PRELIMINARY ECOLOGICAL APPRAISAL

at

Land at Low Town
Kirkburton
Huddersfield
West Yorkshire
HD8 0SB

Client:
Acumen Designers & Architects

Client Address:
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JCA Ref:
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Date of Report:
28/11/2023

JCA Limited
Arboricultural & Ecological Consultants

Quality Assurance

Version	Desktop Survey Completed:		Site Surveyed:		Report Completed:		Reviewed:	
	Date	Name	Date	Name	Date	Name	Date	Name
Planning	20/11/23	Eleanor Clark	21/11/23	Eleanor Clark Rick Westwood	28/11/23	Eleanor Clark	28/11/23	Rick Westwood
							28/11/23	Adam West

This report has been prepared and provided in accordance with the *British Standard 42020: Biodiversity – Code of practice for planning and development 2018* and the *CIEEM's Code of Professional Conduct.*

Risk Assessment Completed	E.S.COOK
Bio-security Procedure Completed	
Lone Worker Procedure Completed	

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Summary

JCA Limited has been commissioned by **Acumen Designers & Architects** to undertake a Preliminary Ecological Appraisal (PEA) of a site located at **Land at Low Town, Kirkburton, Huddersfield**. The site is located at Ordnance Survey (OS) National Grid Reference **SE 19735 12449** with nearby postcode **HD8 0SB**.

A desk study and field survey were undertaken in order to assess the potential of the site to support protected habitats and species and species of conservation concern. Recommendations for further survey, avoidance, mitigation, and enhancement – where appropriate - have been made and are summarised in Table 1 on the following page and are detailed in full in Chapter 6 of this report.

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Table 1: summary of ecological receptors at the site and recommended mitigation.

Receptor	Potential Risk to Project if No Action Taken	Cause of Impact Description of Effect	Further Survey Required	Mitigation Required
Designated sites				
Statutorily protected	None	None	No	No
Non-statutorily protected	None	None	No	No
S41 habitat	None	None	No	No
Other habitats	None	None	No	No
Protected species				
Flora (WCA Sch 8, CHSR Sch 5)	None	None	No	No
Invertebrates	None	None	No	No
White-clawed crayfish	None	None	No	No
Fish	None	None	No	No
Great crested newt	None	None	No	No
Reptiles	Low	Potential breach of legislation from killing and injury of individual reptiles during vegetation clearance.	No	A precautionary approach should be adopted to include an Ecological Clerk of Works (ECoW) being present.
Birds	Moderate	Potential breach of legislation from the destruction of nests or disturbance of nesting birds.	Dependent on timing of works.	A preconstruction site walkover is required prior to any vegetation removal commencing. If removal occurs outside of the breeding bird period (1st February until 31st August) and nesting birds are found, the removal must cease immediately, and a suitably competent ecologist contacted.
Bats	High	The building on site has high suitability of roosting	Three emergence surveys for the building with high	Dependent on the results of the surveys.

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		bats. Any disturbance to bats or a bat roost would result in a breach of legislation.	roosting potential between May and September, with at least two surveys during May-August. Two hibernation surveys are recommended during the coldest month of January and February.	
Otters	None	None	No	No
Water voles	None	None	No	No
Beaver	None	None	No	No
Other Species e.g. S41 species	Moderate	The removal of shrubs could disturb, injure, or kill hedgehogs.	No	A precautionary approach should be adopted to include an Ecological Clerk of Works (ECoW).
Invasive Species (WCA Sch 9) Injurious Weeds (Weeds Act, 1959)				
Rhododendron & montbretia	High	The spread of a Schedule 9 species due to inappropriate management and handling, resulting in the unwanted spread to the wider environment, is in breach of legislation.	No	A method statement for safe management and removal of these species is required.
Key: S41 habitat/species – habitats and species listed as priority for conservation importance under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006. WCA Sch – Wildlife and Countryside Act 1981 (as amended) Schedule CHSR – Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019				

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1. Introduction

1.1 Background

1.1.1 In November 2023, JCA Limited was instructed by **Acumen Designers & Architects** to undertake a Preliminary Ecological Appraisal (PEA) of a site located at **Land at Low Town, Kirkburton, Huddersfield** hereafter referred to as 'the site'. The purpose of the survey is to establish a baseline of ecological information and assess whether the proposed works, hereafter referred to as 'the scheme', have the potential to adversely affect any protected or notable habitats or species.

1.2 Scheme Description and Location

1.2.1 The site is located at Ordnance Survey (OS) National Grid Reference **SE 19735 12449**, with nearby postcode **HD8 0SB**. The site is bordered to the north by residential properties with gardens and pockets of woodland, to the east by All Hallows Church and graveyard with mature trees, to the west and the south by residential properties with gardens, arable land, and woodlands further afield.

1.2.2 The scheme is the conversion and extension of the existing building to two residential properties.

1.3 Aims and Objectives

1.3.1 The purpose of the survey is to establish a baseline of ecological information and assess whether the proposed development activities have the potential to adversely affect any protected or notable habitats or species. The following tasks have been undertaken:

- Desktop study – a review of environmental records for the surrounding area to obtain existing information on statutory and non-statutory designated sites of nature conservation interest, and the presence of protected and notable habitats and species within the site and its environs.
- Field surveys – a UKHab Habitat survey involving a site visit to record habitat types and dominant vegetation, including any invasive species. During this survey evidence of protected or notable fauna and habitats

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or habitat capable of supporting protected or notable fauna was recorded.

- Ecological report – an assessment of the potential ecological constraints to the proposed works at the site and recommendations for further survey, avoidance, mitigation, and enhancement where appropriate. Locations of any features constituting ecological constraints or of other ecological interest and vegetation recorded on and around the development are included in an accompanying UK Hab Habitat Map (**Appendix 1**). This report and the maps are supported by photographs (**Appendix 4**) and information regarding current legislation (**Appendix 7**).

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2. Methodology

2.1 Desktop Study

2.1.1 The desktop study involved conducting database searches for statutory and non-statutory designated sites and European Protected Species (EPS) licensing applications within a 2km radius of the site. In addition, international sites designated for bats within 30km of the site were searched for. The baseline conditions are based on a review of existing available information including:

- MAGIC (Multi-Agency Geographical Information for the Countryside) website (to identify statutory designated sites and EPS licences).
- Ordnance Survey mapping (to identify potentially notable habitats including ponds).
- Aerial photography (to identify potentially notable habitats).
- Data search for records of protected/notable species on and within 2km of the site within the last ten years (exempting bat roosts, of which all records are included) obtained from West Yorkshire Ecology Service, the local environmental records centre for WYES, along with information for non-statutory wildlife sites.

2.1.2 The records were checked against species listed as priority species under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and the Kirklees Biodiversity Action Plan (2007) to assess national and regional habitat and species status.

2.2 Field Survey

2.2.1 A UK Hab survey of the site was conducted on 21/11/23. All areas of the site were investigated and areas around the site where access permitted.

2.2.2 The vegetation and habitat types within the site were noted during the survey in accordance with the categories specified for a Vegetation and Habitat Survey (The UK Habitat Classification, Habitat Definitions Version 2.01, UKHab, 2023). Dominant and abundant plant species were recorded for each habitat present.

2.2.3 The site was inspected for evidence of, and its potential to support, protected or notable species, especially those listed under the

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Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, the Wildlife & Countryside Act (WCA) 1981 (as amended), including those given a higher level of legal protection under the NERC Act 2006 and Countryside & Rights of Way (CRoW) Act 2000, and those listed on the LBAP. The following species were considered:

- Invertebrates (including white-clawed crayfish *Austropotamobius pallipes*).
- Great crested newt *Triturus cristatus* freshwater habitat potential within 500m of the site.
- Reptile habitat within the site.
- Nesting and foraging habitat for birds within the site.
- Bat roost potential and foraging habitat within the site.
- Badger *Meles meles* setts within 30m of the site, where accessible.
- Otters *Lutra lutra* and suitable habitat within 30m of the site, where accessible.
- Water vole *Arvicola amphibius* habitat within 20m of the site, where accessible.
- Eurasian beaver *Castor fiber* habitat within 30m of the site, where accessible.
- Other notable species.
- Invasive species.

2.3 Survey Constraints

2.3.1 To determine presence or likely absence of protected species usually requires multiple visits at suitable times of the year. As a result, the survey undertaken focused on assessing the potential of the site to support species of note, which are of principal importance for the conservation of biodiversity with reference to the National Planning Policy Framework (Ministry of Housing, Communities and Local Government, 2018), especially those given protection under UK wildlife legislation.

2.3.2 The optimum time of year for completing the survey is between April and September, as many plant species have a seasonal expression in spring and summer only. The survey was undertaken on 21/11/23. This is a

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potential constraint; however, the plant species were still present making them readily identifiable.

2.3.3 The weather on the day of the survey was sunny and cold. The weather leading up to the survey was cool with some heavy showers. This is a potential constraint as any field signs, such as hair, tracks and droppings could be washed away by heavy rain. As such, a precautionary approach has been followed.

2.3.4 The details of this report will remain valid for a period of 18 months. If works have not commenced within this period or land use on site changes, it is recommended that a new review of the ecological conditions is undertaken.

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3. Desk Study Results

3.1 Statutory Designated Sites

3.1.1 The MAGIC website revealed no internationally or nationally designated sites within 2km of the site. The closest internationally designated site is Denby Grange Colliery Ponds Special Area of Conservation (SAC) and Special Site of Scientific Interest (SSSI). It is located approximately 7.6km northeast of the site.

3.1.2 The closest nationally designated site is Honley Station Cutting SSSI, located 5.1km west of the site. The site falls within the SSSI Impact Risk Zone for Dark Peak SSSI.

3.2 Non-statutory Designated Sites

3.2.1 Records received from WYES revealed 9 non-statutory designated sites within 2km of the site, detailed in Table 2 below.

Table 2: Non-statutory designated sites within 2km of the site, returned from WYES.

Site Name	Distance (m) from Site	Reasons for Designation
Allen Wood LWS	469m	Ancient & semi-natural woodland and species rich acid woodland.
Shelley Wood LWS	650m	Ancient & semi-natural woodland and species rich acid woodland.
Thunderbridge LWS	874m	Species rich neutral grassland and species rich acid to neutral grassland.
Gelder Wood LWS	1648m	Species rich acid woodland.
Carr Wood LWS	1670m	Species rich acid woodland and native bluebell cover.
Upper and Lower Stones Wood LWS	1680m	Ancient & semi-natural woodland and species rich acid woodland.
Shepley Mill Wood LWS	1682m	Native bluebell cover.
Birks Wood LWS	1764m	Native bluebell cover.
Lepton Great Wood LWS	1966m	Ancient & semi-natural woodland, species rich acid woodland and native bluebell cover.

Key:
LWS – Local Wildlife Site

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3.3 Section 41 of the NERC Act 2006 Priority Habitat Inventory

3.3.1 The MAGIC website revealed no priority habitats within or adjacent to the site.

3.4 Protected and Notable Species

3.4.1 European Protected Species (EPS) Licence Applications

The MAGIC website revealed three EPS licence applications within 2km of the site.

- A licence granted on 10/09/2019 and ending on 30/11/2024 to allow for the impact and damage of a breeding site and the destruction of resting place used by Brant's bat, whiskered bat, and common pipistrelle. Licence reference: 2019-42580-EPS-MIT.
- A licence granted on 30/08/2017 and ending on 22/08/2022 to allow for the destruction of resting place used by common pipistrelle. Licence reference: 2017-30682-EPS-MIT.
- A licence granted on 01/02/2013 and ending on 31/07/2014 to allow for the impact and destruction of a breeding site and the destruction of resting place used by brown long-eared bat and common pipistrelle. Licence reference: EPSM2012-5385.

3.4.2 Records of Protected and Notable Species

3.4.3 Flora

26 records of bluebell *Hyacinthoides non-scripta* were received from WYES. Bluebells are listed under Schedule 8 of the wildlife and countryside Act 1981 and are a Kirklees Biodiversity Action Plan (BAP) species. The closest and most recent record is from 2015, located 515m south of the site.

One record of moschatel *Adoxa moschatellina*, a Kirklees BAP species, was received from WYES. The record is from 2014, located 1259m south-west of the site.

3.4.4 Invertebrates (including white-clawed crayfish)

No records of protected or notable invertebrate species were received from WYES.

3.4.5 Fish

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No records of protected or notable fish species were received from WYES.

3.4.6 Amphibians

Four records of common frog *Rana temporaria*, a West Yorkshire BAP (WYBAP) species, were received from WYES. The most recent record is from 2019, located 1864m north-west of the site. The closest record is from 2013, located 1647m north-west of the site.

One record of common toad *Bufo bufo*, a WYBAP and Kirklees BAP species, was received from WYES. The record is from 2017 and is located 1847m north of the site.

3.4.7 Reptiles

No records of reptiles were received from WYES.

3.4.8 Birds

The following records were received from WYES:

Table 3: Bird Records Received from WYES.

Scientific name	Common name	Designation	Latest Date	Number of records	Distance from site (m)
Alcedo atthis	Kingfisher	WCA	2017	1	1883
Carduelis carduelis	Goldfinch	Kirklees BAP	2019	4	1776
Columba oenas	Stock dove	Kirklees BAP	2017	1	1777
Cuculus canorus	Cuckoo	S41 WYBAP	2018	1	1840
Fringilla montifringilla	Brambling	WCA	2019	3	1852
Hirundo rustica	Swallow	WYBAP Kirklees BAP	2015	1	1883
Passer domesticus	House sparrow	S41 WYBAP Kirklees BAP	2016	2	1831
Prunella modularis	Dunnock	WYBAP Kirklees BAP	2017	1	1874
Turdus philomelos	Song thrush	WYBAP Kirklees BAP	2017	7	1669

Key:
WCA: Schedule 1 of the Wildlife & Countryside Act 1981 (as amended)
S41: Section 41 of the NERC Act 2006
WYBAP: West Yorkshire Biodiversity Action Plan
Kirklees BAP: Kirklees Biodiversity Action Plan

3.4.9 Bats

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The following records were received from WYES:

Table 4: Bat Records Received from WYES.

Scientific Name	Common Name	Designation	Latest Date	Number of records	Distance from Site
Myotis	Unidentified *Myotis* spp	EPS	2017	2	1834
Myotis daubentonii	Daubenton's bat	EPS WYBAP Kirklees BAP	2018	1	1782
Nyctalus	Unidentified *Nyctalus* spp	EPS	2011	1	380
Nyctalus leisleri	Leisler's bat	EPS WYBAP Kirklees BAP	2015	2	1565
Nyctalus noctula	Noctule bat	EPS S41 WYBAP Kirklees BAP	2018	6	217
Pipistrellus pipistrellus	Common pipistrelle	EPS WYBAP Kirklees BAP	2018	23	217
Pipistrellus pygmaeus	Soprano pipistrelle	EPS S41 WYBAP Kirklees BAP	2018	4	806
Plecotus auritus	Brown long-eared bat	EPS S41 WYBAP Kirklees BAP	2017	4	1400
Vespertilionidae	Unidentified bat	EPS	2010	4	523

Key:
EPS: European Protected Species: Species listed under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
S41: Section 41 of the NERC Act 2006
WYBAP: West Yorkshire Biodiversity Action Plan
Kirklees BAP: Kirklees Biodiversity Action Plan

3.4.10 Bat Roosts

The following records were received from WYES:

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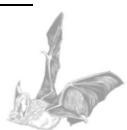

Table 5: Bat Records Received from WYES.

Scientific Name	Common Name	Roost type	Date	Distance from Site (m)
Myotis brandtii	Brandt's Bat	Maternity	2019	1506
Myotis mystacinus	Whiskered Bat	Not recorded	2021	1400
Myotis mystacinus	Whiskered Bat	Maternity	2019	1506
Pipistrellus	Unidentified *Pipistrellus* sp	Common pipistrelle	1 adult	2013
Pipistrellus pipistrellus	Common pipistrelle	Maternity	2019	1506
Pipistrellus pipistrellus	Common pipistrelle	2 adults	2012	1834
Pipistrellus pipistrellus	Common pipistrelle	Not recorded	2015	1857
Pipistrellus pipistrellus	Common pipistrelle	Not recorded	2015	1853
Pipistrellus pipistrellus	Common pipistrelle	1 adult	2018	1222
Pipistrellus pipistrellus	Common pipistrelle	Not recorded	2015	1560
Pipistrellus pipistrellus	Common pipistrelle	1 adult	2011	375
Pipistrellus pipistrellus	Common pipistrelle	1 adult	2011	1839
Pipistrellus pipistrellus	Common pipistrelle	1 adult	2013	1459
Pipistrellus pipistrellus	Common pipistrelle	1 adult	2013	1236
Plecotus auritus	Brown long-eared bat	Maternity	2012	1405
Plecotus auritus	Brown long-eared bat	22 adults	2012	1405
Plecotus auritus	Brown long-eared bat	Maternity	2021	1400
Plecotus auritus	Brown long-eared bat	Maternity	2011	1400
Plecotus auritus	Brown long-eared bat	Not recorded	2011	1490

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Plecotus auritus	Brown long-eared bat	Not recorded	2010	1460
Plecotus auritus	Brown long-eared bat	Hibernacula	2009	1462
Vespertilionidae	Unidentified bat	Not recorded	2005	779
Vespertilionidae	Unidentified bat	180 adults	2003	1503

3.4.12 Otters

One record of otter *Lutra lutra*, a WYBAP and Kirklees BAP species, was received from WYES. The record is from 2015, located 1938m from the site.

3.4.13 Water Voles

No records of water vole *Arvicola amphibius* were received from WYES.

3.4.14 Beaver

No records of beaver *Castor fiber* were received from WYES.

3.4.15 Other Notable Species

No records of other notable species were received from WYES.

3.4.16 Invasive Species

14 records of Himalayan balsam *Impatiens glandulifera* were received from WYES. The most recent record is from 2016, located 821m from the site. The closest record is from 2011, located 805m from the site.

8 records of Japanese knotweed *Fallopia japonica*, were received from WYES. The most recent record is from 2016, located 993m from the site. The closest record is from 2011, located 805m from the site.

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4. Field Survey Results

4.1 Habitats

4.1.1 u1 – Built-up areas and gardens, 32 scattered trees, 510 bare ground, 521 unmanaged, 524 invasive non-native species, 828 vegetated garden, 847 introduced shrub

An area of introduced shrub is located on the eastern boundary of the site. This section of the site is the rear garden of the property and has been left unmanaged, introduced shrub now dominates the area. A low-lying stone wall is present in this area, the majority of which is overgrown with introduced shrub.

The area is dominated by winter heath *Erica carnea*, with bramble *Rubus fruticosus*, hart's-tongue fern *Asplenium scolopendrium*, hydrangea *Hydrangea* sp., holly *Ilex aquifolium,* phlox *Phlox* sp*.,* wood fern *Dryopteris* sp., vetch *Vicia* sp., wood avens *Geum urbanum,* creeping buttercup *Ranunculus repens,* foxglove *Digitalis purpurea,* young hawthorn *Crataegus monogyna,* fragrant vibernum *Vibernum farreri*, young silver birch *Betula pendula*, broom *Cytisus scoparius*. Rhododendron *Rhododendron ponticum* and montbretia *Crocosmia crocosmiiflora* is present in this area of the site. Both species are invasive non-native species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

4.1.2 u1 – Built-up areas and gardens, 32 scattered trees, 510 bare ground, 521 unmanaged, 828 vegetated garden, 847 introduced shrub

An area of bare ground with scattered trees, and introduced shrub. The area is comprised of a single magnolia *Magnolia liliiflora*, common box *Buxus sempervirens,* wood avens, bramble and wood fern.

4.1.3 u1b – Developed land, sealed surface, 81 ruderal or ephemeral, 847 introduced shrub

A paved area east of the residential property with ruderal vegetation and introduced shrubs growing between slabs and on its boundaries. The area is comprised of fuchsia *Fuchsia* sp., sycamore sapling *Acer pseudoplatanus*, dandelion *Taraxacum officinale*, Canada goldenrod *Solidago canadensis,* wood avens, rosebay willowherb *Chamaenerion angustifolium*, herb-Robert *Geranium robertianum*, toadflax *Linaria*, feverfew *Tanacetum parthenium* and iris *Iris* sp*.*

4.1.4 u1b – Developed land, sealed surface

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A strip of concrete borders the building on the western boundary of the site.

4.1.5 u1b5 - Buildings/structures

There are two buildings on site (see Appendix A: UKHab Habitat Map and Appendix B: Bat Scoping Map). The first building is in the rear garden and is comprised of a wooden shed connected to a glass house. The second building is comprised of three sections: the cottage, garage and bath house.

The cottage is double storey, constructed of stone with a Yorkshire stone roof. The roof appears to be newly laid with new membrane visible from ground level. The windows and front door also appear to be recently installed. A rendered, single stored lean-to is present to the north of the cottage. Internally, the cottage appeared to have been recently plastered.

The garage is connected to the southern gable end of the cottage. The garage is constructed of stone with a Yorkshire stone roof. The Yorkshire stone is unlined with a section of the roof covered in a mezzanine style roof, creating a large void. The roof void was inaccessible and therefore was not inspected.

The bath house is connected to the southern gable end of the garage. The bath house is constructed of stone with a slate roof. There is access to the lower level of the bath house from Low Town road. The interior of the bath house consists of one large open space. The slate roof is unlined and some of the internal walls consist of exposed brick.

4.1.6 u1c – artificial unvegetated, unsealed surface

An area of unsurfaced ground is in the northwest corner of the site connecting the road to the footpath accessing the church north of the site.

4.2 Protected and Notable Species

4.2.1 Flora

No signs of bluebell or other protected and notable species were identified on site. The habitats on site are not typical of those favoured by bluebell. As such, flora will not be mentioned further in the report.

4.2.2 Invertebrates (including white-clawed crayfish)

No records of protected or notable species of invertebrate were received from WYES. The habitats on site are common and widespread and therefore are not likely to support important assemblages of invertebrates. As such, invertebrates will not be mentioned further in this report.

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4.2.3 Fish

No records of fish were received from WYES. The are no habitats on site or adjacent to the site suitable for supporting fish. As such, fish will not be mentioned further in this report.

4.2.4 Amphibians

Records of common toad and common frog were received from WYES. The habitat on site is considered suitable habitat for amphibians in the form of drystone walls and low-lying shrub. There are no ponds within 500m of the site and all records of amphibians are located greater than 1500m from the site. One pond is located 522m south of the site and is surrounded by woodland which is considered optimal terrestrial habitat for amphibians. It is unlikely that amphibians will travel to the site to utilise the onsite habitats. As such, amphibians will not be mentioned further in this report.

4.2.5 Reptiles

No records of reptiles were received from WYES. The introduced shrub on site is not considered suitable for reptiles. However, stone walls with crevices are present on site which are considered suitable for reptiles, in particular common lizards.

4.2.6 Birds

9 species of protected and notable species were received from WYES. The trees on site are considered suitable for nesting birds.

4.2.7 Bats

The shed and glass house in the rear garden did not provide any potential roosting features for bats and therefore has negligible potential for roosting bats.

The second building comprised of the cottage, garage and bath house is considered to have features suitable for roosting bats. The Yorkshire stone roof appears to be newly laid using the original stone as a new membrane lining was visible from ground level. The following potential roosting features were identified:

- External potential roosting features (PRFs)
    - Lifted stone slabs were present across the length of the cottage and on the lean-to on both the north-west and south-east elevations.

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  - Gaps between the fascia and stone wall allowing access into the building on the southeast of the building.
  - Missing mortar on southeast of the building.
  - Missing mortar in the northern corner of the building.
  - Air vent allowing access into the building on the northwest elevation.
  - Gaps and missing mortar surrounding piping on north-west of the building.
  - Missing mortar where the roof of the garage meets the gable end of the cottage.
  - Missing mortar below roofing tiles on southern gable end.
- Internal PRFs
  - The cottage had been recently plastered and therefore it was not possible to identify if a cavity wall is present.
  - Exposed brick work and gaps into the roof were present in the stairwell of the building.

The garage connects the bath house and the cottage and is constructed of stone walls and Yorkshire stone roof. The following potential roosting features were identified:

- External PRFs
  - Lifted stone slabs were present across the length of the cottage and on the lean-to on both the northwest and southeast elevations.
  - A lintel is present above the windows of the garage. A gap is present where the lintel meets the stone wall.
- Internal PRFs
  - Exposed brick with missing mortar.
  - Mezzanine ceiling covering half of the roof creating a loft space.
  - Wooden purlin and rafters.

The bath house is connected to the southern gable end of the garage. There is access to a cellar space from the western elevation. The interior of the bath house consists of one large open space with a lower-level access from Low Town road. The following potential roosting features were identified:

- External PRFs
  - Missing brick and mortar on the eastern parapet of the roof.
  - Lifted and missing slate tiles across length of roof.
  - Broken window in roof.
  - Gap where parapet tiles meet stone wall.
  - Missing mortar above the ground level door allowing access to the cellar.

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  - Missing brick and mortar on southern aspect of the stone wall.
- Internal PRFs
  - Unlined rood with woodland purlins and rafters.
  - Exposed brick with missing mortar.
  - Lower level with missing mortar and cavity space.

4.2.9 Otters

One record of otter was received from WYES. However, there are no habitats on site or adjacent to the site suitable for supporting otter. As such, otter will not be mentioned further in this report.

4.2.10 Water Voles

No records of water vole were received from WYES. The are no habitats on site or adjacent to the site suitable for supporting water vole. As such, water vole will not be mentioned further in this report.

4.2.11 Beaver

No records of beaver were received from WYES. The are no habitats on site or adjacent to the site suitable for supporting beaver. As such, beaver will not be mentioned further in this report.

4.2.12 Other Notable Species

No records of other notable species were received from WYES. The habitats on site are suitable for foraging and provide shelter for hedgehogs. Hedgehogs can travel several kilometres in a night and therefore the site may support foraging and commuting hedgehogs.

4.2.13 Invasive Species

Rhododendron and montbretia were identified on site during the site survey. Both species are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

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5. Assessment

5.1 Designated Sites

5.1.1 Statutory designated sites

The MAGIC website revealed no internationally or nationally designated sites within 2km of the site. Due to the small scale of the development and the distance of designated sites from the sites itself, sites under these designations are not considered vulnerable to adverse impacts from the proposed scheme.

The site does fall within the SSSI Impact Risk Zone for the Dark Peak SSSI, however, the proposed development does not fall under any of the criteria listed. Therefore, the SSSI will not be impacted by the proposed development.

5.1.2 Non-statutory designated sites

9 non-statutory designated sites are located within 2km of the site with the closest being Allen Wood LWS, located 469m from the site. Due to the habitats on site being different to those present in the LWS and the small scale of the works, sites under this designation are not considered vulnerable to adverse impacts from the proposed development.

5.2 Habitats

5.2.1 The most valuable habitats for biodiversity within the development site boundary are the scattered trees. The proposed works will impact scattered trees through the compaction of soil and damage to roots.

5.2.2 The other habitats described in Chapter 4, Section 4.1 have lower biodiversity and provide less opportunity to support protected or notable species. The flora recorded in these habitats are locally common and widespread and they do not fall into any of the NERC S41 or Local BAP Priority Habitat descriptions.

5.3 Protected and Notable Species

5.3.1 Reptiles

There is the potential for sheltering and basking reptiles on the stones wall present throughout the rear garden. It appears that the walls are to

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be retained, however if the walls are to be restored or removed reptiles may be impacted negatively. Recommendations regarding reptiles on site will be made in paragraph 6.2.1.

5.3.2 Birds

The trees on site have the potential to support nesting birds. The trees on site are to be retained. However, if any trees are removed or significantly pruned it could result in the destruction of an active bird's nest which is an offense under the Wildlife and Countryside Act 1981 (as amended). Recommendations regarding birds will be made in paragraph 6.2.2.

5.3.3 Bats

The PRFs present on and in the building is describe is paragraph 4.2.7. There are several roosting features present that could be utilised by bats, with some features having the potential to support large numbers of bats, for example the roof void in the garage. The lower level of the bath house also has the potential for hibernating bats with it having a stable temperature and void behind the stone wall. As such, the building is considered to have high potential for roosting bats. The building is to be converted into a residential property with an extension on the southeastern elevation of the cottage. As such, roosting bats may be negatively impacted by the proposed development. Recommendations regarding roosting bats will be made in paragraph 6.2.3.

5.3.5 Other Notable Species

The habitats on site are suitable for foraging, commuting and nesting hedgehogs. The habitats will see the removal of introduced shrub which could lead to hedgehogs being killed or injured. As such, recommendations regarding hedgehogs will be made in paragraph 6.2.5.

5.3.6 Invasive Species

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Rhododendron and montbretia were identified on site and are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). There is the legal requirement to ensure the safe removal and disposal of these species, and such removal will be of benefit to the site. If construction works begin before removal, there is a risk of transporting and distributing these species. Recommendations regarding invasive species will be made in paragraph 6.2.6.

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6 Recommendations

6.1 Habitats

6.1.1 It is recommended that a Development Survey and Impact Assessment be conducted on site prior to the scheme taking place. This will further identify trees on site, assess the impact of the proposed works on the tree present, and offer recommendations for tree preservation.

6.1.2 The proposed works provide an opportunity to institute enhancement for biodiversity such as the inclusion of native planting. A landscaping plan should be devised which incorporates, as far as practicable, native species with known benefits to wildlife common in the area.

6.2 Protected and Notable Species

6.2.1 Reptiles

It is advised that a precautionary approach is adopted to include an Ecological Clerk of Works (ECoW) being present prior to works commencing. The ECoW would give a toolbox talk to onsite contractors to relate applicable legislation, what signs to look for, and what to do should reptiles be encountered on site. Should a reptile be found during site clearance, the advising ecologist would move it to a place of safety.

6.2.2 Birds

The removal and significant pruning of trees should take place between 1st September and 31st January to minimise the risk of destroying an active bird nest. If clearance within this time frame is not feasible and is to take place within bird nesting season, the trees must be surveyed for birds' nests by a suitable experienced ecologist. The survey must take place not more than 24 hours prior to clearance works beginning.

6.2.3 Bats

The building on site has been categorised as having high potential for roosting bats. To determine the presence/likely absence of roosting bats, three bat emergence surveys are required. The surveys must be carried out between May and September in suitable weather conditions and spaced three weeks apart. At least two surveys must be carried out between May and August.

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It is recommended that no night working takes place and no additional lighting be used at the site to avoid disturbance to commuting bats. If it is necessary to install additional lighting on site, these should be fitted with hoods, cowls, or shields to direct light into the working areas only.

The lower level of the bath house is categorized as having moderate suitability for hibernation and therefore will require a winter hibernation survey. The involved a detailed inspection of the building during the winter months to look for and identify hibernating bats or other evidence of bats. Two visits spread four weeks are recommended during the coldest months (generally January and February but can include December) are recommended.

Inappropriate lighting in the vicinity of bat roosts or on commuting and foraging routes can cause disturbance to bat populations and individuals. As such, guidance in line with the information provided by the Bat Conservation Trust and Institute of Lighting Professionals (2023) will aid the planning in lighting schemes with the aim of limiting the impact that lights may have on local bat populations. New lighting schemes should be approved by an appropriately experienced ecologist prior to construction.

6.2.4 Badgers

As badgers are a highly mobile species, precautions must be taken to avoid harm to badgers during the construction phase of the development. Any excavations are to be covered at night, when badgers are active to prevent them from becoming trapped. If excavations cannot be covered a means of escape, such as a plank placed from the bottom of the excavation to the rim at a 45-degree angle, must be provided.

6.2.5 Other Notable Species

Vegetation clearance must be carried out under supervision of an Ecological Clerk of Works (ECoW). The ECoW will hand search any area where hedgehogs might be present before they are cleared. They will be captured by the ECoW and relocated to a safe place with suitable habitat. To prevent the free movement of hedgehogs becoming obstructed, the boundary treatments of the proposed development must contain holes at ground level measuring 13 x13cm to allow hedgehogs to pass through the site.

6.2.6 Invasive Species

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An invasive non-native species method statement for the safe management and removal of rhododendron and montbretia on site will be required before works can commence. To prevent any invasive species being planted within developed sites, all soft planting should be of native providence.

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7 References

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Websites:

Advice on protected species is consolidated at:
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Magic Map Application (2016) *Magic.defra.gov.uk*. Available at: http://magic.defra.gov.uk/MagicMap.aspx

The RSPB (2016). Available at: http://www.rspb.org.uk/

Surveys and mitigation plans: protected species - Detailed guidance (2015) *Gov.uk*. Available at: https://www.gov.uk/guidance/surveys-and-mitigation-plans-protected-species

Within this detailed guidance on surveys and mitigation information is available on the following protected species:

- Bats
- Natterjack toads
- Otters
- Reptiles
- Water voles
- White-clawed crayfish
- Wild birds
- Hazel dormice
- Great crested newts
- Badgers

Wildlife licences: when you need to apply - Detailed guidance (2014) *Gov.uk*. Available at: https://www.gov.uk/guidance/wildlife-licences

Within this detailed guidance on licensing information is available on licences for the following protected species:

- Bats
- Natterjack toads
- Otters
- Reptiles
- Water voles
- White-clawed crayfish
- Wild birds
- Hazel dormice
- Great crested newts
- Badgers

As well as:

- Non-native Bumblebee species
- Deer
- Freshwater fish
- Invertebrates
- Mink, coypu, muskrat and gr squirrel
- Plants

Species Specific Information:

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Strachan, R. (2009), Populations and Persistence – Developing a Strategy for Conserving Water Voles in the UK, Presentation to Warwickshire Wildlife Trust, 2nd April 2009, Environment Agency, Wales

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Strachan, R., Moorehouse, T. and Gelling, M. (2011), Water Vole Conservation Handbook, 3rd Edn, WILDCRU

White-clawed Crayfish:

Peay, S. (2002) Guidance on Habitat for White-clawed Crayfish and its Restoration. Kendal: English Nature

Biodiversity Metric Guidance:

STEPHEN PANKS[A], NICK WHITE[A], AMANDA NEWSOME[A], MUNGO NASH[A], JACK POTTER[A], MATT HEYDON[A], EDWARD MAYHEW[A], MARIA ALVAREZ[A], TRUDY RUSSELL[A], CLARE CASHON[A], FINN GODDARD[A], SARAH J. SCOTT[B], MAX HEAVER[C], SARAH H. SCOTT[C], JO TREWEEK[D], BILL BUTCHER[E] and DAVE STONE[A] (2022) *Biodiversity metric 3.1: Auditing and accounting for biodiversity – User Guide*.

Natural England. A – Natural England, B – Environment Agency, C – Department for Environment, Food and Rural Affairs, D – Treweek Environmental Consultants Ltd, E – eCountability Ltd

Relevant Legislation:

Wildlife and Countryside Act 1981, (c. 69) (as amended). Available at: http://www.legislation.gov.uk/ukpga/1981/69

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Appendices

Appendix 1: UKHab Habitat Map

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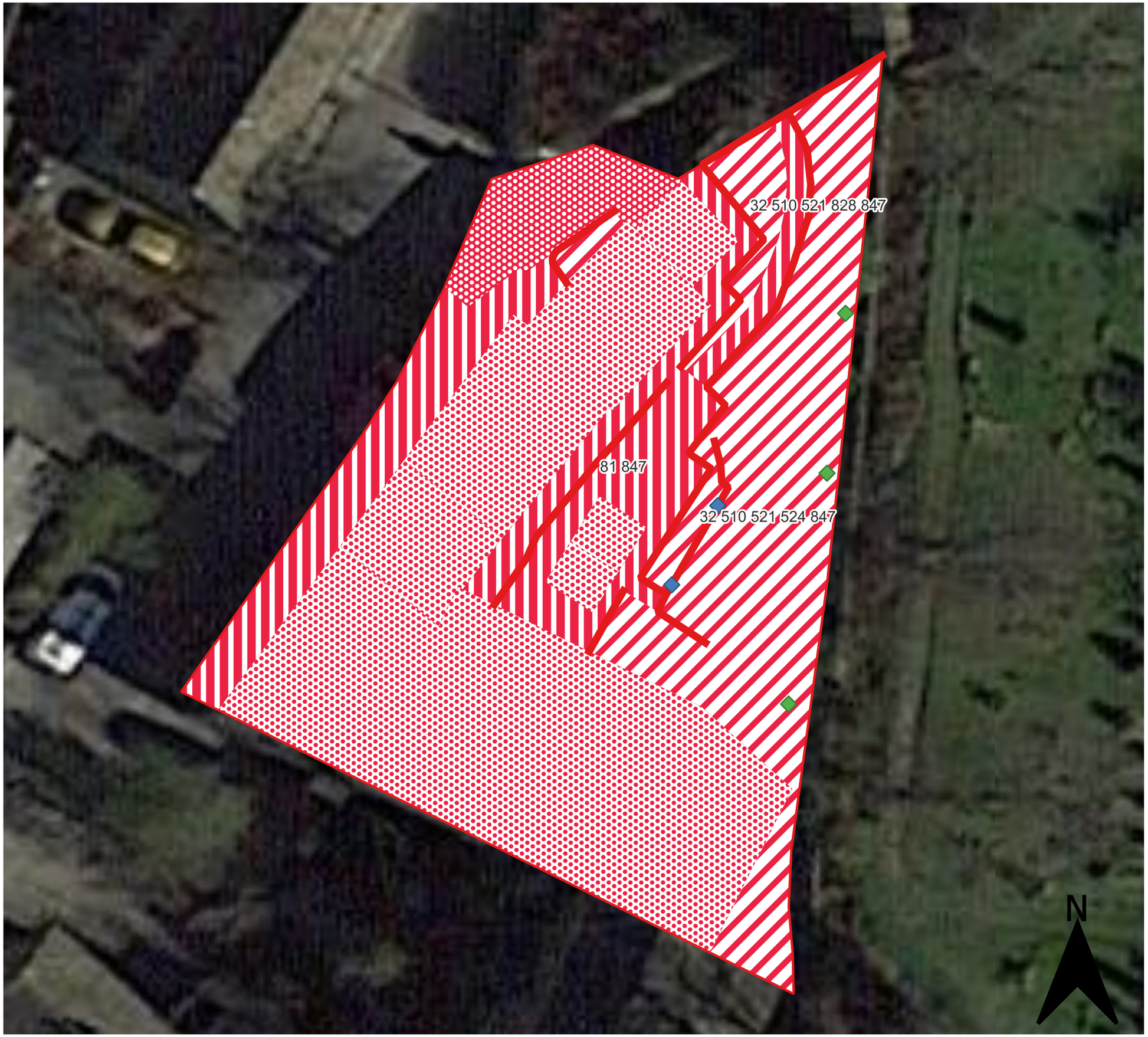

Land at Low Town
Kirkburton
Huddersfield
West Yorkshire
HD8 0SB

Key

Site boundary

Primary habitats

- u1 - built-up areas and gardens
- u1b - developed land. sealed surface
- u1b5 - buildings
- u1c - artificial unvegetated unsealed surface
- u1e - built linear features

Invasive non-native species

- Montbretia
- Rhododendron

Secondary codes
32 scattered trees
81 ruderal or ephemeral
510 bare ground
521 unmanaged
524 invasive non-native species
828 vegetated garden
847 introduced shrub

Scale 0 2.5 5 m

Site: Land at Low Town	Client: Acumen Designers & Architects
Project: 21550 Preliminary Ecological Appraisal	Author: EIC
Plan ref: 21550/EIC	Revision: 00

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Appendix 2: Bat Scoping Map

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Land at Low Town
Kirkburton
Huddersfield
West Yorkshire
HD8 0SB

Key

- Site boundary
- Buildings

Potential roosting features (PRFs)

- Gaps behind fascia
- Missing brick & mortar
- Broken window
- Broken / missing tiles
- Gaps under tiles

Scale 0 2.5 5 m

Site: Land at Low Town	Client: Acumen Designers & Architects
Project: 21550 Preliminary Ecological Appraisal	Author: EIC
Plan ref: 21550/EIC/BatScope	Revision: 00

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Appendix 3: Proposed Development Plan

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Only figured dimensions should be used.

Scaled dimensions should be checked with the Architect.
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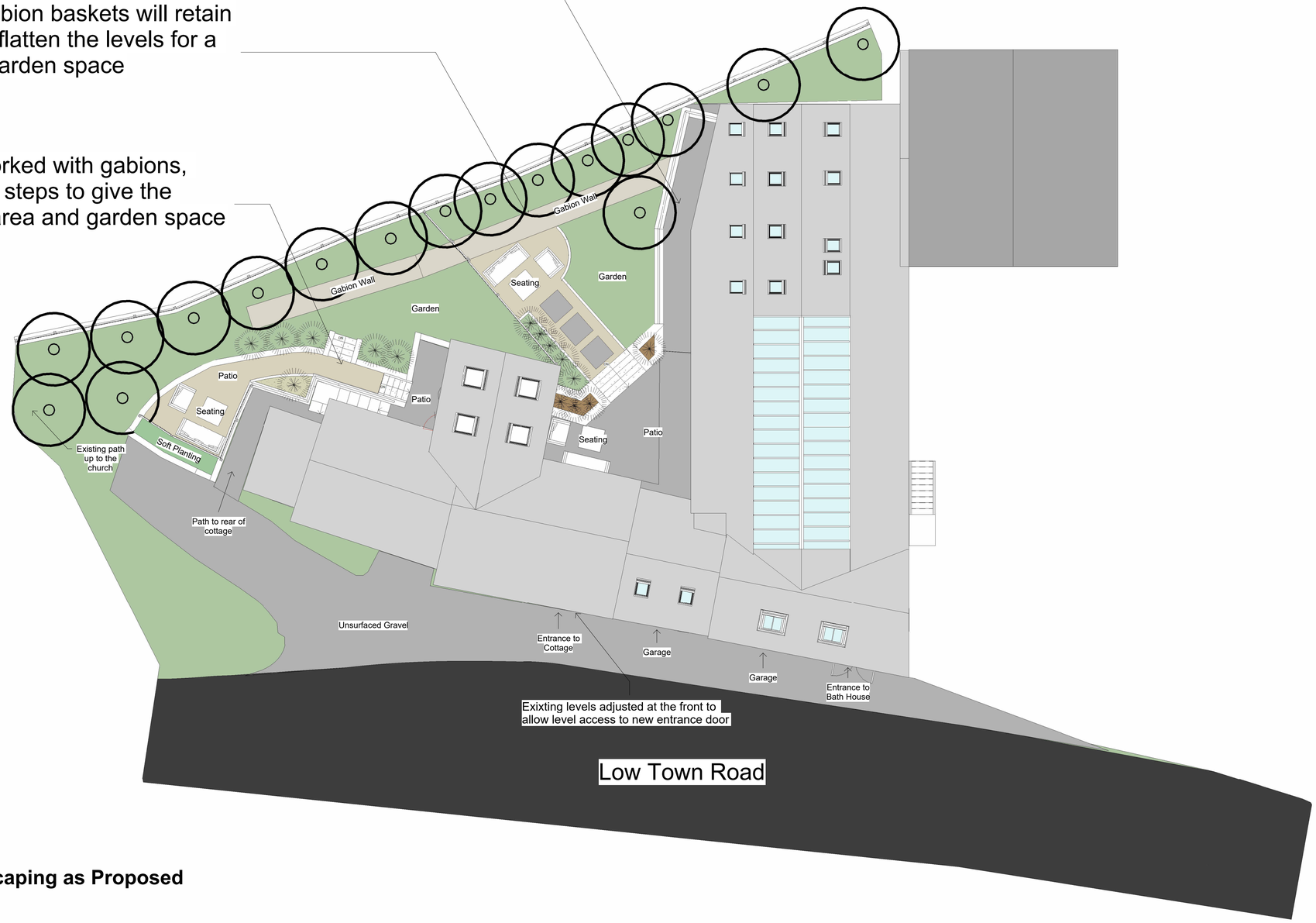
Excavated land to create light well for bedroom windows

Approx 1m high gabion baskets will retain existing slope and flatten the levels for a seating area and garden space

Landscaping re-worked with gabions, retaining walls and steps to give the cottage a seating area and garden space



Site Plan & Landscaping as Proposed

1 : 100

Rev	Description	Auth	Date

DO NOT SCALE OFF THIS DRAWING

ACUMEN
Designers & Architects
acumenarchitects.co.uk 01484 546 000
Headrow House, Old Leeds Road, Huddersfield, Huddersfield HD1 1SG

Client: JAMES WIMPENNY HOMES

Project: 19/21 LOW TOWN COTTAGE & BATHHOUSE, KIRKBURTON

Description: SITE PLAN & LANDSCAPING AS PROPOSED

Drawing No	Rev No
2868_ACU(SK)03	

Scale	Date Drawn	Drawn By	Authorised By
1 : 100 @ A1	20.09.23	AO	JC

Purpose of Issue
Planning ○ Building Regs ○ Tender ○ Construction ○ Comment ○ Info ●

Appendix 4: Photographic Evidence

Photo 1: Northwest elevation of the cottage.

Photo 2: Northwest elevation of the garage with lifted tiles.

Photo 3: Lifted tiles and missing mortar on southern gable end of the cottage and the garage roof.

Photo 4: Mezzanine roof in garage

Photo 5: Southern gable end of bath house.

Photo 6: Missing mortar allowing access to the lower level of the bath house

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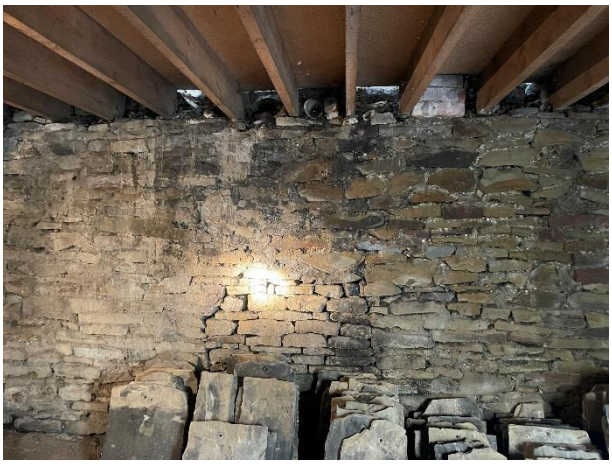

Photo 7: Interior of the lower level of the bath house.

Photo 8: Interior of bath house.

Photo 9: Lifted slate tiles.

Photo 10: Lifted tiles of cottage roof with new mezzanine.

Photo 11: Rear garden.

Photo 12: Rear garden.

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Appendix 5: Bat Survey Calendar

Figure 1: Survey timings calendar (taken from BCT: Bat surveys for professional Ecologists, Good Practice Guidelines; 4th Edition).

Table 2.2 Recommended UK survey times for survey types described in these guidelines.

Survey type	Month											
	J	F	M	A	M	J	J	A	S	O	N	D
Daytime Bat Walkover (DBW)												
PRA – structures[a]												
Emergence survey for maternity or summer roosts[b]												
Emergence survey for transitional/ occasional roosts[b]												
Re-entry surveys[c]												
Emergence survey for mating roosts[b]												
Hibernation survey – structures[a]												
GLTA[d]												
PRF inspection survey – trees												
Ground-level bat activity survey – night-time walkover surveys and automated/static												
Pre-, during and post-hibernation – automated/static bat activity survey												
Swarming survey[e]												
Back-tracking survey												
Trapping and radio-tagging survey[f]												

= optimal period = sub-optimal period

= weather or location dependent (i.e. may not be suitable due to spring and autumn conditions in any one year or in more northerly latitudes). Note that October emergence surveys are not acceptable in Scotland.

= it is not acceptable to trap bats when they are heavily pregnant and have dependent pups. Mothers need to optimise foraging due to the physiological demands of pregnancy and lactation, and pups need to be regularly fed. Interrupting these activities could potentially have an impact on breeding success in the year in question. The timing of birth can vary between years – it may be as early as the end of May or as late as the start of August, therefore caution should be exercised and local information gained on birth dates before trapping activities are carried out during the summer months. Any information gained and decisions made should be kept as a record.

a Not including trees.

b Please see Chapter 7 for recommended timings for surveys to give confidence in a negative result. For sites assessed as having low suitability, a survey should be carried out between May and August. For sites with moderate and high suitability, a proportion of the surveys should be carried out between May and August (to detect maternity roosts if present) but some of the surveys may be carried out later in the year in order to detect transitional and mating roosts. The survey season for presence/likely absence surveys is defined as May to September. Roost characterisation surveys may be appropriate in April and/or October depending on the need to characterise transitional/occasional roosts at these times.

c The time that bats return to their roosts is very variable and therefore re-entry surveys are no longer recommended as a standard approach. If they are carried out the constraints shoule be recognised.

d GLTAs can be sub-optimal in the spring, summer and autumn due to foliage obscuring parts of the tree. If all parts of the tree are visible then the survey can be carried out at any time. If parts of the tree are obscured by foliage then it is not possible to carry out a thorough survey and this limitation should be recognised and the impact on the results acknowledged. Please refer to Chapter 6 for more information.

e Different species show a peak in swarming activity at different times, e.g. Daubenton's bat activity tends to peak in August whilst Natterer's bat activity tends to peak in September (Tomlinson, 2020) and therefore surveying across the swarming season is likely to be important.

f Trapping and tagging in cooler conditions can make release of bats difficult, which should be a consideration if trapping is carried out in spring and autumn. Tagging of bats in April and sometimes early May should be avoided following a poor spring, if bats are in poor condition. Tagging of newly volant pups should be avoided. Tagging of bats should be avoided in October due to the risk that bats will enter hibernation with the tag still attached (bats will groom less often as they enter torpor more frequently). If a tag falls off during hibernation this could leave a bald patch if the fur has been clipped, which could have negative impacts for the hibernating bat. Please refer to Chapter 9 for more information.

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Appendix 6: Glossary

Activity surveys - are used to assess the level of bat activity at a site. This can be done either by using equipment such as an AnaBat device, or manually walking around a site with a heterodyne detector, documenting the number of bat passes and interceptions.

Dawn surveys - begin around 2 hours before and up to sunrise when bats are returning to their roosts from foraging, and swarming behaviour can be seen close to roost entrances.

Dusk surveys - begin around 30 minutes before sunset and up to 2 hours afterwards. These are done in order to see bats emerging from their roost sites at night.

Echolocation – is a system similar to sonar that allows bats to travel and forage even in total darkness. Bats make a call and then listen to the returning echoes in order to build up a map of their surrounding area. This allows bats to gauge the identity and distance of an object by how long the echo takes to return to them.

Habitat - the ecological or environmental area that is inhabited by a particular species of animal, plant or other type of organism.

Hibernation - is a state of inactivity and metabolic depression characterized by lower body temperature, slower breathing, and lower metabolic rate. Hibernating animals conserve energy, especially during winter when food is short, tapping energy reserves, i.e. body fat, at a slow rate.

Hibernacula - typically consist of underground sites, such as caves and cellars, which remain relatively cold and humid. Bats will hibernate to conserve energy over the winter months when falling temperatures cause a drop in the abundance of insects. These will typically be colonised around November to around March.

Insectivorous – is when an organism feeds exclusively on insects.

Nocturnal - a behaviour characterized by being active during the night and sleeping during the day.

Maternity roosts – colonised around late May early June and consist of mature females and their young. These roosts need to be warm and quiet, and are used up until around August, with females typically leaving first and then the young.

Mating roosts – mating begins around late October to November. Males of most species use special mating calls to attract females. These can include purrs, clicks and buzzing.

Roost – a site where bats live during the day, rear young and hibernate. These can be in man made structures, such as buildings, bridges, tunnels, cellars and mines, or natural features such as mature trees and caves.

Roosts in buildings – many types of buildings will be used by bats. The most likely sites are agricultural buildings (e.g. farmhouses and barns), buildings with exposed wooden beams (greater than 20cm thick), buildings with weather boarding and/or hanging tiles, and buildings close to woodland and/or water.

Roosts in trees – these are typically in mature trees with deep sheltered cracks, under loose sections of bark, or in woodpecker holes.

Species – a group of organisms in which all members can interbreed and produce viable offspring.

Summer roosts (non-breeding) - these are generally occupied by groups of males and immature females during the summer, and are usually only occupied for a short period before the group moves to another location.

Swarming – a behaviour exhibited by bats returning to their roost sites at dawn. Bats can be seen repeatedly flying to and from the roost entrance, making it much easier for consultants to identify where roosts are on a building or structure.

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Temporary/Transitory roosts – These are used after hibernation (March – April) before mature females disperse to maternity roosts and male/immature females colonise summer (non-breeding) roosts. Similarly, temporary roosts form before hibernation (August -October).

Underground Roosts – these are typically used during the winter and can be mines, caves, tunnels or cellars.

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Appendix 7: Protected Species Information

The following species are fully protected in UK law, under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019:

- All UK bat species
- Dormouse
- Great Crested Newt and Natterjack Toad
- Large Blue Butterfly
- Otter
- Pine Marten
- Polecat
- Scottish Wild Cat
- Smooth Snake and Sand Lizard
- Various aquatic and plant species

These species are afforded the highest protection in the UK. Under this protection it is an offence to; deliberately capture, injure or kill any wild animal of a European protected species; deliberately disturb wild animal of any such species; 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 to this it is an offence to be in possession of, or to control, transport, sell or exchange, or to offer for sale or exchange, a European Protected species.

The following species are protected under UK law, such as the Wildlife and Countryside Act 1981 (as amended):

- Badger
- Nesting birds
- Red Squirrel
- Reptiles (Adder, Common lizard, Grass snake, Slow worm)
- Water Vole
- White Clawed Crayfish
- Various bird species i.e. Barn Owl
- Various plant species

Therefore under this protection it is an offence to; kill, injure or take any of the above species.

Nesting birds are only protected during the breeding season whilst on their nest. In addition to the adults being protected, the eggs, young and nest itself whilst in use are protected.

The Wildlife and Countryside Act 1981 also contains measures to prevent the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9 in England and Wales (e.g. Japanese Knotweed and Himalayan Balsam).

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Badgers are protected under The Protection of Badgers Act 1992. Under this legislation it is an offence to; take, injure, kill, or cruelly ill-treat a badger; interfere with a badger sett; sell or possess a live badger; or mark or ring a badger.

The following habitat types are protected under UK Law:

- Habitats that are used by protected species
- Habitats that fall within designated sites
- Hedgerows
- Individual trees/woods can be protected under Tree Preservation Orders

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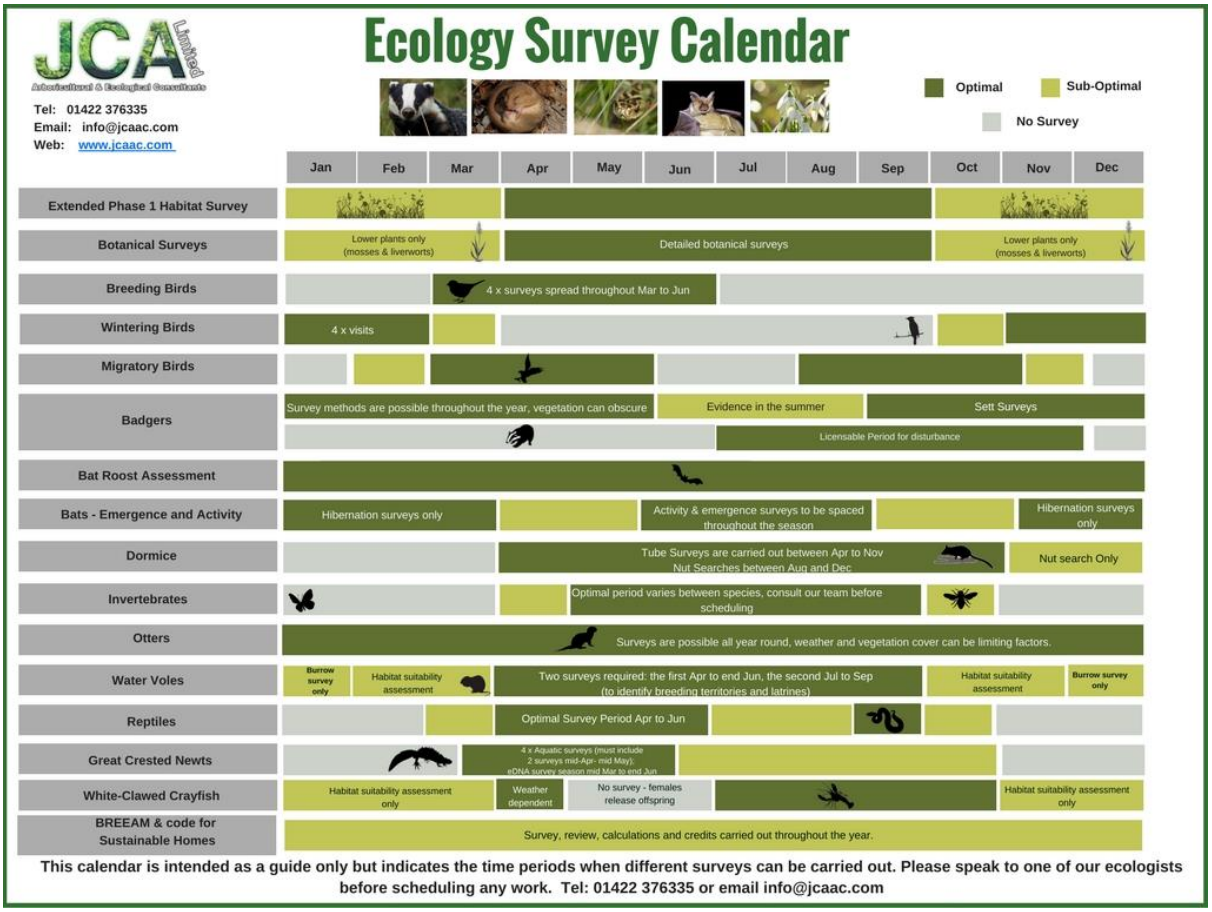
Appendix 8: Survey Calendar

Figure 2: Survey calendar for protected species and habitat surveys.



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Appendix 9: Author Qualifications

Adam West, Principal Ecologist

BSc (Hons) Animal and Wildlife Management.

Adam joined JCA to lead the expanding ecology department. Having returned to education as a mature student, Adam studied Countryside Management for two years before undertaking a Batchelor's degree, for which he was awarded First Class Honours. Adam has many years' experience in ecological consultancy, working on projects ranging from individual planning applications to national infrastructure projects. Adam holds a Natural England Level 1 great crested newt survey class licence and a Natural England Level 2 bat survey class licence.

Eleanor Clark, Assistant Ecologist

BSc (Hons) Biology, MSc Biodiversity, Ecology & Ecosystems.

Eleanor gained her undergraduate degree in biology in 2017 from the University of Portsmouth before going on to complete an MSc in Biodiversity, Ecology & Ecosystems at the University of York in 2019. Eleanor has 2 years of experience in ecological consultancy with experience surveying for a range of protected species. Eleanor holds a Natural England Level 1 great crested newt licence and is working towards her bat licence.

Rick Westwood, Graduate Ecologist

BA (Hons) History and Politics

Rick gained his undergraduate degree in History and Politics in 2001 from Leeds Metropolitan University before going on to complete a PGCE in History at the University of Leeds in 2003. After 18 years in secondary education and the NHS, Rick began assisting on bat emergence surveys in 2023, after which, he gained employment as a Graduate Ecologist at JCA Ltd.

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The Information and advice which we have prepared and provided is true and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that the opinions expressed are our true and bona fide opinions.

Signed

.....

Eleanor Clark *BSc (Hons) MSc*

28/11/2023

Reviewed by

.....

Rick Westwood *BA (Hons)*

28/11/2023

Approved by

.....

Adam West *ACIEEM*

28/11/2023

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For and on behalf of ***JCA Ltd***

Registered Office:

Unit 80

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ECOLOGICAL SERVICES

Ecological Pre-Planning Services

- Phase 1 Habitat Surveys
- Great Crested Newt eDNA Sampling
- Protected species: Bat, Wintering and Nesting Bird, Badger, Amphibian, Otter, Water Vole, White-Clawed Crayfish, Dormice and Reptile Surveys.
- Preparation for Environmental Impact Assessment (EIA)
- Invasive Species Surveys
- Code for Sustainable Homes
- Butterfly & Insect Surveys

Ecological Post-Planning Services

- Biodiversity Enhancement Plans
- Protected Species Mitigation
- Ecological Management (Bat and Bird box installation and inspection)
- Planting Schemes
- Monitoring of bird or bat boxes.

ARBORICULTURAL SERVICES

Guidance for Architects & Developers

- British Standard 5837 Surveys
- Arboricultural Implications Assessments (AIA)
- Arboricultural Method Statements (AMS)

Advice for Engineers, Loss Adjusters and Insurers

- Tree Surveys for Subsidence
- Heave Assessment
- Tree Root Identification

Advice for Local Authorities and Social Housing

- Tree Safety Surveys
- Specialist Decay Detection
- Landscape and Orchard Design

Tree Advice for the Legal Profession

- Subsidence Litigation
- Personal Injury and Accident Investigation
- Expert Witness, Planning Inquiries and Appeals

Veteran Tree Management

- Ancient Woodland Management
- Veteran Tree Management

Tree Health and Pest and Disease Management

- Pest and Disease Surveys
- Tree Health Checks
- Disease Mitigation and Control

JCA Limited

Arboricultural & Ecological Consultants

HEAD QUARTERS

Unit 80 Bowers Mill,
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Company Reg No: 05005041