

LAND AT BARROW BROOK (PHASE 2) CLITHEROE LANCASHIRE

EXTENDED PHASE 1 HABITAT SURVEY

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A report for

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EXTENDED PHASE 1 HABITAT SURVEY

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Map 1: Extended Phase 1 Habitat Survey LeRN Barrow Brook - Ecology Plan

PART 1 INTRODUCTION:

1.1 REASONS FOR SURVEY:

PENNINE *Ecological* have been commissioned by Avalon Chartered Town Planning and Architectural Consultancy, to undertake an Ecological Survey and Evaluation of land at Barrow Brook, Nr Clitheroe, Lancashire.

The study includes a vegetation survey, badger survey and preliminary bat roost survey, and also includes a full evaluation of the ecological significance of the survey findings. A statement of potential impact and recommended mitigation measures are provided where appropriate.

The surveys are required in association with a housing development proposal on the site.

1.2 SITE LOCATION:

The site is located to the south of Holm Road, Barrow, Nr Clitheroe, BB7 9WF. The habitats surveyed are shown on Map 1 in the Appendix.

Reference to the proposed site plan as submitted in support of the application should be made in respect of the development's layout.

1.3 SURVEY METHODOLOGY:

1.3.1 Extended Phase 1 Habitat Survey:

An Extended Phase 1 Habitat Survey (Nature Conservancy Council 1990) of the study area was undertaken on 2nd November 2016. The site's habitats were fully mapped and higher vascular plant species were recorded and given abundance values according to the standard DAFOR scale, where:

D = Dominant

A = Abundant

F = Frequent

O = Occasional

R = Rare

Where appropriate these values can be prefixed by the letter L (locally) or V (very), to provide more subtle biogeographical data.

1.3.2 Hedgerow Regulations Survey:

(Refer to Map 1 for hedgerow locations)

The hedgerow on the western boundary of the site was surveyed using the Hedgerow Regulations (1997) methodology. The full survey methodology is explained at length in document The Hedgerow Regulations 1997 – A Guide to the Law and Good Practice (Department of the Environment, Transport and the Regions), further information is provided in the 1997 Act No. 1160 The Hedgerow Regulations 1997, Schedules 1 - 3.

Land at Barrow Brook (Phase 2) - Clitheroe, Lancashire Extended Phase 1 Habitat Survey

The survey data presented here only relates to the Wildlife and Landscape criteria as detailed in (Part II Criteria of Schedule 1) of the above act.

1.3.3 Badger Survey:

The badger survey focused on land directly affected by the proposed development and land within 30m of the site (where accessible) but excluding the gardens of adjacent properties.

The survey used standard techniques for establishing the use of the site by badger, and included searches for evidence of badgers including:

- Setts
- Pathways
- Footprints
- Latrines
- Foraging areas
- Scratching posts

1.3.4 Preliminary Bat Roost Survey:

All British bats and their roosts are afforded protection under the 1981 Wildlife & Countryside Act (as amended) and are listed in Schedule 2 of the Conservation of Habitats & Species Regulations 2010.

The site was visited on the 2nd November 2016 and an assessment of potential bat interest undertaken.

Guidance provided in Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn) (Bat Conservation Trust 2016), was referred to in respect of the survey.

The surveys were undertaken by an experienced preliminary assessment surveyor for bats. Intrusive surveys i.e. requiring a bat licence were not undertaken.

1.3.5 Other Species:

In addition to the above, general assessments of the suitability of the site to support breeding birds and great crested newt were also undertaken as part of this study.

1.4 SURVEY CONSTRAINTS:

1.4.1 Extended Phase 1 Habitat Survey:

The survey was conducted at an optimum time for Extended Phase 1 Habitat Survey. There were no constraints to the survey.

1.4.2 Hedgerow Regulations Survey:

There was a minor constraint to the hedgerow survey generated though certain elements of the ground flora (if present) not being visible at the time of the survey.

Land at Barrow Brook (Phase 2) - Clitheroe, Lancashire Extended Phase I Habitat Survey

1.4.3 Badger Survey:

There were no constraints to survey.

1.4.4 Bat Survey:

The search for potential roosts was subject to minor constraint due to limited visual access on the eastern side of a single mature ash tree.

1.4.5 Other Species:

There were no constraints to the evaluation of the site in respect of breeding birds and great crested newt.

PART 2 SURVEY RESULTS:

2.1 DESK BASED STUDY:

A request for ecological data was made to Lancashire Environment Record Network (LeRN) to obtain details of any biological records relating to the site. The extent of the study is shown on the LeRN Barrow Brook Ecology Plan in the appendix.

Desk based studies were also undertaken to establish the presence of ponds within a 500m radius of the site, as part of a scoping study relating to great crested newt (GCN)

The results of the desk study revealed the following information;

- The site has no statutory wildlife or ecological designations.
- There are no Sites of Special Scientific Interest (SSSI) within 1km of the site.
- There are no BHSs within 0.9km of the site.
- There are no known waterbodies capable of supporting GCN within 1km of the site.
- The nearest waterbodies are large commercial fishing lakes approximately 50m north of the site.
- The LeRN data search returned no records of GCN within 1.2km.
- The LeRN data search returned no protected species records for the site.
- LeRN data provided a record of a pipistrelle bat roost at Green Park Court (SD738378) in 2009. The record is approximately 240m from the site.
- LeRN data returned three other species records within 250m of the site, including Scots pine (1988) and Indian balsam (2010 and 2011).
- LeRN data returned five species records within 500m of the site, including wood clubrush (2003), Lunar hornet moth (2006), Strawberry clover (2010) Des Etang's St John's-wort (2010) and Speckled wood (2015).
- Records beyond 500m are not provided as they have no bearing on the proposals.

The LeRN Ecology Plan is provided in the appendix.

2.2 EXTENDED PHASE 1 HABITAT SURVEY:

2.2.1 General Description:

The site is composed of a single agricultural field located between the new housing development off Holm Road to the west, and the A59 to the east.

The site is largely composed of a single semi-improved poor grassland that obviously hasn't been managed recently. Consequently there is a build-up of thatch in the sward and some developing rankness.

The boundary on the western side is mostly composed of a tall, defunct hawthorn hedge, with an approximate third of the boundary formed by dry stone wall. The north, south and eastern boundaries are fenced.

2.2.2 Extended Phase 1 Habitat Survey Target Notes:

Survey locations, Target Notes and the proposed working area locations are shown on Map 1 in the Appendix. All species nomenclature follows Stace, C. (1996) 'New Flora of the British Isles' – definitive English names.

Target Note No: 1

A small semi-improved poor grassland that lacks diversity and is co-dominated by crested dog's-tail and common bent. The grassland hasn't obviously been managed for some time and a light 'thatch' is now developing in the base of the sward which has a rank appearance.

It is estimated that the grassland is derived from the MG6 Lolium perenne-Cynosurus cristatus grassland as defined in British Plant Communities.*

Stands of common nettle, rosebay willowherb and several ash, hazel, horse chestnut and holly saplings have become established in the south-west corner of the field.

There is no public right of access but an informal footpath used by local dog walkers runs around the outside of the field.

Species:	Abundance:
Crested dog's-tail	LD
Common bent	LD
Red fescue	Α
Yorkshire-fog	Α
Ribwort plantain	Α
Creeping buttercup	Α
Red clover	Α
Dock spp.	F
Cock's-foot	LF
Common sorrel	LF
Dandelion sp.	LF
Hard rush	VLF
Soft-rush	VLF
Great willowherb	VLF
Common ragwort	0
Reed canary-grass	VO
Wild angelica	VO

Target Note No: 2

An overgrown hawthorn-dominated hedgerow on the western boundary of the site. Not having been managed for many years, the hedge is tall and straggly and has an open structure.

The only other woody species in the hedgerow are very occasional elder and a single mature ash tree.

^{*(}Rodwell et al. 1992)

The ground flora is rank and poor and dominated by false oat-grass and common nettle, with abundant bramble, Yorkshire-fog, cleavers and Indian balsam. Cock's-foot is locally abundant.

In common with many hawthorn hedges within the County, the hedge has a strong affinity with the W21 Crataegus monogyna-Hedera helix scrub community.*

*(Rodwell et al. 1992)

Site Photographs - Habitats:



Photograph 1: Typical view of the semi-improved poor grassland affected by the proposal. (See Target Note 1)



Photograph 2: The hedgerow and single mature ash described in Target Note 2.



Photograph 3: The hedgerow described in Target Note 2 at the proposed site entrance.

2.2.3 Hedgerow Regulations Survey:

The evaluation of hedgerows in respect of the Regulations is based upon an average number of woody species in a given hedge plus a given number of other qualifying features.

To qualify as important, a hedgerow in Lancashire has to have at least 4 woody species before any other qualifying features are considered.

The hedgerow on site contains only 3 woody species throughout its whole length, therefore it clearly fails to qualify as an important hedgerow due to the lack of woody diversity alone.

As the hedge fails to qualify as important, a Hedgerow Regulation Survey form was not completed in this instance.

Whilst the hedgerow is not considered important under the Regulations, hedgerows are Section 41 Habitats of Principle Importance in England (NERC Act 2006).

2.3 BADGER SURVEY:

2.3.1 Survey Details and Results:

The badger survey employed standard techniques to establish if badgers are present on site or use the site for foraging/commuting. (See Section 1.3 Survey Methodology)

The following searches were undertaken.

- Searches for setts on site and within 30m of the site. (Excluding the adjacent domestic garden areas)
- Searches for foraging signs and pathways.
- Boundary searches for runs, pathways and latrines.

The survey results are outlined below.

Sett Search:

The survey found no setts on the site or on the surrounding land

Search for Foraging Signs and Pathways:

The site was thoroughly searched for badger pathways or signs of foraging. No sign of badger activity was found therefore it can be concluded that the species is not using this area for foraging or commuting.

Boundary Search:

All of the boundaries of the site were walked and examined for potential runs, pathways and latrines. The search found no evidence to suggest badger activity along any of the site boundaries. The absence of latrines indicates a lack of territorial activity in the near vicinity of the site.

2.3.2 Survey Conclusions:

The survey found no evidence of historic, recent or current use of the site by badgers for foraging, commuting or occupation, and the species is considered to be absent on site and locally.

2.4 BIRDS:

2.4.1 Bird Evaluation:

Breeding bird surveys were not undertaken, however, the prevailing conditions on site make it highly unlikely that any bird population present would exceed 'local' (i.e. Parish) value.

Nesting bird species area restricted to very small numbers of common tree/shrub nesting species that could use the boundary hedgerow and ash tree as nest sites.

The size, shape and grassland type within the field combined with tall boundary trees and human/canine disturbance make the site unsuitable for ground-nesting birds such as skylark, lapwing or meadow pipit.

No bird species of particular interest were noted during the survey.

2.5 BATS:

2.5.1 Bat Evaluation:

During the site visit, the trees and shrubs of the site were examined for the presence of holes that could potentially be used as bat roosts. The surveys were undertaken at ground level using close-focusing binoculars. (Lieca Trinovid 8x42)

In addition, the site was assessed for its potential value for foraging and commuting bats.

Bat Roosts:

On-site:

The roost search found no features to indicate the potential presence of bat roosts in the ash tree (T1) and hedgerow shrubs on the site. Although the ash tree couldn't be clearly seen on its western side.

However, the author of this report surveyed the tree in 2011 which at the time confirmed no features of bat roost potential to be present. Given what could be clearly observed in 2016, it is reasonable to conclude that the development of potential roosts since the 2011 survey is considered to be unlikely.

Off-site:

Two large oak trees have substantial branches that overhang the western boundary of the site at its southern end. As a precaution in the event of pruning being required, these trees were subject to a preliminary ground-level roost search.

The northernmost oak (T2) has no potential, however the southernmost tree (T3) has several rot holes high above ground level that might be used by roosting bats. The holes are approximately 5-7m from the ground and located on the western aspect of the tree.

None of the holes showed any external sign of bat use in the form of grease/urine staining, or droppings stuck to the bark of the tree.

Roost potential in this tree is considered to be 'low-moderate' as defined by the BCT guidelines 2016.

The location of this tree (T3) is shown on Map 1 in the appendix.

The trees on the outside of the eastern and northern boundary of the site were also examined for potential roosts which in all cases were found to be absent.

Photographs showing the potential roosts in the off-site tree are provided below.

Foraging & Commuting Routes:

The hedgerow and other boundaries where off-site trees are present, provide relatively low value foraging areas for bats locally. Some bats might use the site, however the woodland edge next to the adjacent fishing lakes and the woodland and hedged farmland to the south and west would be expected to provide the main foraging areas for bats locally.

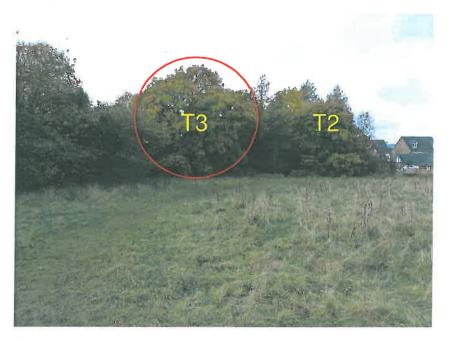
Site Photographs - Bats:



Photograph 4: Vertical crack and rot hole in T3.



Photograph 5: Rot hole in T3.



Photograph 6: Tree (T3) location in relation to the site boundary circled in red. T2 with no roost potential is clearly visible located on the corner of the off-site woodland to the right of T3.



Photograph 7: T1 and hedgerow shrubs- No bat roost potential.



Photograph 8: Off-site trees along the east and northern boundaries with no bat roost potential.

2.6 GREAT CRESTED NEWT:

2.6.1 Great Crested Newt Evaluation:

There are no ponds on the site and reference to Ordnance Survey maps and online aerial photographs indicate that there are no ponds within 500m of the site that are not separated by major barriers to GCN movement.

The nearest ponds are associated with Pendle View Fishery to the north of the site, however the swift-flowing Barrow Brook and the A59 impose a major barrier effect. In addition, given the level of fish stocks present in commercial fisheries, the likelihood of GCN presence is remote, especially given the absence of other waterbodies locally.

The LeRN data search returned no records of GCN within 1.2km of the site, all are separated by major barrier effects generated by the A59.

Therefore there are no potential impacts generated on GCN or its habitat resulting from the proposals for the site.

PART 3 ECOLOGICAL EVALUATION:

3.1 EVALUATION OF SURVEY FINDINGS:

The following section evaluates the site in relation to statutory/non-statutory sites, protected species and species/habitats listed under Section 41 Species/Habitats of Principal Importance in England (NERC) Act 2006.

- The site has no statutory wildlife or ecological designations.
- There are no Sites of Special Scientific Interest (SSSI) within 1km of the site.
- There are no BHSs within 0.9km of the site.
- There are no known waterbodies capable of supporting GCN within 1km of the site.
- The hedgerows is a Section 41 Habitat of Principle Importance in England (NERC Act 2006).
- The LeRN data search returned no protected species records for the site.
- The LeRN data search returned no records of GCN within 1.2km.
- LeRN data provided a record of a pipistrelle bat roost at Green Park Court approximately 240m south-west of the site.
- No other significant LeRN data was returned within 500m of the site.
- Records beyond 500m are not provided as they are considered to be beyond the sphere
 of influence of the proposed development.

3.1.1 Statutory Sites:

The LeRN data has revealed that site has no statutory wildlife designations and that there are no Sites of Special Scientific Interest (SSSI) within 1km of the site.

3.1.2 Biological Heritage Sites:

The area affected by the proposals fails to meet any of the guidelines for selection associated with the Lancashire Biological Heritage Site scheme. There are no Biological Heritage sites within 0.9km of the site.

3.1.3 Protected Species:

No on-site trees with bat roost potential were found during the survey, however a single mature oak (T3) with branches overhanging the site is located off-site adjacent to the southwest boundary. Roost potential here is estimated to be 'low - moderate'.

Low potential foraging opportunities exist along the edge of the tree/hedge line on the site boundaries. The same areas might also be used as commuting routes.

There are no badger setts on site and there is no evidence of badger foraging on site or runs entering the site through boundaries.

Common birds of 'local' value might use the trees and shrubs on the boundaries of the site as nest sites.

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There are no potential GCN breeding sites within 500m of the site, therefore the species is considered to be absent in the local area. Major barriers to amphibian movement are imposed by the presence of Barrow Brook and the A59.

3.1.4 Section 41 (S41) Habitats and Species of Principal Importance in England Natural Environment and Rural Communities (NERC) Act 2006:

The hedgerow on the site is a S41 habitat, however the hedgerow fails to qualify as important in respect of the Hedgerow Regulations 1997 due to low woody diversity and absence of associated key features.

3.2 SUMMARY EVALUATION:

3.2.1 Vegetation - Habitats and Species:

The survey found no habitats that are higher than 'site - local' (i.e. Parish) value. The site is small, and the habitats present are common and include semi-improved poor grassland, a hedgerow and small stands of rank tall ruderal herb and self-seeded tree saplings.

The hedgerow is a S41 habitat but is not important in respect of the Hedgerow Regulations.

All of the habitats found on site are common on a local-national scale.

3.2.2 Badgers:

There is no evidence of badger occupation/use on or immediately adjacent to the site.

3.2.3 Birds:

The site has value for low range of common nesting birds in the boundary hedgerow only. The bird population is estimated to be of 'local' (Parish) value.

3.2.4 Bats:

There are no trees with obvious bat roost potential on the site, however a single mature oak (T3) with branches overhanging the site is located off-site adjacent to the south-west boundary. 'Low - moderate' roost potential was identified in this tree.

Minor foraging opportunities exist along the edge of the tree/hedge line on the site boundaries. The same areas might also be used as commuting routes.

3.2.5 Great Crested Newt:

There are no potentially suitable ponds within at least 500m of the site, therefore GCN will not be affected by the proposals. In addition, major barrier effects are imposed on amphibians generally due to the presence of Barrow Brook and the A59.

PART 4 RECOMMENDATIONS:

4.1 HABITATS:

The proposed works will directly affect semi-improved poor grasslands, tall ruderal herb, a single hedgerow and a small number of self-seeded sapling trees only.

No further habitat surveys are recommended but root protection areas should be considered in respect of the mature boundary tree and the off-site trees near to the boundary.

In addition, Indian balsam is a material consideration in respect of the proposed development of the site. Small linear stands of balsam were found along the hedgerow only and will require approved methods to prevent its spread.

Any removal of hedgerows should be compensated by the provision of new tree/shrub boundary features.

4.2 FAUNA:

4.2.1 Badger:

There was a total absence of any evidence of activity that could be associated with badger on the site. Therefore no further survey or precautions in respect of badger is recommended.

4.2.2 Birds:

Small numbers of common birds might breed in the tree and hedgerow on the site. Surveys in spring/summer are considered unlikely to reveal any population greater than 'site-local' significance, therefore additional surveys are not recommended.

To avoid impacts on nesting birds, if any of the trees/shrubs/scrub need to be removed, then this must be done outside of the bird breeding season during September-February. Removal in the period March-August must not be undertaken unless an ecologist has inspected the site and deemed the vegetation to be clear of nesting birds.

Any losses of nesting habitat should be compensated for by the provision of new tree/shrub planting.

4.2.3 Bats:

Potential Roosts:

No potential roosts were identified in the on-site boundary ash tree (T1) or hedgerow shrubs.

Roost potential was identified in a single mature oak tree located off-site (T3). Therefore if any major pruning of the main branches of this tree or felling is required, then it must be checked by a fully licensed bat ecologist to determine if any sign of bat habitat is present.

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If it can be determined that bats are not using this tree as a roost, then no further surveys are required. Where evidence of bat habitation is present or where the survey is inconclusive, further 'emergence' surveys will be required. The level of such surveys will be guided by the bat ecologist and based upon the findings of the inspection of the holes.

In addition, if bats are found to be present in T3, then simple lighting controls will be required to ensure that light spillage does adversely affect the roost. The bat ecologist will provide guidance based upon the BCT guidelines. (See Bats and lighting in the UK- bats and the built environment series. Bat Conservation Trust.)

4.2.4 Great Crested Newt:

GCN are considered to be absent on site which is isolated from all waterbodies within 500m of the proposal boundary. Therefore no further surveys or precautions are recommended.

PART 5 REFERENCES:

5.1 REFERENCES:

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APPENDIX:

Map 1: Extended Phase 1 Habitat Survey

LeRN Barrow Brook Ecology Plan



