PRELIMINARY ECOLOGICAL APPRAISAL

at

Land off Sheffield Road
Victoria
Holmfirth
West Yorkshire
HD9 7TP

Client:
T D Jagger Ltd

Client Address:
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Date of Report:
05/09/23

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	23/08/23	Eleanor Clark	24/08/23	Eleanor Clark	01/09/23	Eleanor Clark	06/09/23	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 **T D Jagger Ltd** to undertake a Preliminary Ecological Appraisal (PEA) of a site located at **Land off Sheffield Road, Victoria**. The site is located at Ordnance Survey (OS) National Grid Reference SE 17911 05296 with nearby postcode HD9 7TP.

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	N/A	N/A	N/A
Non-statutorily protected	None	N/A	N/A	N/A
S41 habitat	None	N/A	N/A	N/A
Other habitats	None	N/A	N/A	N/A
Protected species				
Flora (WCA Sch 8, CHSR Sch 5)	None	N/A	N/A	N/A
Invertebrates	None	N/A	N/A	N/A
White-clawed crayfish	None	N/A	N/A	N/A
Fish	None	N/A	N/A	N/A
Great crested newt	None	N/A	N/A	N/A
Reptiles	None	N/A	N/A	N/A
Birds	High	Site clearance leading to destruction of active nests	If site clearance takes place in the main nesting period (1st Feb-31st Aug) a nesting bird survey is required no more than 24 hours prior to clearance	Dependent on results of survey
Bats	High	Destruction of roosts causing a breach of legislation	The building on site requires one emergence survey between 1st May and 31st August in suitable weather conditions.	Dependent on results of survey
Badgers	Moderate	Animals becoming trapped in excavations on site	None	Excavations to be covered at night or a means of escape provided
Otters	None	N/A	N/A	N/A
Water voles	None	N/A	N/A	N/A
Beaver	None	N/A	N/A	N/A

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Other Species e.g. S41 species	High	Death or injury of hedgehogs and brown hare during site clearance	None	Ecolocgical Clerk of Works (ECoW) to search vegetation immediately prior to clearance
Invasive Species (WCA Sch 9) Injurious Weeds (Weeds Act, 1959)				
Invasive species	None	N/A	N/A	N/A
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 August 2023, JCA Limited was instructed by **T D Jagger Ltd** to undertake a Preliminary Ecological Appraisal (PEA) of a site located at **Land off Sheffield Road**, **Victoria** 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 17911 05296, with nearby postcode HD9 7TP. The site is bordered by agricultural fields on all sides.

1.2.2 The scheme is the demolitions of the existing building and the construction of two demi-detached 2-3 bedroom properties.

1.3 Aims and Objectives

1.4.1 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 Extended Phase 1 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.

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- 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 3**) 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 Sheffield Biological Records Centre (SBRC), the local environmental records centre for Sheffield, 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 Kirklees Biodiversity Action Plan and the Bradford Biodiversity Action Plan 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 24/08/2023. 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 1.1, UKHab, 2020). Dominant and abundant plant species were recorded for each habitat present.

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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 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 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.

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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 24/08/2023.

2.3.3 Light rain was experienced during the survey. This was not considered sufficient to have obscured field signs of protected species which may have been present.

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 designated sites within 2km of the site. The nearest statutory designated site is South Pennine Moors Special Area of Conservation (SAC) and Phase 1 Special Protected Area (SPA), located 3172m southwest of the site.

3.1.2 The MAGIC website revealed no nationally designated sites within 2km of the site. The nearest statutory designated site is Upper Park Wood Local Nature Reserve (LNR), located 8244m north-northeast of the site. The site is located within a Site of Special Scientific Interest (SSSI) Impact Risk Zone.

3.2 Non-statutory Designated Sites

3.2.1 Records received from SBRC revealed three 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 SBRC.

Site Name	Distance (m) from Site	Reasons for Designation
Whitley Edge LWS	618	No information provided
Western Moors LWS	1138	No information provided
Broadstone Reservoir LWS	1649	No information provided
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 the site.

3.4 Protected and Notable Species

3.4.1 <u>European Protected Species (EPS) Licence Applications</u>

The MAGIC website revealed no EPS licence applications within 2km of the site.

3.4.2 <u>Records of Protected and Notable Species</u>

3.4.3 <u>Flora</u>

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No records of flora were returned by SBRC.

3.4.4 Invertebrates (including white-clawed crayfish)

The following records were received from SBRC:

Table 3: Invertebrate Records Received from SBRC.

Scientific name	Common name	Designation	Latest Date	Number of records	Distance from site (m)
Acronicta rumicis	Knot grass	UKBAP	2021	1	1992
Coenonympha pamphilus	Small heath	UKBAP Kirklees LBAP	2019	12	496
Erynnis tages	Dingy skipper	UKBAP Bradford LBAP	2019	3	986
Lasiommata megera	Wall butterfly	UKBAP Kirklees LBAP	2020	57	592

Key:
UKBAP: UK Biodiversity Action Plan
LBAP: Local Biodiversity Action Plan

3.4.5 Fish

No records of fish were returned by SBRC.

3.4.6 Amphibians

Two record of common toad *Bufo bufo*, a Schedule 5 (WCA as amended), UKBAP species and Kirklees LBAP species, was received by SBRC. The most recent record was made in 2022 located 1400m from the site.

3.4.7 Reptiles

One record of common lizard *Zootoca vivipara*, a Schedule 5 (WCA as amended), UKBAP species and a Kirklees LBAP species, was received by SBRC. The record was made in 2022 located 1300m from the site.

3.4.8 Birds

The following records were received from SBRC:

Table 4: Bird Records Received from SBRC.

Scientific name	Common name	Designation	Latest Date	Number of records	Distance from site (m)
Cygnus cygnus	Whooper swan	WCA Sch1	2022	1	1736

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Emberiza schoeniclus	Reed bunting	UKBAP Kirklees LBAP	2019	5	1295
Falco peregrinus	Peregrine	WCA Sch 1	2020	1	1416
Muscicapa striata	Spotted flycatcher	UKBAP Kirklees LBAP	2017	2	1295
Numanius arquata	Curlew	UKBAP	2022	28	306
Passer domesticus	House sparrow	UKBAP Kirklees LBAP	2019	5	843
Perdix perdix	Grey partridge	UKBAP Bradford LBAP	2022	7	155
Turdus iliacus	Redwing	WCA Sch 1	2015	1	2469
Turdus pilaris	Fieldfare	WCA Sch 1	2021	6	147
Tyto alba	Barn owl	WCA Sch 1 Bradford LBAP	2015	1	1295
Vanellus vanellus	Lapwing	UKBAP Bradford LBAP	2022	34	358

Key:
WCA Sch 1: Schedule 1 of the Wildlife & Countryside Act 1981 (as amended)
UKBAP: UK Biodiversity Action Plan
LBAP: Local Biodiversity Action Plan

3.4.9 Bats

No records of bats were returned by SBRC.

3.4.10 Bat Roosts

No records of bat roosts were returned by SBRC.

3.4.11 Badgers

No records of badgers were returned by SBRC.

3.4.12 Otters

No records of otters were returned by SBRC.

3.4.13 Water Voles

No records of water voles were returned by SBRC.

3.4.14 Beaver

No records of beavers were returned by SBRC.

3.4.15 Other Notable Species

The following records were received from SBRC:

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Table 5: Other Notable Species Records Received from SBRC.

Scientific name	Common name	Designation	Latest Date	Number of records	Distance from site (m)
Erinaceus europaeus	Hedgehog	UKBAP Bradford & Kirklees LBAP	2019	7	496
Lepus europaeus	Brown hare	UKBAP Kirklees LBAP	2022	21	294
Lepus timidus	Mountain hare	UKBAP Kirklees LBAP	2014	2	1838

Key:
UKBAP: UK Biodiversity Action Plan
LBAP: Local Biodiversity Action Plan

3.4.16 Invasive Species

No records of invasive species were returned by SBRC.

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4. Field Survey Results

4.1 Habitats

Please refer to Appendix 1: UK Hab Habitat Map.

4.1.1 g4 – modified grassland, 81 ruderal

An area of modified grassland with ruderal vegetation is located along the boundary of the site and surrounding the building. The sward is comprised of perennial ryegrass *Lolium perenne*, cock's-foot *Dactylis glomerata,* Yorkshire fog *Holcus lanatus* with bitter dock *Rumex obtusifolious,* dandelion *Taraxacum officinale,* ribwort plantain *Plantago lanceolata,* common mouse-ear *Cerastium fontanum,* spiny sow-thistle *Sonchus asper,* creeping buttercup *Ranunculus repens,* autumn hawkbit *Scorzoneroides autumnalis,* nettle *Urtica dioica,* hairy willowherb *Epilobium ciliatum,* hairgrass *Deschampsia sp*., cow parsley *Anthriscus sylvestris,* red clover *Trifolium pratense,* prostrate knotweed *Polygonum aviculare,* ragwort *Jacobaea vulgaris,* pineapple weed *Matricaria discoidea,* nipplewort *Lapsana communisis,* meadow buttercup *Ranunculus acris,* jointed rush *Juncus articulatus and* creeping thistle *Cirsium arvense.*

Agricultural equipment is being stored on the grassland south of the building. A pile of rubble is located within the grassland in the north west corner of the site.

4.1.2 u1b6 - building, 833 barn

There is one building on site (see Appendix A: UK Hab Habitat Map) which is used as a stable and for storage of agricultural equipment. The building consists of a combination of breezeblocks and unlined asbestos. Large barn style doors are present on the western and eastern elevations with an additional opening on the eastern elevation. The building has a pitched roof constructed of unlined asbestos.

4.1.3 u1f – sparsely vegetated urban land, 81 ruderal, 839 track

At the centre of the site is an area of sparsely vegetated urban land. The area is used as a track and is constructed of crushed stone hardcore. Ruderal vegetation covers greater than 10% of the hardstanding and is comprised of white clover *Trifolium repens*, common plantain *Plantago major*, pineapple weed, perennial ryegrass, spiny sowthistle *Sonchus asper* and autumn hawkbit.

4.2 Protected and Notable Species

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4.2.1 Flora

No records of protected or notable plant species were received from SBRC and none were noted during the survey. The flora present in considered locally common and abundant. As such, flora will not be mentioned further in this report.

4.2.2 Invertebrates (including white-clawed crayfish)

Four species of protected and notable invertebrates' species were received from SBRC. There are food plants present to support knotgrass moth, small heath butterfly and wall butterfly. No invertebrates were observed during the survey and vegetation did not show any evidence of damage from foraging. Invertebrates will, therefore, not be mentioned further in this report.

4.2.3 Fish

No records of protected or notable fish were returned by SBRC. Habitats on site, or within influencing distance of the site do not support fish species. As such, fish will not be mentioned further in this report.

4.2.4 Amphibians

Records of common toad were received from SBRC. Two ponds were identified within 500m of the site with the closest located approximately 306m south west of the site. Modified grassland which appears to be utilised for grazing or hay production and the A616 is located between the site and the closest pond. Considering the habitats on site are suboptimal foraging and sheltering habitats for great crested newt and other common amphibians, it is unlikely that they utilise the site. As such, amphibians will not be mentioned further in this report.

4.2.5 Reptiles

Records of common lizard were received from SBRC. The site lacks the mosaic of habitat types required to support basking, foraging and breeding reptiles. The site is poorly connected to other areas of suitable habitat with the A616 located along the western boundary and horse grazed pasture on all other aspects. No evidence of reptiles was found on site during the survey. As such, reptiles will not be mentioned further in this report.

4.2.6 Birds

11 species of protected and notable birds were received from SBRC. The site contains a small about of foraging habitat for birds in the form of grassland. The

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building has a large opening on its eastern aspect and therefore may provide nesting opportunities for birds. No birds' nests were found during the site survey.

4.2.7 Bats

No records of bat were returned by SBRC. The building has pitched roof with corrugated asbestos sheeting. The southern elevation of the building is constructed of single skin breeze blocks with guttering and downpipes. An exposed wooden wall plate can be seen from the external wall. Mortar is missing between the wall plate and breezeblock wall, allowing access into the building. The western and eastern aspects are constructing of a breezeblock plinth and asbestos corrugated sheeting. Some sections of the asbestos are missing on the western elevation allowing access into the building. There is one barn style door on both the western and eastern elevation. An extra opening with no door is present on the eastern elevation allowing access into the building. The northern elevation is constructed of corrugated asbestos sheets. Silage is stacked within 1m of the northern elevation which blocks a clear flight path to any possible access points into the building. The interior of the building is used for agricultural storage. The asbestos is unlined with exposed steel rafters and wooden purlins. Cobwebs were covering the beams on the roof of the building. However, there were some areas where it would be possible for single bats to roost. As such, the building is considered to have low potential for roosting bats.

The habitats on site are of low potential for commuting and foraging bats as the site is comprised of hard standing and modified grassland with ruderal vegetation. The site is not bordered by or within proximity to habitats considered suitable for foraging and commuting bats such as hedgerows, trees, woodland, and waterways.

4.2.8 Badgers

No records of badger were returned by SBRC. The grassland on site provides a small amount of suitable foraging habitat. No setts or other field signs were found on site or within 30m of the site. Badgers are a highly mobile species; therefore, it is likely that they utilise the site for foraging and dispersal.

4.2.9 Otters

No records of otter were returned by SBRC. Habitats on site, or within influencing distance of the site do not support otter. As such, otter will not be mentioned further in this report.

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4.2.10 Water Voles

No records of water vole were returned by SBRC. Habitats on site, or within influencing distance of the site do not support water vole. As such, water vole will not be mentioned further in this report.

4.2.11 Beaver

No records of beaver were returned by SBRC. Habitats on site, or within influencing distance of the site do not support beaver. As such, beaver will not be mentioned further in this report.

4.2.12 Other Notable Species

7 records of hedgehog were received from SBRC. The habitats on site provide suitable foraging habitat for hedgehogs. Hedgehogs can travel several kilometres in a night and therefore the site may support foraging and commuting hedgehogs.

Records of brown hare and mountain hare were received from SBRC. The grassland on site provides limited suitable foraging habitat for both species. As such, mountain hare will not be mentioned further in this report.

4.2.13 Invasive Species

No records of invasive species were returned by SBRC. No invasive species were identified during the site survey. As such, invasive species will not be mentioned further in this report.

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5. Assessment

5.1 Designated Sites

5.1.1 Statutory designated sites

There are no internationally or nationally designated sites within 2km of the site. The site is located within a SSSI Impact Risk Zone, however the proposed development does not fall into any of the categories listed. As such, sites under these designations are not considered vulnerable to adverse impacts from the proposed scheme.

5.1.2 Non-statutory designated sites

There are three non-statutory designated sites within 2km of the site. The closest is Whitely Edge LWS located 618m from the site. All LWS are not considered vulnerable to adverse impacts from the proposed scheme due to the large distance between them and the site.

5.2 Habitats

5.2.1 The most valuable habitats for biodiversity within the development site boundary is the modified grassland. The proposed works will impact these habitats through the removal of modified grassland.

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 Local BAP Priority Habitat descriptions.

5.3 Protected and Notable Species

5.2.1 Birds

The building on site has the potential to support nesting birds. Recommendations regarding birds will be made in paragraph 6.2.1.

5.2.2 Bats

The building has been categorised as having low bat roosting potential. The building will be demolished to facilitate the proposed development. As such, the proposed development has the potential to destroy a bat roost if one is present

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in the building. If roosting bats are present, the proposed development can only proceed under the authority of a Natural England mitigation licence. Recommendations regarding bats on site will be made in paragraph 6.2.2.

5.2.3 Badgers

No badger setts or other field signs were found on site or within 30m of the site. As badgers are a highly mobile species, it is possible that badgers utilise the site for foraging and dispersal. Recommendation regarding badgers will be made in paragraph 6.2.3.

5.2.4 Other Notable Species

Hedehogs have been recorded within 2km of the site and there is habitat to support hedgehogs on site. This habitat is likely to me removed during the works. Recommendations regarding hedgehog and brown hair will be made in paragraph 6.2.4.

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6 Recommendations

6.1 Habitats

6.1.1 The proposed works provide an opportunity to institute enhancement for biodiversity, such as the inclusion of native plant species. 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 Birds

Demolition of the existing building must take place outside bird nesting season, which runs from 1st February to 31st August. If demolition is to take place within the nesting season, a nesting bird survey must be carried out by a suitably experienced ecologist no more than 24 hours before works begin.

6.2.2 Bats

The building on site has been categorised as having low bat roosting potential. To determine the presence/likely absence of roosting bats, one bat emergence survey is required prior to works commencing. The survey must take place between 1st May and 31st August in suitable weather conditions.

6.2.3 Badgers

As badgers are a highly mobile species, precautions must be taken to avoid harm to badgers during construction. Any excavations are to be covered at night, when badgers are active, to prevent any badgers becoming trapped. If excavations can't 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.

6.2.4 Hedgehog

Vegetation clearance must be carried out under the supervision of an ecological clerk of works (ECoW). The ECoW will hand search any area where hedgehogs or yellow-necked mice might be present before they are cleared. Any animals found will be captured by the ECoW and relocated to a safe place with suitable habitat.

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7 References

Guidelines for surveys and report writing:

British Standards Institute (BSI), (2013) *BS 42020:2013, Biodiversity - Code of practice for planning and development*. London.

Chartered Institute of Ecology and Environmental Management (CIEEM), (2015) *Guidelines for Ecological Report Writing*. Winchester.

Joint Nature Conservation Committee (JNCC), (2010) *Handbook for Phase 1 habitat survey: A technique for environmental audit*.

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 gr squirrel
- Plants

5.3 *UK Hab* (2022) *The UK Habitat Classification System*. Available at: http:// https://ukhab.org/

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Species Specific Information:

Badgers:

Natural England, (2007) Badgers and Development: A Guide to Best Practice and Licensing.

Competencies for Species Survey: Badger, Chartered Institute of Ecology and Environmental Management CIEEM, 2013

Bats:

Bat Conservation Trust, (2007) Bats, Development & Planning in England. London.

Bat Conservation Trust and Institute of Lighting Professionals (2018) Guidance Note 08/18: Bats and artificial lighting in the UK. ILP, Rugby

Collins, J. (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines. 3rd edition. Bat Conservation Trust, London.

Mitchell-Jones, A.J. & McLeish, A.P. (2012) The Bat Workers' Manual. Pelagic Publishing, Exeter.

Bats: surveys and mitigation for development projects, https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects Accessed 2018-06-21

Relevant Legislation:

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

Countryside and Rights of Way Act 2000 (c.37). Available at:
http://www.legislation.gov.uk/ukpga/2000/37/contents

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Available at:
https://www.legislation.gov.uk/ukdsi/2019/9780111176573

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:
http://www.legislation.gov.uk/ukpga/1992/51/contents

The Hedgerow Regulations 1997 (No. 1160). Available at:
http://www.legislation.gov.uk/uksi/1997/1160/contents/made

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Appendices

Appendix 1: UK Hab Habitat Map

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Land off Sheffield Road
Victoria, Holmfirth, West Yorkshire, HD9 7TP

Key

- Site boundary

Habitats

- g4 - modified grassland
- u - urban
- u1b6 - other developed land
- u1f - sparsely vegetated urban land

Scale

0 10 20 m

Site Land off Sheffield Road, Victoria, Holmfirth, West Yorkshire, HD9 7TP	Client T D Jagger Ltd.
Project Preliminary Ecological Appraisal	Author EIC
Plan ref 01	Revision 00

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Appendix 2: Proposed Development Plan

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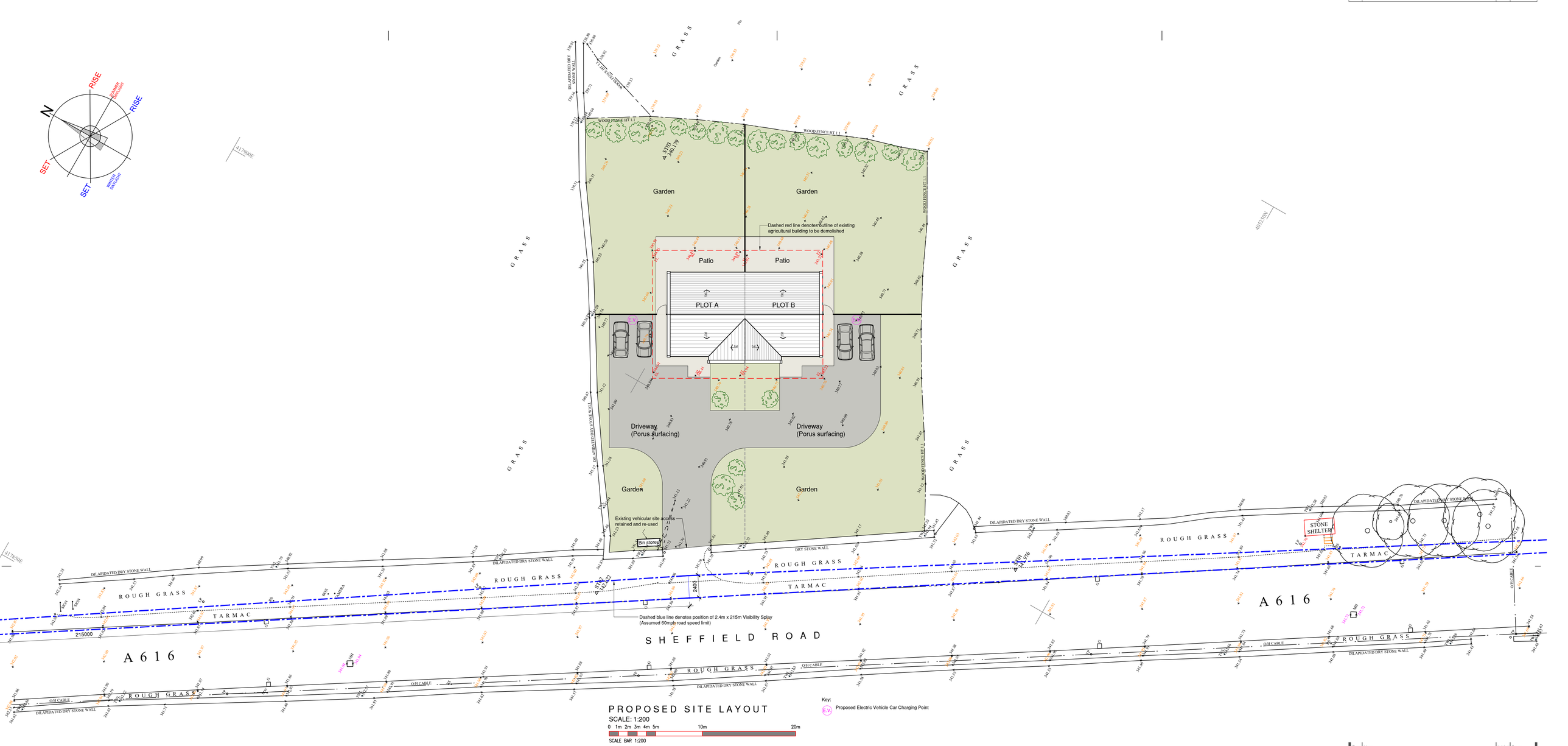


PROPOSED SITE LAYOUT

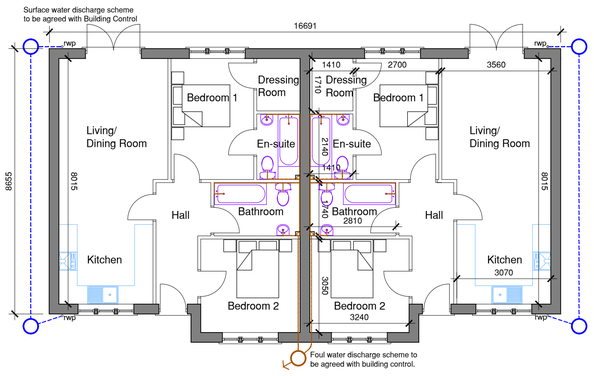
SCALE: 1:200

0 1m 2m 3m 4m 5m 10m 20m

SCALE BAR 1:200

Key:

E.V. Proposed Electric Vehicle Car Charging Point



PROPOSED GROUND FLOOR PLAN

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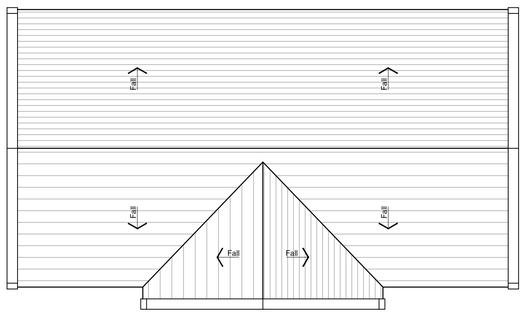
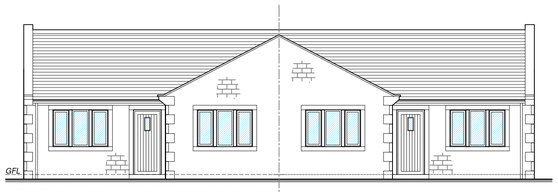


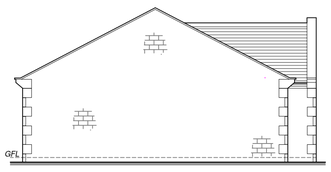
PROPOSED ROOF PLAN

SCALE: 1:100



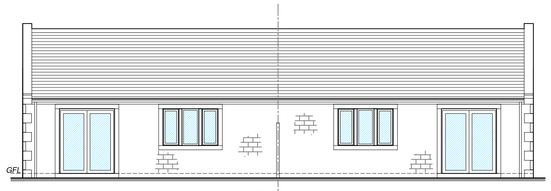
PROPOSED SOUTH WEST ELEVATION

SCALE: 1:100



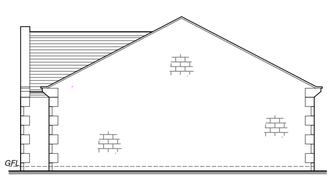
PROPOSED NORTH WEST ELEVATION

SCALE: 1:100



PROPOSED NORTH EAST ELEVATION

SCALE: 1:100



PROPOSED SOUTH EAST ELEVATION

SCALE: 1:100

Rev	Note	Initial	Date

T D JAGGER
PROPERTY CONSULTANTS

3 Richmond House, Caldene Business Park,
Mytholmroyd, Hebden Bridge,
West Yorkshire,
HX7 5QJ

01422 883317
www.tdjagger.ltd.uk

Client
The Trustees of M Hemsley Dec'd.

Project
Proposed Residential Development
Sheffield Road, Hepworth,
Holmfirth, HD9 1TP

Drawing
Proposed Site Layout
Proposed Floor Plans & Elevations

Date	Drawn	Checked	Scale
April 2022	RAL	BH	As Drwg @ A1

Drwg. No.	Revision
2953 03	-

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Dont Ignore Health & Safety

Think Safe Build Safe

It Might Just Save Your Life

Appendix 3: Photographic Evidence

Photo 1: Modified grassland with agricultural equipment and southern aspect of the building.

Photo 2: Modified grassland, track and western elevation of the building.

Photo 3: Modified grassland, track with silage and northern elevation of the building.

Photo 4: Modified grassland, track and eastern elevation of the building.

Photo 5: Modified grassland and pile of rubble in north west corner of the site.

Photo 6: Missing mortar on southern elevation of the building.

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Photo 7: Interior of the building.

Photo 8: Interior of the building.

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Appendix 4: Bat Survey Calendar

Figure 1: Survey timings calendar (taken from BCT: Bat surveys for professional Ecologists, Good Practice Guidelines; 3rd Edition).

Survey type	Month											
	J	F	M	A	M	J	J	A	S	O	N	D
Preliminary ecological appraisal - fieldwork												
Preliminary roost assessment – structures[a]												
Emergence/re-entry survey for maternity or summer roosts[b]												
Emergence/re-entry[c] survey for transitional roosts[b]												
Emergence survey for mating roosts[b]												
Hibernation survey – structures[a]												
Preliminary ground level roost assessment - trees[d]												
Potential roost feature (PRF) inspection survey - trees												
Ground level bat activity survey – transects and automated/static												
Pre-, during and post-hibernation – automated/static bat activity survey												
Swarming survey												
Back-tracking survey												
Trapping survey[e]												
Radio tagging and tracking survey[e]												

= 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 surveys are not acceptable in Scotland.

[a] Not including trees

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Appendix 5: 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 6: 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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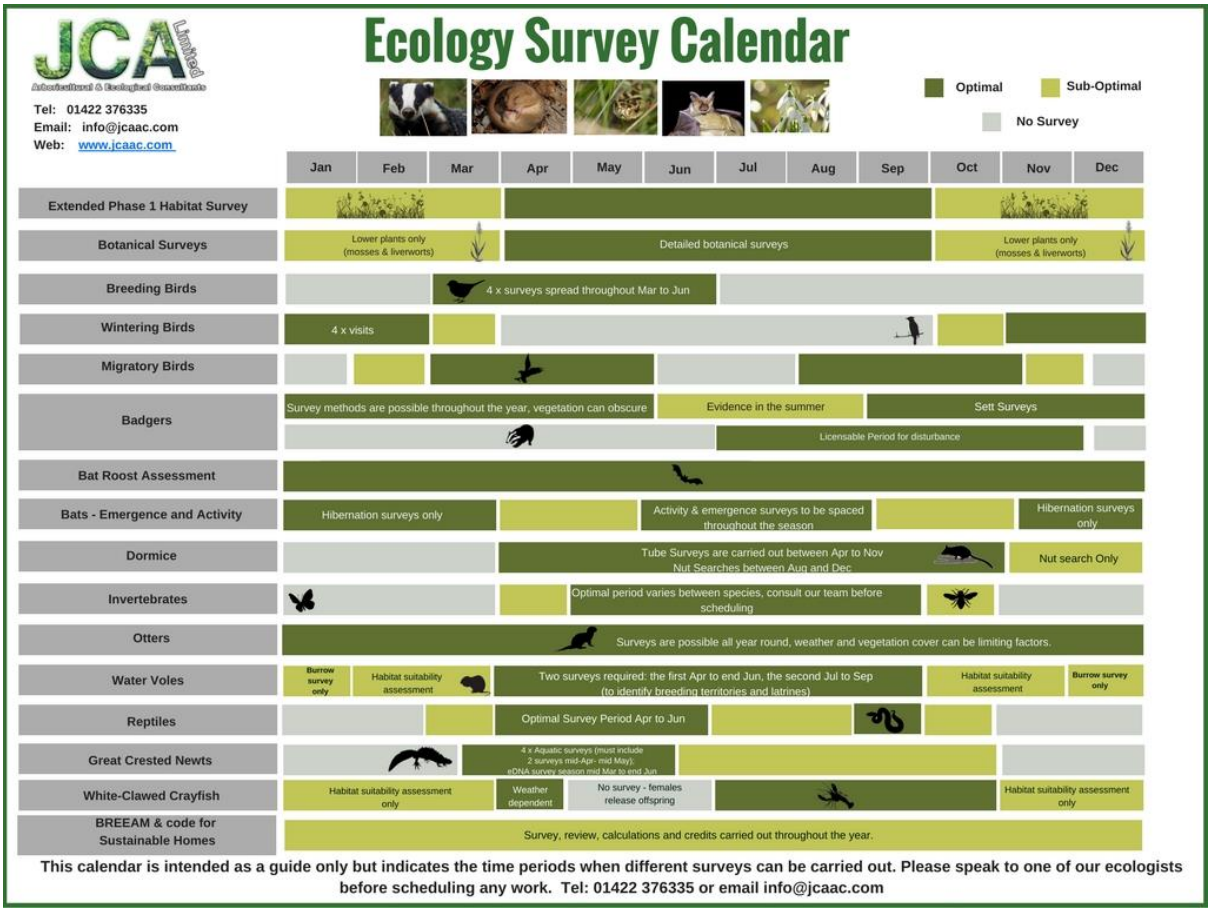
Appendix 7: Survey Calendar

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



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Appendix 8: 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.

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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

05/09/23

Reviewed and approved by

.....

Adam West *ACIEEM*

06/09/2023

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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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