Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Ecological Appraisal

Land adjacent to Oak Hill College Whalley BB7 9AF

Ref: P.808.16

November 2018
(see revision dates below)

Rev	Date	Details

Ascerta
Mere One, Mere Grange, Elton Head Road, St Helens, Merseyside WA9 5GG
T: 0845 463 4404 E: info@landscapetreesecology.com
www.landscapetreesecology.com

P.808.16

Ecological Appraisal

Of

Land adjacent to
Oak Hill College
Whalley
BB7 9AF

For

Sunderland, Peacock and Associates

26 November 2018

Field Work by	Neil Everett Grad CIEEM
Document Author	Rachael Hamilton MSci (Hons)
Technical Review	Dr Rosalind King MCIEEM
QA Review & Approval	Ciaran Power

Contents

EXECUTIVE SUMMARY

An Ecological Appraisal has been carried out at land adjacent to Oak Hill College, Whalley, BB7 9AF on 1st November 2018 by Mr Neil Everett Grad CIEEM. The assessment comprised a desk study and biological records search, as well as a site walkover survey in order to map habitat types. The survey was extended to assess the potential for protected species to use the site. The assessment provides baseline data as to current site conditions and where appropriate allows recommendations to be made in respect of further potential work in order to satisfy current wildlife legislation.

The site comprises a large area of bare ground to the east with a patch of marshy grassland amid, and improved grassland to the west. There are patches of tall ruderal vegetation along the southern boundary of the site, running along native species rich hedgerow with trees and a dry ditch. There is a species poor hedgerow along the north western boundary of the site bordering onto the college, and trees scattered along the site boundaries. These habitats are presented on plan P.808.16.01A (Appendix 1).

Assessed against the '*Guidelines for Ecological Impact Assessment in the UK and Ireland'* 2nd edition (2016), the habitats range in ecological value from **negligible** to **within the zone of influence** of the site**.** The bare ground and a small section of native species rich hedgerow with three hawthorn trees are to be lost to proposals for the construction of eight residential dwellings and a new access road to the east. As the habitats to be lost to the proposals are small in area and the trees are assessed as having **low** potential bat roost features, it is considered that their loss will not adversely affect the ecological value of the wider area provided the recommendations detailed below are followed.

The site provides habitat for nesting birds, amphibians and bats. Provided the recommendations below are followed these species will not be adversely affected by the proposals.

The recommendations, if fully implemented, will enable the proposals to meet the requirements of national and local guidance and legislation including the NPPF and policies EN3 and EN4 of the Core Strategy 2008 - 2028 A Local Plan for Ribble Valley Adoption Version (adopted 16 December 2014).

Recommendations

1. Reasonable Avoidance Measures to ensure that no harm is caused to amphibians during the removal of the hawthorn trees and hedgerow for the creation of a new access road;
2. The retention of trees with moderate bat roost features. If any of these trees are to be felled or pruned in the future, further climbing or nocturnal surveys will be necessary to ensure that no harm will be caused to bats;
3. Planting of new trees to ensure that there is no net loss of bird nesting habitat and bat foraging and commuting habitat;
4. Installation of a 32mm hole nest box within retained vegetation to mitigate for loss of nesting habitat within the hawthorn trees to be lost;
5. Ensuring the felling of the three hawthorn is complete by November 2019;
6. Lighting sensitive to the needs of bats, designed to avoid overspill onto the scattered trees present on site;
7. Avoiding vegetation removal during the bird breeding season (1 March to 31 August inclusive) or undertaking a survey for breeding birds and ensuring any active nests found are protected within a suitable buffer zone until they are no longer in use;
8. Providing gaps of 13cm by 13cm under garden fences to enable hedgehog continued access across site; and
9. Habitat enhancement with the installation of a bird box (one 25mm or 32mm entrance hole box), attached to retained trees on site, one house sparrow terrace attached to a new build, a bat box attached to a retained tree and suitable landscaping incorporating species that provide a food or shelter resource to wildlife to include hawthorn, honeysuckle and holly as hedgerow species and silver birch, crab apple, rowan and bird cherry as tree species.

1.0 Introduction

Ascerta has been instructed by Sunderland Peacock and Associates to carry out an ecological appraisal of land adjacent to Oak Hill College, Whalley, BB7 9AF (hereafter referred to as the site). The site OS grid reference is SD 738 369.

Our client seeks planning consent to alter access to a site where eight residential dwellings are to be built.

The site was visited on 1st November 2018 by Mr Neil Everett BSc (Hons) Grad CIEEM, when an Ecological Appraisal, which includes an assessment of the potential for protected species to be using the site or surroundings, was carried out in accordance with the *Handbook for Phase 1 Habitat Survey: a Technique for Environmental Audit* (*JNCC, 2010*). The report was prepared following methods detailed in the CIEEM '*Guidelines for Ecological Impact Assessment in the UK and Ireland'* (2018) and '*Guidelines for Ecological Report Writing*' (2015). This report presents the results of the survey including evaluation of habitats on site and potential for protected species to be using the site. The report includes recommendations for further actions where applicable in order to satisfy current wildlife legislation and to achieve our client's objectives.

A previous ecological appraisal of the site was undertaken by Mr Neil Everett in November 2016 for similar proposals but a different access route.

2.0 Objectives

Our client's objectives are to alter access to a site where eight residential dwellings are to be built.

Our objectives are as follows:

- Identify and evaluate any features of ecological value and the potential of the site to support protected species based on the walkover survey and biological records search;
- Identify designated sites within 2km of the site;
- Review protected species records within 2km of the site;
- Map the habitats within the site using JNCC (2010) methods;
- Provide recommendations for further species-specific surveys and mitigation measures where current legislation requires;
- Provide recommendations that seek to enhance the ecological value of the site where possible;
- Provide recommendations to assist our clients in achieving their objectives whilst satisfying current wildlife legislation.

3.0 Relevant Legislation

3.1 European Legislation

The following Directives have been adopted by the European Union and provide protection for fauna and flora species of European importance and the habitats which support them:

- Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive);
- Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive).

3.2 UK Legislation

The Habitats Directive has been transposed into national legislation through the Conservation of Habitats and Species Regulations 2017 (The Habitats Regulations). This provides for the designation and protection of 'European Sites' (SPAs, SACs and Ramsar Sites, including proposed or potential European Sites) and the protection of 'European Protected Species'.

The key UK legislation relating to nature conservation is the Wildlife and Countryside Act 1981 (as amended) (W&C Act). This Act is supplemented, *inter alia*, by provision in the Countryside and Rights of Way (CRoW) Act 2000, and the Natural Environment and Rural Communities Act 2006 (NERC Act). Additional species and habitat specific UK legislation includes the Protection of Badgers Act 1992 and the Hedgerow Regulations 1997.

Species and Habitats of Principal Importance
Species and Habitats of Principal Importance are listed under section 41 of the NERC Act and are a material consideration in planning decisions. Planners require relevant, up to date information from ecological surveys in order to assess the effects of a proposed development on biodiversity as Councils have a statutory obligation under section 40 of the NERC Act to consider biodiversity conservation in the determination of planning applications.

The National Planning Policy Framework (NPPF) 2018 has been published to provide further planning guidance. Wildlife, biodiversity and ecological networks are referred to in Section 15 '*Conserving and enhancing the natural environment'*. The NPPF states that the planning system should contribute to and enhance the natural and local environment by: recognising the wider benefits of ecosystem services, minimising impacts on biodiversity and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures. Further guidance is provided within Government Circular *06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within The Planning System*.

Background information about the lists of priority habitats and species (Species and Habitats of Principal Importance) can be found within the UK Biodiversity Action Plan (UK BAP). Although this has been succeeded by The '*UK Post-2010 Biodiversity Framework*', many of UK BAP tools are still relevant. BAPs identify habitats and species of nature conservation priority on a UK (UK BAP) and Local (LBAP) scale. Most BAP priority habitats and species have Habitat Action Plans (HAP) and Species Action Plans (SAP) and there are also "grouped action plans" for groups of related species with similar conservation requirements. The LBAP relating to this Site is the Lancashire Biodiversity Action Plan.

Badgers
The legislation protecting badgers in England and Wales is the Protection of Badgers Act 1992.

Under the Protection of Badgers Act 1992 it is an offence *inter alia* to:

- Wilfully kill, injure or take a badger, or to attempt to do so;
- Cruelly ill-treat a badger; or
- Intentionally or recklessly interfere with a badger sett by (a) damaging a sett or any part of one; (b) destroying a sett; (c) obstructing access to or any entrance of a sett; (d) causing a dog to enter a sett; or (e) disturbing a badger when it is occupying a sett.

The Badger Act 1992 defines a badger's sett as "*any structure or place which displays signs indicating current use by a badger*"

Natural England can issue licences to enable works to continue that may affect a protected species. In relation to disturbance of badgers, Natural England (2009) gives guidelines on disturbance which will require a licence. These includes: "*using very heavy machinery (generally tracked vehicles) within 30 metres of any entrance to an active sett; using lighter machinery (generally wheeled vehicles), particularly for any digging operation, within 20 metres; light work such as hand digging or scrub clearance within 10 metres. There are some activities which may cause disturbance at greater distances (such as using explosives or pile driving) and these should be given individual consideration.*"

Bats
In England, all bats and their roosts are protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife & Countryside Act 1981 (as amended). Several species of bat are also highlighted as Priority Species under the UK Biodiversity Action Plan and within the Lancashire Biodiversity Action Plan.

Under the current legislation as summarised on pages 8 and 9 of the Bat Surveys for Professional Ecologists Good Practice Guidelines – 3rd Edition (2016) it is a criminal offence to:

"To kill, capture, injure or take a wild bat;

- *To damage or destroy a place used by a bat for breeding or resting. All offences of this nature are identified within the Habitats Regulations. This offence is unique in that it can be committed accidently. No element of intentional, reckless or deliberate action needs to be evidenced;*
- *To disturb bats anywhere (roosts, flight lines or foraging areas)if levels of disturbance can be shown to impair their ability to survive, to breed or reproduce, to rear or nurture their young, to hibernate or migrate or to affect significantly local distribution or abundance;*
- *To intentionally or recklessly disturb a bat, whilst it is occupying a place of shelter or protection;*
- *To intentionally or recklessly obstruct access to any place used by a bat for shelter or protection; and*
- *To be in possession or control of a bat alive or dead (or any part of a bat or anything derived from a bat, although bat droppings are generally considered to be acceptable), or to transport a bat, to sell or exchange a bat or to offer to sell or exchange a bat taken from the wild."*

Breeding Birds
Breeding Birds are protected under the Wildlife and Countryside Act which make it an offence to:

- *intentionally kill, injure or take any wild bird or take, damage or destroy the nest of any wild bird whilst it is in use or being built;*
- *intentionally take or destroy the egg of any wild bird;*
- *have in one's possession or control any wild bird, dead or alive, or any part of a wild bird (including eggs), which has been taken in contravention of the Act or the Protection of Birds Act 1954;*
- *intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.*

Great Crested Newt
The great crested newt (*Triturus cristatus*) is fully protected under the Wildlife and Countryside Act, 1981 (as amended) and the Habitats Regulations, 2017. It is also a Species of Principal Importance. The legislation makes it an offence to:

- *Deliberately (or intentionally) kill, injure or capture (or take) a great crested newt, or great crested newt egg or eft;*
- *Deliberately (intentionally) damage or destroy any breeding site or resting place (i.e. pond, refuge, hibernaculum);*
- *Deliberately or recklessly obstruct access to any breeding site or resting place;*
- *Deliberately, intentionally or recklessly disturb a great crested newt, in particular disturbance which is likely to:*
    - *impair the ability of the great crested newt to survive, breed, reproduce, or to rear or nurture young;*
    - *impair the ability of the great crested newt to hibernate or migrate; or significantly affect the local distribution or abundance of great crested newts*

Invasive Species
It is an offence under Section 14(2) of the Wildlife and Countryside Act 1981 to '*plant or otherwise cause to grow*' in the wild any plant in Schedule 9 Part II.

3.3 Local Legislation

The site lies within Ribble Valley Borough Council and is covered by the Core Strategy 2008 - 2028 A Local Plan for Ribble Valley Adoption Version (adopted 16 December 2014). Policies EN3 and EN4 are the policies of relevance here and have been taken into account when preparing this report.

The following table provides a summary of the main species within the UK that could be encountered within or within proximity of this development site, together with the legislation that affords them protection.

Table 3.1 Protected Species and the Associated Legislation.

	Species	Legislation
Amphibians	Great crested newt (*Triturus cristatus*)	Schedule 5, W&C Act 1981 (as amended); Schedule 2, The Habitats Regulations 2017; and Section 41, NERC.
Mammals	Badger (*Meles meles*)	Protection of Badgers Act 1992.
	All species of bat Otter (*Lutra lutra*)	Schedule 5, W&C Act 1981 (as amended); Schedule 2, The Habitats Regulations 2017; and Section 41, NERC.
	Water vole (*Arvicola amphibious*)	Schedule 5, W&C Act 1981 (as amended) and Section 41, NERC.
Birds	All wild birds	Schedule 5, W&C Act 1981 (as amended) and Section 41, NERC.

It is a criminal offence to intentionally, wilfully kill, injure or take any of the aforementioned protected species or to destroy or disturb its habitat.

4.0 Survey Methods

The Ecological Appraisal involved the collection and review of data from a desk study and field survey along with assessment of the value of the habitats following CIEEM guidelines.

4.1 Desk Study

A review of the designated sites and habitats within 2km of the site has been undertaken using the Multi-Agency Geographic Information for the Countryside (MAGIC) and the Natural England websites.

A review of UK and Local priority species and habitats known to occur in the region of the site has been undertaken; using the Joint Nature Conservation Committee website and local records from LeRN (Lancashire Environmental Record Network (Appendix 3).

4.2 Field Survey

A walkover survey of the site was conducted on 1st November 2018 when the habitat types and features of ecological interest were identified and mapped in compliance with the Handbook for Phase 1 Habitat Survey: a Technique for Environmental Audit (*JNCC, 2010*). The survey methods involve the recording and mapping of all habitat types and ecological features present on site, including the identification of the main species present and examination of the potential for any protected species. Habitats were mapped and target notes made for any interesting features.

When conducting the surveys particular focus was concentrated on the following species and habitat features:

- Mammals (badgers, bats);
- Birds;
- Amphibians;
- Invertebrates;
- Hedgerows and boundaries;
- Invasive plant species; and
- Plant communities and trees.

4.3 Badger Survey Methods

The site was searched for setts and badger field signs including foraging areas, latrines and tracks. Attention was paid to the presence of the following field signs:

- Setts: single holes or a series of holes likely to be interconnected underground;
- Latrines: badgers usually deposit faeces in excavated pits;
- Paths and footprints;
- Scratching posts: at the base of trees;
- Snuffle holes: areas where badgers have searched for insects;
- Day nest: bundles of vegetation where badgers may sleep above ground; and
- Traces of hair.

4.4 Bat Survey Methods

The survey methods followed the guidelines set out by the Bat Conservation Trust Bat Surveys for Professional Ecologists Good Practice Guidelines – 3rd Edition (2016). Habitats, Buildings and Trees were assessed for suitability for use by bats and categorised independently using table 4.1 page 35 within the Bat Conservation Trust Guidelines (Collins, 2016).

Preliminary Ecological Appraisal for Bats

Habitats on site were assessed for their suitability for bats to use them for roosting, commuting and foraging both on the site and surrounding area. Commuting and foraging habitat suitability was categorised **low** to **high**. Commuting and foraging habitat valued as Moderate or above may need further survey effort if lost to the proposals.

Preliminary Roost Assessment Trees

All trees were inspected for Potential Roost Features (PFRs). Features searched for included: Natural or woodpecker holes, cracks/splits in major limbs, loose bark, hollows/cavities, dense epicormic growth, bird and bat boxes. Where such features were found they were investigated for scratches or staining, bat droppings and smoothing of surfaces around entry points. Trees assigned a suitability of **moderate** or above may require further inspection if they are to be lost to the development.

Table 4.1: Guidelines for assessing Potential Roost Features (PRFs), commuting and foraging habitat within a proposed development site. Guidelines taken from table 4.1 page 35 of the Bat Conservation Trust Bat Surveys for Professional Ecologists Good Practice Guidelines – 3rd Edition (2016).

Suitability	Roosting Habitats	Commuting and Foraging Habitats
Negligible	*Negligible habitat features on site likely to be used by roosting bats.*	*Negligible habitat features on site likely to be used by commuting or foraging bats.*
Low	*A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions [a] and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation [b]).* *A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential. [c]*	*Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un vegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.* *Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.*
Moderate	*A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions[a] and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).*	*Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.* *Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.*
High	*A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions [a] and surrounding habitat.*	*Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.* *High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.* *Site is close to and connected to known roosts.*

[a] For example, in terms of temperature, humidity, height above ground level, light levels of disturbance.

[b] Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al., 2015). This phenomenon requires some research in the UK but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments.

[c] This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI,2015).

4.5 Evaluation

Habitats and species on the site were evaluated following the '*Guidelines for Ecological Impact Assessment in the UK and Ireland'* 2nd edition (2016). A geographical frame of reference is assigned to each habitat and species, with International Value being most important, then National, Regional, County, District, Local and lastly, within the immediate Zone of Influence (ZoI) of the proposals only

Value judgements are based on characteristics that can be used to identify ecological resources or features likely to be important in terms of biodiversity. These include site designations such as SSSIs. For undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological resource are considered. Ecological resource quality can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type), other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.

4.6 Limitations

The site visit was undertaken in November. Although this is outside the most appropriate time of year for phase 1 habitat surveys, sufficient vegetation was present to enable habitat identification. The majority of the site comprises bare ground where the land has been cleared. It is not considered a limit to the conclusions of the report based on the habitats found within the site and the works proposed.

5.0 Survey Results

5.1 Desk Study

One statutory site was identified within a 2km radius of the proposed development site and four non-statutory Biological Heritage Sites (BHS) were identified within a 1km radius of the proposed development site.

The following statutory site was identified within the vicinity of the proposals (with approximate distance and direction from the site):

- Light Clough Site of Special Scientific Interest (SSSI) 1.54km north east

The following non-statutory sites were identified within the vicinity of the proposals (with distance and direction from the site):

- Spring Wood BHS 290m south east;
- Calder Bank, Broken Brow BHS 690m south;
- Sir John's Wood & Lords Park Wood BHS 600m south; and
- Planes Wood BHS 1km south east.

The site lies within a Natural England SSSI Impact Risk Zone for two SSSIs, Light Clough and Cock Wood Gorge (2.33km south east).

Following a review of records held by the LeRN, several priority species that have the potential to occur within the vicinity of the proposed development have been identified. These include bat species, common pipistrelle, soprano pipistrelle, great crested newt, palmate newt, smooth newt, common frog, common toad, badger, European hedgehog and brown hare.

Three European Protected Species Licence (EPSL) applications have been approved within 2km. These were identified using Magic Maps and include:

- EPSM2011-3043 for the destruction of a resting place for common pipistrelle. Start date 12/05/2011 end date 01/04/2013.
- 2015-12648-EPS-MIT for the destruction of a resting place for great crested newt. Start date 01/08/2015 end date 01/01/2020.
- 2017-31537-EPS-MIT for the destruction of a resting place for common pipistrelle. Start date 16/01/2017 end date 01/05/2022.

The application relating to GCN was from a site located 478m west of the development site, and the applications relating to bats were from sites 920m north and 1340m south east.

A list of key habitats is shown in table 5.1 below and a summary description of key habitats within the survey area is provided in Section 5.2. Notes on the presence or potential presence of protected species are provided in Section 5.3. The Phase 1 Habitat map can be found in Appendix 1. The Target Notes (TN) and lists of species recorded during survey are presented in Appendix 2.

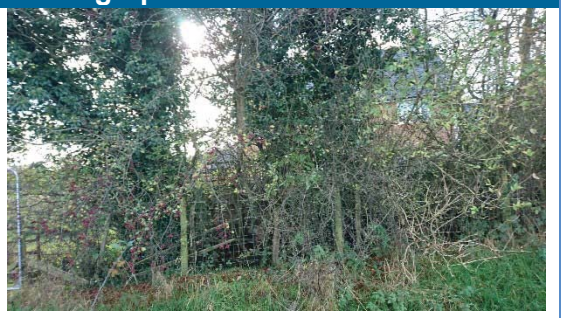
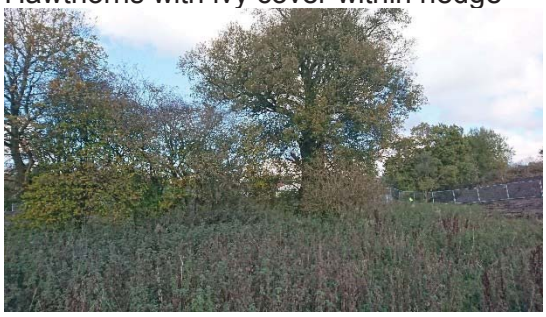
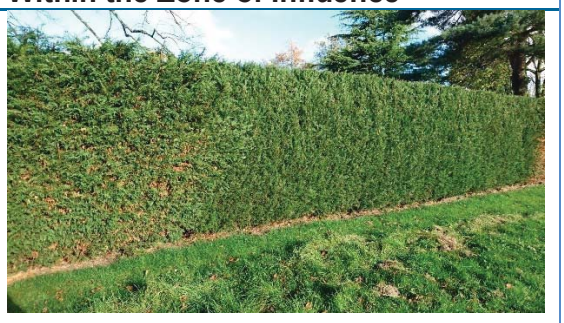
5.2 Habitat Survey

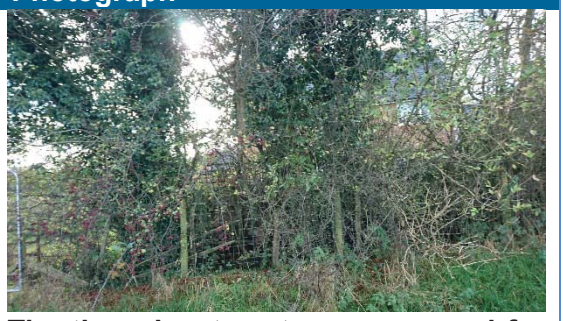
The site comprises a large area of bare ground to the east with a small patch of marshy grassland. Improved grassland lies in the west. There are patches of tall ruderal vegetation along the southern boundary of the site, running along native species rich hedgerow with trees and a dry ditch. There is a species poor hedgerow along the north western boundary of the site bordering onto the college, and trees scattered along the site boundaries. These habitats are presented on plan P.808.16.01A (Appendix 1).

The immediate surrounding landscape comprises an all-weather sports pitch to the east, farmland to the south east, a new residential estate to the south west and college buildings to the north. Beyond, the main land use to the east is farmland including arable and pasture east of the site, there is woodland (Biological Heritage Site) to the south east, residential dwellings south west and west, and farmland to the north if the site.

Weather conditions during the survey were mild (10 ºC) and cloudy (6/8) with an F2 (Beaufort Scale) light breeze, therefore appropriate for this type of survey.

Table 5.1 Habitat Types on the Proposed Development Site.

Description	Photograph
Scattered Trees: There are trees scattered around the site boundaries and within hedgerows. Species include lime, ash, oak, sycamore, and hawthorn. Scattered trees can offer nesting habitat for birds and roosting habitat for bats. They may also offer forage for birds, bats, and insects. There are three hawthorn trees along the south eastern boundary of the site where the new access road is proposed to pass through. However, most of the trees on site will be unaffected by developments and new trees are planned to be planted in the south eastern corner of the site, along the road, within proposals. These trees would replace the loss of habitat caused by the removal of the hawthorns.	 Hawthorns with ivy cover within hedge  Scattered trees
Ecological Value	**Within the Zone of Influence**
Species Poor Intact Hedge: There is a well-maintained cypress hedge along the north western boundary of the site, which borders with the college. Species poor hedgerows offer nesting and forage habitat for birds, and forage for amphibians, small mammals and invertebrates. This hedge will not be lost within current proposals.	
Ecological Value	**Within the Zone of Influence**

Description	Photograph
Native Species Rich Hedge with Trees: There are species rich hedgerows along the southern boundary and cutting across to the north west from the southern boundary. These are unmanaged and dominated by hawthorn and hazel with ash and holly also present. This habitat offers nesting opportunities for birds and the trees may offer roosting and commuting habitat for bats. The hedgerow will also offer forage for birds, bats, amphibians, small mammals and invertebrates. Most of the hedgerow will be retained within proposals. However, a small section of hedgerow and three hawthorn trees in the south east of the site will be lost to the development for the creation of an access road. This loss can be mitigated by enhancing the species composition and management of the retained hedgerows.	 **The three hawtorn trees proposed for loss to accommodate access.** 
Ecological Value	**Within the Zone of Influence**
Dry Ditch: There is a dry ditch which runs along the native species rich hedge and trees. The ditch may offer some forage for amphibians and invertebrates but is unlikely to support species such as water vole. Most of the ditch will be retained within proposals with only a small loss along the east where the new access road is proposed.	 **The tree lined dry ditch**
Ecological Value	**Within the Zone of Influence**
Tall Ruderal Vegetation: There are patches of tall ruderal vegetation encroaching the bare ground from the southern edge of the site, along the species rich hedgerow. Tall ruderal vegetation offers forage for birds, bats, small mammals, amphibians and invertebrates. This type of habitat is common in the wider environment and can be easily recreated.	
Ecological Value	**Within the Zone of Influence**
Improved Grassland: The western side of the site comprises improved grassland, formerly a paddock for donkey grazing. The site has been left ungrazed for some time and has stated to develop a rank sward through lack of grazing. The habitat offers limited forage for birds, amphibians and invertebrates. This type of habitat is common in the wider environment and can be easily replicated by provision of lawns within the proposals.	
Ecological Value	**Within the Zone of Influence**

Description	Photograph
Bare Ground: Part of the site has been cleared prior to the site visit. Previously this was tall ruderal vegetation and improved grassland (based on site visit undertaken by Ascerta in 2016). The majority of the site now comprises bare ground with patches of encroaching tall ruderal vegetation and marshy grassland. This habitat offers limited forage for birds or other species, with better habitat existing in the vicinity. Bare ground is common in the wider environment.	
Ecological Value	**Negligible**
Marshy Grassland: There is a small patch of species poor marshy grassland amid bare ground. This comprised of soft and hard rush with common sedge and grass species such as fescue and cock's foot. This is remnant of a slightly larger area of marshy grassland noted during the 2016 survey. This habitat is common in the wider area and loss to the proposals will not adversely impact biodiversity value of the area.	
Ecological Value	**Within the Zone of Influence**
Bonfire Pile: The site was visited on 1st November, just before bonfire night, when a bonfire pile was identified. It is thought that this was a temporary feature which will have been burned on bonfire night. If the bonfire pile is still present in 2019, it could provide refuge for hedgehogs and should either be hand-removed or checked before being burned or destroyed.	
Ecological Value	**Negligible**

5.3 Protected and Invasive Species

Species Results	Evaluation and Recommendations
Amphibians: Sixty-three records of great crested newt were returned from trapping surveys at 8 locations within 2km of the site. The closest record came from 420m east of the site, and the most recent record dates from 2017. There is foraging habitat for GCN within the hedgerows onsite and good habitat connectivity with the nearby Biological Heritage Site, Spring Wood, 290m south east. There are six water bodies within the vicinity of the site, one of which is located 527m south east of the site within Spring Wood. The development site is isolated from Spring Wood by the A671, although species of amphibian could cross roads. The closest pond is located 490m north west of the site together with a smaller pond 15m west. These ponds are connected to the development site by gardens and residential streets. There are records of other amphibians. The record search returned: 37 records of smooth newt with the closest record 190m west of the site, and the most recent from 2011. 72 palmate newt with the closest record 200m west of the site, 81 common frog with the closest record 220m north west of the site and 18 common toad with the closest record 490m east of the site.	It is considered that there is sufficient habitat connectivity for great crested newts and other amphibians to be using the hedgerows onsite. The site provides foraging and commuting habitat for newts but no breeding habitat. The hedgerows and dry ditch form the main foraging habitat for great crested newt and will be mostly retained within the proposals. Therefore, there will be no adverse impact on habitat availability for great crested newt following development. However, a small section will be lost to provide access. There is a very low risk amphibian, including great crested newt could resting under the hedgerow during removal. Therefore, it is recommended that Reasonable Avoidance Measures (RAMS) are undertaken to ensure that there is no harm caused to amphibians, including great crested newt, during the removal of the hedgerow and G1 on the south eastern boundary of the site. These are outlined in section 5.4 below.
Ecological Value	**Within the Zone of Influence**
Badger: One record of badger was returned within 2km of the site. The location of this was confidential and the record dated from 2015. No evidence of badger use of the site was noted during survey and the site provides limited sett building habitat due to the current works on the site.	It is considered that badgers are not using the site for foraging or commuting, and the site provides low quality sett building habitat as it subject to disturbance. Badgers are unlikely to be influenced by the proposals and need no further consideration within the current planning application.
Ecological Value	**N/A as unlikely present**

Species Results	Evaluation and Recommendations
Bats: Three records of bat were returned within 2km of the development site. The closest record is an unidentified bat roost 226m north west of the site, dating from 2012. There is also a record of a single soprano pipistrelle 1.6km north west of the site from 2010 and a record of a common pipistrelle roost dating from 2012. <u>Preliminary Ecological Appraisal for Bats</u> *Habitats*: The habitats on site, including the scattered trees, species poor hedgerow, native species rich hedge and trees and tall ruderal vegetation, offer some forage and commuting habitat for bats. *Buildings*: There are no buildings onsite. *Trees*: There are several large trees onsite which were assessed for potential bat roost features These trees are mapped on drawing *P.808.16.01A, Appendix 1* and include the oak (T3) and sycamore (T4) on the eastern boundary, three hawthorn trees (H1) on the south eastern boundary, two ash trees (T6 and T8) and an oak tree (T7) on the south western boundary and four limes on the north western boundary (G5). Of these trees, only the three hawthorns are proposed for removal during development works.	*Habitat*: The habitats on the site are considered to provide **low** bat commuting and foraging suitability. With the majority of features retained within the proposals, including scattered trees, species poor hedgerow and native species rich hedgerow with trees. There are also plans for the planting of new trees within the development. *Trees*: The majority of trees will be retained within the proposals bar three hawthorn in the south of the site within the hedgerow H1. These had some light ivy cover and were assessed has having low bat roost potential. They can be felled without the need for further survey provided this is complete by November 2019. If this is not possible an update survey may be required as tree condition can change over time. The majority of trees on the site have negligible to low bat roost potential. However, three trees were identified as having moderate bat roost potential. These are T3 – Oak, T6 – Ash, T7 – Oak (marked on drawing P.808.16.01A). If these are to have works, or be felled in the future, then further surveys may be necessary to ensure that bats are not roosting within the trees. The planting of new trees is already included within current development plans. It is considered that the new planting will sufficiently replace the loss of bat foraging habitat that was provided by the G1, hawthorn trees. To enable bats continued use of retained commuting and foraging habitats on the site it is advised that lighting is kept to a minimum and designed to avoid spill into the foraging habitat i.e. the scattered trees along the eastern border of the site. Lighting design should follow advice set out in *Bats and lighting in the UK- bats and the built environment series*, 08/18 (Bat Conservation Trust, 2018).
Ecological Value	**Low bat commuting and foraging habitat, negligible to moderate roosting habitat in trees.**

Species Results	Evaluation and Recommendations
Breeding Birds: Bird records within 2km were returned including skylark, kestrel, redpoll, swift, cuckoo, house martin, lesser spotted woodpecker, swallow and house sparrow. The habitats on site offer nesting opportunities for common bird species within trees and the species poor hedgerow. No bird activity was recorded during the site walkover survey.	There will be only negligible habitat loss for breeding and foraging birds as a result of the proposals, including the removal of the hawthorn trees, H1. The loss of nesting habitat can be mitigated for by the provision of a 32mm hole box attached to a retained tree within the proposals. The site can be enhanced for birds with additional bird box provision and the planting of new trees. In order to avoid harm to nesting birds, vegetation should not be cleared during the bird breeding season (between 1 March and 31 August). If vegetation needs to be cleared during this period, a nesting bird survey will be required, conducted by a suitably qualified ecologist, before works begin. If any active nests are observed during the survey, exclusion zones will be set up and works will not occur in these areas until nesting is complete.
Ecological Value	**Within the Zone of Influence**
Other Species: Seven records of brown hare were returned. The most recent sighting of brown hare was in 2014. Three records of European hedgehog were returned. The closest was 1.25km north of the site and the most recent from 2013. No records of reptiles, water vole, otter or white clawed crayfish were returned for the site. There are no water bodies on site or within the immediate vicinity that would provide suitable habitat for water vole or otter. The dry ditch is not considered to support water vole as it is completely dry and not connected to suitable water vole habitat. No records of water vole were returned in the vicinity.	The site does not provide habitat for brown hare, however may provide habitat for hedgehogs within hedgerows. It is considered that hedgehog may be affected by the developments as former potential commuting habitat is to be replaced by a small access road. However due to the closed cul-de-sac nature of the development it is considered that the road will be quiet and pose little treat to hedgehogs. In order to enable hedgehog continued access across site it is recommended that gaps of 13cm by 13cm are left under fences between garden.
Ecological Value	**N/A as unlikely present**

5.4 Potential Further Works for Amphibians

Amphibian Reasonable Avoidance Measures

As works are to be carried out to the hedgerows to provide access to the site it is advised that Reasonable Avoidance Measures (RAMs) are used to ensure no harm to amphibian in the unlikely event they are encountered during works:

1. Staff should be informed by a 'toolbox talk' of the precautions to take in the unlikely event an amphibian is found on site;
2. Ideally, initial ground works (root removal and digging) should also be carried out at a suitable time of year when amphibian are unlikely to be using the area (preferably between mid-March and the end of May);
3. If this is not possible, any areas of suitable amphibian habitat should be searched for amphibian by a suitably qualified and licensed ecologist immediately prior to commencement; and
4. Construction works can create suitable amphibian terrestrial habitat in the form of rubble piles and stored material. To discourage these species during construction all materials should be stored off the ground on pallets. In addition, any excavations should have ramps (planks of wood) fitted overnight to provide an escape route to species that may they fall into excavations.

The above RAMs can be detailed within a Construction Environment Management Plan (CEMP) as required. In the unlikely event that amphibians are found during works, all work should stop, and a suitably qualified ecologist contacted for advice.

6.0 Assessment & Recommendations

6.1 Designated Sites and Habitats

There is statutory site, Light Clough SSSI (1.54km north east) and four non-statutory sites (Biological Heritage Sites), Spring Wood (290m south east), Calder Bank, Broken Brow (690m south), Sir John's Wood & Lords Park Wood (600m south) and Planes Wood (1km south east) within the vicinity of the proposals.

Spring Wood is connected to the site by hedgerows, however is cut off by the A671. It is still possible that species from the wood use the development site. However, it is considered that the A761 has a much more immediate effect on Spring Wood than the development is likely to. It is considered that there will be no impact on any other BHS or SSSI in the vicinity of the site as a result of proposals for 8 houses.

The site lies within a Natural England SSSI Impact Risk Zone; however, Natural England will not need to be consulted for this type of planning proposal within the residential area. Natural England would need to be consulted if more than ten residential dwellings were to be built onsite. It is considered that there will be no impact on any SSSIs in the vicinity as a result of the proposals.

The habitats on site comprise scattered trees, species poor intact hedge, native species rich hedge and trees, tall ruderal vegetation, improved grassland, bare ground, dry ditch and marshy grassland. These habitats are considered to have an ecological value of **within the zone of influence** of the site or lower. The site contains no designated or priority habitats. Overall the proposals are unlikely to adversely affect the ecological value of the area.

6.2 Protected and Invasive Species

The site offers habitat for amphibians including great crested newts. It is considered that amphibians could be using hedgerows as forage habitat therefore Reasonable Avoidance Measures (RAMS) should be followed as detailed in section 5.4 above to avoid causing harm to amphibians.

Some of the trees on site have been assessed as having **moderate** potential roost features for bats. If these trees require felling or pruning works in the future, further bat surveys may be necessary. The rest of the trees onsite were assessed as having **low** to **negligible** potential roost features for bats. The three hawthorn trees which will be removed as part of the development offer **low** potential roost features and no further surveys are considered necessary for them to be felled provided this is complete by November 2019. The site is assessed as providing **low** bat foraging and commuting habitat (5.3 above). The site also provides habitat for nesting birds and vegetation clearance should be timed to avoid disturbing nesting birds.

To allow bats to forage and commute across the site and along hedgerows, is advised that lighting is kept to a minimum and designed to avoid spill into the foraging habitat i.e. the scattered trees along the eastern border of the site. Lighting design should follow advice set out in *Bats and lighting in the UK- bats and the built environment series*, (Bat Conservation Trust, 2009).

6.3 Enhancements

In order to meet requirements for biodiversity protection and enhancement outlined within the NPPF, it is recommended that ecological enhancements are included where possible. These could include:

1. The planting of new trees (already proposed);
2. Provision of one 25mm or 32mm entrance hole bird box, and one house sparrow terrace attached to retained trees on site and a new build on-site respectively;
3. Provision of a bat box (e.g. Schewgler 2F type) attached to a retained tree on site; and
4. Suitable landscaping incorporating species that provide a food or shelter resource to wildlife to include hawthorn, honeysuckle and holly as hedgerow species and silver birch, crab apple, rowan and bird cherry as tree species.

7.0 Conclusions

It is considered that there would be very limited impact on the local ecology as a result of the proposals, provided the recommendations detailed above are followed. In summary these include:

1. Reasonable Avoidance Measures to ensure that no harm is caused to amphibians during the removal of the hawthorn trees and hedgerow for the creation of a new access road;
2. The retention of trees with moderate bat roost features. If any of these trees are to be felled or pruned in the future, further climbing or nocturnal surveys will be necessary to ensure that no harm will be caused to bats;
3. Planting of new trees to ensure that there is no net loss of bird nesting habitat and bat foraging and commuting habitat;
4. Installation of a 32mm hole nest box within retained vegetation to mitigate for loss of nesting habitat within the hawthorn trees to be lost;
5. Ensuring the felling of the three hawthorn is complete by November 2019;
6. Lighting sensitive to the needs of bats, designed to avoid overspill onto the scattered trees present on site;
7. Avoiding vegetation removal during the bird breeding season (1 March to 31 August inclusive) or undertaking a survey for breeding birds and ensuring any active nests found are protected within a suitable buffer zone until they are no longer in use;
8. Providing gaps of 13cm by 13cm under garden fences to enable hedgehog continued access across site; and
9. Habitat enhancement with the installation of a bird box (one 25mm or 32mm entrance hole box), attached to retained trees on site, one house sparrow terrace attached to a new build, a bat box attached to a retained tree and suitable landscaping incorporating species that provide a food or shelter resource to wildlife to include hawthorn, honeysuckle and holly as hedgerow species and silver birch, crab apple, rowan and bird cherry as tree species.

The above recommendations, if fully implemented, will enable the proposals to meet the requirements of national and local guidance and legislation including the NPPF and policies EN3 and EN4 of the Core Strategy 2008 - 2028 A Local Plan for Ribble Valley Adoption Version (adopted 16 December 2014).

8.0 References

Bat Conservation Trust (2018) *Bats and lighting in the UK- bats and the built environment series 08/18* Bat Conservation Trust, London.

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

CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.

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

Department for Communities and Local Government (2018), *National Planning Policy Framework (NPPF)*

Joint Nature Conservation Committee (JNCC) (2010) *Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit*. JNCC Publications, Peterborough;

Joint Nature Conservation Committee (JNCC). *The UK Biodiversity Action Plan (UK BAP)* [online] Available at: www.jncc.defra.gov.uk/page-5155

Maddock, A., (ed) (2011) *UK Biodiversity Action Plan; Priority Habitat Descriptions*, JNCC.

Multi Agency Geographic Information for the Countryside (MAGIC) [online]

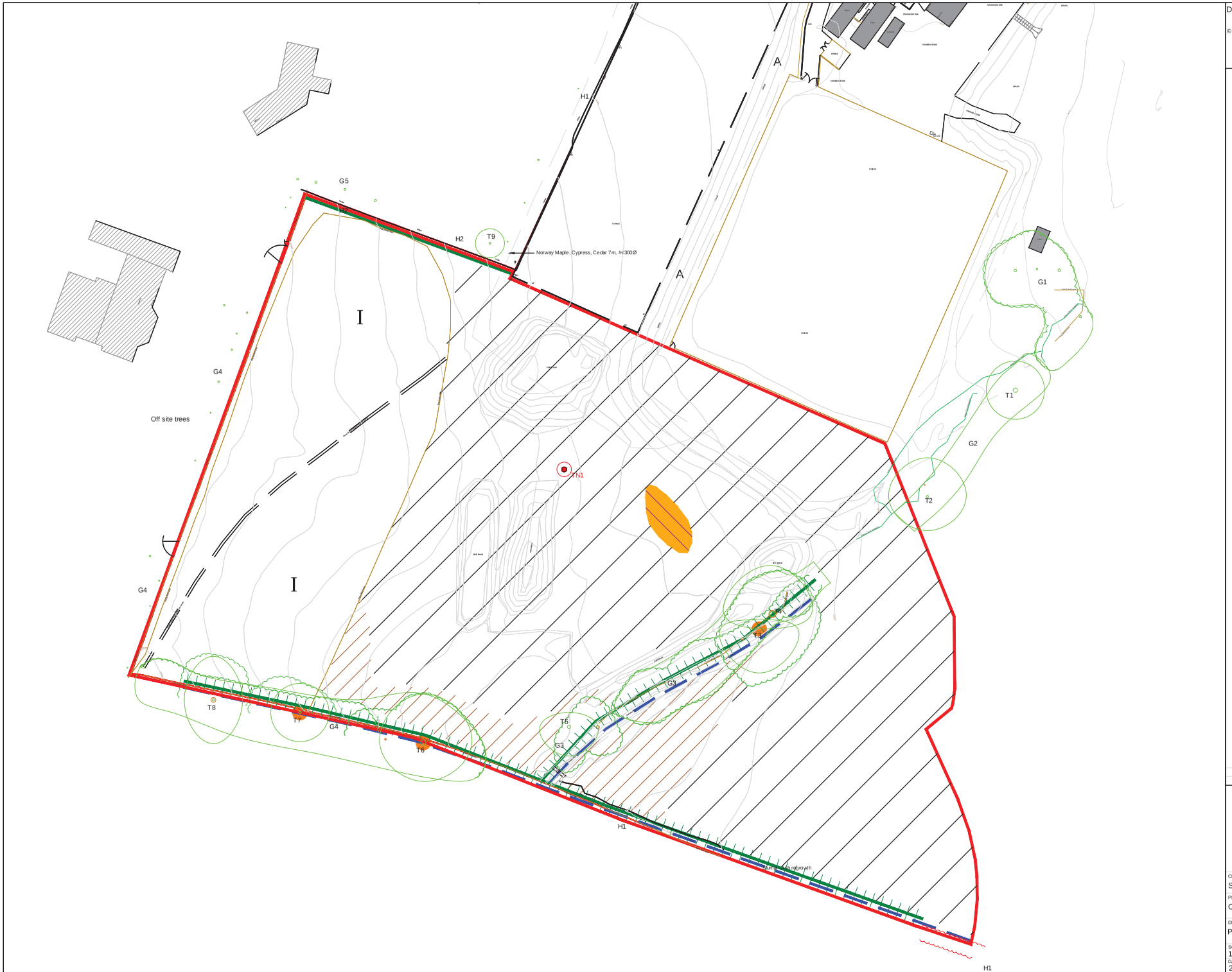
Rose. F. (2006). *Collins The Wild Flower Key, how to identify wild flowers trees and shrubs in Britain and Ireland* .Penguin Group: London.

Stace, C., (2010). *New Flora of the British Isles.* 3rd Edition. Cambridge University Press: Cambridge.

Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Appendix 1



DO NOT SCALE ALL COORDINATES RELATED TO LOCAL GRID LOCATED TO OS NG BY BEST FIT TO DETAIL, EXTRACTED FROM OS DIGITAL DATA.

KEY

- Development site boundary
- Scattered trees
- Species poor intact hedge
- Native species rich hedge and trees
- Tall ruderal vegetation
- Improved grassland
- Bare ground
- Dry ditch
- Marsh / marshy grassland
- Target note 1 - Bonfire pile
- Moderate bat roost potential

REV	DESCRIPTION	DATE
A	General updates	01/11/18

Ascerta
Landscape | Trees | Ecology
f: 0845 463 4405
e: info@landscapetreesecology.com
www.landscapetreesecology.com

CLIENT:
Sunderland Peakcock and Associates

PROJECT:
Oak Hill Housing, Whalley

DRAWING TITLE:
Phase One Habitat Survey

SCALE:	DRAWN BY:	DRAWING No:	REV:
1:500 @A2	CP		
DATE:	CHKD BY:		
21/11/2016	LN	P.808.16.01	A

S:\All Jobs\808.16 Oak Hill Housing, Whalley BB7 9AP\Drawings\P.808.16.01A Phase One Habitat Survey

Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Appendix 2

Species List

English Name	Scientific Name
Common sedge	*Carex nigra*
Ash	*Fraxinus excelsior*
Beech	*Fagus sylvatica*
Bramble	*Rubus fruticosus agg.*
Broadleaved dock	*Rumex obtusifolius*
Cherry	*Prunus sp*
Cock's-foot	*Dactylis glomerata*
Creeping buttercup	*Ranunculus repens*
Creeping thistle	*Cirsium arvense*
Dandelion	*Taraxacum officinale*
Elder	*Sambucus nigra*
Fescue sp.	*Festuca sp.*
Hard rush	*Juncus inflexus*
Hawthorn	*Crataegus monogyna*
Hazel	*Corylus avellana*
Hogweed	*Heracleum sphondylium*
Horse chestnut	*Aesculus hippocastanum*
Ivy	*Hedera helix*
Lime	*Tilia x europaea*
Moss	*Bryophyta sp.*
Nettle	*Urtica dioica*
Oak	*Quercus robur*
Poa sp.	*Poa sp.*
Ragwort	*Senecio jacobaea*
Raspberry	*Rubus ideaus*
Rosebay willowherb	*Chamerion angustifolium*
Soft rush	*Juncus effusus*
Sycamore	*Acer pseudoplatanus*
Wych elm	*Ulmus glabra*
Yew	*Taxus baccata*

*** invasive species**

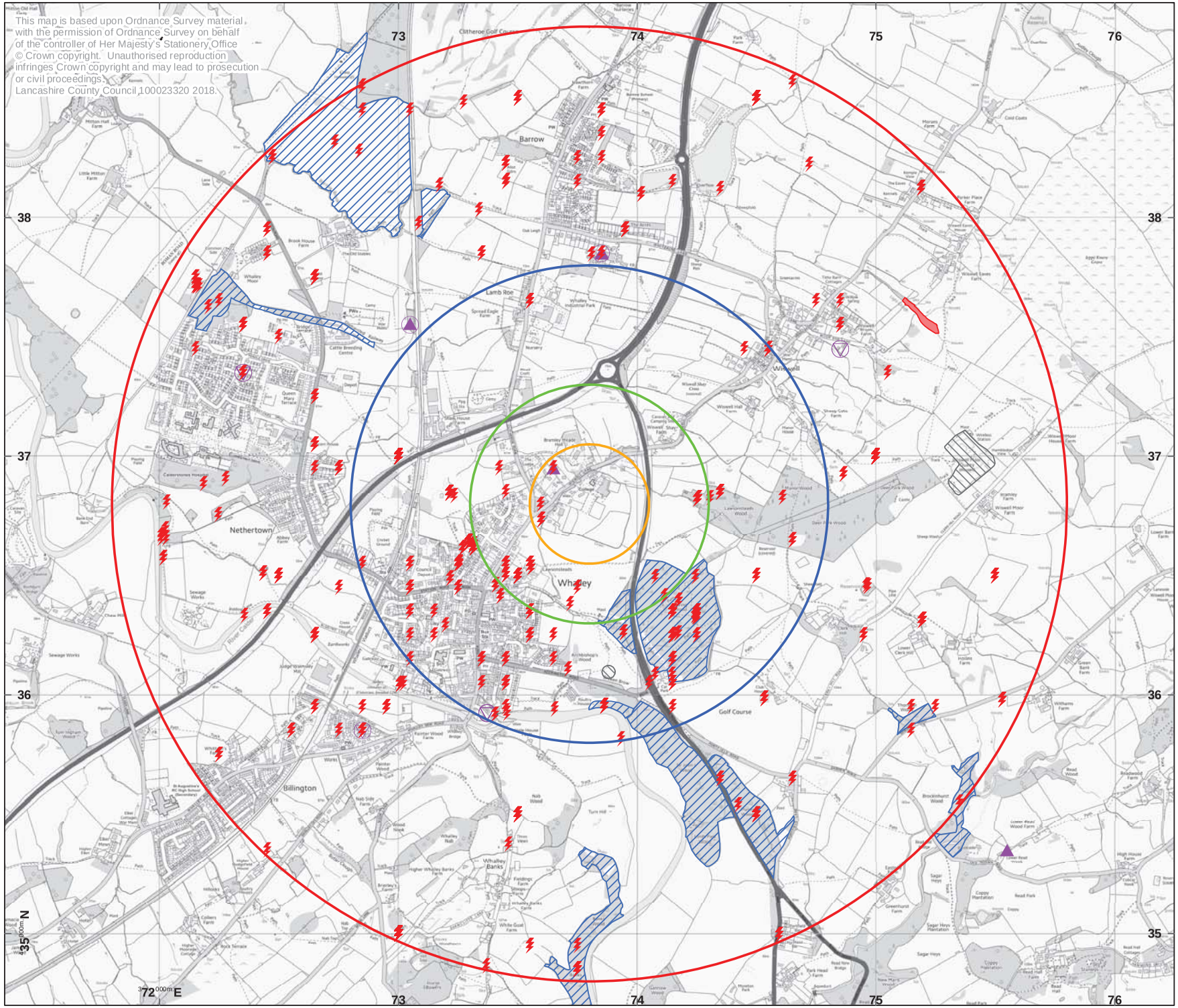
Target Notes

TN1 – Bonfire Pile

Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Appendix 3



Project:
Oak Hill Housing

Client:
Ascerta

Grid Ref: 373800 436800

Legend

- 250 m Buffer
- 500 m Buffer
- 1 km Buffer
- 2 km Buffer
- Lancashire Key Species
- Bat Roost or Possible Roost
- Other Bat Record
- SLBG Bat Roost or Possible Roost
- SLBG Other Bat Record
- Biological Heritage Sites
- Local Geodiversity Sites
- SSSI

N.B. THIS IS AN INTERACTIVE PDF LAYERS CAN BE TURNED ON OR OFF TO AID CLARITY.

N

Metres

0 1,000

1:15,000

Boundaries of statutory designations (Natura 2000, SSSI etc) are included for information only. Definitive, information for these designations should be obtained from Natural England.

Lancashire Key Species records are plotted at the centre of the area to which they relate (the precision of each record is given in the accompanying attribute data and spreadsheet).

NBN Atlas occurrence download at https://nbnatlas.org accessed on Fri Oct 20 12:44:41 UTC 2017. See supporting documentation for citations and further information.

Lancashire Environment Record Network
C/O Planning Group
Environment Directorate,
Lancashire County Council,
PO Box 100,
County Hall,
Preston. PR1 0LD

lern@lancashire.gov.uk http://www.lancashire.gov.uk/lern.aspx