

**PRELIMINARY ECOLOGICAL
APPRAISAL**

**at
Waverley Church
Waverley Road
Huddersfield
West Yorkshire
HD1 5NA**

**Client:
Muhammad Zubair Alvi**

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**JCA Ref:
21732b/JF**

**Date of Report:
06/02/2024**



Quality Assurance

Version	Desktop Survey Completed:		Site Surveyed:		Report Completed:		Reviewed:	
	Date	Name	Date	Name	Date	Name	Date	Name
Planning	31/01/24	James Foster	01/02/24	James Foster Alex Donovan	02/02/24	James Foster	02/02/24	Alex Donovan
							06/02/24	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

Bio-security Procedure Completed

Lone Worker Procedure Completed



Summary

JCA Limited has been commissioned by **Muhammad Zubair Alvi** to undertake a Preliminary Ecological Appraisal (PEA) of a site located at **Waverley Church, Waverley Road**. The site is located at Ordnance Survey (OS) National Grid Reference SE 13918 17014 with nearby postcode HD1 5NA.

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.

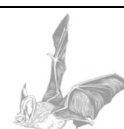


Table 1: summary of ecological receptors at the site and recommended mitigation.

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	Low	Partial removal of the habitats, containing ragwort, present on site could adversely impact a range of invertebrates, as well as species which feed on invertebrates.	No	Native scrub and wildflower planting (including ragwort species) is recommended to mitigate for the loss of habitat and floral variety.
White-clawed crayfish	None	None	No	No
Fish	None	None	No	No
Great crested newt	None	None	No	No
Reptiles	None	None	No	No
Birds	Moderate	The removal of any potentially suitable nesting areas onsite or development works taking place in close proximity to nesting birds has the potential to cause disturbance to breeding birds, resulting in a breach of legislation.	Dependent on timing of works.	A preconstruction site walkover is required if vegetation removal or works in close proximity to bird nests is to take place during bird breeding period (1st February until 31st August). If removal occurs outside of the breeding bird period and nesting birds are found, the removal must cease



				immediately, and a suitably competent ecologist contacted.
Bats	Moderate	One building onsite has moderate bat roosting potential and the site holds potential for commuting and foraging bat species. Any disturbance to bats or a bat roost would result in a breach of legislation.	Yes – two emergence surveys at least three weeks apart, between May – September with at least one survey between May – August.	Dependent on the results of the surveys. If a roost is confirmed, a Mitigation Licence would need to be applied for from Natural England. For artificial lighting within the development, guidance from Institute of Lighting Professionals (08/2023) should be followed.
Otters	None	None	No	No
Water voles	None	None	No	No
Beaver	None	None	No	No
Other Species e.g. S41 species	Low	Potential to disturb any foraging or commuting hedgehogs which may be utilising the site.	No	Any excavation of the site should be covered overnight, or if not possible, a safe exit route provided for hedgehogs to leave the site, such as an



				artificial ramp to aid their exit.
Invasive Species (WCA Sch 9) Injurious Weeds (Weeds Act, 1959)				
Wall cotoneaster was identified on site.	Moderate	The spread of a Schedule 9 WCA designated 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 the 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 January 2024, JCA Limited was instructed by **Muhammad Zubair Alvi** to undertake a Preliminary Ecological Appraisal (PEA) of a site located at **Waverley Church, Waverley Road** 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 13918 17014, with nearby postcode HD1 5NA. The site is surrounded by urban buildings with gardens, and scattered trees. Further afield there is a recreation area and Edgerton cemetery with mature trees to the north more urban buildings to the south, Holy Trinity church and cemetery with mature trees, and Greenhead Park which also contains mature trees and a large managed pond, to the west.

1.2.2 The scheme is change of use of the existing building into 11 flats, adding extra stories to the interior of the building, new skylights, new doors and windows, and the addition of 11 car parking spaces.

1.3 Aims and Objectives

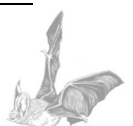
1.3.1 The purpose of the survey is to establish a baseline of ecological information and assess whether the proposed development activities have the potential to adversely affect any protected or notable habitats or species. The following tasks have been undertaken:

- 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 – an 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



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**).



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. 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 (WYES), the local environmental records centre for West Yorkshire, 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, the West Yorkshire Biodiversity Action Plan, and the Kirklees Biodiversity Action Plan (2007) to assess national and regional habitat and species status.

2.2 Field Survey

2.2.1 A UKHab habitat survey of the site was conducted on 01/02/2024. 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 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 Local Biodiversity Action Plan (LBAP). The following species were considered:

- Invertebrates (including white-clawed crayfish *Austropotamobius pallipes*).
- Reptile habitat within the site.
- Nesting and foraging habitat for birds within the site.
- Bat roost potential and foraging habitat within the site.
- 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 considered to be 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 01/02/2024, which is a sub optimal time to conduct surveys due to plant and tree species not being in leaf or flower and are therefore harder to identify. The list of species identified at the site is unlikely to be fully comprehensive. However, this constraint will not affect the overall conclusion of the report as habitat types can still be identified and the potential for protected species can still be accurately assessed.
- 2.3.3 The weather on the day of the survey was dry, cold, and overcast with a calm wind and good visibility. The days leading up to the survey were similar and are unlikely to cause any potential constraints to the survey.
- 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.



3. Desk Study Results

3.1 Statutory Designated Sites

3.1.1 The MAGIC website revealed no internationally designated sites within 2km of the site.

3.1.2 The MAGIC website revealed one nationally designated site within 2km of the site. Gledholt Woods is a Local Nature Reserve (LNR) and is designated for its mature woodland, rough meadow and freshwater habitats that supports a diverse range of fungi, white-clawed crayfish, song thrush and bluebells. The site also falls into the Special Site of Scientific Interest (SSSI) Impact Risk Zone of South Pennine Moors SSSI. However, due to the small-scale nature of the development and the distance from the site, consultation with Natural England (NE) is not required.

3.2 Non-statutory Designated Sites

3.2.1 The site falls into the Bat Alert Zone (Kirklees district) but does not fall into the West Yorkshire Wildlife Habitat Network.

3.2.2 Records received from WYES revealed four 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
Gledholt Woods LWS	705	Mature woodland, rough meadow and freshwater habitats.
Huddersfield Narrow Canal LWS	885	Standing open water habitat that supports a diversity of aquatic plant species, that supports kingfishers and otters.
Sir John Ramsden Canal LWS	960	Standing open water habitat with value for wildlife that supports diverse aquatic plant populations.
Grimescar Wood LWS	1810	Replanted ancient woodland, with over mature trees and bluebells.
Key: LWS – Local Wildlife Site		



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 four EPS licence applications within 2km of the site.

- a licence granted in 02/01/2013 and ending in 01/12/2014 to allow for the destruction of a resting place used by common pipistrelle. Licence reference: EPSM2012-5292.
- a licence granted in 13/10/2014 and ending in 13/10/2014 to allow for the destruction of a resting place used by common pipistrelle. Licence reference: 2014-856-EPS-MIT.
- a licence granted in 15/08/2011 and ending in 31/08/2013 to allow for the destruction of a resting place used by common pipistrelle. Licence reference: EPSM2011-3176.
- a licence granted in 25/02/2010 and ending in 01/02/2012 to allow for the destruction of a resting place used by common pipistrelle, soprano pipistrelle and brown long-eared bat. Licence reference: EPSM2010-1750.

3.4.2 Records of Protected and Notable Species

3.4.3 Flora

No records of protected or notable flora species, within 2km of the site were returned by WYES.

3.4.4 Invertebrates (including white-clawed crayfish)

No records of protected or notable invertebrate species, within 2km of the site were returned by WYES.



3.4.5 Fish

One record of brown trout *Salmo trutta*, a NERC S41 designated species, within 2km of the site were returned by WYES. The record was from 2015 and is located 1240m from the site.

3.4.6 Amphibians

No records of amphibian species, within 2km of the site were returned by WYES.

3.4.7 Reptiles

No records of reptile species, within 2km of the site were returned by 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)
<i>Alcedo atthis</i>	Kingfisher	WCA	2015	1	1800

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

KBAP: Kirklees Biodiversity Action Plan

3.4.9 Bats

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
<i>Myotis</i> sp.	Unidentified <i>Myotis</i> species	EPS WCA5 WCA6	2018	2	1437
<i>Nyctalus leisleri</i>	Leisler's bat	EPS	2015	2	414



		WCA5 WCA6 WYBAP KBAP			
<i>Nyctalus noctula</i>	Noctule bat	EPS WCA5 WCA6 S41 WYBAP KBAP	2021	8	1187
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	EPS WCA5 WCA6 WYBAP KBAP	2023	32	187
<i>Pipistrellus pygmaeus</i>	Soprano pipistrelle	EPS WCA5 WCA6 S41 WYBAP KBAP	2021	4	1340
<i>Plecotus auritus</i>	Brown long-eared bat	EPS WCA5 WCA6 S41 WYBAP KBAP	2017	2	1447

Key:

EPS: European Protected Species: Species listed under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

WCA5: Schedule 5 of the Wildlife & Countryside Act 1981 (as amended)

WCA6: Schedule 6 of the Wildlife & Countryside Act 1981 (as amended)

S41: Section 41 of the NERC Act 2006

WYBAP: West Yorkshire Biodiversity Action Plan

KBAP: Kirklees Biodiversity Action Plan

3.4.10 Bat Roosts

The following records were received from WYES:

Table 5: Bat Records Received from WYES.

Scientific Name	Common Name	Roost type	Date	Distance from Site (m)
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<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost	2021	1748
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost: 2 individuals	2009	1493
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost	2009	1493
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost	2008	1493
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost	2008	1493
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost	2008	1494
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost: 1 individual	2009	1489
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost	2013	1882
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost	2013	1882
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost	2006	1700
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost: 2 individuals	2012	637
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost	2005	934
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost	2005	1311
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost: 2 individuals	2016	1314
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost: 2 individuals	2016	1314
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost	2008	898
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost	2008	991
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost: 2 individuals	2008	954



<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost: 1 individual	2017	1483
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost: 3 individuals	2018	1483
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost: 2 individuals	2018	1142
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost: 2 individuals	2023	1423
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost: 2 individuals	2010	1267
<i>Pipistrellus</i> sp.	Unidentified Pipistrelle species	Maternity roost	2019	1806
<i>Pipistrellus</i> sp.	Unidentified Pipistrelle species	Unspecified roost: 45 individuals	2004	1549
<i>Pipistrellus</i> sp.	Unidentified Pipistrelle species	Unspecified roost	2007	1235
<i>Pipistrellus</i> sp.	Unidentified Pipistrelle species	Excluded roost	2006	1700
<i>Pipistrellus</i> sp.	Unidentified Pipistrelle species	Unspecified roost	2007	1852
<i>Vespertilionidae</i> sp.	Unidentified bat species	Possible roost: 5 individuals	2004	1470
<i>Vespertilionidae</i> sp.	Unidentified bat species	Unspecified roost	2004	1551
<i>Vespertilionidae</i> sp.	Unidentified bat species	Unspecified roost: 12 individuals	2001	637
<i>Vespertilionidae</i> sp.	Unidentified bat species	Possible roost: 4 individuals	2007	1797
<i>Vespertilionidae</i> sp.	Unidentified bat species	Unspecified roost	2001	1736
<i>Vespertilionidae</i> sp.	Unidentified bat species	Possible roost	1996	696



<i>Vespertilionidae</i> sp.	Unidentified bat species	Unspecified roost	2005	221
<i>Vespertilionidae</i> sp.	Unidentified bat species	Unspecified roost: 1 individual	2006	862
<i>Vespertilionidae</i> sp.	Unidentified bat species	Unspecified roost	2007	1530

3.4.12 Otters

No records of otter *Lutra lutra*, within 2km of the site were returned by WYES.

3.4.13 Water Voles

No records of water vole *Arvicola amphibius*, within 2km of the site were returned by WYES.

3.4.14 Beaver

No records of beaver *Castor fiber*, within 2km of the site were returned by WYES.

3.4.15 Other Notable Species

No records of other notable species, within 2km of the site were returned by WYES.

3.4.16 Invasive Species

The following records were received from WYES.

Table 6: Schedule 9 WCA (as amended) Designated Non-native Invasive Species Records Received from WYES.

Scientific name	Common name	Latest Date	Number of records	Distance from site (m)
<i>Cotoneaster horizontalis</i>	Wall cotoneaster	2020	1	1811



<i>Fallopia japonica</i>	Japanese knotweed	2021	118	923
<i>Heracleum mantegazzianum</i>	Giant hogweed	2016	2	1074
<i>Impatiens glandulifera</i>	Himalayan Balsam	2021	1	1768
<i>Pacifastacus leniusculus</i>	Signal crayfish	2019	5	1163
<i>Sciurus carolinensis</i>	Grey squirrel	2021	2	882



4. Field Survey Results

4.1 Habitats

4.1.1 g4 – Modified grassland: 10 – Scattered scrub, 81 – Ruderal or ephemeral, 202 – Young trees – self-set, 510 – Bare ground, 523 – Non-native, 847 – Introduced shrub.

There is a small area of modified grassland on the east of the site, which contains scattered scrub, ruderal vegetation, tree saplings, areas of bare ground and non-native introduced shrubs (see **Appendix 1** and **Appendix 4, photo 1**). Species identified here include Darwin's barberry *Berberis darwinii*, buddleja *Buddleja davidii*, hairy bittercress *Cardamine hirsute*, red valerian *Centranthus ruber*, fringed willowherb *Epilobium ciliatum*, silk tassel bush *Garra elliptica*, wood avens *Geum urbanum*, ivy *Hedera helix*, holly *Ilex aquifolium*, perennial ryegrass *Lolium perenne*, photinia species *Photinia* sp., cherry laurel *Prunus laurocerasus*, creeping buttercup *Ranunculus repens*, rose species *Rosa* sp., bramble *Rubus fruticosus*, ragwort *Senecio jacobaea*, common sowthistle *Sonchus oleraceus* and dandelion *Taraxacum officinale*.

4.1.2 u1 – Urban: 32 – Scattered trees, 202 – Young trees – self-set, 523 – Non-native, 524 – Invasive non-native species, 847 – Introduced shrub.

There is a small area of non-native introduced shrub on the north of the site which contains tree saplings, scattered trees and a Schedule 9 WCA designated invasive non-native species (see **Appendix 1, target note 1** and **Appendix 4, photo 2**). Species identified here include Japanese laurel *Aucuba japonica*, buddleja *Buddleja davidii*, hairy bittercress *Cardamine hirsute*, wall cotoneaster *Cotoneaster horizontalis* (**Schedule 9 WCA designated invasive non-native species**) Franchet's cotoneaster *Cotoneaster franchetii*, ash *Fraxinus excelsior*, snowdrop *Galanthus nivalis*, wood avens *Geum urbanum*, ivy *Hedera helix*, goldencup St John's wort *Hypericum patulum*, holly *Ilex aquifolium*, cherry laurel *Prunus laurocerasus*, great laurel *Rhododendron maximum*, rose species *Rosa* sp., bramble *Rubus fruticosus*, autumn hawkbit *Scorzonoides autumnalis* and common sowthistle *Sonchus oleraceus*

4.1.3 u1b – Developed land - sealed surface: 33 – Line of trees.

There is developed land - sealed surface in the form of old tarmac surrounding the building at the centre of the site with a line of trees on the



west (see **Appendix 1 and Appendix 4, photo 3**). Species found here include sycamore *Acer pseudoplatanus*, ivy *Hedera helix*, common whitebeam *Sorbus aria* and rowan *Sorbus aucuparia*.

4.1.4 u1b5 – Buildings/structures.

There is one building, located at the centre of the site (see **Appendix 1 and Appendix 4, photo 5-14**). The building is a single storey 20th century (1910) church, constructed of stone blocks, with a single pitched roof with parapets made of traditional slate with gables ends on the north and southern aspects and cross gable wings on the east and western aspects. There are sections of single storey flat roof extensions lined with bitumen with parapets and on the north and southern aspects, a belltower on the northern aspect, a cross hipped extension with a slate tile roof on the southern aspect, buttresses on the east and western aspects and clerestory windows on the north, east and western aspects. The roof is lined with wooden sarking and is supported by hammer beam trusses.

4.1.5 u1c – Artificial unvegetated, unsealed surface: 510 – bare ground.

There is a small section of bare ground on the northeast corner of the site (see **Appendix 1**).

4.1.6 u1f – Sparsely vegetated urban land: 10 – Scattered scrub, 202 – Young trees – self-set, 510 – Bare ground, 532 – Scattered grass.

There is a small area of sparsely vegetated urban land on the south of the site, which contains scattered young bramble scrub shoots, tree saplings, areas of bare ground and scattered grass (see **Appendix 1 and Appendix 4, photo 4**). Species identified here include *Buddleja davidii*, hairy bittercress *Cardamine hirsute*, red valerian *Centranthus ruber*, foxglove *Digitalis purpurea*, fringed willowherb *Epilobium ciliatum*, dove's-foot crane's-bill *Geranium mole*, wood avens *Geum urbanum*, ivy *Hedera helix*, perennial ryegrass *Lolium perenne*, wild cherry *Prunus avium*, creeping buttercup *Ranunculus repens*, bramble *Rubus fruticosus*, autumn hawkbit *Scorzoneroides autumnalis*, ragwort *Senecio jacobaea* and dandelion *Taraxacum officinale*.

4.2 Protected and Notable Species

4.2.1 Flora



No protected or notable flora species records were returned by WYES. No protected or notable flora species were identified on site and no potentially suitable habitat for protected or notable flora species was identified on site. Flora, therefore, will not be mentioned further in this report.

4.2.2 Invertebrates (including white-clawed crayfish)

No protected or notable invertebrate species records were returned by WYES. There is potential habitat on site to support invertebrates. The grassland and sparsely vegetated urban land on site have the potential to support foraging invertebrate species. Ragwort was identified on site in the grassland and sparsely vegetated urban land habitats. Ragwort is the sole food plant of the cinnabar moth *Tyria jacobaeae* caterpillar, which is a NERC S41 designated species.

4.2.3 Fish

One record of brown trout was returned by WYES. There is no suitable habitat on or adjacent to site with the potential to support trout or other protected or notable fish species. Fish, therefore, will not be mentioned further in this report.

4.2.4 Amphibians

No records of amphibian species were returned by WYES. There is no potentially suitable habitat on site to support amphibians. There is however, two water bodies within 500m from the site. Both waterbodies are man-made with vertical developed banks. There is no potentially suitable habitat connectivity between the waterbodies and the site. Therefore, due to the lack of records, the lack of potentially suitable habitat on site, the lack of potentially suitable habitat adjacent to the site and the lack of any potentially suitable habitat connectivity. Amphibians, therefore, will not be mentioned further in this report.

4.2.5 Reptiles

No records of reptile species were returned by WYES. There is no potentially suitable habitat on site, adjacent to site or in the local vicinity of the site to support reptiles. Reptiles, will therefore, not be mentioned further in this report.

4.2.6 Birds



Three records of two Schedule 1 WCA (as amended) bird species were returned by WYES. There is potentially suitable habitat to support nesting bird species. The line of trees on site and the buildings' belltower has the potential to support nesting bird species.

4.2.7 Bats

50 field records of six species of bat and 37 bat roost records were returned by WYES. There is potentially suitable habitat on site for commuting, foraging and roosting bat species. The building on site has the potential to support roosting bats and the line of trees has the potential to support commuting and foraging bats. Potential roosting features present on the building include missing mortar on the north, east and southern aspects (see **Appendix 1 and Appendix 4, photos 7-9**), gaps in the eave on the north, east and western aspects (see **Appendix 1 and Appendix 4, photos 10**), gaps under the common rafters on the eastern aspect (see **Appendix 1 and Appendix 4, photos 11**), a broken clerestory window on the northern aspect (see **Appendix 1 and Appendix 4, photos 7**), an air vent on the southern aspect (see **Appendix 1 and Appendix 4, photos 9**), missing ties on the western aspect (see **Appendix 1 and Appendix 4, photos 12**), and a lifted tile on the eastern aspect (see **Appendix 1 and Appendix 4, photos 13**).

4.2.9 Otters

No records of otters were returned by WYES. No field signs of otters, or otter holts, were identified on site. There is no suitable habitat on or adjacent to site with the potential to support otters. Otters, therefore, will not be mentioned further in this report.

4.2.10 Water Voles

No records of water voles were returned by WYES. No field signs of water vole, or water vole burrows, were identified on site. There is no suitable



habitat on or adjacent to site with the potential to support water voles. Water voles, therefore, will not be mentioned further in this report.

4.2.11 Beaver

No records of beaver were returned by WYES. There is no suitable habitat on or adjacent to site with the potential to support beaver. Beavers, therefore, will not be mentioned further in this report.

4.2.12 Other Notable Species

No records of other notable species were returned by WYES. There is potentially suitable habitat on site to support commuting and foraging hedgehogs, which are a WCA (as amended) Schedule 6, NERC S41, WYBAP and KBAP designated species. Hedgehogs are a mobile species and could potentially be utilising the site for commuting and the grassland for foraging.

4.2.13 Invasive Species

129 records of six Schedule 9 WCA (as amended) designated species, including seven records Schedule 9 fauna, were returned by WYES. One invasive non-native species was identified on site. Wall cotoneaster *Cotoneaster horizontalis* is a Schedule 9 designated species and was found on the north of the site in the introduced shrub habitat (**see Appendix 1, target note 1**).



5. Assessment

5.1 Designated Sites

5.1.1 Statutory designated sites

The MAGIC website revealed no internationally designated sites within 2km of the site.

The MAGIC website revealed one nationally designated site within 2km of the site. Gledholt Woods is a Local Nature Reserve (LNR). However, due to the small-scale nature of the development and the distance from the site, no adverse impacts are anticipated to the LNR. Consultation with Natural England is not required.

5.1.2 Non-statutory designated sites

Records from WYES revealed four non-statutory sites within 2km of the site. The closest is Gledholt woods which is a Local Wildlife Site (LWS). The LWS is situated 705m to the southwest of the site, and due to the lack of any kind of habitat connectivity, the small-scale nature of the development and the distance from the site, any adverse effects on the LWS are not anticipated, consultation with Kirklees council is not required.

5.2 Habitats

5.2.1 The most valuable habitats for biodiversity within the development site boundary are the building and the line of trees. The proposed works will impact the buildings' interior and roof.

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 is considered to be locally common and widespread and they do not fall into any of the NERC S41 or LBAP Priority Habitat descriptions.

5.3 Protected and Notable Species

5.3.1 Invertebrates (including white-clawed crayfish)

No records of protected or notable invertebrate species were returned by WYES. Ragwort, the sole food plant for cinnabar moth caterpillars, which



is a NERC S41, WYBAP and KBAP designated species was identified on site in the grassland and sparsely vegetated urban land habitats. Under current development plans the sparsely vegetated urban land habitat, in which ragwort was identified is to be impacted by partial removal. Invertebrates, therefore, may be impacted by the proposed development. Further recommendations are therefore provided in **Section 6.2.1**.

5.3.2 Birds

Three records of two Schedule 1 WCA (as amended) bird species were returned by WYES. The line of trees and the buildings' belltower on site offer potential nesting opportunities for a range of bird species. Under the current development plans, the line of trees and buildings' belltower are not to be impacted. But the development of the site in such proximity of the line of trees, could adversely impact nesting birds through unnecessary disturbance. Further recommendations are therefore provided in **Section 6.2.2**.

5.3.3 Bats

50 field records of six species of bat and 37 bat roost records were returned by WYES. The building on site has the potential to support roosting bats and the line of trees has the potential to support commuting and foraging bats. Based on the number and type of potential roosting features present, the building has been judged to have **moderate potential** to support roosting bats. The criteria for assigning a roost suitability category and the survey effort required to ascertain the presence/likely absence of bats within the building are presented in **Appendix 5, Figures 1 and 2**. Bats, therefore, may be impacted by the proposed development. Further recommendations are therefore provided in **Section 6.2.3**.

5.3.5 Other Notable Species



No records of other notable species were returned by WYES. The grassland on site and the site itself has the potential to support commuting and foraging hedgehogs. Under the current development plans, this habitat is not planned to be impacted, however, hedgehogs could potentially be adversely impacted by the development. Further recommendations are therefore provided in **Section 6.2.5**.

5.3.6 Invasive Species

129 records of six Schedule 9 WCA (as amended) designated species, including seven records Schedule 9 fauna, were returned by WYES. Wall cotoneaster *Cotoneaster horizontalis* was found on the north of the site in the introduced shrub habitat (**see Appendix 1, target note 1**). Under the current development plan, this habitat is to be impacted by partial removal. There is a legal requirement to ensure the safe removal and disposal of this species, and such removal will be a benefit to the site. Recommendations regarding the removal of these species are provided in **Section 6.2.6**.



6. Recommendations

6.1 Habitats

- 6.1.1 The proposed works provide an opportunity to institute enhancement for biodiversity. Through the addition of faunal boxes and the planting of native species with known benefits to wildlife common in the area.

6.2 Protected and Notable Species

6.2.1 Invertebrates (including white-clawed crayfish)

Native scrub and wildflower planting (including ragwort species) is recommended to mitigate for the loss of habitat and floral variety which will affect many generalist invertebrate species on site and species which may forage on invertebrates such as bats and birds.

6.2.2 Birds

The vegetation onsite provides high nesting potential for breeding bird species. In the UK, the key breeding period for birds is from 1st February until 31st August (depending on species and behaviour). A preconstruction site walkover no more than 24 hours prior to any vegetation removal or works to the building's belltower is required, and if removal/works occurs outside of the breeding bird period and birds' nests are found, the removal must cease immediately, and a suitably competent ecologist contacted.

6.2.3 Bats

For the building on site, **two emergence surveys** at least three weeks apart, between May – September, with at least one survey between May – August, are required to ascertain the presence/likely absence of roosting bats. Upon completion of the two surveys if any bats are found to emerge or re-enter the buildings or trees, the roost type will be able to be then accurately characterised.

If bats are then confirmed to be roosting on the site, a Bat Mitigation Licence may be applied for from Natural England, and a mitigation plan devised so the development causes as little impact on the local bat populations as possible.



Artificial light is known to deter bats from entering lit areas. The development must incorporate a wildlife sensitive lighting scheme. In particular, obtrusive light is to be prevented from reaching potential foraging and commuting routes, both from new exterior and interior lights. Guidance published by the Institution of Lighting Professionals (08/23) is to be followed when designing the lighting scheme for the development.

It is important to avoid:

- Uniform levels of luminance across the site.
- Metal halide and florescent lighting.
- Upward tilting lighting that increases skyline luminance.

Instead, the following should be installed:

- Dark buffer zones.
- Screening in the form of vegetation, fences and structures.
- Appropriately designated darkened areas.
- Luminaries absent of UV elements.
- LED luminaries with a sharp cut-off, low intensity and good rendition.
- A warm white spectrum (<2700 kelvin) to reduce blue light.
- Peak luminaire wavelength at a minimum of 550nm.
- Downward directional luminaires with upward light ratios of 0%.
- Lower light columns to limit light spill.
- Recessed internal light fixtures.
- Window glazing treatments or automated blind systems.

6.2.5 Other Notable Species



To permit hedgehog migration and safe passage of hedgehogs through the site, any excavations created during the development stage must be covered at night or appropriate escape routes implemented. Planks are to be placed at a 45-degree angle for hedgehogs to escape safely.

6.2.6 Invasive Species

An Invasive Species Method Statement for the safe management and removal of the wall cotoneaster present on site is to be conducted.



7. References

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Websites:

Advice on protected species is consolidated at:

Environmental management: Wildlife and habitat conservation - GOV.UK (2016) *Gov.uk*. Available at: <https://www.gov.uk/topic/environmental-management/wildlife-habitat-conservation>

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 grey squirrel
- Plants

Species Specific Information:



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Otters: Natural England, (2007) *Species Information Note SIN006, Otter: European protected species*.

Reptiles and Amphibians:

Baker, J., Beebee, T., Buckley, J., Gent, T. and Orchard, D. (2011) *Amphibian Habitat Management Handbook*. 1st ed. Bournemouth: Amphibian and Reptile Conservation.

Edgar, P., Foster, J. and Baker, J. (2010) *Reptile Habitat Management Handbook*. 1st ed. Bournemouth: Amphibian and Reptile Conservation.

English Nature, (2004). *Reptiles: guidelines for developers*. Peterborough.

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Stoddart, D.M. (1970), *Individual range, dispersal in a population of water voles (Arvicola terrestris (L.))*. *Journal of Animal Ecology* 39, 403-425.

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 – Trewweek Environmental Consultants Ltd, E – eCountability Ltd

Relevant Legislation:

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The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Available at:
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Conservation of natural habitats and of wild fauna and flora Council Directive (92/43/EEC) (The Habitats Directive) (as amended) Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043>

Protection of Badgers Act 1992 (c. 51). Available at:
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Appendices

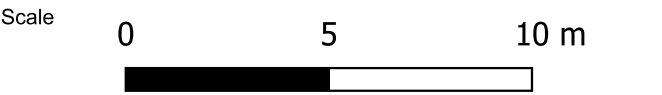
Appendix 1: UKHab Habitat Map





Site name & address
Waverley Church, Waverley Road, Huddersfield, West Yorkshire. HD1 5NA.

- Key**
- Red Line Boundary
 - Target Note 1: Wall contoneaster
 - Habitats**
 - g4 Modified grassland
 - 10 – Scattered scrub
 - 81 – Ruderal or ephemeral
 - 202 – Young trees – self-set
 - 510 – Bare ground
 - 523 – Non-native
 - 847 – Introduced shrub
 - u1 Urban
 - 32 – Scattered trees
 - 202 – Young trees – self-set
 - 523 – Non-native
 - 524 – Invasive non-native species
 - 847 – Introduced shrub
 - u1b Developed land - sealed surface
 - 33 – Line of trees
 - u1b5 Buildings/structures
 - u1c Artificial unvegetated, unsealed surface
 - 510 – bare ground
 - u1f Sparsely vegetated urban land
 - 10 – Scattered scrub
 - 202 – Young trees – self-set
 - 510 – Bare ground
 - 532 – Scattered grass
 - Line of trees
 - Trees

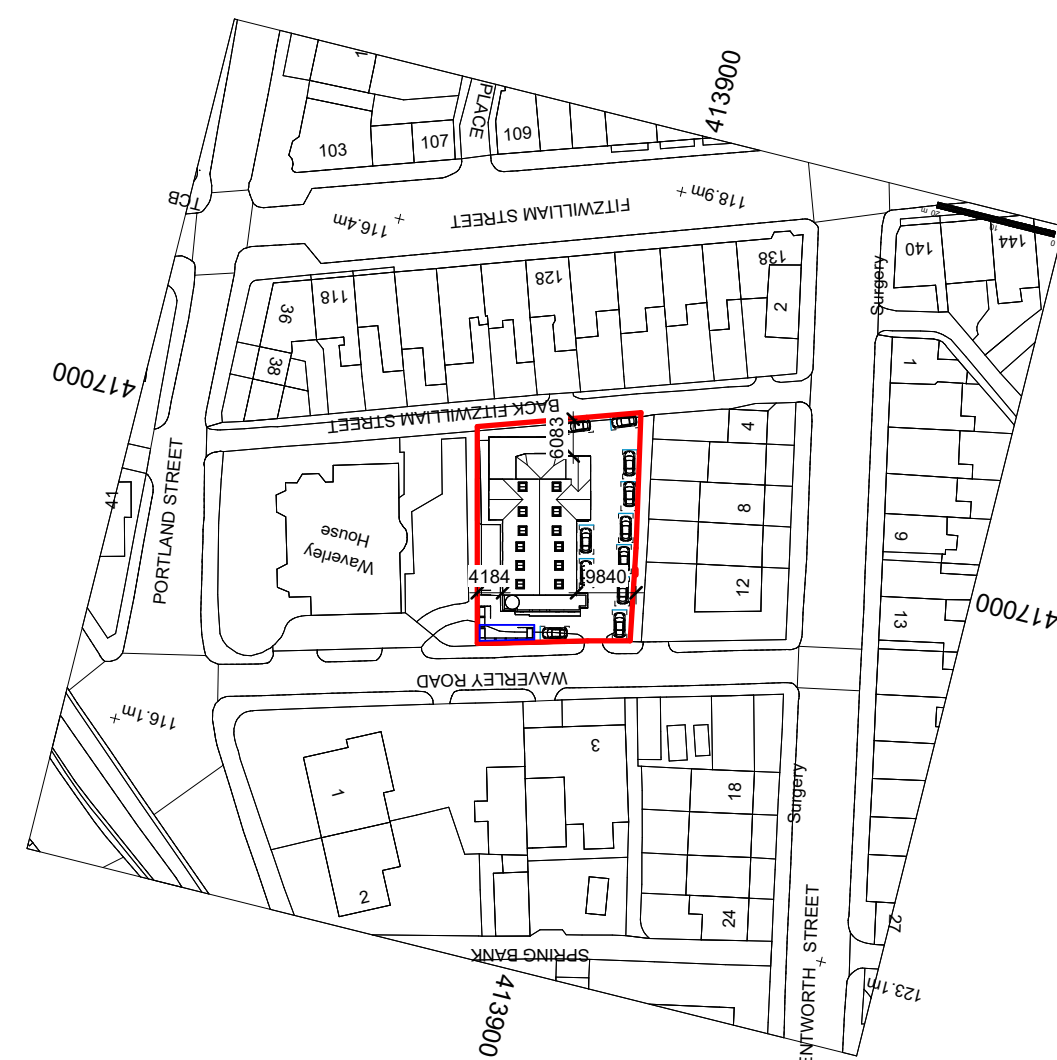
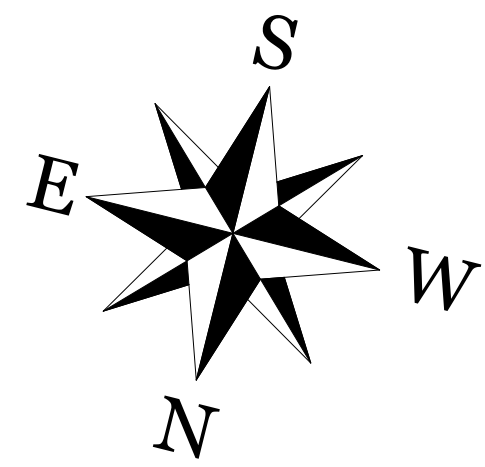


Site Waverley Road Church	Client Hudds- Monarch Housing
Project Preliminary Ecological Appraisal Report	Author JF
Plan ref 21732b	Revision 0

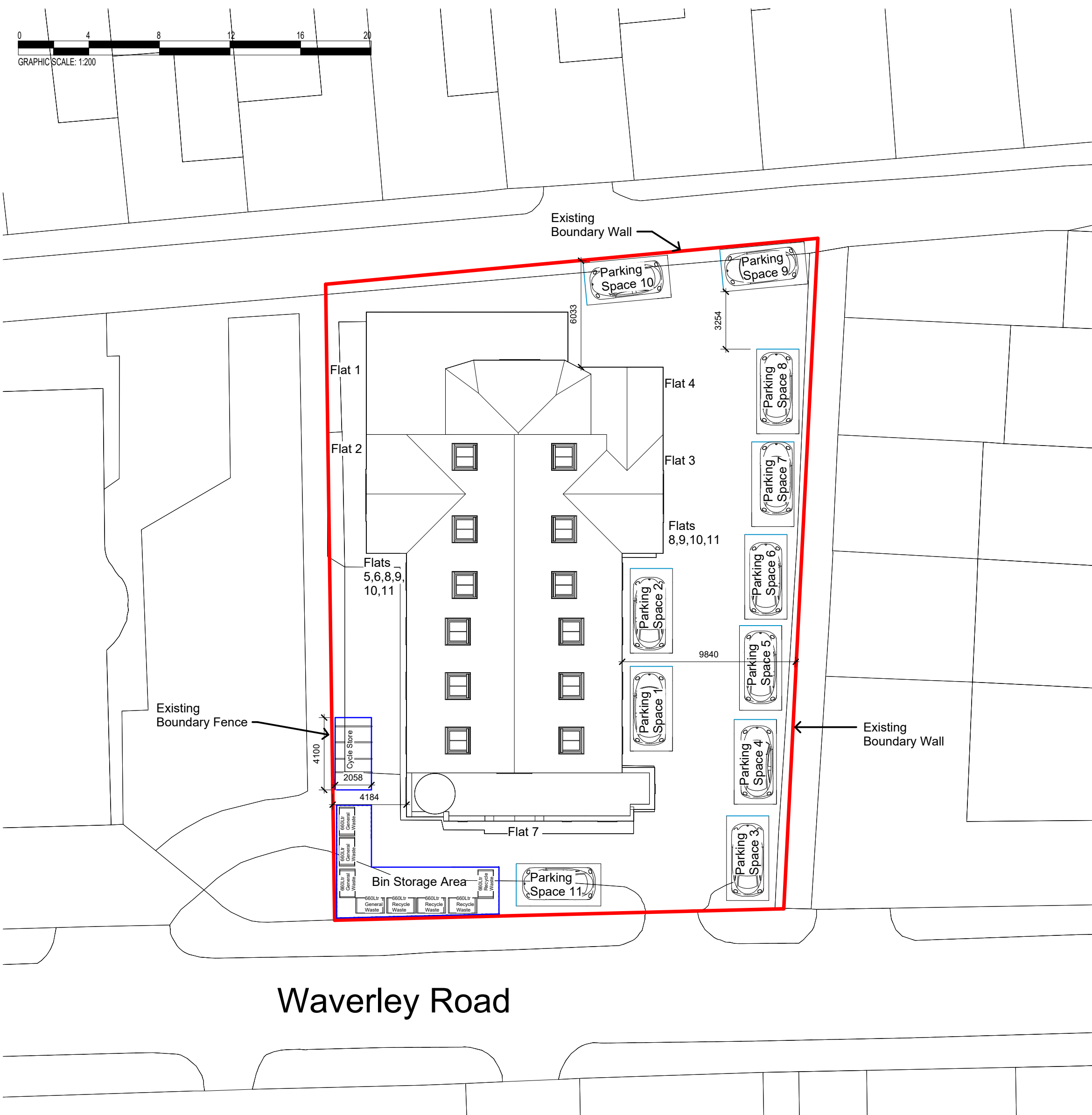
Contains Ordnance Survey data © Crown copyright and database right 2024

Appendix 2: Proposed Development Plan





Proposed Location Plan
1 : 1250



Proposed Site Plan
1 : 200

Appendix 3: Bat Roost Potential Map



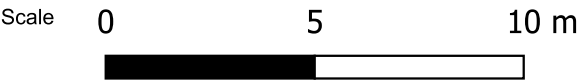
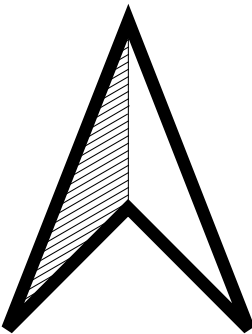


Site name & address
Waverley Church, Waverley Road, Huddersfield, West Yorkshire, HD1 5NA.

Key

-  Red Line Boundary
-  Building

- Potential Roosting Features
- 1 - Missing mortar
 - 2 - Gap in eave
 - 3 - Gap under rafter
 - 4 - Broken window
 - 5 - Air vent
 - 6 - Missing rooftile
 - 7 - Lifted rooftile



Site Waverley Road Church	Client Hudds- Monarch Housing
Project Preliminary Ecological Appraisal Report	Author JF
Plan ref 21732b	Revision 0

Appendix 4: Photographic Evidence



Photo 1: Modified grassland on the east of the site, viewed from the south.



Photo 2: Introduced shrub on the north of the site, viewed from the southeast.



Photo 3: Line of trees on the west of the site, viewed from the southeast.



Photo 4: Sparsely vegetated urban land on the south of the site, viewed from the northwest.



Photo 5: The building on site, viewed from the northeast.



Photo 6: Wooden sarking and hammer beam trusses supporting the roof.





Photo 7: Missing mortar and broken window on the northern aspect, viewed from the north.



Photo 8: Missing mortar on the eastern aspect, viewed from the east.



Photo 9: Missing mortar and air vent on the southern aspect, viewed from the southwest.



Photo 10: Gaps in the eave on the western aspect, viewed from the west.



Photo 11: Gaps under the common rafters on the eastern aspect, viewed from the east.



Photo 12: Missing tiles, on the western aspect, viewed from the west.





Photo 13: Lifted tile on the eastern aspect, viewed from the northeast.



Photo 14: The belltower on the northern aspect, viewed from the east.



Appendix 5: Bat Survey Guidelines

Figure 1: Guidelines used for assessing the bat roosting suitability of a site (taken from Collins, 2023).

Roosting Suitability	Potential Roosting Features (PRFs) Present
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e., a complete absence of crevices/suitable shelter at all ground/underground levels). Trees: Either no PRFs in the tree or highly unlikely to be any.
Negligible	No visible features on the site likely to be used by roosting bats. No signs of bats found during the initial assessment.
Low	A structure with one or more potential roosting opportunities that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough shelter, protection, surrounding habitats, or the appropriate conditions to be used on a regular basis by larger numbers of bats e.g. unlikely to support hibernation or maternity roosts. A tree of sufficient size and age to contain features suitable for bat roosting, but with no features seen from the ground. No signs of bat use found during the initial assessment.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to the size of the potential roosting feature which is sufficient to provide: shelter, protection, optimal conditions and surrounding habitats. The feature(s) are unlikely to support a roost of high conservation status. Signs (potential signs) of bat use found during the initial assessment.
High	A structure or tree with one or more potential roost sites that could be used by bats due to the size of the potential roosting feature which is sufficient to provide: shelter, protection, optimal conditions and high-quality surrounding habitats. The features have the potential to support large colonies of bats (e.g. maternity or hibernation) for long periods of time. Signs of bat use present.

Figure 2: Recommended minimum number of survey visits for presence/likely absence surveys (taken from Collins, 2023).

Negligible roost suitability	Low roost suitability or PRF-L	Moderate roost suitability	High roost suitability or PRF-M
No further survey required	One survey visit. One dusk emergence survey, May to August (structures).	Two separate dusk emergence survey visits. May to September, with at least one	Three separate dusk emergence survey visits. May to September, with at least two



	No further surveys required (trees).	survey between May and August.	surveys between May and August
September surveys are both weather- and location-dependent. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season. September surveys are likely to miss maternity roosts due to dispersal before this time but may pick up mating roosts. Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced out at least three weeks apart, preferably more. Survey timings should consider the prevailing conditions in the year of survey, which will vary geographically. In years with a cold spring, the surveys should not be started in early May, or all completed in May. The surveys should maximise the possibility of detecting maternity roosts, which can switch roosts between pregnancy and lactation, and the optimum coverage includes the pre-parturition, post-parturition, and mating periods. Structures that have been categorised as low potential can be problematic, and the number of surveys required should be judged on a case-by-case basis. In some cases, more than one survey may be needed, particularly where there are several buildings in this category.			

Figure 3: Survey timings calendar (taken from BCT: Bat surveys for professional Ecologists, Good Practice Guidelines; 4th Edition).

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.



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.



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.



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).



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.

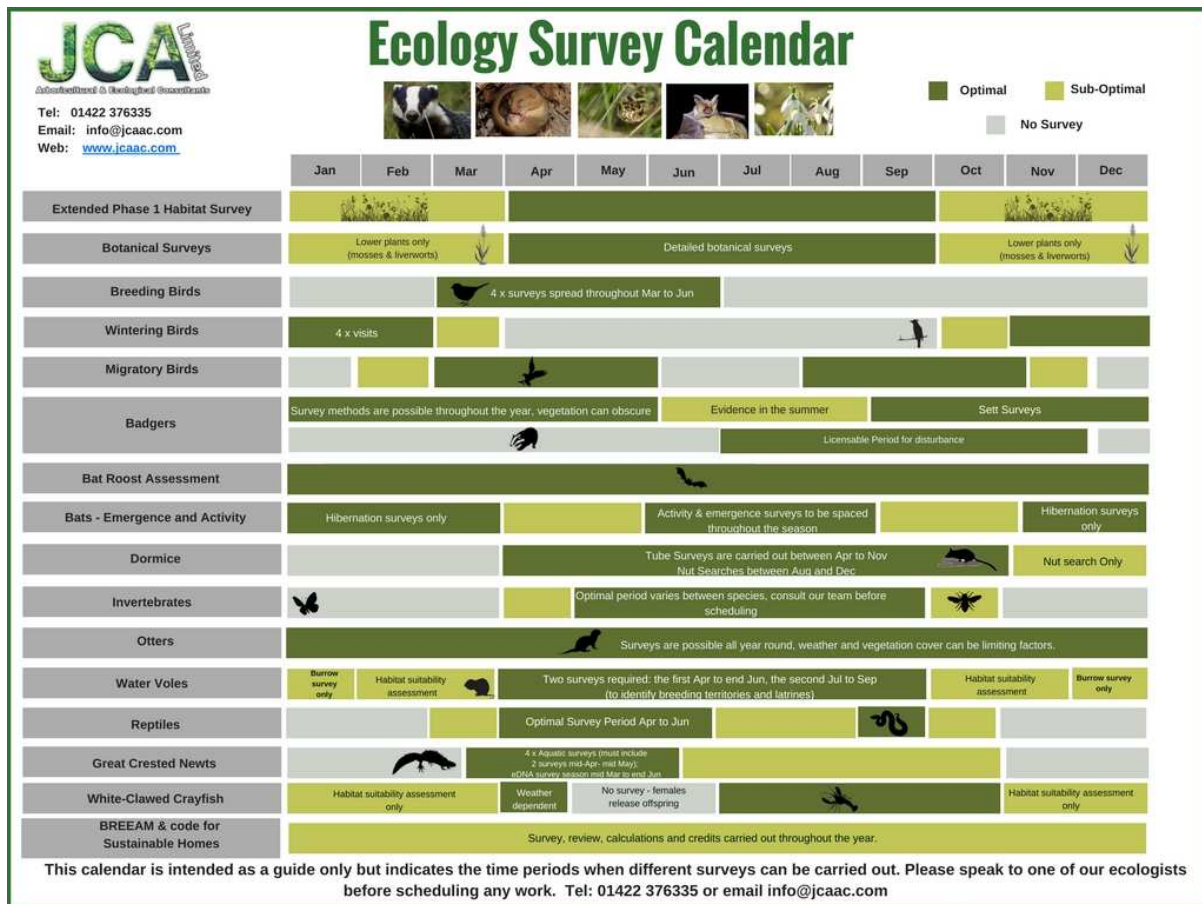
The following habitat types are protected under UK Law:

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



Appendix 8: Survey Calendar

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



Appendix 9: Author Qualifications

Adam West, Principal Ecologist

BSc (Hons) Animal and Wildlife Management, ACIEEM.

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 Bachelor'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.

James Foster, Assistant Ecologist

BSc (Hons) Biology.

James gained his undergraduate degree in biology in 2012 from University of Leeds. James has plenty of experience in ecology, having worked countless projects of different scales all over the north and midlands. James has 9 years of experience surveying anything from reptiles to hedgerows and holds a Great crested newt licence level 1 and is working towards his bat licence and barn owl licence.

Alex Donovan, Graduate Ecologist

MBIOL, BSc Biology (Industrial).

Alex joined JCA in 2023 after graduating from the University of Leeds with a First Class Honours Integrated Master's degree in Biology. As part of his degree programme, Alex spent an industrial placement year working in the Uplands Research Department of the Game and Wildlife Conservation Trust, assisting on various ecological surveys and projects. Alex is a registered Trainee Bird Ringer, licensed through the BTO, and has previously conducted seasonal bat emergence and transect surveys.



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



.....
James Foster *BSc (Hons)*

02/02/2024

Reviewed by



.....
Alex Donovan *MBIOL BSc (Hons)*

02/02/2024

Approved by



.....
Adam West *BSc (Hons), ACIEEM*

06/02/2024



For and on behalf of **JCA Ltd**

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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



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