Land at Hawthorne Place, Clitheroe, BB7 2HU

ECOLOGICAL SURVEY AND ASSESSMENT

September 2019

[ERAP (Consultant Ecologists) Ltd ref: 2019-283]

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Document Control

Survey Type:	**Surveyors**	**Survey Date(s)**
Phase 1 Habitat survey	Amy Sharples B.Sc. (Hons) M.Sc. GradCIEEM	6th November 2018
Updated Phase 1 Habitat survey	Amy Sharples B.Sc. (Hons) M.Sc. GradCIEEM	5th September 2019
Reporting	**Personnel**	**Date**
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Revised and issued by	Amy Sharples B.Sc. (Hons) M.Sc. GradCIEEM	6th September 2019
Report issued to	Persimmon Homes (Lancashire)	
Version Number	2: Updated to include the results of the updated Phase 1 Habitat survey	

SUMMARY

i. This Ecological Appraisal presents the ecological, biodiversity and nature conservation status of the land at Hawthorne Place, Clitheroe, BB7 2HU. The appraisal was requested in connection with proposals to develop the site to housing.

ii. The appraisal presents the results of a desktop study and extended Phase 1 Habitat Survey carried out in November 2018. The scope of survey undertaken is appropriate to identify potential ecological constraints, the remit of mitigation required and opportunities for biodiversity associated with the development proposals.

iii. The site comprises one field of sheep-grazed improved grassland with tall-herb vegetation, scattered trees and shrubs and boundary hedgerows.

iv. The proposals will have no adverse effect on statutory or non-statutory designated sites for nature conservation.

v. None of the habitats within the site are of significant interest in terms of their plant species composition; only common and widespread plant species were recorded. None of the habitats present are semi-natural and the National Vegetation Classification (NVC) communities present are typical of the geographical area and site conditions.

vi. Hedgerow 1 is Priority Habitat. Hedgerow 1 does not qualify as 'important' in accordance with *The Hedgerows Regulations 1997* wildlife and landscape criteria. Recommendations for the protection of Hedgerow 1 and compensatory planting to be implemented if the removal of a section of hedgerow is unavoidable are presented at **Sections 5.2** and **5.6**. No other Priority Habitats are present at the site.

vii. Appropriate survey effort and / or assessment in accordance with standard guidance has been carried out to reasonably discount adverse effects on relevant protected species namely badger, roosting bats, barn owl, great crested newt and other amphibians and reptile species. No further survey is necessary to inform a planning decision.

viii. Habitats at the site are of low suitability for use by foraging bats. Conservation of opportunities for foraging bats and enhancement of the developed site for roosting bats will be achieved by the scheme, refer to **Section 5.4**. The boundary hedgerows and scattered trees and shrubs within the site are suitable for use by nesting birds including Priority Species. Mandatory actions to protect nesting birds during site clearance and measures to provide compensatory opportunities for nesting birds are recommended and can be achieved by the proposals, refer to **Section 5.5**.

ix. An invasive species listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) namely Wall Cotoneaster was detected. It is an offence to cause the spread of this species in the wild. Guidance on the control of this species is described in the report (**Section 5.3**).

x. The recommendations in **Section 5.0** address all the mandatory measures and ecological recommendations to be applied to ensure compliance with wildlife legislation, the National Planning Policy Framework (NPPF) and best practice.

xi. The proposals will secure an opportunity to implement beneficial measures such as habitat creation that will safeguard habitats for wildlife such as birds and bats, it is feasible to provide a net gain in biodiversity in accordance with the principles of the NPPF.

xii. It is concluded that the proposals are feasible and acceptable in accordance with ecological considerations and relevant planning policy. Development at the site will provide an opportunity to secure ecological enhancement for wildlife associated with residential development.

1.0 INTRODUCTION

1.1 Background and Rationale

1.1.1 ERAP (Consultant Ecologists) Ltd was commissioned by Persimmon Homes (Lancashire) to carry out an ecological appraisal of the land at Hawthorne Place, Clitheroe, BB7 2HU (hereafter referred to as the 'site'). The Ordnance Survey (OS) grid reference at the centre of the site is SD 7438 4254. An aerial image of the site and its surrounding habitats is appended at **Figure 1** (Source: Google Maps).

1.1.2 The appraisal was requested in connection with a planning application to develop the site to housing.

1.2 Scope of Works

1.2.1 The scope of ecological works undertaken in November 2018 and September 2019 comprised:

a. A desktop study and data search for known ecological information at the site and the local area;

b. An Extended Phase 1 Habitat Survey and assessment;

c. Assessment of the ecological value of the habitats within the site with the use of the National Vegetation Classification (NVC) and the Ratcliffe criteria, as presented in *A Nature Conservation Review* (Ratcliffe, 1977);

d. Survey and assessment of all habitats for relevant statutorily protected species and other wildlife including badger (*Meles meles*), great crested newt (*Triturus cristatus*), bird species and reptiles;

e. A preliminary bat survey and assessment of the trees for potential roost features;

f. The identification of any potential ecological constraints on the proposals and the specification of the scope of mitigation and ecological enhancement required in accordance with wildlife legislation, planning policy guidance and other relevant guidance; and

g. The identification of any further surveys or precautionary actions that may be required prior to the commencement of any development activities.

2.0 METHOD OF SURVEY

2.1 Desktop Study

2.1.1 The following sources of information and ecological records were consulted:

a. MAGiC: A web-based interactive map which brings together geographic information on key environmental schemes and designations, including details of statutory nature conservation sites;

b. Lancashire Environment Record Network (LERN); and

c. The Lancashire Biodiversity Action Plan (BAP).

2.2 Vegetation and Habitats

2.2.1 An Extended Phase 1 Habitat Survey of the site was carried out by Amy Sharples B.Sc. (Hons) M.Sc. GradCIEEM on 6th November 2018. The weather was dry with scattered cloud, a light air (Beaufort Scale 1) and an air temperature of 12°C. The conditions were favourable for the ecological survey.

2.2.2 An updated Phase 1 Habitat Survey of the site was carried out by Amy Sharples B.Sc. (Hons) M.Sc. GradCIEEM on 5th September 2019. The weather was dry with scattered cloud with a light air (Beaufort Scale 1) and an air temperature of 11°C. The conditions and time of year were favourable for the updated ecological survey.

2.2.3 A habitat and vegetation map was produced for the site and the immediate surrounding area at a scale of 1:1250 (refer to **Figure 2**). The mapping is based on the Joint Nature Conservation Committee Phase 1 Habitat Survey methodology (JNCC, 2010) with minor adjustments to illustrate and examine the habitats with greater precision.

2.2.4 The plant species within the site boundary were determined with estimates of the distribution, ground cover, abundance and constancy of individual species. The estimation of abundance was based on the DAFOR system, where D = Dominant, A = Abundant, F = Frequent, O = Occasional and R = Rare, this being a widely used and accepted system employed by ecological surveyors. The terms L = Locally and V = Very were additionally used to describe the plant species distributions with greater precision.

2.2.5 Stands of vegetation and habitats were described and evaluated using the National Vegetation Classification (NVC). The NVC provides a systematic and comprehensive analysis of British vegetation and is a reliable framework for nature conservation and land-use planning.

2.2.6 Hedgerows were assessed in accordance with *The Hedgerows Regulations 1997* Wildlife and Landscape Criteria (H.M.S.O., 1997).

2.2.7 Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the *Wildlife and Countryside Act 1981* (as amended) and species which are indicators of important and uncommon plant communities. Plant nomenclature follows *New Flora of the British Isles 3rd Edition* (Stace, 2010).

2.2.8 Searches were carried out for the presence of invasive species, including those listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended), including Japanese Knotweed (*Fallopia japonica*), Indian Balsam (*Impatiens glandulifera*) and Giant Hogweed (*Heracleum mantegazzianum*).

2.3 Animal Life

Badger

2.3.1 The survey area for badger covered the site (as annotated on **Figure 1**) and extended to accessible land within a radius of 50 metres from the site boundary. Private gardens / land were excluded from the survey.

2.3.2 The survey was conducted in accordance with guidance presented within *Badgers and Development* (Natural England, 2007) and *Badgers: surveys and mitigation for development projects* (Natural England, 2015).

2.3.3 The following signs of badger activity were searched for:

a. Sett entrances, e.g. entrances that are normally 25 to 35cm in diameter and shaped like a ‘D’ on its side;
b. Large spoil heaps outside sett entrances;
c. Bedding outside sett entrances;
d. Badger footprints;
e. Badger paths;
f. Latrines;
g. Badger hairs on fences or bushes;
h. Scratching posts; and
i. Signs of digging for food.

2.3.4 Habitats within and surrounding the site were assessed in terms of their suitability for use by foraging and sheltering badger in accordance with their known habitat preferences as detailed in current guidance and *Badger* (Roper, 2010).

Bat Species

Daylight Survey: Trees

2.3.5 A preliminary assessment of the trees within the site was conducted to assess their suitability for use by roosting bats, and to inform whether further surveys or precautionary measures were required.

2.3.6 Trees were assessed from the ground using binoculars and a high-powered torch. Each tree was searched for the presence of the following features:

Woodpecker holes, rot holes, hazard beams, other vertical or horizontal cracks or splits in stems and branches, partially decayed platey bark, knot holes, man-made holes, tear-outs, cankers in which cavities have developed, other hollows or cavities, including butt-rots, double-leaders forming compression forks with included bark, gaps between overlapping stems or branches, partially detached Ivy (Hedera helix) with stem diameters in excess of 50mm and bat, bird or dormouse (Muscardinus avellanarius) boxes.

2.3.7 Terms used to describe any features present follow (where possible) those outlined and described in *Bat Tree Habitat Key, 2nd Edition* (Andrews, H (ed), 2013) and *Bat Roosts in Trees: A Guide to Identification and Assessment for Tree-care and Ecology Professionals* (BTHK, 2018).

2.3.8 The requirement for further presence / absence surveys at each tree was then considered.

Habitat Assessment for Commuting / Foraging Bats

2.3.9 Habitats within and adjacent to the site were assessed for their value and suitability for commuting and foraging bats in accordance with Table 4.1 of *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn),* (Collins, J. (ed), 2016). Reference has been made using the following categories and descriptions / examples, presented at **Table 2.1**, below.

Table 2.1: Consideration of Suitability of Foraging and Commuting Habitat for Bats

Suitability	Commuting Habitat	Foraging Habitat
Negligible	Negligible habitat features on site likely to be used by commuting bats.	Negligible habitat features on site likely to be used by foraging bats.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated 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 or patch of scrub.
Moderate	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 linked to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous, high-quality habitat that is well connected to the wider landscape and is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. Habitats close to and connected to known roosts.	High-quality habitat that is well-connected to the wider landscape and is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Habitats close to and connected to known roosts.

Bird Species

2.3.10 Bird species observed and heard during the survey were recorded.

2.3.11 Habitats throughout the site and in the immediate surrounding area were assessed for their value to roosting, feeding and nesting birds, as indicated by the amount of shelter, feeding value, woody vegetation structure and species diversity of tree and shrub species in the site.

Great Crested Newt

Desktop Search for Ponds

2.3.12 In accordance with current Natural England guidance (Natural England, 2015) all ponds within an unobstructed 500 metres of a site should be considered for their suitability to support breeding great crested newts. The potential of the proposed development to impact upon any great crested newt population(s) whose breeding ponds are within 500 metres must be considered.

2.3.13 The search of habitats in the wider area up to a distance of 500 metres from the site boundary revealed the presence of one pond, Pond 1 (SD7458 4282) located 255 metres north-west of the site, refer to **Figure 1**.

Consideration of Requirement for Further Survey

2.3.14 The requirement for further survey at Pond 1 was assessed using the following criteria:

a. Results of the data search;

b. Presence of dispersal barriers to great crested newt movements between Pond 1 and the site, as detected during the walkover survey; and

c. Distance of the pond from the site, and the potential influence of the proposed development of the site on any populations of great crested newt (if present at ponds), using the Natural England Rapid Risk Assessment tool.

Consideration of Distance of Ponds from Site and Relative Size of Site

2.3.15 To inform the requirement for further surveys, the Natural England Rapid Risk Assessment tool from *GCN Method Statement WML-A14-2 (Version November 2017)* (Natural England, 2017) has been completed, as presented at **Table 2.2**, below.

2.3.16 The tool has been completed based on the presence of Pond 1 (located over 250 metres from the site) and the size of the development site (1.7 ha). The rapid risk assessment tool assumes that great crested newt are present.

Table 2.2: Rapid Risk Assessment Result

Component	Likely Effect	Notional Offence Probability Score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	1 - 5 ha lost or damaged	0.04
Individual great crested newts	No effect	0
	Maximum:	0.04
Rapid risk assessment result:	**GREEN: OFFENCE HIGHLY UNLIKELY**	

2.3.17 Due to the results of the Natural England Rapid Risk Assessment, which indicates that the site is sufficiently small and distant from Pond 1 that any proposed development is highly unlikely to impact upon great crested newt populations (if present), it is not considered necessary to include further assessment for potential impacts of the development on great crested newt of Pond 1. In addition, as detailed at **Table 3.2**, there are no known records of great crested newt within a 2 kilometre radius of the site.

Reptile Species

2.3.18 The site and its surroundings were assessed in terms of their suitability for use by reptile species using the important characteristics for reptiles outlined in the draft document '*Reptile Mitigation Guidelines*' (Natural

England, 2011), and the *Reptile Habitat Management Handbook* (Edgar, et al., 2010). These habitat characteristics are outlined in **Table 2.3**, below.

Table 2.3: Important Habitat Characteristics for Reptiles

1. Location (in relation to species range)	7. Connectivity to nearby good quality habitat
2. Vegetation Structure	8. Prey abundance
3. Insolation	9. Refuge opportunity
4. Aspect	10. Hibernation habitat potential
5. Topography	11. Disturbance regime
6. Surface geology	12. Egg-laying site potential

Water Vole and Otter

2.3.19 No water courses, ditches or other bodies of water lie within the site. Therefore the site does not support habitats suitable for water vole and otter and no further survey is required.

2.4 Survey and Reporting Limitations

2.1 All areas of the site were fully accessible at the time of the survey. No survey limitations were experienced.

2.4.2 All measurements within this report are approximate only, and have been either estimated whilst on site or calculated using mapping software (QGIS) or internet-based mapping services such as MAGiC and Google Earth.

2.5 Evaluation Methodology

2.5.1 The habitats, vegetation and animal life were evaluated with reference to standard nature conservation criteria as described in *A Nature Conservation Review* (Ratcliffe, 1977) and *Guidelines for the Selection of Biological SSSIs* (Bainbridge, et al., 2013). These are size (extent), diversity, naturalness, rarity, fragility, typicality, recorded history, position in an ecological or geographical unit, potential value and intrinsic appeal.

2.5.2 Habitats have been assessed to determine whether they meet those described in *UK Biodiversity Action Plan: Priority Habitat Descriptions* (Maddock, A (ed), 2008); these lists are used to help draw up the statutory lists of Priority Habitats, as required under Section 41 of the *Natural Environment and Rural Communities* (NERC) *Act 2006*. Where suitable, the ecological value of the habitats present have been assessed using the terms outlined in *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018).

2.5.3 Government advice on wildlife, as set out in the *National Planning Policy Framework* (Ministry of Housing, Communities and Local Government, 2019) and associated government circulars has been taken into consideration. Legislation relating to protected species, such as those listed under Schedules 1, 5, 6 and 8 of the *Wildlife and Countryside Act 1981* (as amended) and *The Conservation of Habitats and Species Regulations 2017*, is referenced where applicable, and any impacts to protected species are evaluated in accordance with current guidance.

2.5.4 The presence of any Priority Species, as listed under Section 41 of the *Natural Environment and Rural Communities (NERC) Act 2006* is noted, and habitats are assessed in terms of their suitability and value for these species. The presence of habitats and/or species listed by the Lancashire BAP Provisional Long List has been taken into account in the evaluation of the site.

3.0 SURVEY RESULTS

3.1 Desktop Study

Designated Sites for Nature Conservation

3.1.1 The site is not designated as, and does not form part of, any statutory or non-statutory designated site for nature conservation.

3.1.2 Four statutory designated sites for nature conservation lie within a 2 kilometre radius of the site. Cross Hill Quarry Local Nature Reserve (LNR), designated as a good example of natural change on a man-made site, lies 385 metres north-west of the site. The overlapping Salthill Quarry LNR and Salthill and Bellmanpark Quarries Site of Special Scientific Interest (SSSI), designated for their geological features, lie 650 metres east of the site. Coplow Quarry SSSI, designated for is geological features, lies 705 metres north-east of the site.

3.1.3 The site lies within a SSSI Impact Risk Zone for Langcliff Cross Meadow SSSI and Special Area of Conservation (SAC) that lies 9.1 kilometres north-west of the site. The meadow is designated as the best example of the few remaining species-rich meadow grasslands in the county. The SSSI Impact Risk Zone requires the Local Planning Authority to consult with Natural England on likely risks from the following development categories (Ordnance Survey, 2019):

Air Pollution: *Livestock and poultry units with floorspace greater than 500m^2 and slurry lagoons greater than 4000m^2.*

Combustion: *General combustion processes greater than 50 megawatt energy input including energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis / gasification, anaerobic digestion, sewage treatment works and other incineration / combustion.*

3.1.4 Twelve non-statutory designated Biological Heritage Sites (BHS) lie within a 2 kilometre radius of the site. A summary of the BHS is presented at **Table 3.1**.

Table 3.1: Biological Heritage Sites within a 2 Kilometre Radius of the Site

Biological Heritage Site (BHS)	Grid Reference and Distance from Site	Description
Salthill Quarry BHS overlapping with Salthill Quarry LNR, Salthill and Bellmanpark Quarries SSSI	SD756424 650 metres east of the site	The site comprises of a mosaic of habitats including limestone grassland, scrub and developing woodland surrounding a former limestone quarry which has been developed as an industrial estate.
Coplow Quarry and Pimlico Road Grasslands BHS overlapping with Coplow Quarry SSSI	SD751431 705 metres north-east of the site	The site comprises of areas of species-rich, semi-natural calcareous grassland and developing scrub at Coplow Quarry. The site includes Coplow Quarry geological SSSI.
Bellman Farm Marsh BHS	SD758433 1.26 kilometres north-east of the site	The site comprises the land adjoining Pimlico Brook from near Pimlico Link Road to the west fields associated with Bellman Farm. The site also includes the area around the old kiln and the adjacent embankment.

Biological Heritage Site (BHS)	Grid Reference and Distance from Site	Description
Bellman Park Quarry BHS overlapping with Salthill and Bellmanpark Quarries SSSI	SD761427 1.57 kilometres east of the site	Bellman Park Quarry is cut into one of a series of limestone hills, and is a link in a chain of calcareous habitats and features between Clitheroe and Downham. To the west are Clitheroe Castle knoll and Salthill and to the east Crow hill, Worsaw Hill and the A59 (T) road cutting. It forms part of the Salthill and Bellmanpark geological SSSI.
Primrose Lodge BHS	SD739410 1.25 kilometres south of the site	Lodge for the former Primrose Print Works, created by the damming of Mearley Brook, and adjacent semi-natural broadleaved woodland. The site supports the largest known colony of Green Figwort (*Scrophularia umbrosa*), a nationally scarce species in the Ribble Valley.
Waddington Brickworks Old Working BHS	SD738439 1.3 kilometres north-west of the site	The site comprises of old workings colonised by species-rich, semi-natural neutral grassland and used as pasture. The topography is undulating with dry grassy mounds and a low lying, damp, central basin area.
Clitheroe Castle Knoll BHS	SD742415 735 metres south of the site	Several rock outcrops and steep sloping areas of limestone grassland, scrub and developing woodland below Clitheroe Castle.
Cross Hill Quarry BHS overlapping with Cross Hill Quarry LNR	SD744432 385 metres north-west of the site	The site comprises of the disused Cross Hill limestone quarries and the adjoining Brungerley Park and supports a mosaic of semi-natural habitats including limestone grassland, scrub and woodland. The site includes Cross Hill Quarry Local Nature Reserve.
Sherburn Wood BHS	SD731425 825 metres west of the site	Semi-natural woodland on a south facing river cliff above a sweeping curve of the River Ribble. Sedimentary rock outcrops below the weir at the eastern end of the wood, whilst further west conglomerate rock is exposed and gives rise to a tufa formation.
Boy Bank BHS	SD735424 525 metres west of the site	The site comprises a small, semi-natural woodland known as Boy Bank Wood and a contiguous area of species-rich grassland. The site is situated on a bluff line above the south bank of the River Ribble, adjacent to the weir at Waddow.
Dog House Wood BHS	SD737427 585 metres north-west of the site	The site comprises a small semi-natural wood situated on a steep south facing river cliff above the River Ribble near Brungerley Bridge.
River Ribble from London Road Bridge Preston, in West, to County Boundary, in East	SD718387 600 metres west of the site	The site comprises the River Ribble and associated semi-natural habitats from the county boundary at Paythorne downstream to London Road Bridge, Walton-le-Dale, Preston. Collectively, the river and its associated habitats support a rich assemblage of plants and animals. The river is important for Atlantic salmon (*Salmo salar*), sea trout (*Salmo trutta trutta*), otter (*Lutra lutra*) and water vole.

Protected and Notable Species

3.1.5 LERN do not hold any records of protected and notable species for the site.

3.1.6 Records of protected and notable species for a 2 kilometre radius of the site are presented at **Table 3.2**.

Table 3.2: Records of Protected Species Within a 2 Kilometre Radius of the Site

Taxon Group	Species Name and Designations[1] and Notes
Terrestrial mammals	Common pipistrelle (*Pipistrellus pipistrellus*): EPS, WCAs5 & LBAP. 213 records, dated between 1986 and 2016, the closest of which is 690m from the site.
	Soprano pipistrelle (*Pipistrellus pygmaeus*): EPS, WCAs5, PS & LBAP. 6 records, dated between 2010 and 2011, the closest of which is 870m from the site.
	Noctule bat (*Nyctalus noctula*): EPS, WCAs5, PS & LBAP. 1 record, dated 2010, 930m from the site.
	Daubenton's bat (*Myotis daubentonii*): EPS, WCAs5 & LBAP. 76 records, dated between 1991 and 2016, the closest of which is 830m from the site.

Taxon Group	Species Name and Designations[1] and Notes
	Pipistrelle species (*Pipistrellus* sp.): EPS, WCAs5 & LBAP. 3 records, dated between 2011 and 2011, the closest of which is 1910m from the site.
	Myotis species (*Myotis* sp.): EPS, WCAs5 & LBAP. 2 records, dated between 1991 and 2010, the closest of which is 830m from the site.
	Bat species: EPS, WCAs5 & LBAP. 48 records, dated between 1998 and 2011, the closest of which is 580m from the site.
	Water vole (*Arvicola amphibius*): WCAs5 & LBAP. 3 records, dated between 1969 and 1969, the closest of which is 870m from the site.
	Brown hare (*Lepus europaeus*): PS & LBAP. 5 records, dated between 2013 and 2015, the closest of which is 780m from the site.
	Hedgehog (*Erinaceus europaeus*): PS & LBAP. 4 records, dated between 2010 and 2015, the closest of which is 780m from the site.
	Badger (*Meles meles*): Protection of Badgers Act 1992. 4 records, dated between 1994 and 1999, the closest of which is 1790m from the site.
Amphibian	Common frog (*Rana temporaria*): LBAP. 7 records, dated between 1833 and 2010, the closest of which is 1050m from the site.
	Palmate newt (*Lissotriton helveticus*): WCAs5 (sale only). 4 records, dated between 1992 and 2010, the closest of which is 1280m from the site.
	Smooth newt (*Lissotriton vulgaris*): WCAs5 (sale only). . 4 records, dated between 1959 and 2015, the closest of which is 1050m from the site.
Reptile	Common lizard (*Zootoca vivipara*): PS & LBAP. 1 record, dated 1833, 1050m from the site.
Bony fish	**PS & LBAP** Atlantic salmon (*Salmo salar*), brown trout (*Salmo trutta*) & European eel (*Anguilla anguilla*) **LBAP** Bullhead (*Cottus gobio*) & grayling (*Thymallus thymallus*)
Jawless fish	**LBAP** Brook lamprey (*Lampetra planeri*)
Flowering plans	**PS & LBAP** Field Gentian (*Gentianella campestris*) **PS** Darnel (*Lolium temulentum*) **LBAP** Autumn Gentian (*Gentianella amarella*), Baberry (*Berberis vulgaris*), Bird's-eye Primrose (*Primula farinosa*), Blue Water-speedwell (*Veronica anagallis-aquatica*), Buckthorn (*Rhamnus cathartica*), Common Rock-rose (*Helianthemum nummularium*), Deadly Nightshade (*Atropa belladonna*), Fragrant Orchid (*Gymnadenia conopsea*), Grass-of-parnassus (*Parnassia palustris*), Greater Pond-sedge (*Carex riparia*), Hairy Violet (*Viola hirta*), Heath Spotted-orchid (*Dactylorhiza maculata* subsp. *ericetorum*), Henbane (*Hyoscyamus niger*), Herb-paris (*Paris quadrifolia*), Knotted Clover (*Trifolium striatum*), Lesser Meadow-rue (*Thalictrum minus*), Marsh Fragrant-orchid (*Gymnadenia densiflora*), Narrow-leaved Bitter-cress (*Cardamine impatiens*), Northern Spike-rush (*Eleocharis mamillata* subsp. *austriaca*), Northern Yellow-cress (*Rorippa islandica*), Red Pondweed (*Potamogeton alpinus*), Sheep's-bit (*Jasione montana*), Shepherd's Cress (*Teesdalia nudicaulis*), Shining Pondweed (*Potamogeton lucens*), Slender Tufted-sedge (*Carex acuta*), Small Scabious (*Scabiosa columbaria*), Small-fruited Prickly-sedge (*Carex muricata* subsp. *pairae*), Solomon's-seal (*Polygonatum multiflorum*), Stinking Hellebore (*Helleborus foetidus*), Stone Bramble (*Rubus saxatilis*), Tuberous Comfrey (*Symphytum tuberosum*), White Bryony (*Bryonia dioica*) & Wild Service-tree (*Sorbus torminalis*), Wintergreen (*Pyrola rotundifolia* subsp. *maritima*)

Taxon Group	Species Name and Designations[1] and Notes
Insects	**PS & LBAP** White-letter hairstreak (*Satyrium w-album*), small heath (*Coenonympha pamphilus*) & wall (*Lasiommata megera*) **PS** Cinnabar (*Tyria jacobaeae*), dot moth (*Melanchra persicariae*), dusky brocade (*Apamea remissa*), ghost moth (*Hepialus humuli*), latticed heath (*Chiasmia clathrata*), shaded broad-bar (*Scotopteryx chenopodiata*) & small square-spot (*Diarsia rubi*) **LBAP** Ringlet (*Aphantopus hyperantus*) & brown rustic (*Rusina ferruginea*)
Spiders	**LBAP** Labyrinth spider (*Agelena labyrinthica*)
Birds	**WCAs1 & LBAP** Peregrine (*Falco peregrinus*) **WCAs1** Fieldfare (*Turdus pilaris*), kingfisher (*Alcedo atthis*) & redwing (*Turdus iliacus*) **PS & LBAP** Cuckoo (*Cuculus canorus*), curlew (*Numenius arquata*), grey partridge (*Perdix perdix*), house sparrow (*Passer domesticus*), lapwing (*Vanellus vanellus*), reed bunting (*Emberiza schoeniclus*), spotted flycatcher (*Muscicapa striata*), tree pipit (*Anthus trivialis*), tree sparrow (*Passer montanus*), bullfinch (*Pyrrhula pyrrhula*), dunnock (*Prunella modularis*), herring gull (*Larus argentatus*), song thrush (*Turdus philomelos*) & starling (*Sturnus vulgaris*) **PS** Lesser redpoll (*Acanthis cabaret*) **LBAP** Black-headed gull (*Chroicocephalus ridibundus*), common sandpiper (*Actitis hypoleucos*), grey heron (*Ardea cinerea*), kestrel (*Falco tinnunculus*), lesser black-backed gull (*Larus fuscus*), meadow pipit (*Anthus pratensis*), northern golden plover (*Pluvialis apricaria* subsp. *albifrons*), oystercatcher (*Haematopus ostralegus*), pochard (*Aythya ferina*), redshank (*Tringa totanus*), snipe (*Gallinago gallinago*), swift (*Apus apus*), teal (*Anas crecca*), wigeon (*Anas penelope*) & willow warbler (*Phylloscopus trochilus*)

[1]Key to Designation Codes:
EPS = European Protected Species under the *Conservation of Habitats and Species Regulations 2017.*
WCAs1 = Species receives full protection under Schedule 1 of the *Wildlife and Countryside Act 1981* (as amended).
WCAs5 = Species receives full protection under Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended).
PS = Priority Species listed under Section 41 of the NERC Act 2006
LBAP = Species listed on the Lancashire Biodiversity Action Plan Provisional Long List

3.1.7 The presence of these protected and notable species within the wider area has been taken into account throughout this report.

3.2 Vegetation and Habitats

General Description

3.2.1 The approximately 1.7 hectare site is located in a residential area on the northern margin of Clitheroe and comprises one sheep-grazed field of improved grassland with tall-herb vegetation, scattered trees and shrubs and boundary hedgerows.

3.2.2 All site boundaries are fenced. Existing residential housing lies beyond the southern and eastern boundaries. A hedgerow lies on the western section of the northern boundary. Further sheep-grazed

improved grassland lies beyond the northern boundary. A Beech (*Fagus sylvatica*) hedgerow lies on the northern section of the western boundary. Existing residential housing lies beyond the western boundary.

3.2.3 A Phase 1 Habitat Survey map is appended at **Figure 2**, and can be referred to for all habitat descriptions. Photographs are appended at **Table 8.4**.

3.2.4 The improved grassland (**Photos 1** and **2**) was sheep-grazed at the time of the survey and is characterised by constant and abundant Crested Dog's-tail (*Cynosurus cristatus*) and Perennial Rye-grass (*Lolium perenne*) with abundant Creeping Buttercup (*Ranunculus repens*) and frequent Cock's-foot (*Dactylis glomerata*) and Yorkshire-fog (*Holcus lanatus*).

3.2.5 The tall-herb vegetation (**Photos 3** and **4**) is characterised by frequent Common Nettle (*Urtica dioica*) and occasional Creeping Thistle (*Cirsium arvense*).

3.2.6 The scattered semi-mature trees and shrubs (**Photo 4**) are characterised by occasional Silver Birch (*Betula pendula*), Hawthorn (*Crataegus monogyna*), Ash (*Fraxinus excelsior*), Goat Willow (*Salix caprea*) and Grey Willow (*Salix cinerea*).

3.2.7 The improved grassland is characteristic of an *MG6 Perennial Rye-grass – Crested Dog's-tail* grassland community of the NVC (Rodwell, 1992). The tall-herb vegetation is characteristic of *OV24 Common Nettle – Cleavers* and *OV25 Common Nettle – Creeping Thistle* tall-herb weed communities of the NVC (Rodwell, 2000). A plant species list is appended at **Table 8.1**.

Boundary Hedgerows

3.2.8 Hedgerow 1 (**Photo 5**) is located on the western section of the northern site boundary. Hedgerow 1 is 50 metres long, 70% continuous and there is evidence of previous cutting management. The woody species are characterised by constant and abundant Blackthorn (*Prunus spinosa*) and frequent Hawthorn. The ground flora comprises species associated with the improved grassland including constant and abundant Perennial Rye-grass, frequent Cock's-foot and Yorkshire-fog and occasional Common Nettle.

3.2.9 The vegetation at Hedgerow 1 has affinities with the *W21 Hawthorn – Ivy* and *W22 Blackthorn – Bramble* scrub communities of the NVC (Rodwell, 1991). A plant species list is appended at **Table 8.2**.

3.2.10 Hedgerow 1 does not qualify as 'important' when assessed in accordance with *The Hedgerows Regulations 1997* wildlife and landscape criteria. An assessment of Hedgerow 1 is appended at **Table 8.3**.

3.2.11 A Beech hedgerow (**Photo 6**) lies on the northern section of the western site boundary, associated with the curtilage of the residential properties adjacent to the western site boundary.

Invasive Plant Species

3.2.12 No Japanese Knotweed is present at the site.

3.2.13 As illustrated on **Figure 2**, very locally abundant stands of Wall Cotoneaster were detected at the eastern section of the southern site boundary. This species is listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended); it is an offence to spread or cause its spread in the wild. This is considered further at **Section 5.3** below.

3.3 Animal Life

Badger

3.3.1 No signs of badger such as setts / holes, prints, hairs or snuffle holes were detected at the site or within 50 metres of the site boundary. No records of badger within a 1.5 kilometre radius of the site were reported in the data search. The presence of badger at the site is reasonably discounted.

Bat Species

Daylight Survey: Trees

3.3.2 None of the trees within the site or on the site boundary support features suitable for use by roosting bats.

Habitat Assessment for Commuting and Foraging Bats

3.3.3 The boundary hedgerows within the site provide edge habitats with suitability for use by foraging bats. All other habitats within the site are of limited suitability for foraging bats. Overall, the site is of low suitability for use by foraging bats, in accordance with the criteria listed in **Table 2.1**.

Bird Species

3.3.4 One magpie (*Pica pica*) and two wood pigeon (*Columba palumbus*) were detected during the survey. The boundary hedgerows and scattered trees and shrubs at the site are suitable for use by nesting passerine birds.

3.3.5 The habitats within the site are suitable for use by ground nesting birds; no ground nesting birds were observed at the time of the survey.

Reptiles

3.3.6 The short, grazed grassland is homogenous in its composition, and the site is flat. The site is of limited suitability for use by basking reptiles. No rubble piles, mounds, garden waste or other suitable habitats typically associated with sheltering reptile species are present.

3.3.7 There are no records of reptile for the site or within 1.5 kilometres of the site (the existing record is dated 1833); it is not considered reasonably likely that reptiles will have colonised the site from the surrounding land. The presence of reptiles within the site is reasonably discounted.

4.0 EVALUATION AND ASSESSMENT

4.1 Introduction and Description of Proposals

4.1.1 It is proposed to develop the site to housing. At the time of writing a proposals plan was not available.

4.1.2 **Section 4.2** provides an assessment of any impacts of the proposed development on the designated sites in the wider area. The ecological value of habitats within the site are evaluated at **Section 4.3**, and the presence of protected and notable species is considered at **Section 4.4**.

4.2 Designated Sites for Nature Conservation

4.2.1 The site is not, and does not form any part of, a statutory or non-statutory designated site for nature conservation. The habitats within the site are not complementary to nor is the site functionally linked to any of the designated sites for nature conservation in the wider area.

4.2.2 The proposals do not match any of the criteria for which further assessment would be required in respect of the SSSI Impact Risk Zones. The proposals will have no impact upon the SSSIs and SAC in the wider area.

4.2.3 The proposals will have no adverse impact on any designated site for nature conservation.

4.3 Vegetation and Habitats

4.3.1 None of the habitats within the site are of significant interest in terms of their plant species composition. None of the habitats present are representative of semi-natural habitat. The NVC communities present are typical of the geographical area and conditions present.

4.3.2 Hedgerow 1 is Priority Habitat although it does not qualify as 'important' when assessed under *The Hedgerow Regulations 1997* landscape and wildlife criteria.

4.3.3 The boundary hedgerows and scattered trees and shrubs are of local value as they also provide habitat structural diversity and opportunities for nesting birds.

4.3.4 Wall Cotoneaster, an invasive plant species listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) has been detected within the site. It is considered that the proposals present an opportunity for the control of this species as part of the proposed development. Further guidance is presented at **Section 5.3** of this report.

4.4 Protected Species and Other Wildlife

4.4.1 Appropriate and proportionate survey effort and assessment, in accordance with standard survey guidelines has been applied to reasonably discount the presence of relevant protected species namely badger, roosting bats, great crested newt and reptiles. No further surveys for other protected species are necessary to support a planning decision.

4.4.2 Habitats within and adjacent to the site are of low suitability for foraging bats. Conservation of opportunities for foraging bats and enhancement of the developed site for roosting bats will be achieved by the scheme, refer to **Section 5.4**.

4.4.3 The boundary hedgerows and scattered trees and shrubs provide favourable foraging and nesting habitat for passerine bird species. Consideration of birds (including protection of breeding birds and recommended enhancements for Priority Species) are presented at **Section 5.5**.

5.0 RECOMMENDATIONS AND ECOLOGICAL ENHANCEMENT

5.1 Introduction

5.1.1 These recommendations aim to ensure that the development is implemented in accordance with relevant wildlife legislation, Natural England guidance, the principles of the National Planning Policy Framework (NPPF), local planning policy and best practice.

5.1.2 The recommendations address the potential impacts identified in **Section 4.0** and are appropriate and proportionate.

5.1.3 In accordance with Chapter 15, paragraph 175 point 'd' of the NPPF, when determining planning applications, local planning authorities should encourage opportunities to incorporate biodiversity improvements in and around developments, especially where this can secure measurable net gains for biodiversity.

5.1.4 Where possible, opportunities to enhance the ecological interest and habitat connectivity and seek biodiversity gain through appropriate landscape planting and habitat creation have been identified, as required by the NPPF and other relevant planning documents.

5.1.5 All recommendations are appropriate to the geographical area, the habitats in the wider area, the wildlife present in the local area (and likely to use the site post-construction) and take into consideration the end use of the site as a residential development.

5.2 Protection of Existing Vegetation and Recommendations in Relation to Site Layout

5.2.1 It is recommended that the site layout is designed to retain the boundary hedgerows and the scattered trees with a buffer of at least the root protection zone, where feasible.

5.2.2 During the construction phase, temporary protective demarcation fencing will be used to protect the trees, shrubs and hedgerows to be retained. The fencing must extend outside the canopy of the retained features and must remain in position until all areas have been developed to ensure protection is provided throughout the construction phase.

5.2.3 The fencing will be in accordance with BS5837:2012 *Trees in Relation to Design, Demolition and Construction: Recommendations* (BSI, 2012).

5.3 Invasive Species

5.3.1 It is an offence under the *Wildlife and Countryside Act 1981* (as amended) to cause the spread of Wall Cotoneaster in the wild. It is concluded that the preparation of an Invasive Species Management Plan is not necessary in this case. Due to the location of the planting of the plants (the plants are planted outside the site on the opposite side of the boundary fence), removal will not be feasible, therefore it is recommended that soil from the area associated with the Wall Cotoneaster plants is not removed from the site nor spread in the wild.

5.4 Bats

Lighting

5.4.1 Paragraph 180, bullet point 'c' in Chapter 15 (conserving and enhancing the natural environment) of the NPPF states that development should:

'limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.'

Construction Phase

5.4.2 Any lighting to be used at the site during construction should be directional and screened where possible, this specification should be included within a Construction Environment Management Plan (CEMP), or similar.

Development Lighting Design

5.4.3 The lighting scheme to be implemented at the developed site must involve the use of appropriate products and screening, where necessary, to ensure no excessive artificial lighting shines over the boundary hedgerows, areas of ecological enhancement and any landscape planting, as lighting overspill may deter use by wildlife such as foraging bats.

5.4.4 The lighting scheme will be designed with reference to current guidance, namely:

a. *Guidance Note 8: Bats and Artificial Lighting in the UK* (Institution of Lighting Professionals & Bat Conservation Trust, 2018); and

b. *Bats and lighting: Overview of current evidence and mitigation guidance* (Stone, 2014).

Enhancing Habitats for Roosting Bats

5.4.5 It is recommended that the development incorporates the installation of commercially available bat access panels at the new buildings. The number and location of the bat access panels will be advised by an ecologist on completion of the site layout.

5.4.6 The bat access panels should be sited at least four metres above ground level, ideally facing or close to areas of landscape planting or existing linear features. The access panels should not be positioned over windows or doorways where bat droppings may become a nuisance. Suitable bat access panels are available from NHBS Ecology (www.nhbs.com) or Wild Care Shop (www.wildcareshop.com) and are presented at **Insert 1**, below:

Insert 1: Example of commercially available bat access panels.

5.5 Birds

Protection

5.5.1 All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended) while they are breeding. It is advised that any works such as vegetation clearance that will affect habitats suitable for use by nesting birds are scheduled to commence outside the bird nesting season. Commencement of works in the nesting season must be informed by a pre-works nesting bird survey, carried out by a suitably experienced ecologist. The bird breeding season typically extends between March to August inclusive.

5.5.2 If breeding birds are detected the ecologist will issue guidance in relation to the protection of the nesting birds in conjunction with the scheduled works. This may involve cordoning off an area of the site until the young birds have fledged.

Enhancing Habitats for Nesting Birds

5.5.3 The installation of bird nest boxes is recommended at the proposed new buildings. The number and location of the bird nest boxes will be advised by an ecologist on completion of the site layout.

5.5.4 The bird nest boxes will be not be positioned over windows or doorways where droppings may become a nuisance. RSPB advice states that boxes should ideally be sited facing north to east, to avoid exposure to direct sunlight, which may cause overheating of chicks in the nest. Suitable bird nest boxes are available from the NHBS (www.nhbs.com) or Wild Care Shop (www.wildcareshop.com). Examples of suitable bird nest boxes are presented at **Insert 2**, below:

Insert 2: *House Sparrow Nesting Terrace, 1MR Schwegler Avianex Nest Box, Vivara Pro WoodStone Starling Nest Box and Vivara Pro Cambridge Brick Faced Swift Nest Box*

5.6 Landscape Planting and Net Gain for Biodiversity

Compensatory Hedgerow Planting

5.6.1 If any section of Hedgerow 1 is scheduled for removal the site layout must incorporate compensatory native linear planting. The compensatory hedgerow planting must be of an equal length, or greater than, the length of hedgerow scheduled for removal.

Landscape Planting within the Residential Site

5.6.2 It is recommended that the landscape planting within the residential site is composed from native species and species known to be of value for the attraction of wildlife.

5.6.3 It is recommended that trees which support blossom and fruit which will attract insects are incorporated into the landscape planting. Suitable species are presented at **Table 5.1**, below.

Table 5.1: Suitable Native Species for Tree and Shrub Planting

Scientific Name	Common Name	Scientific Name	Common Name
Acer campestre	Field Maple	*Prunus spinosa*	Blackthorn
Corylus avellana	Hazel	*Rosa arvensis*	Field Rose
Crataegus monogyna	Hawthorn	*Rosa canina*	Dog-rose
Ilex aquifolium	Holly	*Sambucus nigra*	Elder
Malus sylvestris	Crab Apple	*Sorbus aucuparia*	Rowan
Prunus avium	Wild Cherry	*Ulmus glabra*	Wych Elm
Prunus padus	Bird Cherry	*Viburnum opulus*	Guelder Rose

5.6.4 The understorey and ground cover planting design should be prepared to optimise the attraction of invertebrates such as feeding bumblebees and butterflies. Where possible the use of native species should be maximised but where necessary non-native species known to be attractive to invertebrates should be used.

5.6.5 Planting schemes that include flowering species such as *Viburnum, Ceanothus, Hebe*, *Lavandula*, *Lonicera, Potentilla, Rosmarinus* and *Vinca* can maximise opportunities for feeding invertebrates and for the attraction of foraging bats and birds.

5.6.6 For further plants suitable for the attraction of pollinators please refer to the *Perfect for Pollinators Plant List* (Royal Horticultural Society, 2012). It is recommended that the selection of plant species at the site ensures that a variety of flowering species are available throughout the year.

Net Gain for Biodiversity

5.6.7 Due to the low ecological value of the site it is considered feasible to achieve a net gain for biodiversity, provided the recommendations within this report are considered at the design of the site layout and landscape planting scheme. Further ecological input may be required to achieve a net gain in biodiversity.

6.0 CONCLUSION

6.1 This ecological appraisal has demonstrated that a residential development at the site is feasible and acceptable in accordance with ecological considerations and the National Planning Policy Framework.

6.2 It is possible to implement reasonable actions for the protection and long-term conservation of Priority Habitats (Hedgerow 1) associated with the site.

6.3 Development at the site will provide an opportunity to secure ecological enhancement for fauna typically associated with residential areas such as breeding birds and roosting bats.

7.0 REFERENCES

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8.0 APPENDIX: TABLES AND FIGURES

Table 8.1: Plant Species List for the land at Hawthorne Place, Clitheroe

Scientific Name	Common Name	DAFOR[1]	Cover
-	Moss species	LA	<1%
-	Ornamental species	LA	<1%
Acer sp.	Maple species	O	2%
Agrostis capillaris	Common Bent	LA	5%
Alopecurus pratensis	Meadow Foxtail	O	5%
Arrhenatherum elatius	False Oat-grass	LA	5%
Bellis perennis	Daisy	VLF	<1%
Betula pendula	Silver Birch	O	2%
Cerastium fontanum	Common Mouse-ear	O	5%
Cirsium arvense	Creeping Thistle	O	5%
Cirsium vulgare	Spear Thistle	VLF	<1%
Cotoneaster horizontalis	Wall Cotoneaster	VLA	<1%
Crataegus monogyna	Hawthorn	O	2%
Cynosurus cristatus	Crested Dog's-tail	A*	10%
Dactylis glomerata	Cock's-foot	F	10%
Dipsacus pilosus	Small Teasel	R	<1%
Elytrigia repens	Common Couch	LA	5%
Fagus sylvatica	Beech	LA	<1%
Festuca rubra	Red Fescue	LA	<1%
Fraxinus excelsior	Ash	O	2%
Galium aparine	Cleavers	VLA	<1%
Hedera helix	Ivy	LA	<1%
Holcus lanatus	Yorkshire-fog	F	10%
Juncus effusus	Soft-rush	VLA	<1%
Lolium perenne	Perennial Rye-grass	A*	20%
Matricaria discoidea	Pineappleweed	LA	<1%
Phleum pratense	Timothy	O	2%
Plantago lanceolata	Ribwort Plantain	VLF	<1%
Poa annua	Annual Meadow-grass	LA	<1%
Poa pratensis	Smooth Meadow-grass	O	3%
Poa trivialis	Rough Meadow-grass	O	3%
Ranunculus repens	Creeping Buttercup	A	10%
Rumex acetosa	Common Sorrel	VLA	<1%
Rumex obtusifolius	Broad-leaved Dock	LA	<1%
Salix caprea	Goat Willow	O	2%
Salix cinerea	Grey Willow	O	2%
Senecio jacobaea	Common Ragwort	LF	<1%
Solanum dulcamara	Bittersweet	R	<1%
Stellaria media	Common Chickweed	LA	<1%
Taraxacum officinale agg.	Dandelion	VLF	<1%
Trifolium repens	White Clover	LA	<1%
Urtica dioica	Common Nettle	F	10%

[1]**Key to DAFOR:** D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species

Table 8.2: Plant Species List for Hedgerow 1

Scientific Name	Common Name	Hedgerow 1	
		DAFOR	% Cover
Woody Species			
Crataegus monogyna	Hawthorn	F	25%
Prunus spinosa	Blackthorn	A*	75%
Herb Layer			
-	Moss species	LF	<1%
Cerastium fontanum	Common Mouse-ear	LF	<1%
Cirsium arvense	Creeping Thistle	LA	<1%
Dactylis glomerata	Cock's-foot	F	15%
Hedera helix	Ivy	VLA	<1%
Holcus lanatus	Yorkshire-fog	F	15%
Lolium perenne	Perennial Rye-grass	A*	30%
Rumex obtusifolius	Broad-leaved Dock	LF	<1%
Urtica dioica	Common Nettle	O	20%

[1]**Key to DAFOR:** D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species.
Species highlighted in grey are classed as either 'woody' or 'woodland' species contributing to *The Hedgerows Regulations 1997* wildlife and landscape criteria assessment.

Table 8.3: ***The Hedgerow Regulations 1997*** **Assessments Results of Hedgerow 1**

Hedgerow Name	**Hedgerow 1**		
Height x width (metres)	2 x 0.5		
Length (metres)	50		
Continuity	70%		
Management	Sometimes cut		
Total number of woody species	2		
Average Number of Qualifying Woody Species:			
Section number	1	2	3
Qualifying woody species	2	-	-
Average number	**2**		
Number of Features Present:			
(a) Bank or wall along at least ½ length	No		
(b) Gaps which in agg. do not exceed 10%	No		
(c)-(e) 1 standard tree per 50m	No		
(f) At least 3 woodland species within 1 metre	No		
(g) Ditch along at least ½ its length	No		
(h) Connections scoring 4 points or more	No		
(i) Parallel hedge within 15m	No		
Total Features	**0**		
Criteria for Hedgerow Importance 1: Hedgerow contains species listed as:			
(1) Part 1 of Schedule 1, Schedule 5 or Schedule 8 of W&C Act 1981	No		
(2) Declining breeders in 'Red Data Birds of Britain'	No		
(3) Categorised as 'endangered', 'extinct' or 'vulnerable'	No		
Criteria for Hedgerow Importance 2: Hedgerow Includes all woody species mentioned in (i)-(iv):			
(i) At least 7 woody species	No		
(ii) At least 6 woody species and at least 3 features	No		
(iii) At least 6 woody species, inc. one of: Black Poplar, L-leaved Lime, S-leaved Lime or Wild Service Tree	No		
(iv) At least 5 woody species, and has 4 features	No		
Criteria for Hedgerow Importance 3: Is adjacent to is adjacent to a bridleway, footpath or byway *and* includes at least 4 woody species on average and 2 features from (a) to (g):			
Qualifies:	No		
Hedgerow Classed as Important?	**No**		

Table 8.4: Table of Photographs

Photo 1: Improved grassland (facing west)

Photo 2: Improved grassland (facing south)

Photo 3: Tall-herb vegetation on field boundaries

Photo 4: Tall-herb vegetation and scattered trees and shrubs

Photo 5: Hedgerow 1 (facing west)

Photo 6: Beech hedgerow at western site boundary

Figure 1: Google Earth Image to Illustrate the Site Boundary and Pond Location

Figure 2: Phase 1 Habitat and Vegetation Map