

**PRELIMINARY ECOLOGICAL
APPRAISAL**

**at
Calderbrook Alpacas
Todmorden Road
Littleborough
Lancashire
OL15 9AL**

**Client:
Joanne Schembri**

**Client Address:
Calderbrook Alpacas
Todmorden Road
Littleborough
OL15 9AL**

**JCA Ref:
21680a/JF**

**Date of Report:
17/01/2024**



Quality Assurance

Version	Desktop Survey Completed:		Site Surveyed:		Report Completed:		Reviewed:	
	Date	Name	Date	Name	Date	Name	Date	Name
Planning	16/01/24	James Foster	09/01/24	James Foster Alex Donovan	17/01/24	James Foster	17/01/24	Alex Donovan
							18/01/24	Adam West

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

Risk Assessment Completed	
Bio-security Procedure Completed	
Lone Worker Procedure Completed	



Summary

JCA Limited has been commissioned by **Joanne Schembri** to undertake a Preliminary Ecological Appraisal (PEA) of a site located at **Calderbrook Alpacas, Todmorden Road, Littleborough**. The site is located at Ordnance Survey (OS) National Grid Reference **SD 94729 18885** with nearby postcode **OL15 9LY**.

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

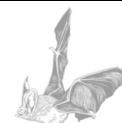


Table 1: summary of ecological receptors at the site and recommended mitigation.

Receptor	Potential Risk to Project if No Action Taken	Cause of Impact Description of Effect	Further Survey Required	Mitigation Required
Designated sites				
Statutorily protected	None	None	No	No
Non-statutorily protected	None	None	No	No
S41 habitat	None	None	No	No
Other habitats	None	None	No	No
Protected species				
Flora (WCA Sch 8, CHSR Sch 5)	None	None	No	No
Invertebrates	None	None	No	No
White-clawed crayfish	None	None	No	No
Fish	None	None	No	No
Great crested newt	None	None	No	No
Reptiles	None	None	No	No
Birds	None	None	No	No
Bats	Very Low	Artificial light at night (ALAN) has the potential to cause disturbance to commuting, foraging and roosting bats.	No	All lighting must consider wildlife and be in accordance with the ILP Guidance GN08/23 (2023). A key point is the avoidance of internal and external light spill. Where possible, lighting should be timed, or on sensors and avoid the hours between sunset and sunrise, when bats are out foraging.
Badgers	Very Low	Potential to disturb any foraging or commuting badgers which may be utilising the site.	No	Any excavation of the site should be covered overnight, or if not possible, a safe exit route



				provided for badgers to leave the site, such as an artificial ramp to aid their exit.
Otters	None	None	No	No
Water voles	None	None	No	No
Beaver	None	None	No	No
Other Species e.g. S41 species	None	Potential to disturb any foraging or commuting hedgehogs or hares which may be utilising the site.	No	Any excavation of the site should be covered overnight, or if not possible, a safe exit route provided for hedgehogs and hares to leave the site, such as an artificial ramp to aid their exit.
Invasive Species (WCA Sch 9) Injurious Weeds (Weeds Act, 1959)				
No Invasive species were found on site.	None	None	No	No
Key: S41 habitat/species – habitats and species listed as priority for conservation importance under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006. WCA Sch – Wildlife and Countryside Act 1981 (as amended) Schedule CHSR – Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019				



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1. Introduction

1.1 Background

1.1.1 In January 2024, JCA Limited was instructed by **Joanne Schembri** to undertake a Preliminary Ecological Appraisal (PEA) of a site located at **Calderbrook Alpacas, Todmorden Road, Littleborough** 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 **SD 94729 18885**, with nearby postcode **OL15 9LY**. The site is bordered to the north by arable land and moorland, to the east by a drain, holiday cottages and moorland, to the west by Rochdale canal, residential properties and moorland and to the south by Rochdale canal, canal drain, woodlands, moorlands, a pond, and a reservoir with residential properties further afield.

1.2.2 The scheme is the demolition of a temporary structure (small polytunnel) and an existing shed being used as stables and the construction of a larger replacement stable.

1.3 Aims and Objectives

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

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



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

- Ecological report – an assessment of the potential ecological constraints to the proposed works at the site and recommendations for further survey, avoidance, mitigation, and enhancement where appropriate. Locations of any features constituting ecological constraints or of other ecological interest and vegetation recorded on and around the development are included in an accompanying UK Hab Habitat Map (**Appendix 1**). This report and the maps are supported by photographs (**Appendix 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. 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 Greater Manchester Ecology Unit (GMEU) and West Yorkshire Ecology Service (WYES), the local environmental records centre for Greater Manchester and West Yorkshire, along with information for non-statutory wildlife sites.

2.1.2 The records were checked against species listed as priority species under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, the Greater Manchester Biodiversity Action Plan (multiple contributors, 2009) and the Calderdale Biodiversity Action Plan (Hugh Firman, 2003) 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 09/01/2024. All areas of the site were investigated and areas around the site where access permitted.

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



2.2.3 The site was inspected for evidence of, and its potential to support, protected or notable species, especially those listed under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, the Wildlife & Countryside Act (WCA) 1981 (as amended), including those given a higher level of legal protection under the NERC Act 2006 and Countryside & Rights of Way (CRoW) Act 2000, and those listed on the 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.



- 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 09/01/2024, which is a sub optimal time to conduct surveys due to plant and tree species not being in leaf or flower and are therefore harder to identify. The list of species identified at the site is unlikely to be fully comprehensive. But this constraint will not affect the overall conclusion of the report as habitat types can still be identified and the potential for protected species can still be accurately judged.
- 2.3.3 The weather on the day was cold, clear and calm with ground frost in some shaded areas. The weather leading up to the survey was similar and is unlikely to be considered a constraint to the survey.
- 2.3.4 The details of this report will remain valid for a period of 18 months. If works have not commenced within this period or land use on site changes, it is recommended that a new review of the ecological conditions is undertaken.



3. Desk Study Results

3.1 Statutory Designated Sites

3.1.1 The MAGIC website revealed two internationally designated sites within 2km of the site, detailed in Table 2 below.

Table 2: Internationally designated sites within 2km of the site, identified on MAGIC.

Site Name	Distance (m) from Site	Reasons for Designation
South Pennine Moors SAC	150m	Selection of Annex 1 European habitats directive habitats. Including, European dry heaths, blanket bogs, old sessile oak woods with holly and ferns, northern Atlantic wet heaths with heather, transition mires and quaking bogs.
South Pennine Moors Phase 2 SPA	150m	Upland of international importance for breeding moorland and moorland fringe birds, such as. Merlin, golden plover, lapwing, dunlin, snipe, curlew, redshank, common sandpiper, short-eared owl, whinchat, wheatear, ring ouzel, red grouse and twite.
Key: SAC – Special Area of Conservation SPA – Special Protection Area		

3.1.2 The MAGIC website revealed one nationally designated site within 2km of the site. South Pennine Moors is a Special Site of Scientific Interest (SSSI). South Pennine Moors is designated as an SSSI due to the regionally important diversity of upland plant communities and the fauna it supports. The SSSI is located 150m east of the site. The site also falls into the SSSI Impact Risk Zone of South Pennine Moors SSSI, but due to the small-scale nature of the development, consultation with Natural England is not required.

3.2 Non-statutory Designated Sites

3.2.1 Records received from GMEU and WYES revealed seven non-statutory designated sites within 2km of the site, detailed in Table 3 below.

Table 3: Non-statutory designated sites within 2km of the site, returned from GMEU and WYES.

Site Name	Distance (m) from Site	Reasons for Designation
Rochdale Canal	Adjacent to site (West)	The canal supports important populations of water plants including water plantain, ribbon-leaf pondweed



(Scowcroft to Warland) SBI		and liverworts, and animal species such as kingfisher, spotted flycatcher and song thrush
South Pennine Moors (North) SBI	Adjacent to site (East)	Covers the Rochdale section of the South Pennine Moors SSSI. Supports nationally important breeding populations of Schedule 1 and S41 bird species, Annex 1 European habitats directive habitats and Annex 1 European birds directive bird species.
Summit Quarry SBI	310m	Acid grassland, basin mire, scrub and open water habitats supporting diverse range of bryophytes, fish, grey partridge, small heath butterfly and wall brown butterfly.
Rochdale Canal LWS	1260m	Species rich standing water of high wildlife value, which supports a botanically diverse water plant community.
Warland Marsh SBI LWS	1260m	Largest wetland in Upper Calderdale supporting frog, toads, badgers, a significant invertebrate population and a diverse range of vascular plant species and locally unique and rare species, such as common spike-rush and water-horsetail.
Warland Farm LWS	1270m	Species rich acid grassland of local importance.
Key: SBI – Site of Biological Importance LWS – Local Wildlife Site		

3.3 Section 41 of the NERC Act 2006 Priority Habitat Inventory

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

3.4 Protected and Notable Species

3.4.1 European Protected Species (EPS) Licence Applications

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

3.4.2 Records of Protected and Notable Species

3.4.3 Flora

One record of bluebell *Hyacinthoides non-scripta*, a Schedule 8 (WCA, as amended) designated species, was returned from GMEU and WYES. The latest record was made in 2020 and the closest record was 1541m from the site.



3.4.4 Invertebrates (including white-clawed crayfish)

The following records were received from GMEU and WYES:

Table 4: Invertebrate Records Received from GMEU and WYES.

Scientific name	Common name	Designation	Latest Date	Number of records	Distance from site (m)
<i>Acronicta psi</i>	Grey dagger moth	S41	2022	1	930
<i>Acronicta rumicis</i>	Knot grass moth	S41	2014	2	720
<i>Apamea remissa</i>	Dusky brocade moth	S41	2014	4	720
<i>Ceramica pisi</i>	Broom moth	S41	2014	5	720
<i>Coenonympha pamphilus</i>	Small heath butterfly	S41	2022	35	90
<i>Diarsia rubi</i>	Small square-spot moth	S41	2014	1	720
<i>Eulithis mellinata</i>	Spinach moth	S41 CBAP	2014	1	720
<i>Hepialus humuli</i>	Ghost moth	S41 CBAP	2014	2	720
<i>Leucania comma</i>	Shoulder-striped wainscot moth	S41	2014	4	720
<i>Melanchra persicariae</i>	Dot moth	S41	2014	1	720
<i>Mniotype adusta</i>	Dark brocade moth	S41	2014	2	720
<i>Odezia atrata</i>	Chimney sweep moth	CBAP	2016	1	1334
<i>Satyrrium w-album</i>	White letter hairstreak butterfly	WCA S41 CBAP	2018	7	300
<i>Spilosoma lubricipeda</i>	White ermine moth	S41	2014	3	720
<i>Spilosoma luteum</i>	Buff ermine moth	S41	2014	3	720
<i>Timandra comae</i>	Blood vein moth	S41	2014	1	720
<i>Tyria jacobaeae</i>	Cinnabar moth	S41	2014	4	300

Key:

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

S41: Section 41 of the NERC Act 2006

CBAP: Calderdale Biodiversity Action Plan

3.4.5 Fish

No records of fish within 2km were returned from GMEU and WYES.



3.4.6 Amphibians

Two records of common toad *Bufo bufo* a Schedule 5 (WCA, as amended), S41 and CBAP designated species, within 2km were returned from GMEU and WYES. The latest record was made in 2016 and the closest record was 300m from the site.

3.4.7 Reptiles

No records of reptiles within 2km were returned from GMEU and WYES.

3.4.8 Birds

The following records were received from GMEU and WYES:

Table 5: Bird Records Received from GMEU and WYES.

Scientific name	Common name	Designation	Latest Date	Number of records	Distance from site (m)
<i>Acanthis cabaret</i>	Lesser redpoll	S41 CBAP	2015	1	970
<i>Alauda arvensis</i>	Skylark	S41 CBAP	2021	22	850
<i>Alcedo atthis</i>	Kingfisher	WCA CBAP	2021	1	900
<i>Anthus pratensis</i>	Meadow pipit	CBAP	2015	10	1176
<i>Ardea cinerea</i>	Grey heron Heronry	WCA	2019	5	1930
<i>Charadrius dubius</i>	Little ringed plover	WCA	2020	46	965
<i>Columba oenas</i>	Stock dove	CBAP	2015	2	1729
<i>Corvus corax</i>	Raven	CBAP	2015	1	1574
<i>Cuculus canorus</i>	Cuckoo	S41 CBAP	2020	3	300
<i>Emberiza schoeniclus</i>	Reed bunting	S41 WYBAP CBAP	2021	33	350
<i>Falco peregrinus</i>	Peregrine falcon	WCA CBAP	2021	5	610
<i>Falco tinnunculus</i>	Kestrel	WYBAP CBAP	2015	2	1365
<i>Lagopus lagopus scotica</i>	Red grouse	S41 CBAP	2020	8	1280
<i>Linaria cannabina</i>	Linnet	S41 CBAP	2021	21	300
<i>Linaria flavirostris</i>	Twite	S41 GMBAP CBAP	2020	11	970
<i>Locustella naevia</i>	Grasshopper warbler	S41	2015	3	300



<i>Motacilla flava flavissima</i>	Yellow wagtail	S41	2014	1	970
<i>Melanitta nigra</i>	Common scoter	WCA S41	2014	1	965
<i>Numenius arquata</i>	Curlew	S41 WYBAP CBAP	2021	74	330
<i>Passer domesticus</i>	House sparrow	S41 CBAP	2017	12	90
<i>Perdix perdix</i>	Grey partridge	S41 CBAP	2020	10	300
<i>Phylloscopus trochilus</i>	Willow warbler	CBAP	2016	1	1334
<i>Pluvialis apricaria</i>	Golden plover	WYBAP CBAP	2014	1	1988
<i>Prunella modularis occidentalis</i>	Dunnock	S41 CBAP	2020	21	110
<i>Pyrrhula pyrrhula pileata</i>	Bullfinch	S41 CBAP	2017	8	370
<i>Sturnus vulgaris vulgaris</i>	Starling	S41 CBAP	2022	20	90
<i>Turdus philomelos</i>	Song thrush	S41 WYBAP CBAP	2016	1	1,334
<i>Turdus torquatus</i>	Ring ouzel	S41 CBAP	2017	10	940
<i>Vanellus vanellus</i>	Lapwing	S41 WYBAP CBAP	2021	45	555

Key:

WCA: Schedule 1 of the Wildlife & Countryside Act 1981 (as amended)

S41: Section 41 of the NERC Act 2006

WYBAP: West Yorkshire Biodiversity Action Plan

CBAP: Calderdale Biodiversity Action Plan

3.4.9 Bats

The following records were received from GMEU and WYES:

Table 6: Bat Records Received from GMEU and WYES.

Scientific Name	Common Name	Designation	Latest Date	Number of records	Distance from Site
<i>Myotis mystacinus</i>	Whiskered bat	EPS WCA GMBAP CBAP	2021	1	1900



<i>Pipistrellus</i> sp.	Unidentified Pipistrelle bat	EPS WCA GMBAP	2016	1	90
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	EPS WCA GMBAP WYBAP	2019	6	410
<i>Pipistrellus pygmaeus</i>	Soprano pipistrelle	EPS S41 GMBAP WYBAP CBAP	2016	1	1555
<i>Plecotus auritus</i>	Brown long-eared bat	EPS WCA S41 GMBAP CBAP	2016	1	1555

Key:

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

WCA: Schedule 1 of the Wildlife & Countryside Act 1981 (as amended).

S41: Section 41 of the NERC Act 2006

GMBAP: Greater Manchester Biodiversity Action Plan

WYBAP: West Yorkshire Biodiversity Action Plan

CBAP: Calderdale Biodiversity Action Plan

3.4.10 Bat Roosts

The following records were received from GMEU and WYES:

Table 7: Bat Records Received from GMEU and WYES.

Scientific Name	Common Name	Roost type	Date	Distance from Site (m)
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Day roost: two individuals	2022	2000
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Day roost: three individuals	2022	2000
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Maternity roost: mixed sex 161 individuals	2014	410



<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Unspecified roost: four individuals	2016	1555
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Maternity roost: unspecified numbers	2013	1830
<i>Pipistrellus</i> sp.	Unidentified Pipistrelle bat	Unspecified roost: 105 individuals	2001	1490

3.4.11 Badgers

Records of badger *Meles meles*, a Schedule 6 WCA (as amended) designated species, and also protected under the Protection of Badgers Act 1992, within 2km were returned from GMEU and WYES.

3.4.12 Otters

Three records of otter *Lutra lutra*, a Schedule 5 (WCA, as amended), S41 and Conservation of Habitats and Species Regulations 2010, WYBAP and CBAP designated species, within 2km were returned from GMEU and WYES. The latest record was made in 2018 and the closest record was 950m from the site.

3.4.13 Water Voles

No records of water vole *Arvicola amphibius* within 2km were returned from GMEU and WYES.

3.4.14 Beaver

No records of beaver *Castor fiber*, within 2km were returned from GMEU and WYES.

3.4.15 Other Notable Species

The following records were received from GMEU and WYES:

Table 7: Other Notable Species Records Received from GMEU and WYES.

Scientific Name	Common Name	Designation	Latest Date	Number of records	Distance from Site
<i>Erinaceus europaeus</i>	Hedgehog	S41 CBAP	2022	3	720



<i>Lepus europaeus</i>	Brown hare	S41 GMBAP	2016	2	970
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3.4.16 Invasive Species

Three records of Canada goose *Branta canadensis*, a Schedule 9 designated species were returned by GMEU and WYES. The most recent record is from 2014 and the closest record is 490m from the site.



4. Field Survey Results

4.1 Habitats

4.1.1 g4 – Modified grassland – 10 – Scattered scrub, 14 – Scattered rushes, 32 – Scattered trees, 100 – Grazed, 114 – Drystone wall, 510 – Bare ground.

The site is entirely composed of modified grassland, and it is managed and grazed by a small herd of alpacas and a single sheep. There are scattered trees and scattered scrub on the west of the site, scattered rushes throughout the site, areas of bare ground due to grazing and a partially collapsed drystone wall on the northern boundary (**see Appendix 1 and Appendix 3 Photos 1-3**). Species identified here include sycamore *Acer pseudoplatanus*, downy birch *Betula pubescens*, buddleja *Buddleja davidii*, creeping thistle *Cirsium arvense*, hawthorn *Crataegus monogyna*, foxglove *Digitalis purpurea*, beech *Fagus sylvatica*, ash *Fraxinus excelsior*, soft rush *Juncus effusus*, perennial ryegrass *Lolium perenne*, oak *Quercus robur*, meadow buttercup *Ranunculus acris*, bramble *Rubus fruticosus*, broad-leaved dock *Rumex obtusifolius* and stinging nettle *Urtica dioica*.

4.1.2 u1b5 – Buildings/structures

There are two small buildings on site (**see Appendix 1 and Appendix 3 photos 4 & 5**), Table 8 below details building descriptions.

Table 8: descriptions of the buildings on site.

Building Number	Description	Potential Roosting Features	Bat Roost Potential
1	Single storey shed made of wood, with a single pitched roof of corrugated asbestos, used as a stable.	None	None
2	Temporary structure: small polytunnel, made of man-made fabrics with a metal frame, used as a stable.	None	None

4.2 Protected and Notable Species

4.2.1 Flora



One record of bluebell was returned from GMEU and WYES. No bluebells were identified onsite; however, the timing of the survey was outside the bluebell activity period (late March to early May), this is considered a constraint. However, there is no potentially suitable habitat on site to support bluebells. Only generalist flora species were identified onsite, and no protected or notable flora were identified. Flora will therefore not be mentioned further in this report.

4.2.2 Invertebrates (including white-clawed crayfish)

77 records of 17 species of protected or notable invertebrate species, including seven records of White letter hairstreak, a Schedule 5 (WCA, as amended) and S41 designated species, were returned from GMEU and WYES. There is potential habitat on and adjacent to the site to support invertebrates. The grassland on site has the potential to support foraging invertebrate species and Rochdale Canal adjacent to the site has the potential to support white-clawed crayfish. However, only generalist plant species were found on site and no food plant species for notable and protected invertebrate species were identified.

4.2.3 Fish

No records of fish were returned from GMEU and WYES. There is no suitable habitat on site to support fish. However, there is potentially suitable habitat to support fish adjacent to the site. Rochdale canal is located immediately west of the site.

4.2.4 Amphibians

Two records of common toad were returned from GMEU and WYES. No amphibians were identified onsite. However, there is potentially suitable habitat on site and adjacent to the site to support hibernating and breeding amphibian species. The partially collapsed dry stone wall has the potential to support hibernating amphibians. There is potential to support breeding amphibians adjacent to site and further afield. Rochdale canal is immediately west of the site, however due to the steep sided man-made banks, access of amphibians onto the site is unlikely. The drain to the east of the site was considered unlikely to support amphibians due to the fast flow and the vertical man-made aspect of the banks and a bed made of cobblestones. There is a pond located 220m south of the site (**Appendix 2 photo 6**) which was subjected to a great crested newt Habitat Suitability Index (HSI) (**Appendix 8**) and resulted in a score of



0.48 which means the waterbody has poor suitability for great crested newts and the predicted presence in this suitability category is 0.03.

4.2.5 Reptiles

No records of reptiles were returned from GMEU and WYES. No reptiles were identified onsite. However, there is potentially suitable habitat on site to support hibernating reptiles. The partially collapsed dry stone wall on the northern border of the site has the potential to support hibernating reptiles.

4.2.6 Birds

379 records of 29 bird species including five Schedule 1 (WCA, as amended) designated species, were returned from GMEU and WYES. No protected or notable bird species were identified on site. However, there is potentially suitable habitat to support nesting birds. The scattered trees and scattered scrub on the east of the site have the potential to support a range of nesting bird species.

4.2.7 Bats

10 field records of four species (five if unidentified bat species are included) of bat and six bat roost records, were returned from GMEU and WYES. No potentially suitable habitat for roosting bats was identified on site. Therefore, no further surveys are required. However, there is potentially suitable habitat to support commuting and foraging bats on site in the grassland, scattered trees and scattered scrub habitats and Rochdale Canal adjacent to the site.

4.2.8 Badgers

Records of badger within 2km were returned from GMEU and WYES. No field signs of badgers or of badger setts were identified onsite. However, there is potentially suitable habitat on site to support commuting and foraging badgers in the grassland habitat.

4.2.9 Otters

Three records of otter within 2km were returned from GMEU and WYES. No field signs of otters or of otter holts were identified on site and there is no potentially suitable habitat on site to support otters. However, there is potentially suitable habitat adjacent to the site. Rochdale Canal is located



immediately west of the site and has the potential to support commuting and foraging otters.

4.2.10 Water Voles

No records of water voles were returned from GMEU and WYES. No field signs of water vole or of water vole burrows were identified on site and there is no potentially suitable habitat on site to support water voles. However, there is potentially suitable habitat adjacent to the site. Rochdale Canal is located immediately east of the site and has the potential to support commuting and foraging water voles.

4.2.11 Beaver

No records of beaver were returned from GMEU and WYES. No field signs of beavers or of beaver dams were identified on or adjacent to site and there is no potentially suitable habitat on site to support Beavers. Beavers therefore will not be mentioned further in this report.

4.2.12 Other Notable Species

Three records of hedgehog and two records of brown hare were returned from GMEU and WYES. No hares or hedgehogs were identified on site. However, the site has potential to support commuting, foraging, and hibernating hedgehogs and commuting hares in the grassland and scrub habitats.

4.2.13 Invasive Species

Three records of Canada goose were returned from GMEU and WYES. However, no invasive species were identified on site. Invasive species will therefore not be mentioned further in this report.



5. Assessment

5.1 Designated Sites

5.1.1 Statutory designated sites

The MAGIC website revealed three Statutory designated sites, South Pennine Moors is designated as a Special Area of Conservation (SAC) and a Special Site of Scientific Interest (SSSI), and South Pennine Moors Phase 2 is designated as a Special Protection Area. The site also falls into the SSSI impact zone of the South Pennine Moors. However due to the small-scale nature of the development, there is not expected to be any impacts on the SPA, SAC and SSSI.

5.1.2 Non-statutory designated sites

The records received from GMEU and WYES revealed six non-statutory sites within 2km of the site. The closest is Rochdale Canal SBI and South Pennine Moors (North section) SBI, which are adjacent to the site. However, due to the small scale of the development, no adverse impacts on the SBIs are anticipated. Consultation with Rochdale Borough Council is not required.

5.2 Habitats

5.2.1 The most valuable habitats for biodiversity within the development site boundary are the scattered trees and scattered scrub, neither of these habitats are to be impacted.

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 Invertebrates

77 records of invertebrate species were returned from GMEU and WYES. Rochdale canal, which is adjacent to the site, has the potential to support white-clawed crayfish. However, the proposal does not include any



potential impacts to Rochdale Canal and due to the small-scale nature of the development, Rochdale canal is unlikely to be adversely affected by the development. White-clawed crayfish therefore will not be mentioned further in this report.

5.3.2 Fish

No records of fish were returned from GMEU and WYES. Rochdale canal, which is adjacent to the site, has the potential to support fish species. However, the proposal does not include any potential impacts to Rochdale Canal and due to the small-scale nature of the development, Rochdale canal is unlikely to be adversely affected by the development. Fish therefore will not be mentioned further in this report.

5.3.3 Amphibians

Two records of common toad were returned by GMEU and WYES. The partially collapsed drystone wall on the northern boundary of the site holds potential to support hibernating amphibian species and the site is connected to further habitats in the vicinity such as Rochdale canal, canal drain, woodlands, moorlands, grasslands and a pond. However, the proposal does not include the removal of these habitats and due to the small-scale nature of the development, the partially collapsed drystone wall and adjacent habitats are unlikely to be adversely affected by the development. Amphibians therefore will not be mentioned further in this report.

5.3.4 Reptiles

No records of reptiles were returned by GMEU and WYES. The partially collapsed wall on the northern boundary of the site holds potential to support hibernating amphibian species and the site is connected to further habitats in the vicinity such as Rochdale canal, canal drain, woodlands, moorlands, grasslands, and a pond. However, the proposal does not include the removal of these habitats and due to the small-scale nature of the development, the partially collapsed drystone wall and adjacent habitats are unlikely to be adversely affected by the development. Reptiles therefore will not be mentioned further in this report.

5.3.5 Birds

379 records of bird species were returned by GMEU and WYES. The scattered trees and scattered scrub have the potential to support nesting bird species. However, the proposal does not include the removal of



these habitats and due to the small-scale nature of the development the scattered trees and scattered scrub are unlikely to be adversely affected by the development. Nesting birds therefore will not be mentioned further in this report.

5.3.6 Bats

Four species (plus one unidentified) of bat and six records of bat roosts were returned by GMEU and WYES. The grassland, scattered trees and scattered scrub on site and Rochdale Canal adjacent to site has the potential to support commuting and foraging bat species. Therefore, bat species may be negatively impacted by the proposed development. As such, further recommendations are provided in **Section 6.2.1**.

5.3.7 Badgers

Records of badger were returned by GMEU and WYES. The grassland on site has the potential to support commuting and foraging badgers. Therefore, badgers may be negatively impacted by the proposed development. As such, further recommendations are provided in **Section 6.2.2**.

5.3.8 Otters

Three records of otter were returned by GMEU and WYES. Rochdale Canal is located immediately east of the site and has the potential to support commuting and foraging otters. However, the proposal does not include any potential impacts to Rochdale Canal and due to the small-scale nature of the development, Rochdale canal is unlikely to be adversely affect by the development. Otters therefore will not be mentioned further in this report.

5.3.9 Water Voles

No records of water vole were returned by GMEU and WYES. Rochdale Canal is located immediately east of the site and has the potential to support commuting and foraging water voles. However, the proposal does not include any potential impacts to Rochdale Canal and due to the small-scale nature of the development, Rochdale canal is unlikely to be adversely affect by the development. Water voles therefore will not be mentioned further in this report.

5.3.10 Other Notable Species



Three records of hedgehog and two records of brown hare were returned by GMEU and WYES. The grassland and scrub on site have the potential to support commuting hedgehogs and hares and the scrub has the potential to support hibernating hedgehogs. However, the proposal does not include any potential impacts to the scrub habitat and due to the small-scale nature of the development, the scrub is unlikely to be adversely affect by the development. A small section of grassland will be affected by the development; therefore, hedgehogs and hares may be negatively impacted by the proposed development. As such, further recommendations are provided in **Section 6.2.3**.



6. Recommendations

6.1 Habitats

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

6.2 Protected and Notable Species

6.2.1 Bats

The grassland, scattered trees and scattered scrub on site and Rochdale Canal adjacent to site offer potentially suitable habitat for commuting and foraging bats.

All lighting must consider wildlife and be in accordance with the ILP Guidance GN01 and GN09 (2023). A key point is the avoidance of internal and external light spill. Where possible, lighting should be timed, or on sensors and avoid the hours between sunset and sunrise, when bats are out foraging.

Lighting Scheme: The development will likely increase lighting levels. All lighting must consider wildlife and be in accordance with the ILP Guidance GN01 and GN09. A key point is the avoidance of internal and external light spill. Where possible, lighting should be timed, or on sensors and avoid the hours between sunset and sunrise, when bats are out foraging.

Artificial light is known to deter bats from entering lit areas. The development must incorporate a wildlife sensitive lighting scheme. In particular, obtrusive light is to be prevented from reaching potential foraging and commuting routes, both from new exterior and interior lights. Guidance published by the Institution of Lighting Professionals (2018) is to be followed when designing the lighting scheme for the development.

It is Important to avoid:

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



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

6.2.2 Badgers

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

6.2.3 Other Notable Species

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



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.

UK Hab (2023) *The UK Habitat Classification System*. Available at: [http:// https://ukhab.org/](http://https://ukhab.org/)

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

Species Specific Information:

Badgers:



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

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Dormice:

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Great Crested Newts:

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

Advice note 5 – *Great Crested Newt Habitat Suitability Index* (2010), Amphibian and Reptile Groups of the United Kingdom

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.

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

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

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

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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>

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:
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Appendices

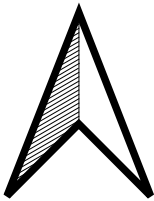
Appendix 1: UKHab Habitat Map





Site name & address
**Calderbrook Alpacas,
Todmorden Road, Littleborough,
Lancashire, OL15 9AL**

- Key**
- Red Line Boundary
 - Habitats**
 - g4 - Modified grassland
 - 10 - Scattered scrub
 - 14 - Scattered rushes
 - 32 - Scattered trees
 - 100 - Grazed
 - 114 - Drystone wall
 - u1b5 - Buildings/structures
 - Trees

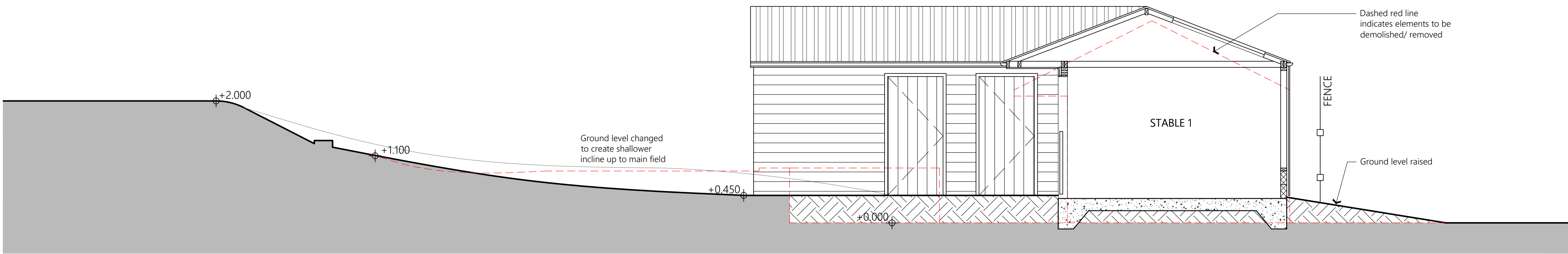


Site Calderbrook Alpacas	Client Joanne Schembri
Project Preliminary Ecological Appraisal	Author JF
Plan ref 21680a/JF	Revision 0

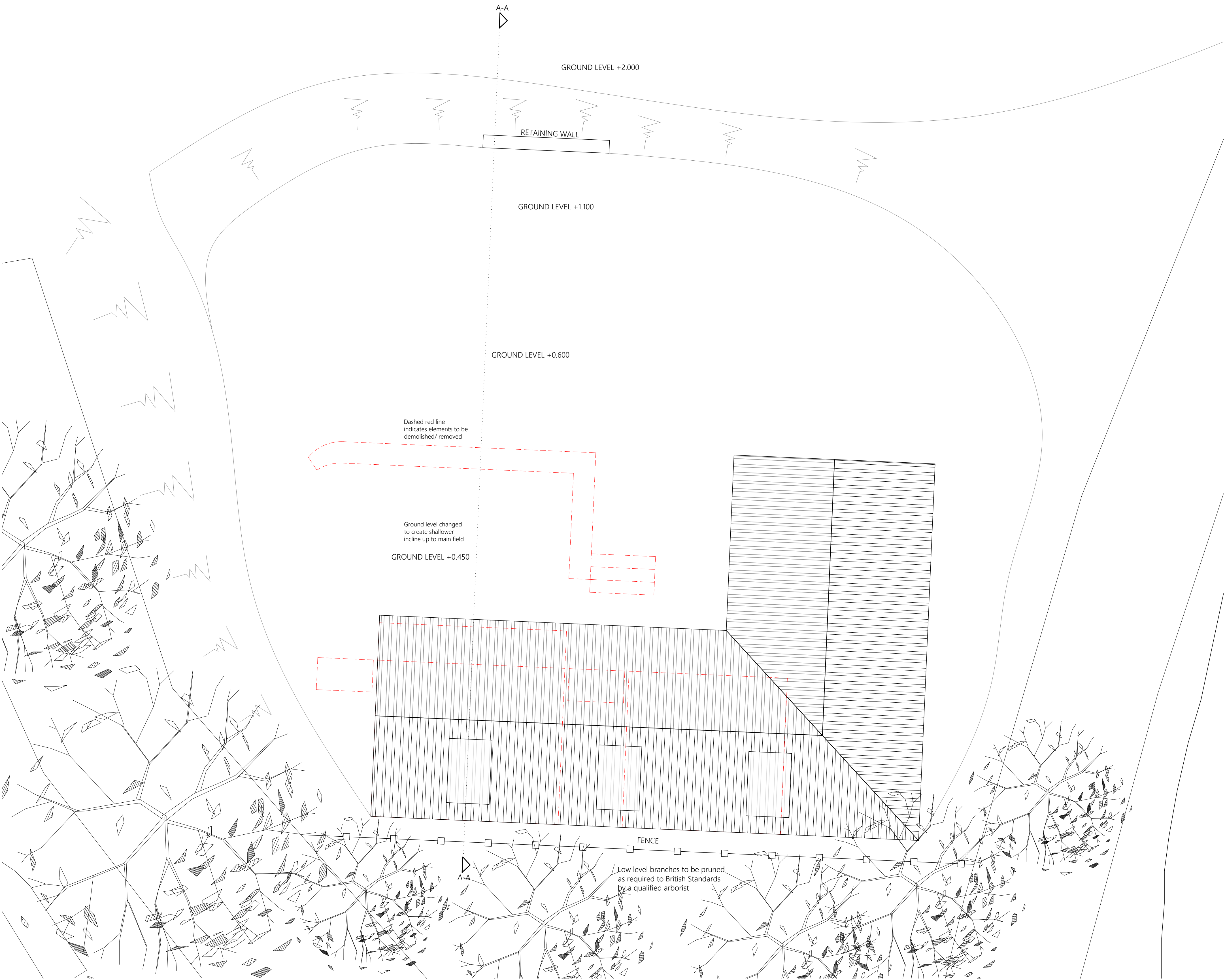
Contains Ordnance Survey data © Crown copyright
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Appendix 2: Proposed Development Plan

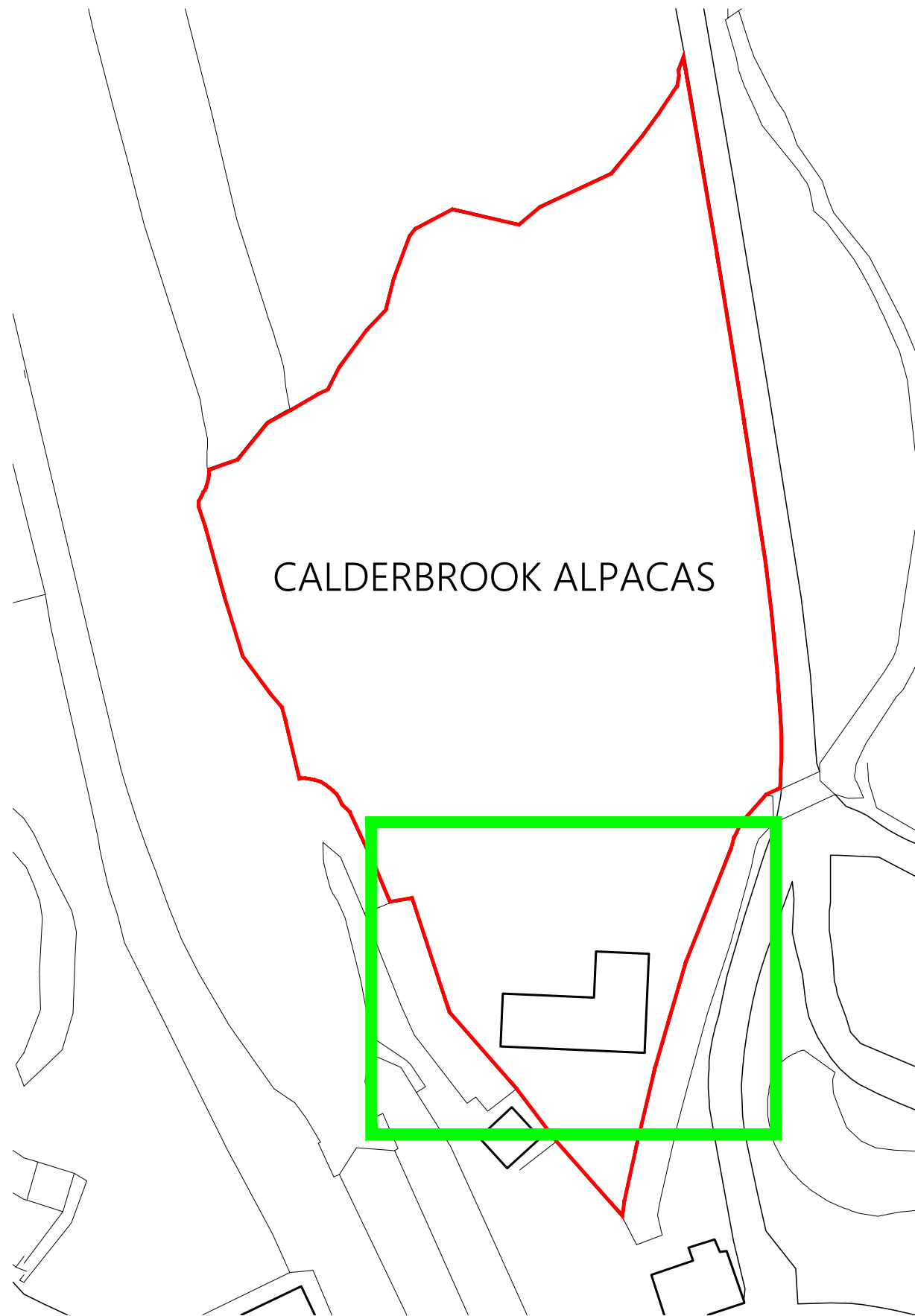




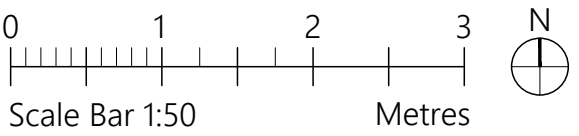
PROPOSED SITE SECTION A-A



PROPOSED SITE PLAN



REFERENCE PLAN
SCALE 1:500@A1



PROJECT	Calderbrook Alpacas Todmorden Road Littleborough, OL15 9LY		
CLIENT	Calderbrook Alpacas		
STATUS	Information		
DRAWING	Proposed Plan and Site Section		
DWG No.	2331-03	REV	
SCALE	1:50@A1	DATE	August '23
AGB CAD SERVICES		website: www.agbcad.co.uk email: info@agbcad.co.uk telephone: 07912 090 125 DO NOT SCALE FROM THIS DRAWING	

Appendix 3: Photographic Evidence



Photo 1: The modified grassland in the centre of the site, viewed from the north.



Photo 2: The scattered trees and scattered scrub on the west of the site and Rochdale canal, viewed from the east.



Photo 3: The partially collapsed drystone wall on the northern boundary of the site, viewed from the southwest.



Photo 4: Building one, viewed from the northwest.



Photo 5: Building two viewed from the northwest

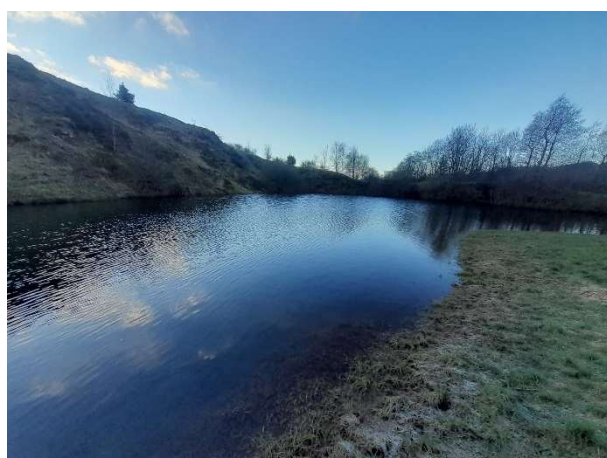


Photo 6: Pond 1 220m south of the site, viewed from the northeast.



Appendix 4: Bat Survey Calendar

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

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

= optimal period = sub-optimal period

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

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



Appendix 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.

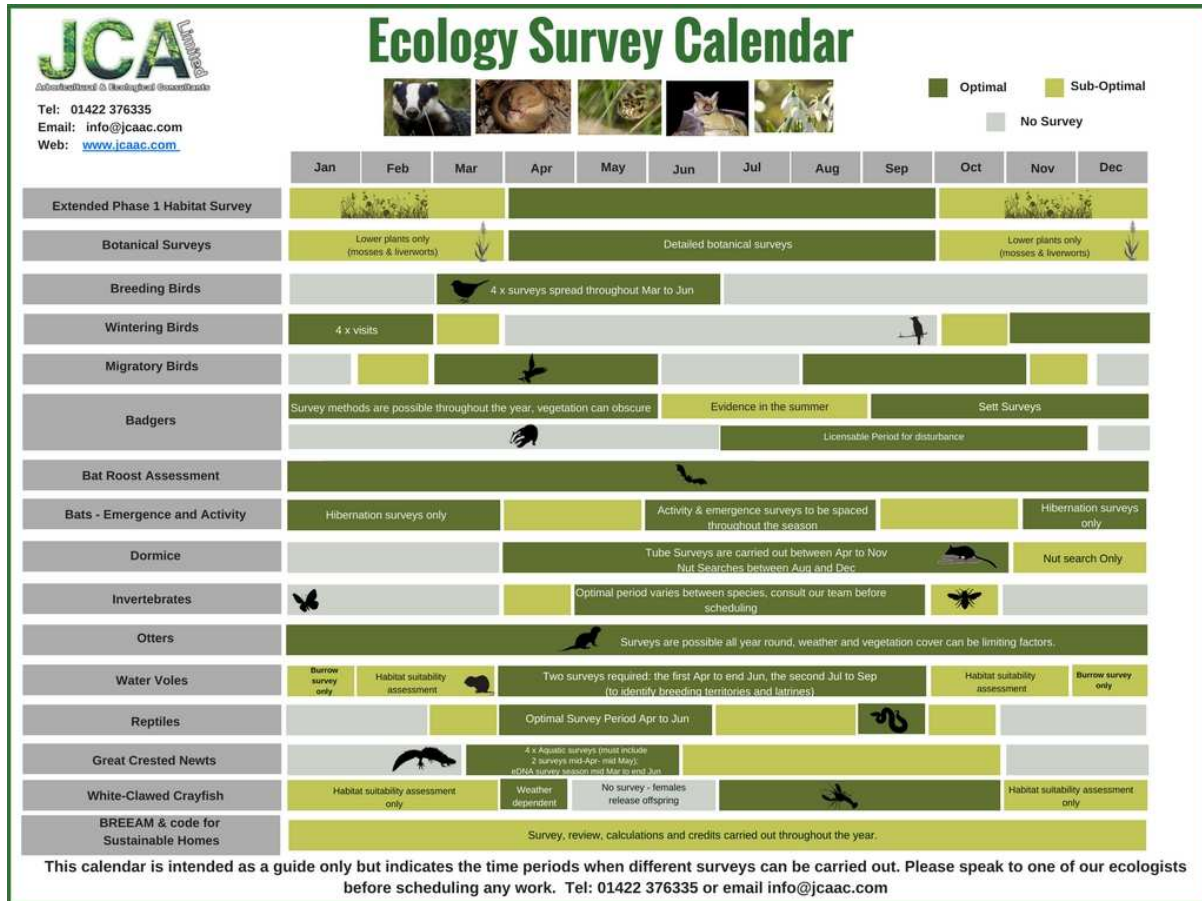
The following habitat types are protected under UK Law:

- 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.



Appendix 8: Great Crested Newt Habitat Suitability Index Calculation

Pond Number	Grid Reference	Location	Area (sq m)	Pond Permanence	Water Quality	Shade (%)
1	SD 94797 18659	0.5	0.80	1.00	0.67	1.00

Waterfowl	Fish	Pond Density	Terrestrial Habitat Quality	Macrophyte Cover (%)	Final HSI Score	HSI Prediction
0.01	0.67	0.65	0.67	0.75	0.48	Poor



Appendix 9: Author Qualifications

Adam West, Principal Ecologist

BSc (Hons) Animal and Wildlife Management, ACIEEM.

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

James Foster, Assistant Ecologist

BSc (Hons) Biology.

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

Alex Donovan, Graduate Ecologist

MBIOL, BSc Biology (Industrial).

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



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

Signed



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

17/01/2024

Reviewed by



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

17/01/2024

Reviewed and approved by



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

18/01/2024



For and on behalf of **JCA Ltd**

Registered Office:

**Unit 80
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Barkisland
Halifax
HX4 OAD**

Tel. 01422 376335

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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.

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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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HEAD QUARTERS

Unit 80 Bowers Mill,
Branch Road,
Barkisland
Halifax, HX4 0AD

Company Reg No: 05005041
VAT No: 686 4674 78

