

**PRELIMINARY ECOLOGICAL
APPRAISAL**

**at
Huddersfield Grammar School
Luck Lane
Huddersfield
West Yorkshire
HD1 4QX**

**Client:
Huddersfield Grammar School**

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**JCA Ref:
16695b/AmB**

Date of Report: 1st February 2021



Quality Assurance

Version	Desktop Survey Completed:		Site Surveyed:		Report Completed:		Reviewed:	
	Date	Name	Date	Name	Date	Name	Date	Name
16695b/AmB	29/1/2021	Amanda Beck	27/1/2021	Amanda Beck	1/2/2021	Amanda Beck	3/2/2021	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 Huddersfield Grammar School to undertake a Preliminary Ecological Appraisal (PEA) of a site located Huddersfield Grammar School temporary car park. The site is located at Ordnance Survey (OS) National Grid Reference SE1245216729 with nearby postcode HD1 4QX.

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.

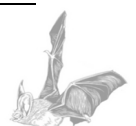
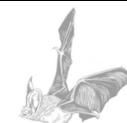


Table 1: summary of ecological receptors at the site and recommended mitigation.

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	None	None
Non-statutorily protected	None	None	None	None
S41 habitat	None	None	None	None
Other habitats (Kirklees Wildlife Habitat Network)	High	The removal of trees within the conservation area will result in a loss of mature trees which make a significant contribution to the local surroundings and wildlife.	An arboricultural survey will be required to assess if trees have a tree preservation order on them.	If trees are felled within the woodland then any new trees to be planted should be native, contain high levels of nectar, pollen, seeds and fruit to attract a variety of insects for birds to feed on.
Protected species				
Flora (WCA Sch 8, CHSR Sch 5)	None	None	None	None
Invertebrates	None	None	None	None
White-clawed crayfish	None	None	None	None
Fish	None	None	None	None
Great crested newt	None	None	None	None
Reptiles	None	None	None	None
Birds	Moderate	The removal of trees on site will impact on the available habitat for nesting, feeding and breeding birds.	If trees and vegetation are to be removed during the nesting bird season March 1st to August 31st a nesting bird survey will be required and must be conducted within 24 hours of vegetation removal.	Any new trees to be planted should be native, contain high levels of nectar, pollen, seeds and fruit to attract a variety of insects for birds to feed on.



Bats	Moderate	The removal of trees and vegetation on site will cause a loss of potential foraging and commuting habitat for bats.	None	Any lighting on site must follow the ILP and Bat Conservation Trust guidelines so bats commuting flight paths are not disturbed. Any new trees or shrubs to be planted should be native, contain high levels of nectar, pollen, seeds and fruit to attract a variety of insects for feeding bats
Badgers	None	None	None	None
Otters	None	None	None	None
Water voles	None	None	None	None
Other Species e.g. S41 species	None	None	None	None
Invasive Species (WCA Sch 9) Injurious Weeds (Weeds Act, 1959)				
	None	None	None	None
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 Sch – Conservation of Habitats and Species Regulations 2017 Schedule				



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1. Introduction

1.1 Background

- 1.1.1 In January 2021, JCA Limited was instructed by Huddersfield Grammar School to undertake a Preliminary Ecological Appraisal (PEA) of a site located at Huddersfield Grammar School, Luck Lane 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 SE1245216729, with nearby postcode HD1 4QX. The site is bordered to the north by residential housing and businesses, to the east is residential housing and Gledholt Woods a Local Nature Reserve, to the west is housing, Middle Wood and William Wood and to the south-west and south-east is allotment gardens among residential properties.
- 1.2.2 The scheme is to lay a gridded mesh on the school's sports field to temporarily allow car parking on site. The entrance onto site towards the temporary carpark goes through part of Kirklees Wildlife Habitat Network woodland.

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, including the results of recent ecological surveys in the area.
 - 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.

- 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 Phase 1 Habitat Map (Appendix 1). This report and the maps are supported by photographs (Appendix 3) and information regarding current legislation (Appendix 6).



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:

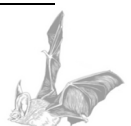
- MAGIC (Multi-Agency Geographical Information for the Countryside) website (to identify statutory designated sites and EPS licences).
- Ordnance Survey mapping (to identify potentially notable habitats including ponds).
- Aerial photography (to identify potentially notable habitats).
- Data search for records of protected/notable species on and within 2km of the site within the last ten (10) years (exempting bat roosts, of which all records are included) obtained from the local environmental records centre for West Yorkshire Ecology Service, along with information for non-statutory wildlife sites.

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

2.2 Field Survey

2.2.1 A Phase 1 survey of the site was conducted on 27th January 2021 by Amanda Beck. 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 Phase 1 Vegetation and Habitat Survey (Joint Nature Conservation Committee, 2010). 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 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.
- Other notable species.
- Invasive species.

2.3 Survey Constraints

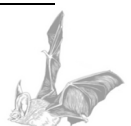
2.3.1 To determine presence or likely absence of protected species usually requires multiple visits at suitable times of the year. As a result, the survey undertaken focused on assessing the potential of the site to support species of note, which are considered to be of principal importance for the conservation 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 27th January 2021 by Amanda Beck.

- 2.3.3 There were no perceived limitations that would significantly impact on the conclusion and recommendations of this report. The site does not contain the range of niche habitats suitable for rare plant species. If a more accurate and comprehensive flora record is required, the optimum time to conduct botanical surveys would be the months of April to September.
- 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 500m of the site. Gledholt woods a Local Nature Reserve 477m east of the site boundary. A group of local volunteers maintain the woodland carrying out practical work. It has open access for the public to use. It has a mature woodland and rough meadow with the woodland supporting an unusual range of fungi. White-clawed crayfish can be found in the pond on site.
- 3.1.3 The MAGIC website revealed no SACs designated for bats within 30km of the site.
- 3.1.4 Records received from West Yorkshire Ecology Service revealed one non-statutory designated site within 1km. Huddersfield Narrow Canal a Local Wildlife Site, 870m south of the site boundary. The canal is home to otters and kingfishers *Alcedo atthis* along with a variety of plant species under Criteria SW1 along the banks and in the water. The canal and towpath provide opportunities for people both on the water and on the bank to observe a wide variety of wildlife.

3.2 Section 41 of the NERC Act 2006 Priority Habitat Inventory

- 3.2.1 The MAGIC website revealed the following habitats within 2km of the site:
- Priority Habitat Inventory Deciduous Woodland, there are thirty parcels of land the nearest being 122.7m to south-west.
 - National Habitat Network of Habitats combined of seven parcels of land the nearest being 590m south.
 - Priority BAP Habitat Woodland Pasture & Parkland, two parcels of land the nearest being 888m east.
 - Priority Habitat Inventory Lowland Dry Acid Grassland, three parcels of land with the nearest being 1.2km west.



3.3 Protected and Notable Species

3.3.1 European Protected Species (EPS) Licence Applications

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

3.3.2 Records of Protected and Notable Species

Table 2: summary of relevant records returned by WYES of protected and notable species within 2km of the site.

Taxonomic Group	Common Name	Scientific Name	On site	Within 500m	Within 1km	Within 2km	Notes
Plants	Bluebells	<i>Hyacinthoides non-scripta</i>	x	x	✓	✓	One field record unknown date. Kirklees BAP species.
	Narrow leaved water-plantain	<i>Alisma tanceolatum</i>	x	x	✓	✓	One record from unknown date. Rare county plant.
Invertebrates	Aphodius conspurcatus	<i>Aphodius conspurcatus</i>	x	x	✓	✓	One record of a notable B beetle species.
	Musk beetle	<i>Aromia moschata</i>	x	x	✓	✓	One record of a notable B beetle species.
	Atomaria nigriventris	<i>Atomaria nigriventris</i>	x	x	✓	✓	One record of a notable beetle species.
	Barynotus squamosus	<i>Barynotus squamosus</i>	x	x	✓	✓	One record of a notable B beetle species.
	Drupentus nasturtii	<i>Drupentus nasturtii</i>	x	x	✓	✓	One record of a notable B beetle species.
	Flax flea beetle	<i>Longitarsus parvulus</i>	x	x	✓	✓	One record of a notable A beetle species.
	Ocypus fuscatus	<i>Ocypus fuscatus</i>	x	x	✓	✓	One record of a notable B beetle species.
	Odontus armiger	<i>Odontus armiger</i>	x	x	✓	✓	One record of a notable A beetle species.
	Oxypoda exoleta	<i>Oxypoda exoleta</i>	x	x	✓	✓	One record of a notable beetle species.
	Poplar borer	<i>Saperda carcharias</i>	x	✓	✓	✓	One record of a notable A beetle species.



	Tarsostenus univittatus	<i>Tarsostenus univittatus</i>	x	x	✓	✓	One record of a RDB: Pre 94: Ex beetle species.
	Cinnabar moth	<i>Tyria jacobaeae</i>	x	x	✓	✓	One record of adult. UKBAP and West Yorkshire BAP species.
Fish	Sea trout	<i>Salmo trutta</i>	x	x	✓	✓	Four records dating from 2013 to 2015 of adult seen. UK BAP, West Yorkshire BAP and Kirklees BAP species.
Amphibians	Palmate newt	<i>Triturus helveticus</i>	x	x	✓	✓	Two records dating from 2010 to 2008 of field records. West Yorkshire BAP species.
Birds	Common kingfisher	<i>Alcedo atthis</i>	x	x	✓	✓	One record from 2015 of adult bird. Schedule 1 species Amber listed Bird of Conservation Concern.
	Mallard	<i>Anas platyrhynchos</i>	x	x	✓	✓	Six records form 2015 of adult birds. Amber listed Bird of Conservation Concern.
	Swift	<i>Apus apus</i>	x	x	✓	✓	Two records dating from 2012 to 2013 of swift nests. Amber listed Bird of Conservation Concern. West Yorkshire BAP species.
	Grey wagtail	<i>Motacilla cinerea</i>	x	x	✓	✓	One record of adult bird. Red listed Bird of Conservation Concern,
	House Sparrow	<i>Passer domesticus</i>	x	x	✓	✓	One record from 2017 of an adult bird. Red listed Bird of Conservation Concern. UK BAP, West Yorkshire BAP & Kirklees BAP species.
Bats	Daubenton's bat	<i>Myotis daubentonii</i>	x	x	✓	✓	Two records from 2012 to 2019 of bats foraging. West Yorkshire BAP & Kirklees BAP species.
	Leisler's bat	<i>Nyctalus leisleri</i>	x	x	✓	✓	Two records from 2015 of bats foraging. West Yorkshire BAP & Kirklees BAP species.
	Noctule bat	<i>Nyctalus noctula</i>	x	x	✓	✓	Three records dating from 2012 to 2017 of individual bats. UKBAP. West Yorkshire BAP & Kirklees BAP species.
	Common Pipistrelle bat	<i>Pipistrellus pipistrellus</i>	x	x	✓	✓	Twenty records dating from 2010 to 2019. Seven records are of foraging



							bats, the rest of the records are bats in flight. One record 500m of a bat in flight. West Yorkshire BAP & Kirklees BAP species.
	Soprano Pipistrelle bat	<i>Pipistrelle pygmaeus</i>	x	✓	✓	✓	Two records dating from 2012 to 2019, one of bat foraging the other a bat commuting. Record within 500m of a bat foraging. UK BAP, West Yorkshire BAP & Kirklees BAP species.
Bat roosts	Pipistrelle bat species	<i>Pipistrellus sp.</i>	x	✓	✓	✓	Four records of bat roosts dating from 2004 to 2015. With two of the roosts being excluded bat roosts. One maternity roost within 500m. UKBAP, West Yorkshire BAP & Kirklees BAP species.
	Common pipistrelle	<i>Pipistrellus pipistrellus</i>	x	x	✓	✓	Twenty-five records of bat roosts dating from 2008 to 2019. Two records are of possible bat roosts and one a hibernating bat roost. West Yorkshire BAP & Kirklees BAP species.
	Unknown bat species	<i>Chiroptera sp.</i>	x	x	✓	✓	Six records dating from 1993 to 2005. Two of these records are of possible bat roosts.
Other notable species	Brown Hare	<i>Lepus europaeus</i>	x	x	✓	✓	One record from 2012. UKBAP, West Yorkshire BAP and Kirklees BAP species.
Plant Schedule 9 species	Japanese Knotweed	<i>Fallopia japonica</i>	x	x	✓	✓	Fourteen records dating from 2010 to 2017.
	Himalayan Balsam	<i>Impatiens glandulifera</i>	x	x	✓	✓	Three records dating from 2010 to 2016.
	Rhododendron	<i>Rhododendron ponticum</i>	x	x	✓	✓	One record unknown date.
Other Schedule 9 species	Signal Crayfish	<i>Pacifastachus leniusculus</i>	x	x	✓	✓	Two records from 2010 of counts of ten adults.



	Grey squirrel	<i>Sciurus carolineensis</i>	x	✓	✓	✓	One record from 2015 of adult.
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4. Field Survey Results

4.1 Habitats

4.1.1 A1 Semi-natural broadleaved woodland

The broadleaved woodland consists of oak *Quercus sp.*, sycamore *Acer pseudoplatanus*, ash *Fraxinus excelsior*, horse chestnut *Aesculus hippocastanum*, common holly *Ilex aquifolium*, variegated holly *Ilex aquifolium variegatum* and hawthorn *Crataegus sp.*

4.1.2 A2.1 Dense continuous bramble

Dense bramble *Rubus fruticosus* is in the understory of the woodland.

4.1.3 C3.1 Tall ruderal

Along the edges of the woodland and within the woodland are tall ruderal consisting of rosebay willow herb *Chamerion angustifolium* and common nettle *Urtica dioica*.

4.1.4 J* 2 Amenity grassland

Amenity grassland forms part of the temporary car park where mesh grids have been placed for temporary car parking. Through these grid's common daisy *Bellis perennis* and annual meadow grass *Poa annua* were observed. To the sides of the temporary car park are grass verges on the edges of the woodland containing common dandelion *Taraxacum officinale*, common chervil *Anthriscus cerefolium*, snowdrops *Galanthus sp.*, wood aven *Geum urbanum*, smooth meadow grass *Poa pratensis* and chickweed *Stellaria media* with common ivy *Hedera helix* growing along the ground.

4.1.5 J3.4 Fence

To the north of the site there is wooden fencing separating the adjacent temporary car park off from the school's sports field.

4.1.6 J3*.6 Buildings/structures

There are no buildings on site, the only structure was a metal storage container to the north of the site.



4.1.7 **J4 Bare ground**

To the south of the site is a bare earth track off Luck Lane onto site through the woodland towards the temporary car park.

4.2 Protected and Notable Species

4.2.1 Flora: The data search revealed two records of two plant species within 1km of the site. One of these species narrow-leaved water plantain requires waterways to grow. There are no water bodies on site to support this species. The other record is of bluebells. On site there is the required habitat to support bluebells within the school's woodland, but no evidence of bluebells leaves was observed on site during the survey. Therefore, flora will not be mentioned further in this report.

4.2.2 Invertebrates: There were twelve records of invertebrate species within 1km of twelve different species: moths, beetles and weevils. Most of the species are Notable A & B species that require niche habitats to feed and breed. The site does not have these niche habitats to support these species. Therefore, invertebrates will not be mentioned further in this report.

4.2.3 Amphibians: There were two records of palmate newts within 1km of the site boundary. There are no waterbodies on site but within 500m of the site there is a pond to support amphibians. However due to roads and residential housing amphibians would have difficulty in commuting to site to hibernate. Therefore, amphibians will not be mentioned further in this report.

4.2.4 Reptiles: The data search did not reveal any records of reptiles within a 2km radius. The mosaic of habitats on site are not suitable for basking, hibernating or feeding reptiles. Therefore, reptiles will not be mentioned further in this report.

4.2.5 Birds: The data search revealed eleven records of five bird species within 1km of the site. Records were of a Schedule 1 bird, two red and two amber listed Birds of Conservation Concern. During the survey four bird species were observed on site, all were common bird species and were seen within the woodland trees. A bird nest was seen to the south-west of the site high up in a mature tree. There are nesting and foraging opportunities for birds in the trees.



4.2.6 Bats: There are sixty-four records within 1km of seven bat species. Records included bats foraging, commuting with thirty-five of these records being of bat roosts excluded, possible bat roosts, hibernation roosts and maternity bat roosts. There are two records within 500m of the site, one record of pipistrelle bat species maternity roost and the other record is of a soprano pipistrelle bats foraging. There were no bat roosting opportunities in the trees. However, foraging and commuting bats maybe using the woodland and grassland to feed.

4.2.7 Badgers: The data search did not reveal any records of badger within a 2km radius of the proposed development site. There are no steep embankments or mature hedgerows that are suitable for badger setts. Therefore, badgers will not be mentioned further in this report.

4.2.8 Fish: There are four records of sea trout within 1km of the site boundary. There are no waterbodies on site, there is a pond within 477m of the site, but the pond is not large enough to support sea trout. Therefore, sea trout will not be mentioned further in this report.

4.2.9 Otters: There were no records within 2km of otters *Lutra lutra*. There are no waterbodies on site or in the surrounding residential housing that would support otters. Therefore, otters will not be mentioned further in this report.

4.2.10 Water Voles: There are no records of water voles *Arvicola amphibius* within 2km of the site. Due to no rivers or streams on site, there are no vegetation corridors that water voles can feed and commute along. Therefore, water voles will not be mentioned further in this report.

4.2.11 Other Notable Species There was one record of a brown hare within 1km of the site, there is no tall vegetation or embankments to support burrowing and feeding hares.. Therefore, hares will not be mentioned further in this report.

4.2.12 Invasive Species: The data search revealed eighteen records of three invasive plant species within 1km of the site. No invasive plant species were observed on site and there are no records within 500m. Therefore, invasive plant species will not be mentioned further in this report.

There are three other records of two Schedule 9 species. Signal crayfish recorded within 1km of the site. There are no waterbodies on site or within 500m to support signal crayfish. Therefore, signal crayfish will not be mentioned further in this report. Grey squirrel is the other species that was



observed within 500m of the site. During the survey a grey squirrel was observed within the tree branches on site.



5. Assessment

5.1 Designated Sites

5.1.1 Statutory designated sites

There is one statutory nature conservation site within 477m of the site's boundary: Gledholt Woods a Local Nature Reserve. The site has woodlands and rough grassland. The temporary car parking proposed area will not have an effect on any protected species within Gledholt Woods, and due to roads and residential housing species will have difficulty in commuting to the school site. Therefore, there will be no impact on the statutory designated site from the proposed temporary car parking area.

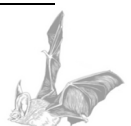
5.1.2 Non-statutory designated sites

There is one confirmed non-statutorily site within 2km of the proposed development: Huddersfield Canal a Local Wildlife Site. The proposed temporary car parking area will not have an impact on the canal due to their being no corridors for species to commute along onto site and no water bodies on site to support aquatic plants. There is habitat fragmentation of the landscape with roads and residential dwellings that species would have to navigate. Therefore, the proposed temporary car park area will not have an impact on this non-statutory site.

5.2 Habitats

5.2.1 The most valuable habitats for biodiversity within the development site boundary are the broadleaved woodland which is part of the Kirklees Wildlife Habitat Network, with trees having tree protection orders on and the dense scrub in the shrub layer below the trees.

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

5.3.1 Birds: The removal of the trees within the woodland will reduce nesting and foraging opportunities for birds.

5.3.2 Bats: The removal of trees will reduce the potential for commuting and foraging bats.



6. Recommendations

6.1 Habitats

- 6.1.1 On completion of works, the number of previously felled trees that have been removed and discussed with Kirklees Council, must be replaced with ten native species of local provenance. Trees must be native species with known benefits to wildlife common in the area.
- 6.1.2 The proposed works provide an opportunity to institute enhancement for biodiversity by using tree trunks or logs on the edge of the site, to form a barrier between the temporary car parking area and the woodland to ensure no damage from cars or disturbance from humans takes place within the woodland.

6.2 Further Surveys Required

- 6.2.1 If trees within the woodland are to be felled during the nesting bird period a Nesting Bird survey will be required 24 hours prior to the removal of the trees to confirm the presence or absence of nesting birds.



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> (Accessed: 21 September 2016).

Magic Map Application (2016) *Magic.defra.gov.uk*. Available at: <http://magic.defra.gov.uk/MagicMap.aspx> (Accessed: 21 September 2016).

The RSPB (2016). Available at: <http://www.rspb.org.uk/> (Accessed: 21 September 2016).

Surveys and mitigation plans: protected species - Detailed guidance (2015) *Gov.uk*. Available at: <https://www.gov.uk/guidance/surveys-and-mitigation-plans-protected-species> (Accessed: 21 September 2016).

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> (Accessed: 21 September 2016).

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:

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. Accessed 2018-06-21

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

Mitchell-Jones, A. and McLeish, A. (ed.). (2004) Bat Workers' Manual. 3rd ed. JNCC.

The Bat Worker's Manual, Anthony J. Mitchell-Jones, 2015

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

Guidance note 8: bats and artificial lighting in the UK, bats and the built environment series, Bat Conservation Trust and ILP, produced 2018, accessed November 2018.

<https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd edition, Bat Conservation Trust, written 2016

Dormice:

Bright, P., Morris, P. and Mitchell-Jones, A. (1996) The dormouse conservation handbook. Peterborough: English Nature.

Great Crested Newts:

Langton, T., Beckett, C. and Foster, J. (2001) Great Crested Newt Conservation Handbook. Halesworth: Froglife. pdf

Advice note 4 (revised) - Amphibian Disease Precautions, A Guide for UK Fieldworkers, Amphibian and Reptile Conservation trust, 2017. Accessed 2018-06-21

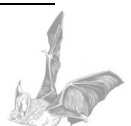
Otters: *Natural England, (2007) Species Information Note SIN006, Otter: European protected species.*

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.



Gent, T. and Gibson, S. (ed.) (2003) *Herpetofauna Workers Manual*. Bournemouth: JNCC.

Water Voles:

Natural England, (2008) *Water voles - the law in practice. Guidance for planners and developers*.

Water Vole Conservation and Management: Lessons From Four Case Studies, Jemma Louise Gaskin, 2016

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

Water Vole Conservation Handbook, 2nd Edn. Wildlife Conservation Research Unit, University of Oxford, Oxford.

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

Strachan, R. and Holmes-Ling, P (2003), *Restoring water voles and other biodiversity to the wider countryside*. Wildlife Conservation Research Unit, Oxford.

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

Relevant Legislation:

Wildlife and Countryside Act 1981, (c. 69) (as amended). Available at:

<http://www.legislation.gov.uk/ukpga/1981/69>

(Accessed: 21 September 2016)

Countryside and Rights of Way Act 2000 (c.37). Available at:

<http://www.legislation.gov.uk/ukpga/2000/37/contents>

(Accessed: 21 September 2016)

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Available at:

<https://www.legislation.gov.uk/ukxi/2017/1012/contents/made>

(Accessed: 08 January 2018)

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> (Accessed: 21 September 2016)

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

<http://www.legislation.gov.uk/ukpga/1992/51/contents> (Accessed: 21 September 2016)

The Hedgerow Regulations 1997 (No. 1160). Available at:

<http://www.legislation.gov.uk/ukxi/1997/1160/contents/made>

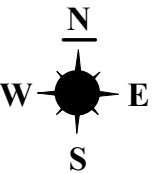
(Accessed: 21 September 2016)



Appendices

Appendix 1: Phase 1 Habitat Map





Appendix 1: Phase 1 Habitat Map

TITLE: Address:
Huddersfield Grammar School,
Luke Lane, Marsh,
Huddersfield HD1 4QX
JCA Ref: 16695b/AmB

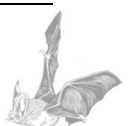
KEY

- Broad-leaved woodland (Semi-natural)
- Dense/continuous scrub
- Tall ruderal
- Amenity grassland
- Buildings
- Hard standing
- Bare ground
- Fence
- Wall
- Site boundary line
- Grid mesh over grass
- Target note

JCA Limited
Arboricultural & Ecological Consultants



Appendix 2: Proposed Development Plan





Revision: C 07.12.2020 Timber picket fencing added CB			Drawn	
Revision: B 02.12.2020 Southern tree belt & fence line added; car park relocated slightly to suit CB			CB	
Revision: A 25.11.2020 Parking bay configuration altered to suit site constraints CB			Date	Scale(s) @ A3
Project			23.10.2020	1:250
Staff Car Park			Status	
Huddersfield Grammar School, Luck Lane Huddersfield HD1 4QX			Planning Issue	
Client			Project No.	Rev
Cognita			88:20	C
Sheet Title			Dwg No.	
Proposed Site Plan			8820_P02	

Appendix 3: Photographic Evidence



Photo 1: View from top of temporary car parking looking towards Luck Lane.



Photo 2: View from temporary car park looking to the west.



Photo 3: View from temporary car park looking north.



Photo 4: View from temporary car park looking to the east.



Photo 5: View of width of temporary car park.



Photo 6: View for temporary car park looking east.





Photo 7: View looking towards Luck Lane.



Photo 8: mesh grid laid down for temporary car park.



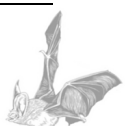
Photo 9: View looking from Luck Lane up track to temporary car park.



Photo 10: School footpath to east giving access from temporary car park onto school grounds.



Photo 11: Bird nest in tree to the south-west.



Appendix 4: Species List

To be submitted to the appropriate Local Records Centre

Site Name: Huddersfield Grammar School, Luck Lane

Provided by: JCA Limited

Grid Ref: SE124167

Verified by: Amanda Beck

Table 3: Complete list of species encountered during survey.

Common Name	Scientific Name	Number	Comment
Sycamore	<i>Acer pseudoplatanus</i>	N/A	None
Long tailed tit	<i>Aegithalos caudatus</i>	6	In trees together to south-west Target Note 1.
Horse chestnut	<i>Aesculus hippocastanum</i>	N/A	None
Common chervil	<i>Anthriscus cerefolium</i>	N/A	None
Common daisy	<i>Bellis pernnis</i>	N/A	None
Rosebay willowherb	<i>Chamerion angustifolium</i>	N/A	None
Hawthorn	<i>Crataegus sp.</i>	N/A	None
Blue tit	<i>Cyanistes caeruleus</i>	1	In trees to east Target Note 2.
Robin	<i>Erithacus rubecula</i>	1	In trees to east Target Note 3.
Ash	<i>Fraxinus excelsior</i>	N/A	None
Snowdrops	<i>Galanthus sp.</i>	N/A	None
Water avens	<i>Geum urbanum</i>	N/A	None
Common ivy	<i>Hedera helix</i>	N/A	None
Common holly	<i>Ilex aquifolium</i>	N/A	None
Variegated holly	<i>Ilex aquifolium variegatum</i>	N/A	None
Magpie birds nest	<i>Pica pica</i>	1	In trees to south-west. Target Note 4.



Annual meadow grass	<i>Poa annua</i>	N/A	None
Smooth meadow grass	<i>Poa pratensis</i>	N/A	None
Oak species	<i>Quercus sp.</i>	N/A	None
Bramble	<i>Rubus fruticosus</i>	N/A	None
Grey squirrel	<i>Sciurus carolinensis</i>	1	In trees to south-west Target Note 5.
Common chick weed	<i>Stellaria media</i>	N/A	None
Common dandelion	<i>Taraxacum officinale</i>	N/A	None
Blackbird	<i>Turdus merula</i>	1	None
Common nettle	<i>Urtica dioica</i>	N/A	None



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.

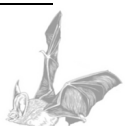
Summer roosts (non-breeding) - these are generally occupied by groups of males and immature females during the summer and are usually only occupied for a short period before the group moves to another location.

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.



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 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.

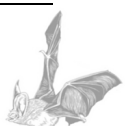
The Wildlife and Countryside Act 1981 also contains measures to prevent the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9 in England and Wales (e.g. Japanese Knotweed and Himalayan Balsam).



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.

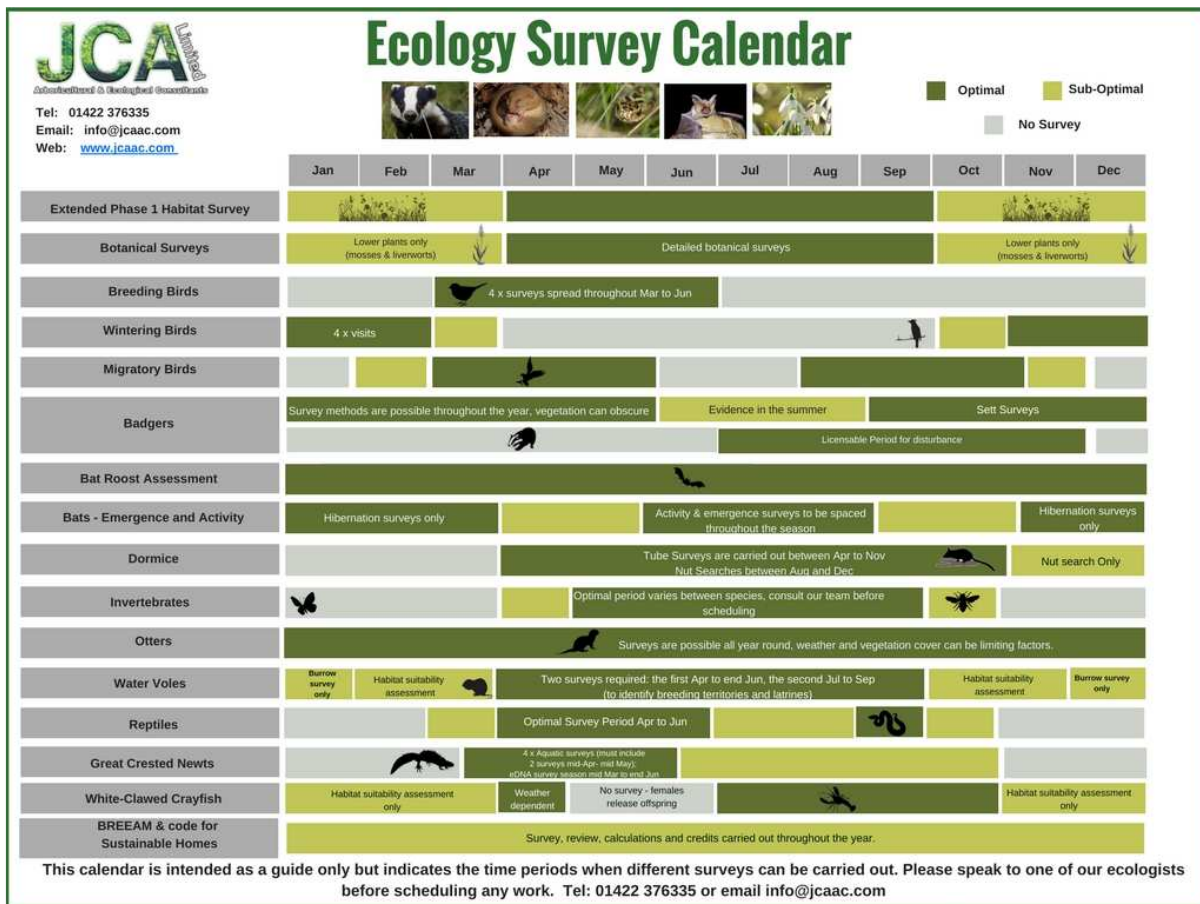
The following habitat types are protected under UK Law:

- 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 7: Survey Calendar

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



The information 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



.....
Amanda Beck *Qualifying CIEEM member. Assistant Ecologist*

1st February 2021

Reviewed by



.....
Adam West *Senior Ecologist*

3rd February 2021

For and on behalf of **JCA Ltd**

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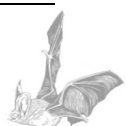
HX4 OAD

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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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