EPSL) and Class Licences within 1km.
Natural England (https://designatedsites/nature/naturalengland.org.uk/)	11/01/2022	Relevant statutory designated site citations.
JNCC (https://jncc.defra.gov.uk/)	11/01/2022	Information on European wildlife sites. Details of relevant Section 41 species and habitats.
Cumbria Biodiversity Data Centre	11/01/2022	Locally designated wildlife sites within 1km of site boundary. Records of protected and notable species within 1km of the site boundary.
Cumbria Biodiversity Action Plans	11/01/2022	Species and habitats which are given special conservation status at the local level.

2.2 Field Survey

2.2.1 Vegetation

The site was subject to a field survey on the 18th of January 2022, by Assistant Ecologist Jake Healy and Senior Biodiversity Consultant, Maisie McKenzie. The weather conditions were 5°C, overcast (7/8 oktas), with a wind speed of 3 on the Beaufort scale.

The methods were based on the standard methodology as detailed by *JNCC Handbook for Phase 1 Habitat Survey* (JNCC, 2010). A Phase 1 Habitat Plan has been produced to demonstrate habitats within the proposed development and the surrounding area. The mapping techniques are based on *the Phase 1 Habitat Survey* (JNCC, 2010) guidance.

Flora species listed as protected in the *Wildlife and Countryside Act 1981* (as amended) and species which are indicators of important and/or uncommon habitats, were searched for during the survey.

Species abundance is described using the DAFOR scale as shown in Table 2. Percentages are an approximate indication rather than a quantitative measure.

Table 2 – Key to Species Abundance

		Description	Indicative Percentage Ranges
D	Dominant	Covers most of the area	90% or greater
A	Abundant	Very common throughout the area.	50 – 90%
F	Frequent	Common or with many individuals.	20 – 50%
O	Occasional	Occurs in several places but not throughout. Populations are not large.	5 – 20%
R	Rare	Occurs in low numbers in relation to size of area.	Less than 5%
“L” will be used to indicate abundance in a localised area, e.g. LA = Locally abundant			

Any invasive species, including those listed on the revised (April 2010) Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) were noted during the field survey when sighted.

2.2.2 Fauna

A site search for field signs of protected and notable fauna was undertaken, and incidental sightings are detailed. The searches completed were as follows:

- Suitability of any ponds to support notable and protected amphibians, and the suitability of the site’s terrestrial habitats to support amphibians.
- Suitability of the site to support reptiles by way of habitat structure and refuge piles, as well as links to the wider landscape.
- Search of any watercourses for signs or suitability for white clawed-crayfish (*Austropotamobius pallipes*), water vole (*Arvicola amphibius*) and otter (*Lutra lutra*) by way of burrows, resting places, holts and foraging signs.
- Suitability of the site to support notable bird species. Bird nests and droppings of notable and protected bird species.
- Suitability of the site to support notable invertebrates.
- Search of the site for any invasive species.
- Badger (*Meles meles*) field signs such as setts, mammal, paths, snuffle holes and latrines.

- Suitability of the site to support notable terrestrial mammals including harvest mouse (*Micromys minutus*) and brown hare (*Lepus europaeus*).

2.3 Bat Assessment

2.3.1 Preliminary Roost Assessment

A Preliminary Roost Assessment (PRA) was carried out on the site buildings and trees using a high-powered torch and close-focussing binoculars.

The PRA methodology is based on information contained within the Bat Conservation Trust (BCT) guidelines, 3rd edition (Collins, 2016). The categorisation within this report is based on that set out in Table 3, which is used as a basis for determining the requirement for further surveys.

Table 3 – Suitability of Buildings and Trees for Roosting Bats (adapted from Collins, 2016)

Category of Suitability	Typical Characteristics	Further Survey Requirements
High Roost Suitability	A structure/tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. Surveys can be undertaken between May and September, with at least two surveys between May and August.
Moderate Roost Suitability	A structure/tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but are unlikely to support a roost of high conservation status.	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. Surveys can be undertaken between May and September with at least one survey between May and August.
Low Roost Suitability	A structure/tree with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate condition and/or suitable surrounding habitat to be used on a regular basis by larger numbers of bats.	Structures: one emergence/re-entry survey between May and August. Trees: No further survey required but precautionary methods of felling recommended.
Negligible Suitability	Negligible habitat features on site likely to be used by roosting bats.	No further work required.

2.3.2 Commuting and Foraging Bats

The site was assessed for its suitability for use by commuting and foraging bats.

The commuting and foraging assessment methodology is based on information contained within the Bat Conservation Trust guidelines 3rd edition (Collins, 2016). The categorisation within this report is

based on that set out in Table 4, which is used as a basis for determining the requirement for further surveys.

Table 4 – Suitability of Site for Foraging and Commuting Bats (adapted from Collins, 2016)

Category of Suitability	Typical Characteristics
High Suitability	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting or foraging bats such as; river valleys, streams, hedgerows, lines of trees or woodland edge. Site is close to or connected to known roosts.
Moderate Suitability	Continuous habitat connected to the wider landscape that could be used by commuting bats such as lines of trees, scrub or linked back gardens. Habitat connected to wider landscape that could be used for bats for foraging such as; trees, scrub, grassland or water.
Low Suitability	Habitat that could be used by small number of commuting bats such as; defunct hedgerow, isolated features not well connected to surrounding habitat or Isolated habitat that could be used by a small number of foraging bats such as a lone tree or patch of scrub.
Negligible Suitability	No features on site suitable for use by commuting and foraging bats.

2.4 Habitat Suitability Index

Three ponds were present on site (P1, P2 and P3) and three ponds (P4, P5 and P6) were identified within 250m of the site boundary, as shown in figure 2. As great crested newts' upper dispersal limit is generally considered to be up to 250m from a waterbody (though occurrence of greater distances does exist), ponds beyond this distance were not assessed due to limited connectivity (English Nature, 2001).

These ponds were considered for their suitability to support great crested newts (*Triturus cristatus*) and they underwent a Habitat Suitability Index (HSI) assessment following the methodology set out in ARG UK Advice Notice 5 (Oldham *et al.*, 2010). Ten habitat suitability indices were assessed and inputted into the HSI equation, which generates a score between 0 and 1. The calculated score corresponds to the estimated pond suitability for great crested newt, as outlined in Table 5. Refer to Appendix 3 for further details.

Table 5 – Pond Suitability Scores for Great Crested Newts

HSI Score	Habitat Suitability
<0.5	Poor
0.5 – 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good
>0.8	Excellent

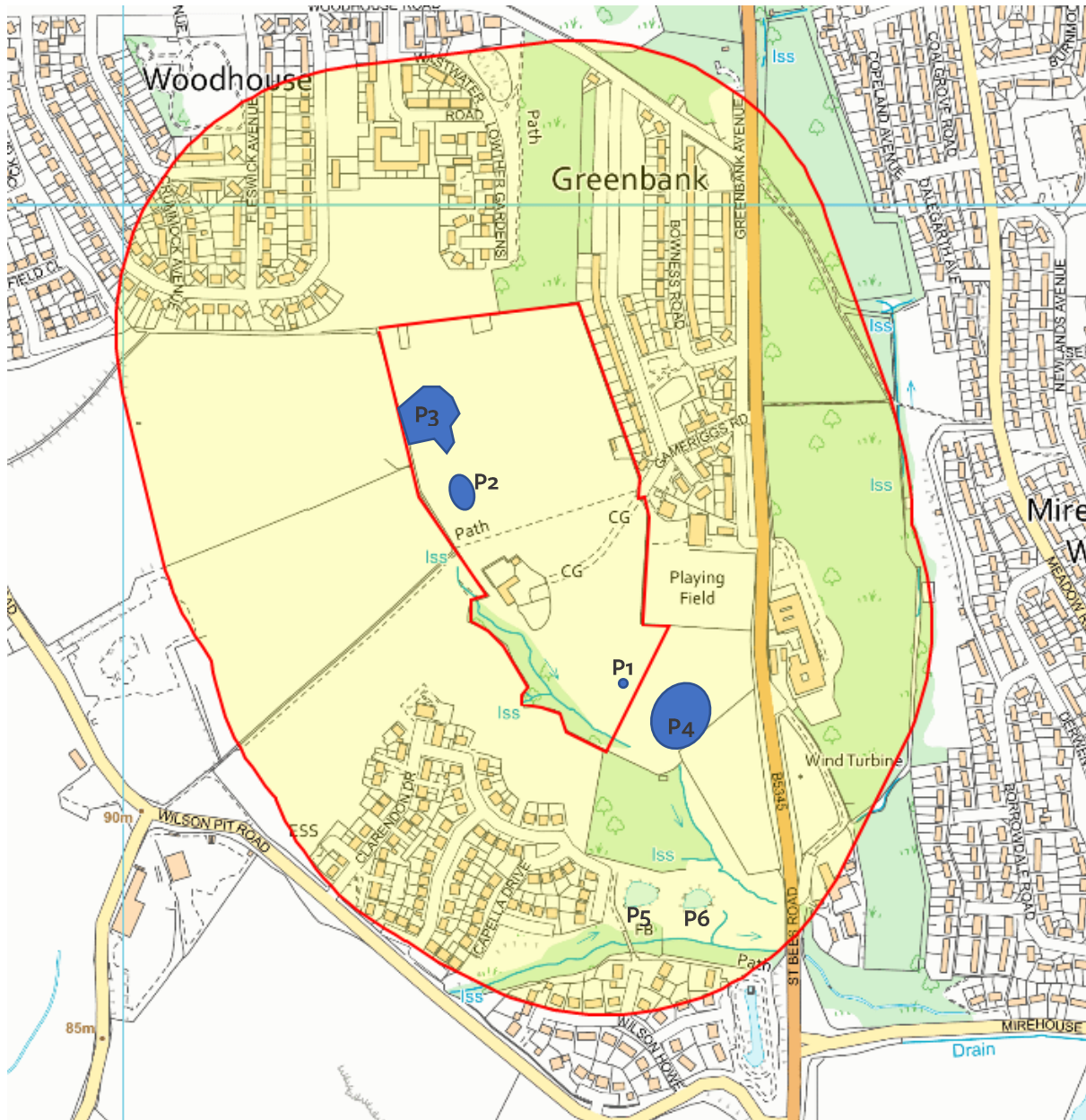


Figure 2. Map of ponds within 250m of the site boundary.

2.5 Constraints to the Survey

Whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.

This PEA does not constitute a full botanical survey. The protected species assessment provides a view of the likelihood of protected species occurring on the site based on the known distribution of species in the local area and the suitability of the habitat.

January is a suboptimal time for carrying out a Phase 1 Habitat Surveys due to being outside of the optimal plant growing season. Therefore, it is likely that some plants are present on the site but were not evident at the time of the survey and were not recorded. This is not considered to be a significant constraint with regards to the general Phase 1 Habitat Survey results due to the size and location of the site and limited extent of the habitats, it is considered very unlikely that any rare or priority plant species were missed.

It should not, however, be taken as providing a full and definitive survey of any protected species group.

Where a lack of records is found during the desk search for a defined geographical area, it does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded. The records returned within the data search were associated with broad grid references and where this is the case these records have been referred to as being “within 1km”.

The conclusions and recommendations detailed in this report are based upon the site redline boundary and the development proposals as outlined by the client at the time of writing. Should there be any changes to the site redline boundary or development proposals at a later stage, this assessment should be reviewed to determine whether any amendments or additional survey work is required.

The findings of this report represent the professional opinion of qualified ecologists and do not constitute professional legal advice. The client may wish to seek professional legal interpretation of the relevant wildlife legislation cited within this document.

2.6 Lifespan of Report

In accordance with CIEEM’s Advice Note on the Lifespan of Ecological Reports and Surveys (CIEEM, 2019), the details of this report will remain valid for a period of **18 months** from the date of the survey (i.e. until the 18th June 2023). After this date, this assessment should be reviewed to determine whether any updated surveys are required.

2.7 Definitions

For the purposes of this report, the term ‘protected and notable species’ relates to:

- Species included on Schedules 2 and 4 of *The Conservation of Habitats and Species Regulations 2017*;
- Species included on Schedules 1, 5 and 8 of the *Wildlife and Countryside Act 1981* (as amended), excluding species that are only protected in relation to their sale (see section 9[5] and 13[2]);
- Invasive non-native species included on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended);
- Species of principal importance for the conservation of/maintaining and enhancing biodiversity as required under: Section 41 of the *Natural Environment and Rural Communities Act 2006* (England), Section 7 of the *Environment (Wales) Act 2016*, Section 2[4] of the *Nature Conservation (Scotland) Act 2004*;
- Local species of importance as identified within various local biodiversity action plans; and,
- Badgers, which are protected under the *Protection of Badgers Act 1992*.

3 Baseline Ecological Conditions

3.1 Desk Study

3.1.1 Site Location

The site is located in a predominantly rural area of Whitehaven, approximately 2.4km south of the town centre. Residential estates are present immediately to the north, east and south of the site. Areas of woodland are also present immediately to the north and south of the site, with another larger area of woodland approximately 200m to the east. Land immediately to the west of the site is currently being developed as a residential scheme. In the wider area a large expanse of arable fields and pastureland is present to the south and west. Saltom Bay is present approximately 1.4km to the north-west of the site.

It is anticipated these habitats will provide suitable foraging, resting, and commuting resources within the local area for a variety of wildlife, such as birds, bats and other terrestrial mammals.

3.1.2 Designated Sites

One site that forms part of the National Site Network is located within 5km of the site boundary. Two non-statutory designated sites are located within 1km of the site and are detailed within Table 6.

Table 6 – Designated Sites within the Search Areas

Designated Site	Approx. Distance from Site	Details
Statutory designated sites		
River Ehen Special Area of Conservation (SAC)	4.6km south-east	A 23-hectare site that is designated for supporting the largest freshwater pearl mussel (<i>Margaritifera margaritifera</i>) population in England. With exceptionally high densities found in some locations. The river also harbours populations of Atlantic salmon (<i>Salmo salar</i>) which also contributes to the sites designation.
Non-statutory designated sites		
Woodhouse Quarry County Wildlife Site (CWS)	600m north	No information available
Roska Park and Bellhouse Gill Wood (CWS)	600m south	No information available

Based on consultation with MAGIC it has been identified that the site also falls within the Impact Risk Zone of the St. Bees Head Site of Special Scientific Interest (SSSI) located approximately 1.1km to the west of the site. This site is the most westerly point on the Cumbria coast. The biological interest of the site is represented in a number of different ‘habitats’: natural cliff-top grassland and heath, sheer cliff face and cliff-fall rubble, shingle and wave-cut platform. The outstanding interest of this area lies, however, in the sheer cliffs which provide the only breeding site on the coast of Cumbria for a variety of colonial seabirds. These include over 2,000 pairs of guillemots along with lesser numbers of fulmar, kittiwake, razorbill, cormorant, puffin, shag and herring gull. The cliffs are, in addition, the only breeding site on the entire coast of England for black guillemots.

3.1.3 Flora and Fauna

The following section summarises protected and/or notable species records that have been recorded within 1km of the site.

Invertebrates

Nine records of notable invertebrates were returned within the data search. One record of small heath (*Coenonympha pamphilus*), four records of wall butterfly (*Lasiommata megera*), one record of latticed heath moth (*Chiasmia clathrata*), and three records of cinnabar moth (*Tyria jacobaeae*). The closest record was related to a wall butterfly approximately 300m north of the site from 2008.

All species records returned are listed on Section 41 of the Natural Environment and Rural Communities Act (NERC) 2006 and are also listed as priority species on the Cumbria BAP.

Vascular Plant

The data search returned two records of a notable vascular plant species attributed to English bluebell (*Hyacinthoides non-scripta*). Both records were attributed to Roska Park and Bellhouse Gill which is located approximately 600m to the south of the site in 1999.

English bluebell are protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended).

Amphibians

Eight records of common toad (*Bufo bufo*) were received, with the closest record approximately 450m west of the site from 1999. The species is listed as a priority species on the Cumbria BAP and is also listed on Section 41 of the NERC Act (2006).

A MagicMap search returned no granted EPSL relating to great crested newts present within 1km of the site.

Birds

A total of 650 records of protected or notable birds were returned within 1km of the site as detailed in Table 7.

Table 7 – Protected or notable birds recorded within 1km

Scientific Name	Common Name	Protection	Closest Record to Site	
			Approx. Min. Distance (m)	Date
<i>Chroicocephalus ridibundus</i>	Black-headed gull	BoCC5**	Within 1km	2010
<i>Pyrrhula pyrrhula</i>	Bullfinch	BoCC5**, S41*****, LBAP	Within 1km	2013
<i>Larus canus</i>	Common gull	BoCC5**	Within 1km	2010
<i>Actitis hypoleucos</i>	Common sandpiper	BoCC5**	Within 1km	2009
<i>Cuculus canorus</i>	Cuckoo	BoCC5*, S41*****, LBAP	Within 1km	1998
<i>Numenius arquata</i>	Curlew	BoCC5*, S41*****, LBAP	Within 1km	1998
<i>Prunella modularis</i>	Dunnock	BoCC5**, S41*****, LBAP	Within 1km	2013
<i>Locustella naevia</i>	Grasshopper warbler	BoCC5*, S41*****, LBAP	Within 1km	2011

Scientific Name	Common Name	Protection	Closest Record to Site	
			Approx. Min. Distance (m)	Date
<i>Larus marinus</i>	Great black-backed gull	BoCC5**	Within 1km	2010
<i>Chloris chloris</i>	Greenfinch	BoCC5*	Within 1km	2013
<i>Tringa nebularia</i>	Greenshank	Sch.1****, BoCC5**	Within 1km	2008
<i>Perdix perdix</i>	Grey partridge	BoCC5*, S41****, LBAP	Within 1km	2013
<i>Motacilla cinerea</i>	Grey wagtail	BoCC5**	Within 1km	2010
<i>Anser anser</i>	Greylag goose	Sch.1****(Part 2), BoCC5**	Within 1km	2010
<i>Larus argentatus</i>	Herring gull	BoCC5*, S41****	Within 1km	2013
<i>Delichon urbicum</i>	House martin	BoCC5*	Within 1km	2009
<i>Passer domesticus</i>	House sparrow	BoCC5*, S41****, LBAP	Within 1km	2013
<i>Falco tinnunculus</i>	Kestrel	BoCC5**	Within 1km	2013
<i>Vanellus vanellus</i>	Lapwing	BoCC5*, S41****, LBAP	Within 1km	2013
<i>Larus fuscus</i>	Lesser black-backed gull	BoCC5**	Within 1km	2013
<i>Acanthis cabaret</i>	Lesser redpoll	BoCC5*, S41****, LBAP	Within 1km	2010
<i>Carduelis cannabina</i>	Linnet	BoCC5*, S41****, LBAP	Within 1km	2013
<i>Anas platyrhynchos</i>	Mallard	BoCC5**	Within 1km	2010
<i>Anthus pratensis</i>	Meadow pipit	BoCC5**	Within 1km	2013
<i>Turdus viscivorus</i>	Mistle thrush	BoCC5*	Within 1km	2010
<i>Gallinula chloropus</i>	Moorhen	BoCC5**	Within 1km	2010
<i>Cygnus olor</i>	Mute swan	BoCC5**	Within 1km	2010
<i>Haematopus ostralegus</i>	Oystercatcher	BoCC5**	Within 1km	2010
<i>Ficedula hypoleuca</i>	Pied flycatcher	BoCC5**	Within 1km	1999
<i>Anser brachyrhynchus</i>	Pink-footed goose	BoCC5**	Within 1km	2011
<i>Aythya ferina</i>	Pochard	BoCC5*	Within 1km	2010
<i>Tringa totanus</i>	Redshank	BoCC5**	Within 1km	2010
<i>Turdus iliacus</i>	Redwing	Sch.1****, BoCC5**	Within 1km	2011
<i>Emberiza schoeniclus</i>	Reed bunting	BoCC5**, S41****, LBAP	Within 1km	2010
<i>Charadrius hiaticula</i>	Ringed plover	BoCC5*	Within 1km	2009
<i>Corvus frugilegus</i>	Rook	BoCC5**	Within 1km	2010
<i>Alauda arvensis</i>	Skylark	BoCC5*, S41****, LBAP	Within 1km	2013

Scientific Name	Common Name	Protection	Closest Record to Site	
			Approx. Min. Distance (m)	Date
<i>Gallinago gallinago</i>	Snipe	BoCC5**	Within 1km	2010
<i>Turdus philomelos</i>	Song thrush	BoCC5**, S41****, LBAP	Within 1km	2013
<i>Accipter nisus</i>	Sparrowhawk	BoCC5**	Within 1km	2011
<i>Muscicapa striata</i>	Spotted flycatcher	BoCC5*, S41****, LBAP	Within 1km	2013
<i>Sturnus vulgaris</i>	Starling	BoCC5*, S41****, LBAP	Within 1km	2013
<i>Apus apus</i>	Swift	BoCC5*	Within 1km	2010
<i>Strix aluco</i>	Tawny owl	BoCC5**	Within 1km	2013
<i>Anas crecca</i>	Teal	BoCC5**	Within 1km	2010
<i>Passer montanus</i>	Tree sparrow	BoCC5*, S41****, LBAP	Within 1km	2010
<i>Oenanthe oenanthe</i>	Wheatear	BoCC5**	Within 1km	2013
<i>Saxicola rubetra</i>	Whinchat	BoCC5*	Within 1km	1999
<i>Anas penelope</i>	Wigeon	BoCC5**	Within 1km	2009
<i>Phylloscopus trochilus</i>	Willow warbler	BoCC5**	Within 1km	2013
<i>Scolopax rusticola</i>	Woodcock	BoCC5*	Within 1km	2009
<i>Colomba palumbus</i>	Woodpigeon	BoCC5**	Within 1km	2013
<i>Troglodytes troglodytes</i>	Wren	BoCC5**	Within 1km	2009
<i>Emberiza citrinella</i>	Yellowhammer	BoCC5*, S41****, LBAP	Within 1km	2009
Sensitive species_d	Sensitive species_d	BoCC5**, Sch.1****	Within 1km	2009
Sensitive species_n	Sensitive species_n	Sch.1****	Within 1km	2013
Sensitive species_t	Sensitive species_t	Sch.1****, LBAP	Within 1km	2011
Sensitive species_w	Sensitive species_w	BoCC5*, Sch.1****	Within 1km	2010
Sensitive species_y	Sensitive species_y	Sch.1****	Within 1km	2012

* Red list of BoCC5 (2021)

** Amber list of BoCC5 (2021)

*** Black list BoCC5 (2021)

**** Section 21 of the NERC Act (2009)

***** Schedule 1 or 5 of the WCA (1981)

Bats

Three records of bat were returned within the data search, attributed to common pipistrelle bat species (*Pipistrellus pipistrellus*), an unidentified pipistrelle species (*Pipistrellus spp.*) and brown long-eared bat (*Plecotus auritus*). The common pipistrelle record was related to a roost, while the unidentified pipistrelle species and brown long-eared records were related to field signs. The closest

record was attributed to the common pipistrelle located approximately 300m to the east of the site from 2001.

All species of bat returned are listed as Priority species on Cumbria BAP and are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Brown long-eared bats are also listed on Section 41 of the NERC Act (2006).

A MagicMap search returned no granted EPSL relating to bats present within 1km of the site.

Hedgehog

Four records of hedgehog were returned within 1km of the site, with the closest record located approximately 450m south of the site from 2011.

Hedgehog are listed on Section 41 of the NERC Act (2006) and are a Priority Species on the Cumbria BAP.

Badger

One record of badger was returned within 1km of the site from 1999 and was attributed to a field sign.

Badger are protected by the Protection of Badgers Act 1992

Red squirrel

Twenty-eight records of red squirrel (*Sciurus vulgaris*) were returned within the data search. The closest record was located approximately 300m to the north-east of the site in 2014.

Red squirrel are listed under Section 41 of the NERC Act (2006) and are listed as a priority species on the Cumbria BAP.

Invasive Non-native Species

Fauna

Seven records of grey squirrel (*Sciurus carolinensis*) were returned within 1km, with the closest record located approximately 650m north of the site in 2010.

Grey squirrel are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)

Flora

Four records of invasive non-native plant species were returned within 1km of the site, exclusively comprising Japanese knotweed (*Fallopia japonica*)

All records were located within 1km of the site and the most recent record returned was from 2010.

Japanese knotweed is listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

No Records Returned

The data search returned no records for:

- Hazel dormice (*Muscardinus avellanarius*)
- Great crested newt
- Reptiles

- White-clawed crayfish
- Water vole
- Otter

3.2 Field Survey

The site habitats and accompanying Target Notes are presented in the Phase 1 Habitat Map in Appendix 4.

3.2.1 Poor Semi-Improved Grassland

Much of the site comprised poor semi-improved grassland that showed evidence of grazing and had a short sward of less than 10cm. Yorkshire fog (*Holcus lanatus*) was abundant throughout the site, with red fescue (*Festuca rubra*) and false oat grass (*Arrhenatherum elatius*) locally abundant within the south of the site. Broadleaved dock (*Rumex obtusifolius*), creeping buttercup (*Ranunculus repens*), ribwort plantain (*Plantago lanceolata*), white clover (*Trifolium repens*) and daisy (*Bellis perennis*) all occurred frequently within this habitat. Occasional occurrences of timothy grass (*Phleum pratense*), common nettle (*Urtica dioica*), cocksfoot (*Dactylis glomerata*), rosebay willowherb (*Chamaenerion angustifolium*), bramble (*Rubus fruticosus* agg.), dandelion (*Taraxacum officinale* agg.), and ragwort (*Jacobaea vulgaris*) were also noted. Along the north-east border of the site was an area of fly tipping (TN1) from an adjacent residential garden.



Photograph 1 – Poor semi-improved grassland comprising much of the site



Photograph 2 – Poor semi-improved grassland comprising much of the centre of the site



Photograph 3 – Fly tipping from adjacent residential garden (TN1)

3.2.2 Marshy Grassland

Two areas of marshy grassland were present on site. One at the south of the site and one along the northern boundary, both areas comprised similar plant composition. Rosebay willowherb and common rush (*Juncus effusus*) was abundant, with creeping thistle (*Cirsium arvense*), springy turf moss (*Rhytidiadelphus squarrosus*), sphagnum moss (*Sphagnum spp.*) and ragwort all occurring occasionally. Reedmace (*Typha latifolia*) was also locally abundant in the northern parcel of marshy grassland.



Photograph 3 – Marshy grassland at the south of the site



Photograph 4 – Marshy grassland at the north of the site

3.2.3 Ditch

An overgrown, partially dry ditch with small areas of shallow water was present along the south-western boundary that contained an outflow at its southern end. This ditch is only anticipated to have flowing water during periods of high rainfall.



Photograph 5 – Outflow at southern end of ditch



Photograph 6 – Ditch along south-west boundary

3.2.4 Dense Scrub

Three areas of dense scrub were present on site. The ditch detailed in Section 3.2.3 was overgrown by dense scrub where bramble was abundant. Goat willow (*Salix caprea*) and hawthorn (*Crataegus monogyna*) were frequent within the area and field horsetail (*Equisetum arvense*), elder (*Sambucus nigra*), rowan (*Sorbus aucuparia*), and lady fern (*Athyrium filix-femina*) were occasionally noted. A small patch of dense scrub was also present at the north of the site which was locally dominated by bramble. Within the centre of the site a small stretch of dense scrub dominated by gorse (*Ulex europaeus*) was present.



Photograph 7 – Dense scrub overgrowing the ditch



Photograph 8 – Dense scrub top the north of the site



Photograph 9 - Dense gorse scrub in the centre of the site

3.2.5 Hardstanding

Along the eastern boundary was an area of the site that had been land grabbed by an adjacent residential property. This area was fenced off and had three metal sheds within it and areas of hardstanding.



Photograph 10 – Northern aspect of land grab fencing



Photograph 11 – Western aspect of land grab fencing



Photograph 12 – Southern aspect of land grab fencing



Photograph 13 – Inside land grab

3.2.6 Tall ruderal

Two small stands of tall ruderal were present around the fenced off land grab detailed in Section 3.2.5. Common nettle, broadleaved dock, and rosebay willowherb were locally abundant in these areas.



Photograph 14 – Tall ruderal to north of land grab



Photograph 15 – Tall ruderal to south of land grab

3.2.7 Bare ground

An active construction site was present on the western boundary of the site and extended partially within the survey area. This area was absent of vegetation.



Photograph 16 – Area of construction site encroachment



Photograph 17 – Area of construction site encroachment

3.2.8 Standing Water

Three areas of standing water were also present on site. Within the area of marshy grassland to the south of the site was a small area of standing water (P1) that was the present due to an overflow pipe from a pond located south of the site. A pond (P2) was also constructed within the area of bare ground detailed in section 3.2.7. To the north of the site was a reedbed (P3), with some standing of water that was dominated by bulrush.



Photograph 18 – Standing water to the south



Photograph 19 – Overflow pipes from offsite pond



Photograph 20 – Construction site pond



Photograph 21 – Construction site pond



Photograph 22 – Bulrush reedbed



Photograph 23 – Bulrush reedbed

3.3 Site Suitability for Protected and Notable Species

3.3.1 Species Discounted from Assessment

Water vole, otter, and white-clawed crayfish (*Austropotamobius pallipes*) have been discounted from the assessment as the aquatic habitats located on site and within proximity are unsuitable to support such species.

Hazel dormouse (*Muscardinus avellanarius*) mainly occur in southern counties, especially in Devon, Somerset, Sussex and Kent. There are few recorded localities north of the Midlands, though they are present in parts of the Lake District and in scattered Welsh localities (Matthews *et al.*, 2018). The species are not generally known to be present within the Whitehaven area (Wembridge *et al.*, 2016). The habitats on site are of limited value due to limited areas of extensive woodland and scrub. As such, the species are reasonably discounted from site.

3.3.2 Invertebrates

Aquatic habitats and reed beds were present on site and provide value to notable invertebrate species, however, these habitats are small in size, and the majority of the site is of poor quality. It is anticipated common species will be present due to the minimal management on site.

Overall, the presence of notable invertebrates within the site is reasonably discounted.

3.3.3 Amphibians

Three ponds (P1, P2, and P3) were located onsite, with three ponds (P4, P5 and P6) within 250m of the site boundary. These ponds were subject to Habitat Suitability Index assessments (HSI) and were found to be of poor suitability for great crested newts but may offer some value to common amphibians, full details of the HSI assessments can be found in Appendix 3.

The site comprised a mosaic of unmanaged habitats, however large areas of the site was comprised of semi-improved grassland that showed evidence of grazing and as such lacked a variety of sward heights which may provide suitable foraging resources and cover for common amphibians such as common toads. However, the areas of dense scrub on site may provide suitable opportunities for common species.

As ponds are present on site and within the surrounding area the presence of great crested newts cannot be reasonably discounted, common amphibian species are also anticipated to occur on site.

3.3.4 Reptiles

The site was found to provide limited value for reptiles, given the majority of the site comprised semi-improved grassland, which lack the structure and habitat quality to support the species group. The scrub habitats could provide some terrestrial cover for the species, though these are generally confined to the boundaries.

Overall, the habitats on site were of limited value and no records of the species group were identified. Reptiles are not considered to be present on site.

3.3.5 Birds

Ground Nesting

The site offers limited potential for ground nesting birds, with a lack of varied vegetation structure on much of the site. The areas of dense scrub offer the highest value to ground nesting birds with records

of notable species such as Lapwing were returned within the data study. However, the site is subject to much disturbance as it is immediately adjacent an active construction site, which is anticipated to limit the value of the site to ground nesting birds further.

As such notable ground nesting birds are reasonably discounted from the site.

Passerine

The site offers suitable habitats for nesting birds in the dense scrub habitats. Several bird species were observed during the site visit within the site extent, including wood pigeon, magpie (*Pica pica*), herring gull, sparrowhawk, and rook. As a result, it is likely that birds use these habitats to nest during the nesting season.

The site was confirmed to provide value for nesting birds.

3.3.6 Bats

Preliminary Roost Assessment

No buildings or trees on site offered bat roosting potential. However, there is a farmhouse (B1) present adjacent to the site boundary. In order to gain a full assessment of bat potential on site an external PRA was conducted on the building, and it was assessed as having **moderate** potential. The full details of the PRA can be found in Appendix 2.

Commuting and Foraging Bats

The dense scrub to the west of the site is anticipated to offer the highest value to commuting and foraging bats as a linear feature and may attract invertebrate prey. However, the site is not connected to other off-site habitats and is isolated. Further linear features are not present on site. The habitats on site appear to be common within the surrounding area.

As such the site has been assessed as providing **Low** commuting and value potential.

3.3.7 Hedgehog

The scrub habitats will provide suitable cover and foraging habitats for the species.

Hedgehog are potentially present within the site.

3.3.8 Red squirrel

Red squirrel require woodland in order to nest and forage. The site offers limited potential for the species with the area of dense scrub offering the most appropriate habitat for the species, due to the presence of some trees. However, this area is isolated from other areas of woodland with no connectivity to the surrounding area. Grey squirrel are also known to be within the area which will outcompete the red squirrel.

As such red squirrel have been discounted from the assessment.

3.3.9 Badger

No evidence of badger was found on site. However, the area of dense scrub at the west of the site is on sloping ground which offers suitable sett constructing habitat. The semi-improved grassland comprising most of the site offers suitable foraging potential for the species and an area of woodland is present approximately 200m east of the site. One record of badger was also returned within the data search.

Badger are likely to use the site for foraging and commuting, although sett constructing habitat does exist on site.

3.4 Invasive Species

3.4.1 Flora

No invasive, non-native species were present on the site at the time of the field survey. However, it should be noted that some invasive non-native plants are very fast spreading and therefore the potential for these species to be introduced to the site at a later date cannot be ruled out.

4 Ecological Constraints and Recommended Mitigation

4.1 Proposed Development

Story Homes are proposing to develop land at the site. The proposals include the development of a residential housing scheme with associated hard and soft landscaping.

4.2 Designated Sites

The site is located within the impact risk zone for the St Bees Head SSSI within the local area. It is anticipated that the designated sites are a sufficient distance away and are separated by anthropogenic barriers such as the residential areas, such that no impacts as a result of development are anticipated.

Two non-statutory CWSs are located within 1 km of the site boundary. There may be small increase of visitors to the nearby sites. However, based on the size of the scheme and the proposed retention of green space on site, it is anticipated the potential impacts will not be of significance.

4.3 Habitats

The site comprised habitats that were found to be widespread within the local area; however, they did contain value for wildlife such as bats, birds and terrestrial mammals.

4.4 Fauna

4.4.1 Amphibians

Great crested newts may be on site and as such it is recommended that eDNA surveys are carried out on all ponds on site and within 250m of the site.

It is recommended that Reasonable Avoidance Measures are to be followed during site clearance. All site contractors are to be inducted to the potential presence of the species. Any debris is to be cleared by hand, and any common amphibians located moved carefully, by hand, to outside of the development area.

4.4.2 Birds

The dense scrub habitat offers the most potential for nesting birds, as such, vegetation removal should be undertaken outside of the breeding bird season (March to September, inclusive). If this is not possible, a suitably experienced ecologist should check the habitat for breeding bird activity no more than 48 hours before clearance. If nesting activity is found, nests must be left in situ until the young have fledged.

4.4.3 Bats

Roosting Bats

As stated in Section 3.3.6, B1 was assessed as having **Moderate** bat roosting potential. However, the building is not to be affected by development and as such no further surveys relating to this building are required.

If the development plans change and this building is to be impacted, then an updated PRA survey should be completed by a suitably qualified ecologist with internal access to provide a comprehensive assessment.

Foraging and Commuting Bats

Bats are sensitive to lighting and may be impacted by the proposed development, should no mitigation for lighting be considered.

Lighting mitigation should follow the guidance outlined in the Institute for Lighting Engineers document "Guidance for the Reduction of Obtrusive Lighting" (2005) and BCT's "Bats and Artificial Lighting in the UK" (2018). The construction lighting may impact bats which are sensitive to light. Directional lighting will be achieved by angle and orientation of beam, use of a cowl, louvre or other light shield, or a combination of these.

An External Lighting Scheme had not been produced on the writing of this report. As such, the following recommendations are to be considered within the scheme during its condition, to minimise impacts of lighting. The recommendations are as follows:

- Keep site lighting to minimum levels.
- Luminaries should lack UV elements and preferably LED lighting with a warm white light should be used over cool white light (ideally <2700Kelvin).
- Lighting should feature peak wavelengths greater than 550nm.
- Internal lighting should be positioned away from windows to minimise light spill, where appropriate.
- Light placement should be downward facing to prevent excess horizontal or vertical light spill.
- The use of integrated fittings such as cowls, shields, louvres, and hoods, that effectively contain light spill from unintended areas, where appropriate.
- The use of hard landscaping features to block light and create dark corridors.
- Avoid illuminating any suitable retained bat habitats, particularly the hedgerows and trees, that are potential commuting and foraging habitat for bats.
- Use of timed security lights should be set on motion-sensors and using short, 1-minute timers, to minimise light use, where appropriate.
- Column heights of lighting can be considered to minimise light spill.

4.4.4 Hedgehog

Hedgehog may be present on site, as such checks for hedgehogs should be carried out prior to vegetation removal to avoid harming this species during works.

4.4.5 Badgers

Badger could potentially use the site and as such it is recommended that the following Precautionary Working Methods are adhered to during the construction phase to ensure that no badgers are impacted by the proposed development:

- All site operatives will be inducted to the potential presence of the species and the species legal protection.
- A badger walkover will be completed by a suitably qualified ecologist immediately prior to construction works starting on site.

- All site operatives will be inducted as to identifying potential badger setts and should be vigilant if they suspect they locate a new sett during works and inform the site manager immediately. A minimum 20m buffer will be maintained from the potential sett until an ecologist has been to site.
- All excavations will be battened at a 45-degree angle or ramps to be positioned to allow escape should animals become trapped.
- All site machinery and materials will be appropriately stored to avoid harm to the species, notably between July and November each year when extra care is needed to avoid potential impacts on pregnant females.

5 Further Surveys

5.1 Great Crested Newts

Updated eDNA surveys are to be carried out on all Ponds on site and within 250m of the site. The results of these surveys will inform the need for further GCN survey effort.

Preliminary plans for the site show that P2 and P3 are to be lost as part of the development. In the unlikely chance that GCN are confirmed to be present through eDNA surveys, appropriate development licences will need to be applied for a mitigation including amphibian proof fencing will need to be constructed to ensure that newts do not disperse on to the construction site. Standard bottle trapping surveys would be carried out to inform the licence, which would require at least four survey visits to ponds with suitability to support GCN.

Any vegetation to be removed will need to be done under the supervision of a qualified ecologist and will involve a two-stage cut, where vegetation is initially trimmed to 0.25m above ground level, is then checked by an ecologist, before the rest of the vegetation is removed.

Table 8 – Further GCN survey effort required

Pond Reference	Surveys required	Surveying Season
Pond 1, 2, 3, 4, 5, and 6	eDNA surveys	15 th April – 30 th June
Pond 1, 2, 3, 4, 5 and 6	Traditional bottle trapping surveys (if eDNA returns positive results)	March to mid-June, with at least 2 visits between mid-April to mid-May

6 Opportunities for Enhancement

The National Planning Policy Framework (NPPF) (2021) highlights the requirement for planning policies and decisions to conserve and enhance the natural environment.

Paragraph 170 states that this should be achieved by (in terms of this assessment only):

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

Specific enhancement recommendations for the site include the following:

- Bat and bird boxes could be placed on the new buildings / retained trees. A plan to show the locations of these boxes and the specifications should be produced by a suitably qualified ecologist once the layout is finalised.
- Planting of linear features such as hedgerows and trees between garden plots where possible, to add commuting features withing the site.
- The inclusion of ‘hedgehog highways’ to facilitate movement across the site. This includes holes of 13 x 13cm at the bases of fence panels, leaving a sufficient gap beneath gates and/or leaving brick spaces at the bases of brick walls.
- An ecologically sensitive planting scheme could be incorporated on the site to promote invertebrate use of the site, which would benefit local bat and bird species.

7 Conclusion

The PEA has met the objectives of the report, by demonstrating the following:

- The major habitats identified on site included poor semi-improved grassland, marshy grassland, dense scrub, tall ruderal and standing water.
- Potential ecological constraints identified included common amphibians, birds, bats, hedgehog, and badgers and are detailed in Section 4.
- Mitigation recommendations to be completed prior and during the construction phase for amphibians, birds, bats, hedgehog, and badgers have been detailed in Section 4.
- Further eDNA surveys are required to determine presence or absence of Great crested Newts on site and inform relevant mitigation requirements.
- General ecological enhancements are listed within Section 6.

8 References

- Bat Conservation Trust and Institute of Lighting Professionals (2018). Bats and artificial lighting in the UK – Bats and the Built Environment Series.
- British Hedgehog Preservation Society / People's Trust for Endangered Species (2019). Hedgehogs and Development. BHPS / PTES.
- CIEEM (2019). Advice Note on the Lifespan of Ecological Reports and Surveys. CIEEM.
- CIEEM (2019). Guidelines for Preliminary Ecological Appraisal. CIEEM. Rivers Ecology Series No. 10. English Nature, Peterborough.
- Collins (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (Third Edition). The Bat Conservation Trust, London.
- Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015) Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. British Birds 108, 708–746. Available online at britishbirds.co.uk/wp-content/uploads/2014/07/BoCC4.pdf
- IEA (1995). Guidelines for Baseline Ecological Assessment. E & F Spon.
- English Nature (2004). Bat Mitigation Guidelines. English Nature, Peterborough.
- Google Earth (2002). Historical aerial imagery of the site. Last checked 18/01/2022.
- Harris S., Cresswell P., Jefferies D. (1989). *Surveying Badgers*. The Mammal Society.
- IEA (1995). Guidelines for Baseline Ecological Assessment. E & F Spon.
- JNCC (2004). Bat Workers Manual. JNCC, Peterborough.
- JNCC (2010). Handbook for Phase One Habitat Survey – 2010 Edition. England Field Unit, Nature Conservancy Council. Reprinted JNCC.
- Maddock, A. (2008). UK biodiversity action plan; priority habitat descriptions. UK Biodiversity Action Plan.
- Mathews, F., Kubasiewicz, L.M., Gurnell, J., Harrower, C.A., McDonald, R.A., and Shore, R.F. (2018). A review of the population and conservation status of British mammals.
- NARRS (2007).
- Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001), Great crested newt conservation handbook, Froglife, Halesworth.
- Oldham, R.S., Keeble, J., Swan, M.J.S., and Jeffcote, M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetology Journal 10 (4), 143-155.
- Shuttleworth, C., RSST (n.d.). Red and grey squirrels distribution in the British Isles in 1945 and 2010.
- Wembridge, D., Al-Fulaij, N. and Langton, S. (2016). The State of Britain's Dormice 2016. Population index, p.100.

Appendix 1 – Relevant Legislation

Legislation relating to European Protected Species (e.g. bats, otter, great crested newt)

European Protected Species and their resting places (e.g. bat roosts) are protected under the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way (CROW) Act 2000, and the Conservation of Habitats and Species Regulations 2017.

The Conservation of Habitats and Species Regulations 2017 transpose the European Union's 'Habitats Directive' (Council Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora (EC Habitats Directive) into UK law. The Regulations provide for the designation and protection of 'European Sites', the protection of 'European Protected Species' (EPS), and the adaptation of planning and other controls for the protection of European Sites. EPS are listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017.

Under the Wildlife and Countryside Act 1981 (as amended) it is an offence to:

- Intentionally kill, injure or take certain animals listed in Schedule 5;
- Intentionally or recklessly damage or destroy any structure or place which any wild animal specified in Schedule 5 uses for shelter or protection;
- Intentionally or recklessly disturb any such animal while it is occupying a structure or place which it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any structure or place which any such animal uses for shelter or protection.

In addition, under this legislation there are offences relating to sale, possession and control of wild animals listed in Schedule 5.

- Under the Conservation of Habitats and Species Regulations 2017 it is an offence to:
- Deliberately capture, injure or kill any wild animal listed as a European Protected Species;
- Deliberately disturb wild animals of any such species in such a way as to be likely:
- to impair their ability:
 - to survive, to breed or reproduce, or to rear or nurture their young, or;
 - in the case of animals of a hibernating or migratory species, to hibernate or migrate, or;
- to affect significantly the local distribution or abundance of the species to which they belong.
- Deliberately take or destroy the eggs of such an animal, or;
- Damage or destroy a breeding site or resting place of such an animal.

In addition, under this legislation there are offences relating to possession, control sale and exchange of an EPS.

Great crested newt, otter and several species of bat are listed as a SoPI under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

Legislation for amphibians (other than great crested newt)

Under the Wildlife and Countryside Act 1981 (as amended) the four widespread amphibian species, smooth newt (*Triturus vulgaris*), palmate newt (*Triturus helveticus*), common toad (*Bufo bufo*) and common frog (*Rana temporaria*) receive limited protection through section 9(5) only which makes selling, offering for sale, possessing or transporting for the purpose of sale (live or dead animal, part or derivative) an offence.

Common toad is listed as a SoPI under Section 41 of the NERC Act 2006.

Legislation relating to breeding birds

All birds, their nests and eggs are protected by the Wildlife and Countryside Act 1981 (as amended) 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 while it is in use or being built;
- Intentionally take or destroy the egg of any wild bird; and
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building or is in, on or near a nest with eggs or young; or disturb the dependent young of such a bird.

Schedule 1 of the Wildlife and Countryside Act 1981 provides further protection for selected species (including peregrine falcon (*Falco peregrinus*), barn owl (*Tyto alba*), little ringed plover (*Charadrius dubius*) and black redstart (*Phoenicurus ochruros*) during the breeding season. If any person intentionally or recklessly disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or disturb dependent young of such a bird. That person shall be guilty of an offence.

A number of bird species are listed as SoPI under Section 41 of the NERC Act 2006.

Conservation status - Birds of Conservation Concern (Eaton et al. 2015)

The UK's leading bird conservation organisations have worked together on the third quantitative review of the status of the birds that occur regularly in the UK, updating the last review in 2011. The status of birds within the UK have been regularly monitored through a series of surveys, including the national Breeding Bird Survey, Common Bird Census, sea bird monitoring programs and wetland monitoring programs. The result of this review and continued monitoring is The Population Status of Birds in the UK, Birds of Conservation Concern 4: 2015.

Birds are assessed against criteria to place each species on one of three alert lists, red, amber or green. Red list species are considered to be of high conservation concern, being either globally threatened, having historical UK population declines, having a rapid population decline or breeding range contraction of 50% or more in the last 25 years.

Amber list species are considered to be of medium conservation concern as they meet one or more of the following criteria (but none of the red list criteria): Red listed for historical decline in a previous review but with substantial recent recovery (more than doubled in the last 25 years), a UK breeding range contraction of between 25% and 49%, a reduction of breeding or non-breeding population of 25-49% in the last 25 years, a 5-year mean of 1-300 breeding pairs in the UK, an unfavourable European conservation status, at least 50% of the UK breeding population found in 10 or fewer sites, or where the breeding population in the UK represents 20% or more of the European breeding populations.

Green list species are considered to be of low conservation concern. They include all regularly occurring species that do not qualify under any of the red or amber criteria are green listed. The green list also includes those species listed as recovering from Historical Decline in the last review that have continued to recover and do not qualify under any of the other criteria.

Legislation relating to badger

Badgers are protected under the Protection of Badgers Act 1992 (as amended) which makes it an offence to:

- wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so;
- intentionally or recklessly damage, destroy or obstruct access to a badger sett; and
- disturb a badger when it is occupying a sett.

These provisions have implications for construction or preparation works undertaken in the vicinity of an active sett and may be confounded by distance from the sett entrance. Any works resulting in ground penetration, vibration or noise near an identified badger sett entrance/s have the potential to disturb badgers and advice should be sought from a suitably experienced ecologist under such circumstances. If disturbance to an active sett is probable, then a licence may need to be obtained from Natural England before any works commence.

Appendix 2 - Preliminary Roost Assessment

Building Reference	Description	Evidence	Category of Suitability
B1	<u>External</u> B1 was a double-storey rendered brick farm building with an open-ended gable style roof. Slate tiles were present along the roof. A single-storey brick and flat roof extension was present adjoining the western aspect of the building. The chimney stack had some lifted lead flashing that could act as a suitable PRF and the western aspect of the single-storey extension had multiple crevices within the brickwork that led into the structure forming further PRFs <u>Internal</u> No internal access		Moderate

Appendix 3 – Habitat Suitability Index Assessment

HSI Score	Standing water (P1)	
Photo		
Description	Located onsite. A small overflow pond rounded in shape with little vegetation and unshaded. The terrestrial habitat surrounding the pond is of poor quality for amphibian species with little connectivity to other ponds on site and off site.	
	Field Score	HSI Score
SI1 - Location	A	1
SI2 – Pond area	<50m ²	0.05
SI3 - Pond drying	Dries Annually	0.1
SI4 – Water quality	Bad	0.1
SI5 - Shade	0%	1
SI6 - Waterfowl	Absent	1
SI7 - Fish	Absent	1
SI8 - Ponds	5	1.9
SI9 - Terrestrial	Poor	0.33
SI10 - Macrophytes	10%	0.35
Overall HSI score	<0.5 – Poor	

HSI Score	Standing water (P2)	
Photo		
Description	Located onsite. A lined construction site pond rectangular in shape with no vegetation and unshaded. The terrestrial habitat surrounding the pond is of poor quality for amphibian species with little connectivity to other ponds on site and off site.	
	Field Score	HSI Score
Sl1 - Location	A	1
Sl2 - Pond area	<50m ²	0.05
Sl3 - Pond drying	Rarely dries	1
Sl4 - Water quality	Bad	0.1
Sl5 - Shade	0%	1
Sl6 - Waterfowl	Absent	1
Sl7 - Fish	Absent	1
Sl8 - Ponds	5	1.9
Sl9 - Terrestrial	Poor	0.33
Sl10 - Macrophytes	0%	0.3
Overall HSI score	<0.5 – Poor	

HSI Score	Standing water (P3)	
Photo		
Description	Located onsite. A small pond heavily vegetated in areas. The terrestrial habitat surrounding the pond is of poor quality for amphibian species with little connectivity to other ponds on site and off site.	
	Field Score	HSI Score
Sl1 - Location	A	1
Sl2 - Pond area	600m ²	1
Sl3 - Pond drying	Sometimes dries	0.5
Sl4 - Water quality	Bad	0.01
Sl5 - Shade	60%	1
Sl6 - Waterfowl	Absent	1
Sl7 - Fish	Absent	1
Sl8 - Ponds	5	1.9
Sl9 - Terrestrial	Poor	0.33
Sl10 - Macrophytes	60%	0.9
Overall HSI score	<0.5 – Poor	

HSI Score	Standing water (P4)	
Photo		
Description	Located offsite. A large, minorly vegetated pond. The terrestrial habitat surrounding the pond is of some value for amphibian species but offers little connectivity to other ponds on site and off site.	
	Field Score	HSI Score
Sl1 - Location	A	1
Sl2 - Pond area	2km ²	0.8
Sl3 - Pond drying	Never dries	0.9
Sl4 - Water quality	Moderate	0.67
Sl5 - Shade	40%	1
Sl6 - Waterfowl	Minor	0.67
Sl7 - Fish	Absent	1
Sl8 - Ponds	5	1.9
Sl9 - Terrestrial	Moderate	0.67
Sl10 - Macrophytes	20%	0.5
Overall HSI score	<0.5 – Poor	

HSI Score	Standing water (P5)	
Photo		
Description	Located approximately 100m south of the site. A small pond vegetated around its banks. The terrestrial habitat surrounding the pond is of poor quality for amphibian species with little connectivity to other ponds on site and off site.	
	Field Score	HSI Score
SI1 - Location	A	1
SI2 - Pond area	500m ²	1
SI3 - Pond drying	Never dries	0.9
SI4 - Water quality	Poor	0.33
SI5 - Shade	20%	1
SI6 - Waterfowl	Minor	0.67
SI7 - Fish	Absent	1
SI8 - Ponds	5	1.9
SI9 - Terrestrial	Poor	0.33
SI10 - Macrophytes	10%	0.4
Overall HSI score	<0.5 – Poor	

HSI Score	Standing water (P6)	
Photo		
Description	Located approximately 100m south of the site. A small pond vegetated around its banks. The terrestrial habitat surrounding the pond is of poor quality for amphibian species with little connectivity to other ponds on site and off site.	
	Field Score	HSI Score
Sl1 - Location	A	1
Sl2 - Pond area	300m ²	0.6
Sl3 - Pond drying	Never dries	0.9
Sl4 - Water quality	Poor	0.33
Sl5 - Shade	20%	1
Sl6 - Waterfowl	Minor	0.67
Sl7 - Fish	Absent	1
Sl8 - Ponds	5	1.9
Sl9 - Terrestrial	Poor	0.33
Sl10 - Macrophytes	10%	0.4
Overall HSI score	<0.5 – Poor	

Appendix 4 – Habitat Map and Target Notes

Do not scale this drawing (printed or electronic version).
This drawing is copyright and is for use on this site only. This drawing should be read in conjunction with all relevant consultants drawings and specialist subcontractors / supply chain drawings and specifications.
Responsibility for the reproduction of this drawing in paper form, or issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.

Red Line Boundary

Poor Semi-improved Grassland

Standing Water

Bare ground

Hardstanding

Marsh/Marshy Grassland

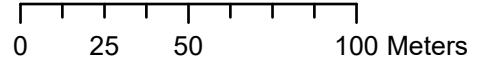
Dense/Continuous Scrub

Building

Tall Ruderal

N

- Target Notes
- TN1 - Lack of access, ongoing construction
 - TN2 - Building (Moderate Bat Potential)
 - TN3 - Land grab from residential property
 - TN4 - Residential Fly Tipping



U R B A N
G R E E N

A: Ground Floor, The Tower,
Deva City Office Park, Trinity Way,
Manchester M3 7BF

T: +44 (0) 161 312 3131

weareurbangreen.co.uk

Client: **Story Homes**

Project: **Edgehill Park Phase 4**

Title: **Habitat Map**

Issue: **01**

Drawn: AB	Checked: MM	Approved: MM
Project: UG1415	Scale @ A3: 1:2250	Date: 26/01/2022
Dwg No: UG1415_ECO_HM_01		Revision: 01