



envirotech

Ecological Consultants
Environmental and Rural Chartered Surveyors

Preliminary Ecological Appraisal

Glencroft, Pendle Avenue,
Chatburn, Clitheroe



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ACCURACY OF REPORT

This report has been compiled based on the methodology as detailed and the professional experience of the surveyor. Whilst the report reflects the situation found as accurately as possible, all of the protected species this survey covers are wild and can move freely from site to site. Their presence or absence detailed in this report does not entirely preclude the possibility of a different past, current or future use of the site surveyed.

We would ask all clients acting upon the contents of this report to show due diligence when undertaking work on their site and/or in their interaction with protected species. If protected species are found during a work programme, and continuing the work programme could result in their disturbance, injury or death, either directly or indirectly an offence may be committed.

If in doubt, stop work and seek further professional advice.

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1. EXECUTIVE SUMMARY

- 1.1.1 Envirotech NW Ltd were commissioned in March 2021 by Steven Abbott Associates LLP to carry out a Preliminary Ecological Appraisal of land at Glencroft off Pendle Avenue in Chatburn, Clitheroe. It is proposed that two new residential dwellings are constructed on the site.
- 1.1.2 A data search and desk study of the site and an area within 2km of the site were undertaken to establish the presence of protected species and notable habitats.
- 1.1.3 The site was then visited by an ecologist from Envirotech NW Ltd on the 31st March 2021. A full botanical survey of the site was initially undertaken and this was followed by surveys to establish the presence or absence of notable species at the site or in proximity such that they may be affected by the proposed development.
- 1.1.4 The plant species assemblages recorded at the site are all common in the local area and are considered to be of low ecological value. Domestic gardens and sympathetically landscaped open space are considered to offer habitat of equal or greater ecological value.
- 1.1.5 A buffer strip of vegetation should be created along the stream. This will ensure that the potential for species to commute along this feature is maintained.
- 1.1.6 None of the hedgerows around the site perimeter were considered important under the Hedgerow Regulations (1997).
- 1.1.7 It is possible that white-clawed crayfish are present within the stream on site as it has connectivity with a watercourse with positive white-clawed crayfish records within 2km of the site. Therefore a crayfish survey and rescue will be required immediately prior to works commencing on the stream.
- 1.1.8 Contaminants should not be allowed to enter substrates or watercourses during work.
- 1.1.9 Birds are likely to utilise scrub, woodland and hedgerows on site for nesting between March and September. Any vegetation clearance should therefore be undertaken outside of this period.
- 1.1.10 No other notable or protected species were recorded on the site.

2. INTRODUCTION

2.1 Background

2.1.1 In March 2021 Envirotech NW Ltd were commissioned by Steven Abbott Associates LLP to carry out a Preliminary Ecological Appraisal of land at Glencroft off Pendle Avenue in Chatburn, Clitheroe, central grid reference SD771 439 (Figure 1). A site investigation was undertaken and a report compiled which includes recommendations for any future actions and or mitigation required.

2.1.2 The survey was requested in connection with the proposed construction of two new residential dwellings.

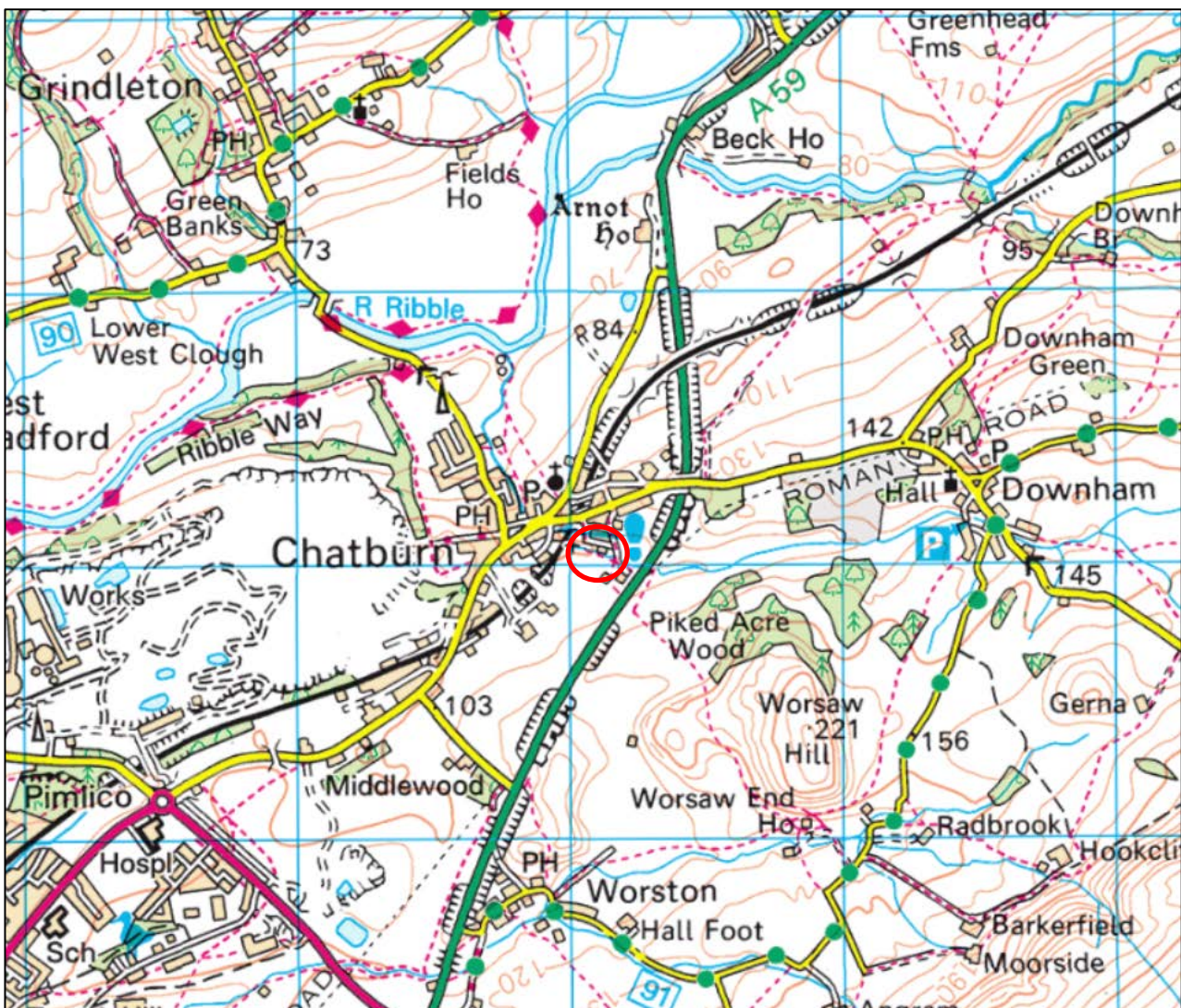


Figure 1 Site location at SD771 439 circled red.

2.2 Objectives

2.2.1 The main objectives of the study were:

- The completion of a Phase 1 Habitat Survey including the preparation of a vegetation and habitat map of the site and the immediate surrounding area.
- The survey and assessment of all habitats for statutorily protected species.
- An evaluation of the ecological significance of the site.
- The identification of any potential development constraints and the specification of the scope of mitigation and enhancement required in accordance with wildlife legislation, planning policy and other relevant guidance, and;
- The identification of any further surveys or precautionary assessments that may be required prior to the commencement of any development activities.

3. METHODOLOGY AND SOURCES OF INFORMATION

3.1 *Data Search*

- 3.1.1 The Biological Records centre for Lancashire "LERN", the Envirotech dataset, and the Multi-Agency Geographic Information for the Countryside (MAGIC) were searched to establish the presence of any records of statutorily protected, notable or rare species, and any designated sites of international, national, regional or local importance within a 2km radius of the site boundary.
- 3.1.2 The Envirotech dataset is compiled from extensive field surveys from the period 2004-present, as well as records obtained from third parties during this time.
- 3.1.3 Google Earth and Google Street View were consulted to establish the presence of any features of ecological importance within the local area.

3.2 *Vegetation and Habitats*

- 3.2.1 A vegetation and habitat map was produced for the site and the immediate surrounding area. The mapping is based on the Joint Nature Conservation Committee Phase 1 Habitat Survey methodology (JNCC 2003).
- 3.2.2 Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the Wildlife and Countryside Act (1981) and indicators of important and uncommon plant communities. All plant nomenclature follows Stace (1991).
- 3.2.3 Searches were carried out for the presence of invasive species, including those listed on Schedule 9 of the Wildlife and Countryside Act (1981), namely Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*) on terrestrial habitat and aquatic species such as floating pennywort (*Hydrocotyle ranunculoides*), water hyacinth (*Eichhornia crassipes*) and New Zealand pygmyweed (*Crassula helmsii*).

3.3 *Timing and Personnel*

- 3.3.1 During the visit, weather conditions were suitable for the survey types undertaken being warm and dry in early spring.
- 3.3.2 The site and surrounding land was visited on the 31st March 2021 by
 - (SC) Ms Sian Comlay BSc (Hons)
Natural England Great Crested Newt Licence (Level 2)
Natural England Bat Class Licence (Level 2)

4. SPECIES SURVEY METHODOLOGY

4.1 Amphibian

- 4.1.1 Great crested newts (*Triturus cristatus*) are protected under Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedule 5 of the Wildlife & Countryside Act (1981).
- 4.1.2 Water-bodies located within or adjacent to the study area were identified and where access was possible were assessed for their potential to support great crested newts.

4.2 Badger

- 4.2.1 Badgers (*Meles meles*) and their setts are protected under the Protection of Badgers Act (1992). This legislation arises from animal welfare issues (rather than on the basis of nature conservation grounds) and protects badgers from being killed, injured or disturbed whilst occupying a sett.
- 4.2.2 A disturbance to badgers in their setts may occur as a result of construction operations. Natural England recommends that the use of heavy machinery in proximity of a sett entrance should be avoided, with a 'disturbance free-zone' being established.
- 4.2.3 The degree of disturbance attributed to construction activity is a function of the background level of activity badgers are accustomed to and that which will be attributed to a proposed activity. The "disturbance free zone" is therefore site specific.
- 4.2.4 The survey for badgers comprised an assessment of all suitable habitat within and outside the study area boundary (where this was possible) to a distance of 30m for indications of use by badgers.
- 4.2.5 Signs of badgers which were searched for included:
- Setts - 'D' shaped entrances at least 25cms wide and wider than they are high with large spoil mounds
 - Discarded bedding at sett entrances (this includes grass and leaves)
 - Scratching posts on shrubs and trees close to a sett entrance
 - The presence of badger hairs which are coarse, up to 100mm long with a long black section and a white tip
 - Dung pit latrines and footprints
 - Habitual runs through vegetation and beneath fences
 - Hedgehog carcasses

4.3 Bats

4.3.1 All British bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act (1981), and are included on Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, as a Protected Species. Taken together, these pieces of legislation make it an offence to:

- Intentionally or recklessly kill, injure or capture bats;
- Deliberately or recklessly disturb bats (whether in a roost or not);
- Damage, destroy or obstruct access to bat roosts.

4.3.2 The Bat Conservation Trust (Hundt (2012) and Collins, J. (ed) (2016) issued guidelines on bat survey methodology, a key feature of their recommendation is for the undertaking of a pre-survey assessment - an initial desk-study and a walkover assessment of the survey area and its surrounding area to identify the relative value of the habitats present for bats and likely commuting routes. This is to be followed by a survey program that is appropriate to the likely level of bat activity within the survey area to be determined by and based on the experience of the surveyor.

4.3.3 The potential value of the survey area for foraging bats was assessed through consideration of two main factors: professional knowledge of bat ecology and foraging behaviour in combination with the geographical location, topography and habitats present within the survey area and surrounds. This resulted in the production of a map showing habitat quality both on and adjacent to the site.

4.3.4 Trees on and within the survey area boundary were assessed for their potential to support roosting or hibernating bats. This comprised a close inspection of all trees on the site to allow an assessment of their potential to be used by bats to be made by a licensed surveyor.

4.3.5 Trees were all assessed in accordance with Collins, J. (ed) (2016).

4.4 Birds

4.4.1 All breeding birds, other than pest species, are protected under the Wildlife and Countryside Act of 1981 when building a nest, rearing young or sitting on eggs. Some bird species, such as barn owl (*Tyto alba*), are protected when near an active nest site. Several birds are listed as UK and or County BAP species.

4.4.2 Bird species and behaviour was noted during the other field surveys. All areas are covered equally, in order to avoid the subjective survey of better quality 'bird habitat'. All birds displaying breeding behaviour were recorded.

4.5 Brown Hare

4.5.1 The brown hare (*Lepus europaeus*) is a UK BAP species.

- 4.5.2 The survey method involved walking boundaries and surveying with binoculars. The survey was conducted at a suitable distance to ensure that the hares were not disturbed. Generally, surveys were undertaken throughout the early afternoon and evening when hares are thought to be most active and feeding.
- 4.5.3 Where present the number of brown hares in each field or hedgerow was recorded, together with the nature and use of the field, climatic conditions and time of day. The presence of forms and faeces where present were also recorded.

4.6 Invertebrates

- 4.6.1 A general assessment was made of the study area's suitability for supporting invertebrates during the phase 1 survey. The study area's lack of habitat diversity, species-poor composition and uniformity of vegetation structure (i.e., lack of variation in height and microtopography) resulted in our belief that a low diversity of invertebrates would be likely to occur across the site.
- 4.6.2 The presence of invertebrates was noted during the other surveys which were undertaken. The extent of sampling was limited in that it could be confirmed that no priority or BAP species would be likely to be affected by the proposal.

4.7 Otter

- 4.7.1 Otters (*Lutra lutra*) are given protection by the Wildlife and Countryside Act (1981) as amended and Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

This protection means that it is an offence to deliberately or recklessly:

- Kill or injure otters;
- Destroy, damage or obstruct their dens, and
- Disturb them whilst in the den.

- 4.7.2 Watercourses were assessed for their suitability and for the presence of otters within 10m of the banks. The banks and scrub vegetation were carefully searched for spraints, feeding remains, runs, prints and couches/holts.

4.8 Reptiles

- 4.8.1 All native reptiles are protected in Britain under the Wildlife and Countryside Act of 1981. It is an offence to intentionally kill, injure, sell or advertise to sell any of the six native species.
- 4.8.2 The survey for these species was based on assessing the habitat type and suitability of the site. This comprised an assessment of satellite imagery for the site and surrounding area as well as comparison of the results from the records searches with habitat types. The general habitat at the site was evaluated in terms of its suitability to reptiles for foraging or breeding.

4.8.3 Reptile surveys comprising visual encounter surveys were undertaken. Habitat at the site was not considered sufficiently suitable for a full presence/ absence survey to be warranted.

4.9 Water Vole

4.9.1 Water voles (*Arvicola amphibious*) and their habitat are fully protected under Schedule 5 of the Wildlife and Countryside Act (1981). This provides protection from killing or taking by certain prohibited methods and their breeding and resting places are fully protected from destruction or obstruction, it is also an offence to disturb them in these places.

4.9.2 There is a stream in the north of the site. This watercourse was surveyed and assessed for evidence of the presence of water vole.

4.9.3 This involved intensive searches by wading upstream where possible, and observing from the banks where not; looking for burrows and other signs including footprints, droppings and chewed vegetation. This was undertaken up to 5m from the watercourse.

4.10 White-clawed crayfish

4.10.1 White-clawed crayfish (*Austropotamobius pallipes*) are protected under the Wildlife and Countryside Act (1981). This provides protection from killing or taking by certain prohibited methods.

4.10.2 An assessment was made for the suitability of the stream on the site to support White-clawed crayfish.

4.11 Survey limitations

4.11.1 The survey was undertaken in early spring. At this time of year plant species are less easily identified and the activity of some species is reduced.

4.11.2 The duration, extent and scope of the surveys were considered sufficient to plan appropriate mitigation and recommend additional precautionary survey work required prior to the commencement of work.

4.11.3 No significant survey limitations were encountered.

5. RESULTS

5.1 *Data Search*

- 5.1.1 Envirotech and LERN hold no records of protected or notable species for the site. There are however records of protected or notable species within 2km (Figure 2). These are discussed in the relevant sections below.
- 5.1.2 The nearest non-statutory protected site is the A59 Road Cutting, Worston to Chatburn located approximately 110m to the east (Figure 3). This is isolated from the survey area by a residential dwelling, agricultural field and in sections the A59.
- 5.1.3 The nearest statutory protected site is Clitheroe Knoll Reefs Site of Special Scientific Interest (SSSI) located approximately 160m to the north east (Figure 4). This is isolated from the site by agricultural fields.
- 5.1.4 The survey area falls within the SSSI Impact Risk Zone for multiple SSSIs, the closest being Clitheroe Knoll Reefs SSSI. However, the proposed development does not fall within any of the Risk Zone Categories, therefore SSSI Impact Risk Zones are not considered to be a notable constraint.

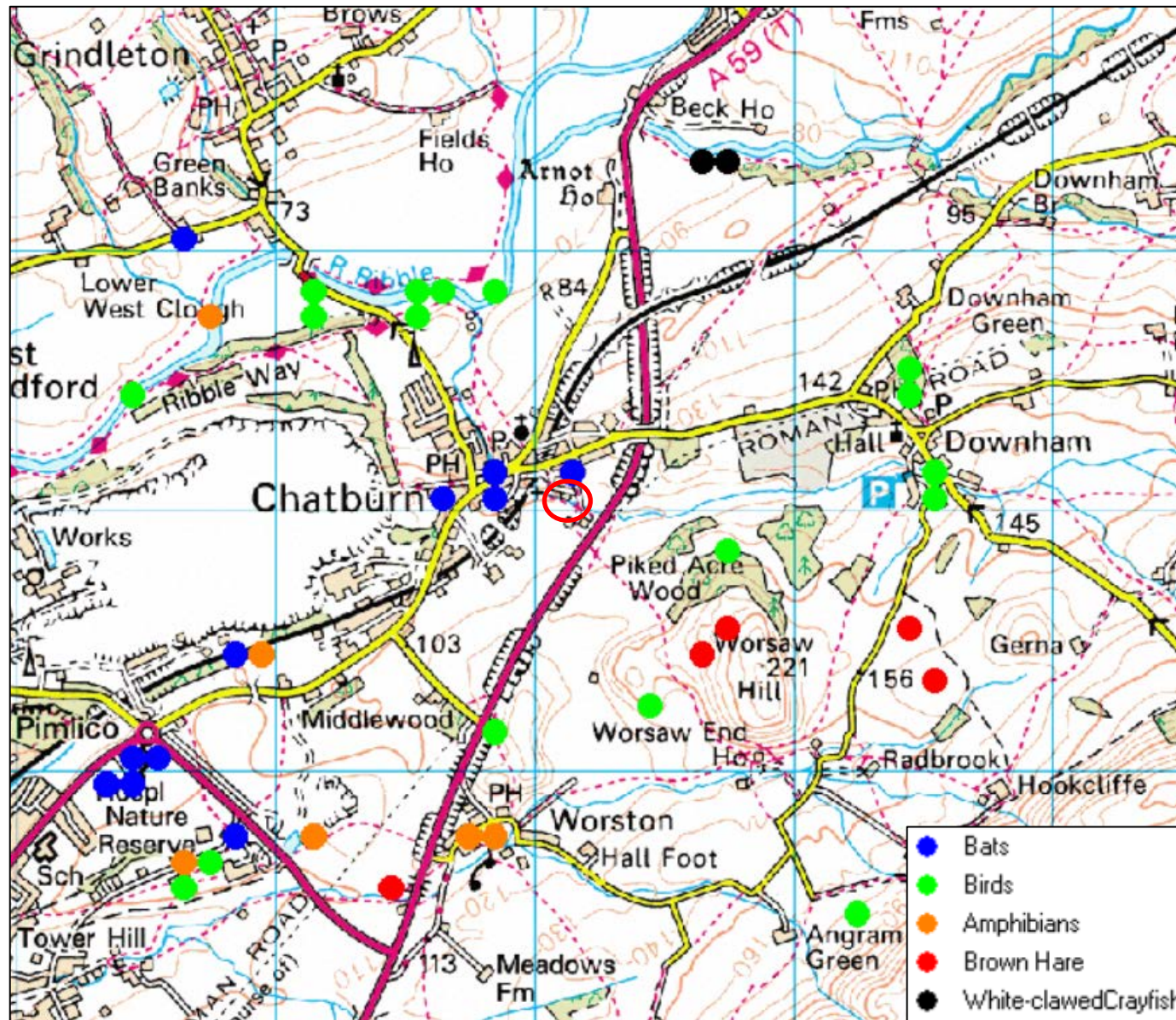


Figure 2 Notable species records, site location is circled red.

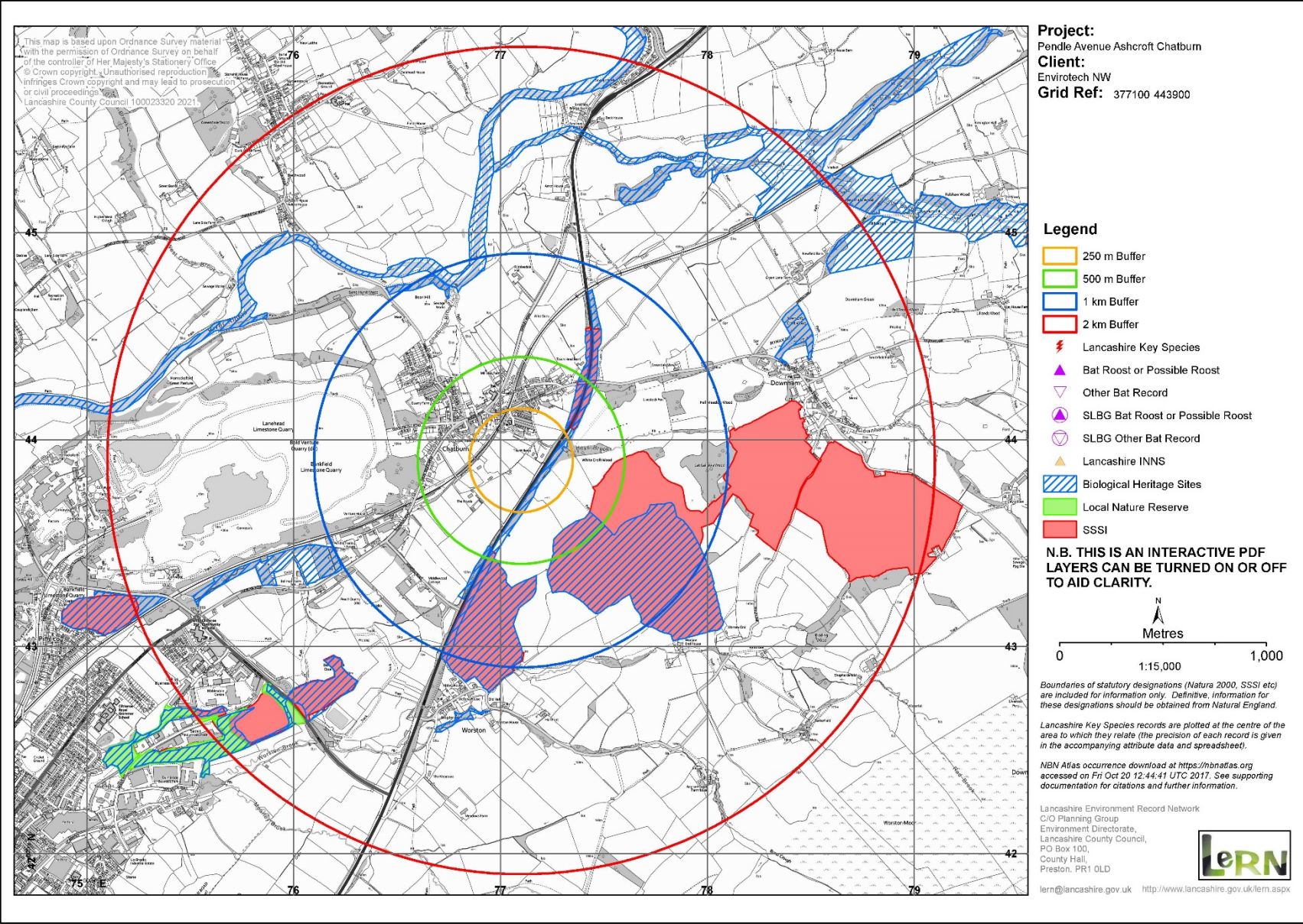


Figure 3 Non-statutory sites 2km buffer.

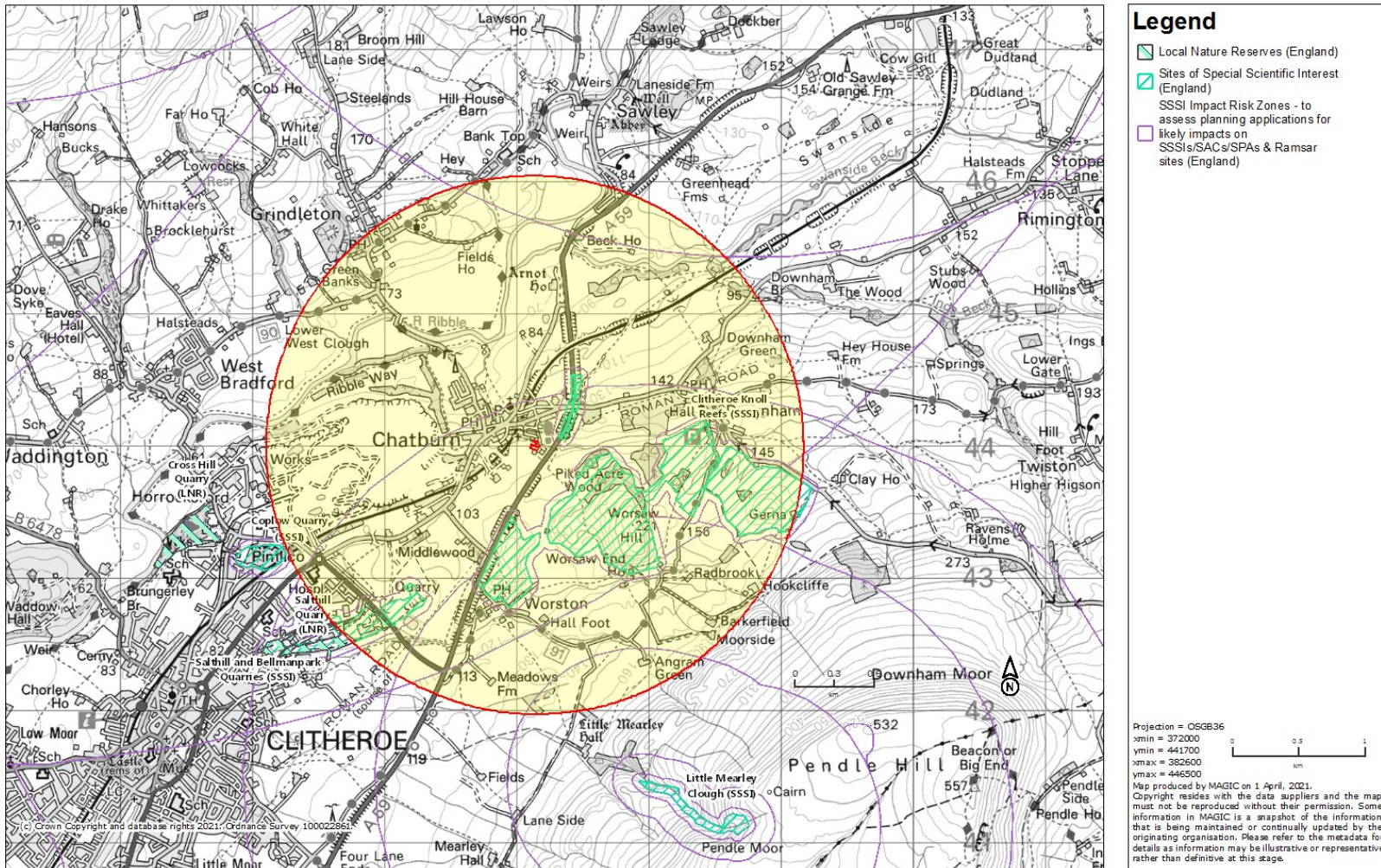


Figure 4 Statutory designated sites 2km buffer.

6. PHASE 1 SURVEY RESULTS

6.1 *Habitat Results*

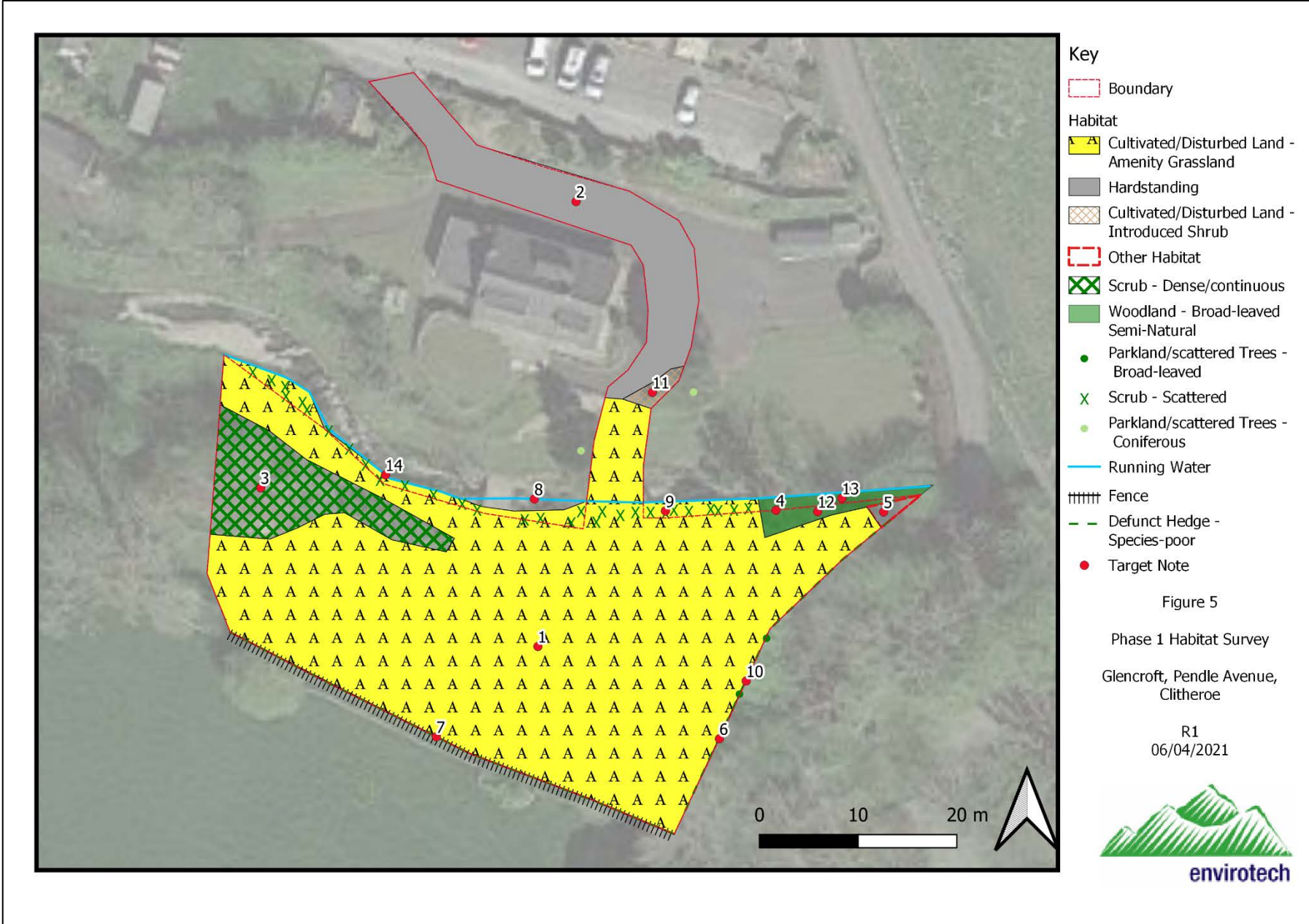
6.1.1 The site comprises amenity grassland and hardstanding with areas of scrub, scattered trees, hedgerows and introduced shrubs along the peripheries. A stream runs through the site with an area of woodland in the east of the site. The site is bound by the residential dwelling Glencroft to the north, a footpath and woodland to the east, agricultural field to the south and a treeline and garden to the west. The wider landscape is dominated by residential dwellings, agricultural land, fragmented woodland, roads and quarries.

6.1.2 See Figure 5 for the Phase 1 Habitat Plan and Table 1 for the descriptive Target Notes.

Target Note	Description	Comment
TN1	Amenity grassland	Short mown amenity grassland dominates the survey area as this forms the existing residential garden. Species recorded within this area include Perennial Ryegrass (<i>Lolium perenne</i>), Yorkshire Fog (<i>Holcus lanatus</i>), Cocksfoot (<i>Dactylis glomerata</i>), Meadow grass (<i>Poa</i> sp.), Common bent (<i>Agrostis capillaris</i>), Creeping buttercup (<i>Ranunculus repens</i>), Daisy (<i>Bellis perennis</i>), Lesser celandine (<i>Ficaria verna</i>) and Dandelion (<i>Taraxacum officinale</i>).
TN2	Hardstanding	The proposed access road location in the north of the site is dominated by an existing tarmac driveway and parking area. This area is devoid of vegetation.
TN3	Dense scrub	An area of dense scrub is present in the west of the site on an embankment. This area was dominated by Bramble (<i>Rubus fruticosus</i> agg), with young Sycamore (<i>Acer pseudoplatanus</i>), Hazel (<i>Corylus avellana</i>) and Hawthorn (<i>Crataegus monogyna</i>) trees, Nettle (<i>Urtica dioica</i>), Willowherb (<i>Epilobium</i> sp.), Broadleaved dock (<i>Rumex obtusifolius</i>), Wild Raspberry (<i>Rubus occidentalis</i>), Lords and ladies (<i>Arum maculatum</i>), Bracken (<i>Pteridium aquilinum</i>), Ransoms (<i>Allium ursinum</i>), Cleavers (<i>Galium aparine</i>), Ivy (<i>Hedera helix</i>), Lesser Celandine and Hart's tongue fern (<i>Asplenium scolopendrium</i>). Some brash is also present within this area.
TN4	Semi-natural broadleaved woodland	A small area of woodland is present in the east of the survey area along the stream. Species recorded within this area include Ash (<i>Fraxinus excelsior</i>), Willow (<i>Salix</i> sp.) and Alder (<i>Alnus glutinosa</i>). The ash trees within this area were showing signs of having ash dieback. The ground flora within this area comprised Bramble, Lords and Ladies, Lesser Celandine, Ransoms, Dogs mercury (<i>Mercurialis perennis</i>) and Ivy.
TN5	Other habitat - brash and garden waste pile	A brash and garden waste pile was present adjacent to the woodland in the east of the site.
TN6	Defunct Species Poor Hedgerow	A defunct species poor hedgerow was present along the eastern boundary of the site. This hedgerow was dominated by Hawthorn, with occasional Blackthorn (<i>Prunus spinosa</i>) and Hazel. Species recorded below the hedgerow include Cleavers, Ivy, Nettle, Dogs mercury and Lords and ladies. Bramble was also present within this hedgerow.

TN7	Defunct Species Poor Hedgerow	A further defunct species poor hedgerow was present along the southern boundary of the site. A wooden post and wire fence was present beyond the hedgerow. The hedgerow was dominated by Hawthorn with occasional Blackthorn, Elderberry (<i>Sambucus nigra</i>) and Hazel also present. The ground flora was dominated by Ivy, Lords and ladies, Dogs mercury, Cleavers, Daffodils (<i>Narcissus</i> sp.) and Broadleaved dock. Bramble was also present within this hedgerow along with a single ash tree.
TN8	Running water	A shallow flowing stream is present running adjacent to the northern boundary of the core development area. The stream will be crossed to facilitate the development.
TN9	Scattered scrub	Scattered scrub is present along the banks of the stream. Species recorded within this area include Bramble, Nettle, Willowherb, Daffodils, Herb-Robert (<i>Geranium robertianum</i>), Lesser Celandine and saplings and cut trees which are naturally regrowing including Hawthorn, Blackthorn and Willow.
TN10	Scattered trees	Two Sycamore trees were identified within the hedgerow on the eastern boundary of the site. Two Spruce (<i>Picea</i> sp.) trees are present adjacent to the proposed access road.
TN11	Introduced shrubs	A small area of introduced shrubs is present along the proposed access road to the north of the stream, this vegetation is associated with the existing residential dwelling. Species recorded within this area include <i>Geranium</i> sp., <i>Hypericum</i> sp., Spurge (<i>Euphorbia</i> sp.) and <i>Lepidium</i> sp.
TN12	Birds	The scrub, woodland, scattered trees and hedgerow provide suitable foraging and nesting habitat for birds.
TN13	Bats	The vegetation along the peripheries of the site offers suitable foraging and commuting opportunities for bats. The trees have low potential for use by roosting bats.
TN14	Stream	The stream may provide suitable habitat for aquatic mammals and crayfish.

Table 1 Details of Target Notes.





Survey area dominated by short mown amenity grassland



Existing driveway and parking area in the north of the site



Area of dense scrub on an embankment in the west of the site



Small area of woodland in the east of the site along the stream



Defunct species poor hedgerow in the east of the site



Defunct species poor hedgerow in the south of the site



Shallow flowing stream



Scattered scrub along the banks of the stream



Area of introduced shrubs and scattered trees to the north of the stream

Table 2 *Photographs*

6.2 Vegetation

- 6.2.1 Details of the plant species found on site are included in the target notes. Species recorded are all commonly occurring and undoubtedly occur elsewhere in similar habitats in the local area.
- 6.2.2 The small area of woodland in the east of the site comprises early mature to mature specimens. This area of woodland is dominated by Ash trees which are presenting signs of having ash dieback. Ancient woodland indicator species are present within this area. The woodland is considered to have moderate ecological diversity and value. It is understood that this habitat will be retained and protected within the proposed development.
- 6.2.3 The amenity grassland has a very low species diversity and ecological value. Whilst the assemblage of species within it is higher than improved pasture, the species are all indicative of regular management and disturbance, this habitat does not constitute a BAP habitat.
- 6.2.4 The defunct species poor hedgerows in the east and south of the site also have a low ecological value. They have a limited understory and are not stockproof. Should these need to be lost, transplanting them is unlikely to be of ecological benefit. New shrub/scrub planting would be suitable compensation for their loss.
- 6.2.5 None of the hedgerows are classified as important under the Hedgerow Regulations (1997) (See Appendix 1).
- 6.2.6 There is no evidence of Japanese knotweed, giant hogweed or Himalayan balsam on the site. No other invasive or notable weed species listed on Schedule 9 (Section 14) of the Wildlife and Countryside Act (1981) (as amended) was identified within the site or adjacent land.

6.3 Amphibian

- 6.3.1 There are records for amphibians within 2km of the site. Species records provided include Palmate newt (*Lissotriton helveticus*), Smooth newt (*Lissotriton vulgaris*) and Common Frog (*Rana temporaria*). There are no records of Great Crested Newt (*Triturus cristatus*) in the local area.
- 6.3.2 A search of OS mapping data did not identify any ponds within 500m of the survey area.
- 6.3.3 Due to the stream being shallow and fast flowing it is not considered to provide suitable habitat for breeding amphibians.
- 6.3.4 The core development area has a low value to amphibians being open and exposed. The boundary hedgerows, woodland and scrub could be utilised as refuges and/or hibernacula but there are no breeding ponds in proximity to the site.
- 6.3.5 Amphibians would be unlikely to attempt to cross the site as it comprises an area that is mostly open with uniform length grass. Whilst not a physical barrier to the dispersal of amphibians, the site is regarded as being a potentially hostile environment to them.

- 6.3.6 The proposed development will not result in the permanent loss of or a substantial negative effect on any waterbodies or foraging areas linked to them. Boundary areas which may provide foraging or refuge sites, are to be retained.
- 6.3.7 As such precautionary mitigation would be appropriate in respect of construction activities.

6.4 Badger

- 6.4.1 Five records of badgers occur within 2km of the site.
- 6.4.2 A single mammal path was present in the hedgerow along the eastern boundary. Footprints resembling those of a dog were present in the mud along this mammal path and due to the presence of adjacent footpaths, it is considered that this mammal path is a result of walkers and dogs rather than badger.
- 6.4.3 No evidence of badger such as footprints, hair, latrines, snuffle holes or setts were identified on site.
- 6.4.4 Badger setts do not occur on site and a lack of feeding signs or runs across the site would suggest that they do not occur within 30m of site boundaries.
- 6.4.5 The proposed development will not impact on any existing badger runs or setts. The porosity of the surrounding fields to the passage of badgers will not be affected.

6.5 Bats

- 6.5.1 There are 58 records of four species of bat within 2km of the site. Species provided by the data search include unidentified bat (*Chiroptera* sp.), unidentified Myotis bat (*Myotis* sp.), Whiskered (*Myotis mystacinus*), Noctule (*Nyctalus noctula*), unidentified Pipistrelle bat (*Pipistrellus* sp.), Common Pipistrelle (*Pipistrellus pipistrellus*) and Soprano Pipistrelle (*Pipistrellus pygmaeus*).
- 6.5.2 The foraging habitat within the site ranges from the poor quality and low potential amenity grassland and hardstanding areas which cover the majority of the site to the small area of woodland and hedgerows in the east and south of the site and the stream to the north of the core development area. Woodland fragments are likely to provide sufficient shelter that they may be attractive to foraging bats. High quality bat habitat extends from the site via woodland and riparian habitats locally (Figure 6).
- 6.5.3 It is not considered there would be significant degradation of foraging habitat as a result of the proposal so long as the hedgerows, stream, woodland and trees are retained and or their loss is compensated for in any landscaping scheme.
- 6.5.4 All trees around the site perimeter were also assessed in accordance with Collins ed. (2016) and assigned a risk category. All of the trees on site were category 2 (low) or category 3 (negligible) risk (Figure 7). Trees within the woodland were classified as category 2 (low) risk. No indications of roosting or highly suitable roost sites were located within the trees. All of the trees could be adequately inspected. Risk categories from

Hundt (2012) and the requirement for mitigation for each tree category are shown on Figure 8.

- 6.5.5 The proposed new access road runs adjacent to the existing residential dwelling at Glencroft. Planning Permission has already been granted for the demolition of this building and redevelopment of the area to the north of the site (Approved Application Reference 3/2020/0112).
- 6.5.6 We consider bat species are unlikely to rely on the site for feeding but will occur in the local area. Roosting by bats is considered unlikely to occur on the site.
- 6.5.7 Mitigation will be required in respect of ensuring that the foraging habitat on site is improved for use by bats during the development.



Key




-  Boundary
-  Medium Quality Habitat
-  High Quality Habitat

Figure 7

Bat Habitat Map

Glencroft, Pendle Avenue,
Clitheroe

R1
06/04/2021





Tree category and description	Stage 1 Initial survey requirements	Stage 2 Further measures to inform proposed mitigation	Stage 3 Likely mitigation
Known or confirmed roost	Follow SNCO guidance and these guidelines wherever possible, to establish the extent to which bats use the site. This is particularly important for roosts of high risk species and/or roosts of district or higher importance and above		The tree can be felled only under EPS licence following the installation of equivalent habitats as a replacement.
Category 1* Trees with multiple, highly suitable features capable of supporting larger roosts	Tree identified on a map and on the ground. Further assessment to provide a best expert judgement on the likely use of the roost, numbers and species of bat, by analysis of droppings or other field evidence. <i>A consultant ecologist is required</i>	Avoid disturbance to trees, where possible. Further dusk and pre-dawn survey to establish more accurately the presence, species, numbers of bats present and the type of roost, and to inform the requirements for mitigation if felling is required.	Felling would be undertaken taking reasonable avoidance measures ³ such as ‘soft felling’ to minimise the risk of harm to individual bats.
Category 1 Trees with definite bat potential, supporting fewer suitable features than category 1* trees or with potential for use by single bats	Tree identified on a map and on the ground. Further assessed to provide a best expert judgement on the potential use of suitable cavities, based on the habitat preferences of bats. <i>A consultant ecologist required</i>	Avoid disturbance to trees, where possible. More detailed, off the ground visual assessment. Further dusk and pre-dawn survey to establish the presence of bats, and if present, the species and numbers of bats and type of roost, to inform the requirements for mitigation if felling is required.	Trees with confirmed roosts following further survey are upgraded to Category 1* and felled under licence as above. Trees with no confirmed roosts may be downgraded to Category 2 dependent on survey findings
Category 2 Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats.	None. <i>A consultant ecologist is unlikely to be required</i>	Avoid disturbance to trees, where possible. No further surveys.	Trees may be felled taking reasonable avoidance measures. Stop works and seek advice in the event bats are found, in order to comply with relevant legislation.
Category 3 Trees with no potential to support bats	None. <i>A consultant ecologist is not required unless new evidence is found</i>	None.	No mitigation for bats required.

Figure 8 Tree risk categories from Hundt (2012).

6.7 Birds

- 6.7.1 There are 277 records of birds within 2km of the site. Woodpigeon (*Columba palumbus*), Robin (*Erithacus rubecula*) and Blackbird (*Turdus merula*) were noted on site during the survey.
- 6.7.2 The woodland and areas of dense scrub offer potential habitat for feeding and nesting birds. The introduced shrubs and scattered scrub also provide suitable feeding habitat. The amenity grassland has a low potential for use by nesting birds as the grassland is managed and as such is usually short. Trampling risks are also very high within this area of the site.
- 6.7.3 The gappy defunct hedges within the site have insufficient density to be of high value to nesting birds but do provide suitable feeding opportunities.
- 6.7.4 A risk assessment of the site in respect of its future potential for and value to nesting birds could be adequately made.
- 6.7.5 The woodland should be retained and protected within the proposed development.
- 6.7.6 Precautionary mitigation is considered appropriate. The landscaping scheme should include species such as rowan (*Sorbus aucuparia*) which are seed bearing and will provide food for birds in the winter.
- 6.7.7 The habitat on site is not considered to be of anything more than of local significance, habitats present are well represented in the local area. The impact on nesting birds is therefore considered likely to be minor.

6.8 Brown Hare

- 6.8.1 Brown hare are a UK BAP priority species. There are ten records of brown hares within 2km of the site.
- 6.8.2 No indication of brown hares was recorded on the site.
- 6.8.3 The site boundary has some potential for brown hares to create forms but use of the site is likely to be limited due to its open and exposed nature and regular human presence.
- 6.8.4 A risk assessment of the site in respect of its future potential for and value to brown hares could be adequately made. We consider the risk to brown hares is very low.

6.9 Invertebrates

- 6.9.1 11 notable invertebrates have been recorded within 2km of the site.
- 6.9.2 No deadwood or vegetation on site was recorded which would provide an important resource for invertebrates in the local area.

- 6.9.3 Given the poor quality habitats contained within the core development area in comparison to the wider area, it is not considered that this site is of any local significance for invertebrates.
- 6.9.4 The stream is likely to support invertebrates, other than creating a new crossing over the stream there will be minimal disturbance to this watercourse. As such precautionary mitigation should be followed with respect to construction works.
- 6.9.5 Impacts on the species are considered likely to be negligible, post development domestic gardens and landscaping will create greater habitat diversity in the area than already exists.

6.10 Otter

- 6.10.1 There are no records of otter within 2km of the site.
- 6.10.2 No indication of the presence or past use of the site by otter was found. The stream is considered unlikely to support large quantities of fish. There are no waterbodies in proximity to the site which would be attractive to Amphibians.
- 6.10.3 The woodland is not considered to provide a sufficient refuge area for otter and is located within an area which is regularly disturbed by adjacent footpaths and being in a residential garden.
- 6.10.4 The stream eventually connects to the River Ribble therefore there is the possibility that otter may occasionally use the stream as a commuting/ dispersal route through the local landscape, however, this species is considered unlikely to be significantly impacted by site development.
- 6.10.5 Precautionary mitigation would be appropriate in respect of construction activities which will need to be restricted at night.

6.11 Reptiles

- 6.11.1 There are no records for reptiles within 2km of the site.
- 6.11.2 The majority of the site has a very low value to reptiles being devoid of significant ground cover. There are no areas of the core development area which would be particularly favourable to reptiles.
- 6.11.3 Reptiles may occur along the boundary of the site and this provides linkage across the local landscape. It is however understood that these areas will be retained and will be unaffected by the proposal.
- 6.11.4 As a consequence, precautionary mitigation would be appropriate in respect of construction activities so as to ensure reasonable avoidance measures are taken to avoid the killing or injury of these species.

6.12 Water vole

- 6.12.1 There are no records of water vole within 2km of the site.
- 6.12.2 The walls of the stream are constructed predominantly from stone and are therefore not considered to provide suitable burrow building opportunities.
- 6.12.3 The vegetation growing along the watercourse was not considered ideal for this species to forage as there was no significant growth of rushes or reeds.
- 6.12.4 No signs of water voles, such as droppings, feeding piles or footprints were present at the time of the survey. We consider this species is likely to be absent from the site. Precautionary mitigation would be appropriate.

6.13 White clawed crayfish

- 6.13.1 There are two records of white-clawed crayfish within a brook connected to the River Ribble.
- 6.13.2 The stream on site is also connected to the River Ribble, therefore there is the potential for the stream on site to be used by white-clawed crayfish.
- 6.13.3 The proposed works involve the construction of a new crossing over the watercourse. Therefore mitigation must be followed with respect to the installation of the new crossing and removal of the old crossing.

6.14 Other

- 6.14.1 The boundary hedgerows, scrub and woodland are species poor and provide little potential for use by hedgehog (*Erinaceus europaeus*). Fragmentation of habitat locally and existing land use do not provide optimal conditions for the free passage of this species across the site and slugs and snails are likely to occur only at very low numbers.
- 6.14.2 The site may be crossed by species such as fox (*Vulpes vulpes*) and rabbit (*Oryctolagus cuniculus*) are known to occur locally.
- 6.14.3 The boundary hedgerows, scrub and woodland may provide suitable habitat for small mammals such as field vole (*Microtus agrestis*) but these areas are small and the sites value to small mammals is limited.

6.15 Statutory and Non-Statutory Sites

Direct Impacts:

- 6.15.1 There are no statutory or non-statutory sites which are connected to the site such that site development would directly affect the dispersal of species between them or directly impact upon their integrity.
- 6.15.2 The habitats on site do not represent or are linked to those found in any of the statutory or non-statutory sites locally.

Indirect Impacts:

6.15.3 There are no statutory or non-statutory sites which are connected to the site such that site development would indirectly affect the dispersal of species between them or indirectly impact upon their integrity.

7. MITIGATION/RECOMMENDATIONS

7.1 *Compensatory planting and habitat enhancement*

- 7.1.1 The roots of trees on the site and its boundaries should be adequately protected during work in accordance with industry standards. All trees should as far as possible be retained in the scheme.
- 7.1.2 The landscaping scheme should utilise plants which are native and wildlife friendly. In particular night flowering species would be beneficial to bats. Wildflower seed could be used to plant verges to enhance the ecological value of the site and continuity between the site and the wider area.
- 7.1.3 If the defunct species poor hedges are removed, transplantation of them is not considered to be of significant ecological benefit as there are no notable species assemblages associated with them, replanting of linear lines of trees/ shrubs would be more beneficial.
- 7.1.4 A buffer strip should be created along the stream. Planting of scattered native shrub species and or hedgerows within an along this buffer will provide shelter and maintain the potential for species to commute along this feature.

7.2 *Amphibians*

- 7.2.1 There is no requirement for specific mitigation for these species. There are currently no suitable breeding sites on or near the site. However, as a precautionary measure, in the unlikely event that any signs of any amphibian activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.
- 7.2.2 In order to further minimise impacts on amphibians the following points should also be followed.
- All work must take place during daylight hours as amphibians are more likely to be commuting over night and this will ensure the risk to any amphibians commuting through the site will be minimised.
 - During the development, measures should be put in place to discourage amphibians from using the development area, the creation of any piles of earth, materials and rubble which could form potential artificial hibernacula and refuge should be avoided at all times. It is recommended that any spoil or rubble will be removed immediately to skips, or on hard standing or short grass. This will ensure that no potential amphibian hibernation or resting sites are created.
 - The storage of all loose materials must be palletised or similar so they are off the ground whenever possible.
 - Should any trenches and excavations be required, an escape route for animals that enter the trench must be provided, especially if left open overnight. Ramps should

be no greater than of 45 degrees in angle. Ideally, any holes should be securely covered. This will ensure amphibians are not trapped during work.

- All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling. Back filling should be completed immediately after any excavations, ideally back filling as an on-going process to the work in hand.

7.3 Badger

7.3.1 Badger setts are known to occur within 2km of the site. These setts will be undisturbed by work but in order to minimise impacts on badgers passing over the site the following points should also be followed.

- All work must take place during daylight hours as badgers are more likely to be commuting over the site at night and this will ensure the risk to any badgers passing through the site will be minimised.
- Should any trenches and excavations be required, an escape route for animals that enter the trench must be provided, especially if left open overnight. Ramps should be no greater than of 45 degrees in angle. Ideally, any holes should be securely covered. This will ensure badgers are not trapped during work.
- All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling. Back filling should be completed immediately after any excavations, ideally back filling as an on-going process to the work in hand.
- Boundary fences/walls should incorporate gaps at their base to facilitate the passage of badgers across the site.

7.4 Bats

7.4.1 Work at night should be restricted, new planting within the site should enhance structural diversity and light spill onto the boundary should be minimised.

7.4.2 Creation of a buffer along the stream will maintain the likely functionality of this habitat for foraging and commuting bats. Care should be taken to ensure that lighting levels along the boundaries of the site are also minimised.

7.4.3 New roosting provision for crevice dwelling bats could be incorporated into the buildings on site or bat boxes could be erected in retained trees.

7.4.4 Any category 2 trees (including trees within the woodland) to be felled should be re-inspected for bats to confirm they remain absent.

7.4.5 Overall it is considered there is more than sufficient scope for mitigation and compensation at the site such that there will be no adverse impact on the favourable conservation status of bats affected by the proposal.

7.5 Birds

- 7.5.1 Nesting by birds within the development area is considered likely to occur. Birds may nest within with scrub, woodland and hedgerows on the site.
- 7.5.2 Any vegetation to be trimmed or cleared should be checked for nesting birds before it is removed. Ideally this should occur outside the bird nesting period March- September. If vegetation clearance is to occur in the March-September period a check for nesting birds should be conducted first by a suitably qualified individual.
- 7.5.3 New planting within the site and the retention of trees and shrubs on the site boundary will maintain the ecological functionality of the site for breeding birds.
- 7.5.4 Artificial bird nesting sites for swallow could be incorporated into the new buildings under the eaves in suitable locations.
- 7.5.5 If nesting birds are found at the site all site works shall cease and further ecological advice shall be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.6 Brown Hares

- 7.6.1 There is no requirement for specific mitigation for this species. However, as a precautionary measure, in the unlikely event that any signs of any brown hare activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.
- 7.6.2 The points in respect of not working at night and leaving open trenches with means of escape detailed for badgers are also applicable to this species.

7.7 Invertebrates

- 7.7.1 Landscaping should include native or wildlife friendly species including night flowering plants.
- 7.7.2 Contaminants should not be allowed to enter substrates or watercourses during work. To effect this, spill kits should be provided on site. Re-fuelling of all plant and machinery should be undertaken away from open drains and watercourses. Drip trays should be used under static machinery.
- 7.7.3 The amount of in channel work required should be minimised.
- 7.7.4 Loose soil and excavated material to be removed from site should be stored in such a way as it can not wash back into the watercourse.
- 7.7.5 Minimal silt and sediments should be allow to enter the watercourse during works.

7.8 Otter

- 7.8.1 There is no requirement for specific mitigation for this species. However, as a precautionary measure, in the unlikely event that any signs of any otter activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.
- 7.8.2 The points in respect of not working at night and leaving open trenches with means of escape detailed for amphibians are also applicable to this species which is only likely to pass through the site at night.
- 7.8.3 The points in respect of new shrub and tree planting around the site and the ecological enhancement of the mill pond are also likely to enhance the sites potential for future use of the site.

7.9 Reptiles

- 7.9.1 There is no requirement for specific mitigation for these species. However, as a precautionary measure, in the unlikely event that any signs of any reptile activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.
- 7.9.2 Dense scrub and woodland on the edge of the development site should be retained such that it is in proximity to open areas of ground which will also be suitable for basking.
- 7.9.3 The points in respect of not leaving open trenches without means of escape detailed for badgers are also applicable to these species.

7.10 Water vole

- 7.10.1 There is no requirement for specific mitigation for this species. However, as a precautionary measure, in the unlikely event that any signs of any Water vole activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.11 White-clawed crayfish

- 7.11.1 A Crayfish survey and rescue must be undertaken by a suitably qualified and licenced individual immediately prior to works to commencing to create the new stream crossing. This would include the hand removal of potential refuges within the watercourse before the bridge is installed.
- 7.11.2 No works to the stream should be undertaken until the survey and rescue is completed.
- 7.11.3 Methods to minimise pollutants entering the watercourse detailed for invertebrates are also applicable to this species.



Figure 9 Proposed site plan

8. CONCLUSION

- 8.1.1 Ecological surveys, site appraisals and impact assessments were carried out with respect to land at Glencroft off Pendle Avenue in Chatburn, Clitheroe. It is proposed that two new residential dwellings are constructed on the site.
- 8.1.2 Bats, birds, badger, brown hare and common amphibians are known to occur in the local area, there was however no conclusive evidence of any specifically protected species regularly occurring on the site or the surrounding areas which would be negatively affected by site development following the mitigation proposed.
- 8.1.3 It is possible that white-clawed crayfish are present within the stream on site as it has connectivity with a watercourse with positive white-clawed crayfish records within 2km of the site. Therefore a crayfish survey and rescue will be required immediately prior to works commencing on the stream.
- 8.1.4 Contaminants should not be allowed to enter substrates or watercourses during work.
- 8.1.5 The vegetation to be cleared has a low ecological significance in the local area; it is understood that the woodland is to be retained within the development.
- 8.1.6 The protection of trees on the site boundary and landscaping will promote structural diversity in both the canopy and at ground level and will encourage a wider variety of wildlife to use the site than already occurs.
- 8.1.7 A buffer strip of vegetation should be created along the stream. This will ensure that the potential for species to commute along this feature is maintained.
- 8.1.8 Contractors will be observant for protected species and all nesting birds. Should any species be found during construction, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

9. REFERENCES

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Hundt, L. (2012) *Bat Surveys: Good Practice Guidelines* (Second Edition). BCT, London.

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Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10 (4), 143-155.

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10. APPENDIX

Hedge		Feature								
	Length 20m +	Hedge is not bounding the curtilage of dwelling	Hedge established more than 30years	Hedge boundary of protected or common land or land used for agriculture or forestry						
TN6	Yes	No	Yes	No						
TN7	Yes	No	Yes	Yes						
No = Automatic failure										
ARCHAEOLOGY AND HISTORY										
	Archaeological feature which is included in the schedule of monuments	Situated wholly or partly within an archaeological site	Boundary of a pre-1600 AD estate	Integral part of a field system	Protected species records					
	No*	No*	No*	No*	No					
	No*	No*	No*	No*	No					
Yes = Automatic pass										
FEATURES										
	Bank or wall	Gaps less than 10%	Standard trees	Ditch	Parallel hedge	Footpath/ Bridleway	Connection points	Woody species	Average ground flora species	HEDGE CLASSIFIED AS IMPORTANT
	No	No	Yes	No	No	Yes	2	3	2	No
	No	No	No	No	No	No	2	3	2	No
7 woody species or 6 woody species + 3 features or 5 woody species + 4 features or highway + 4 woody species and 2 features										

* Historic and archaeological records have not been checked for this site.