



Ecological Impact Assessment

***83 Whitehill Road, Hitchin, SG4
9HP***

Client Name: Orchard Home Developments
Ltd

Project Number: P3252.2.0

Date: 14 December 2018

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Agent	InTouch Planning Ltd
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1 Summary

Site	83 Whitehill Road, Hitchin, SG4 9HP
Central OS Grid Reference	TL 19164 28639
Report Commissioned by	InTouch Planning Ltd on behalf of Orchard Home Developments Ltd.
Date of Survey	6 th December 2018

Considerations	Description	Comments & Recommendations
Surveys undertaken	Desk based study and walkover survey. No further surveys were considered necessary.	Both components informed a Preliminary Ecological Appraisal and Ecological Impact Assessment.
Ecological Features	The site comprised buildings, hard-standing, scrub, scattered trees and ruderal vegetation. Habitats with potential to support nesting birds. Scattered mature trees had potential to support foraging and commuting bats.	The site was considered to be of negligible importance due to the heavy management of its habitats, high levels of disturbance, poor plant diversity and the extensive use of artificial lighting.
Ecological impacts	It is assumed that the mitigation outlined in Section 5 will be adhered to at all times.	There are no anticipated significant residual impacts from the proposed development on any of the important ecological receptors.
Avoidance and General Mitigation	Trees.	Where necessary protect trees from construction activities with fencing according to BS5837:2012.
	Birds.	Clear any woody vegetation and buildings outside the nesting bird season, or after a nesting bird survey by an ecologist if clearance is scheduled between March and August (inclusive).
	Site measures.	Cover trenches or provide planked escape routes to allow any animals that fall in to escape. Minimise artificial lighting.
Enhancements	To increase the ecological value of the site.	Install nest boxes / houses for wildlife, plant native species avoid the use of pesticides.

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2 Introduction

2.1 Background

agb Environmental was commissioned by InTouch Planning Ltd on behalf of Orchard Home Developments Ltd to undertake an Ecological Assessment at 83 Whitehill Road, Hitchin, SG4 9HP, herein referred to as 'the site'.

A Preliminary Ecological Appraisal (PEA) was undertaken to inform the assessment. No further surveys were required and a sufficient level of design information was available to inform the assessment of impacts. The findings of the PEA have, therefore, been transposed into an Ecological Impact Assessment (CIEEM, 2017).

This report will support a planning application for the development of two detached houses to the rear of an existing house.

2.2 Site Location and Description

The site was located in the town of Hitchin at central Ordnance Survey Grid Reference: TL 19164 28639. The site totalled c. 0.1ha comprising buildings, hard-standing, scrub, scattered trees and ruderal vegetation (**Appendix 1**).

The site was located in an extensive residential area and surrounded by housing, roads and private gardens. The wider area comprised suburban settlement to the north with agricultural land, hedgerows and pockets of deciduous woodland to the south, east and west.

2.3 Development Proposal

Orchard Home Developments Ltd propose to construct two detached dwellings with private gardens, driveways and parking areas. The proposal also includes the construction of a new double garage in the north eastern corner of the site. The existing buildings within the site will be demolished, up to six small trees, and patches of scrub and ruderal vegetation will be removed.

2.4 Scope of the Assessment

This report presents information obtained during the following:

- A desk-based assessment undertaken during December 2018; and
- A walkover survey undertaken on 6th December 2018.

2.5 Objective

The objective of the assessment is to identify and describe all potentially significant affects associated with the development proposal, and set out any requirements for mitigation necessary to comply with conservation legislation or to address potential significant ecological effects. Potential enhancement opportunities have been identified in accordance with planning policy, and European and UK wildlife legislation (**Appendix 2**).

3 Methodology

3.1 Surveyor

The site was surveyed by agb Environmental Ecologist Owen Jones BSc (Hons), who is licensed to survey for bats 2017-31719-CLS-CLS (Level 2) and great crested newts 2016-20091-CLS-CLS (Level 1).

3.2 Desk Study

Natural England's Multi-Agency Geographic Information for the Countryside (MAGIC) database (Natural England, 2018) was accessed on the 13th December 2018 for information regarding;

- Natura 2000 sites such as Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites within 10km of the study area;
- Statutory sites designated for nature conservation within a 5km radius of the study area;
- Natural England's Impact Risk Zones (IRZs) for Sites of Special Scientific Interest (SSSI), Special Areas of Conservation, Special Protection Areas and Ramsar sites within which the study area was located; and
- Any European Protected Species Mitigation Licences granted by Natural England within a 2km radius of the study area.

The Herts Environmental Records Centre (HERC) was also consulted on the 3rd December 2018 for the following information for a 1km radius around the application site:

- Non-statutory nature conservation designations, such as Local Wildlife Sites (LWS),
- Legally protected species, such as great crested newts, reptiles, birds and bats; and
- Notable species, such as those listed in the local Biodiversity Action Plan.

3.3 Habitat Survey

A detailed walkover of the site was undertaken on the 6th December 2018 to record and map habitat types and ecological features within the site. The survey was undertaken in accordance with *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017), and the general principles and methods outlined in the *Handbook for Phase I Habitat Survey* (JNCC, 2010). This method of survey provides information on the habitats in the survey area and assesses the potential for notable or protected fauna to occur in or adjacent to the survey area. Features of interest were identified as target notes on the Phase I Habitat Map (**Appendix 1**).

Aerial photographs, maps and field observations were used to identify habitats in the wider landscape which could be impacted by development of the site.

Weather conditions during the survey: 14°C; a light air (Beaufort 1), 50% cloud cover and dry.

3.4 Protected and Notable Species Assessment

The site was inspected for evidence of and assessed for potential to support protected and notable species. This included species listed under the *Conservation of Habitats and Species Regulations 2017*, the *Wildlife and Countryside Act 1981 (as amended)* (WCA), and those given extra protection under the *Natural Environment and Rural Communities (NERC) Act*

2006, Countryside and Rights of Way (CROW) Act 2000, and the Protection of Badgers Act 1992.

The following section outlines the protected / notable species that were considered within the assessment:

3.4.1 Amphibians

The site was assessed for suitability to support amphibians such as the legally protected great crested newt *Triturus cristatus* and the notable common toad *Bufo bufo*. The assessment was undertaken in accordance with the *Herpetofauna Workers' Manual* (Gent & Gibson, 2003) and the *Great Crested Newt Conservation Handbook* (Langton, et al., 2001).

Maps and aerial images were searched for the presence of ponds, and other water-bodies, suitable for breeding amphibians within 250m of the site boundary.

3.4.2 Badgers

The site and a 30m zone around the site (where accessible), were surveyed for badger *Meles meles* evidence such as setts, latrines, pathways, footprints, snuffle holes and badger hairs (Harris, et al., 1989).

3.4.3 Bats

Potential for the site to support roosting, foraging and commuting bats was assessed in line with the Bat Conservation Trust (BCT) *Bat Surveys for Professional Ecologists Good Practice Guidelines* (Collins, 2016).

3.4.3.1 Roosting

The buildings on site were assessed for suitability to support roosting bats according to the classifications in **Table 3.1**. Equipment used to investigate the buildings included; binoculars and a high-power torch. All buildings were described and surveyed for bats and their evidence, which includes droppings, staining, scratch marks and feeding remains.

Table 3.1: Classifying the bat roosting suitability of buildings (Collins, 2016).

Negligible roosting suitability	Negligible habitat features within the site likely to be used by roosting bats.
Low roosting suitability	A structure with one or more features that could be opportunistically used by individual bats. Unlikely to support maternity or hibernation roosts.
Moderate roosting suitability	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat (unlikely to support roosts of high conservation status).
High roosting suitability	A structure 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 and surrounding habitat.
Confirmed roost	Evidence of bat occupation found.

Trees were surveyed for evidence of bats and potential bat roost features (PRFs), and then assigned a level of suitability for roosting bats as outlined in **Table 3.2**. PRFs include woodpecker holes, rot holes, hazard beams, cracks and splits, knot holes, cavities, loose bark, and partially detached ivy (Andrews, 2013).

Table 3.2: Classifying the bat roosting suitability of trees (Collins, 2016).

Negligible roosting suitability	Trees with few, if any, features suitable for roosting.
Low roosting suitability	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.
Moderate roosting suitability	A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat. These trees are unlikely to support a roost of high conservation status.
High roosting suitability	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

3.4.3.2 Foraging and Commuting

The site was assessed for its suitability to support foraging and commuting bats according to **Table 3.3**.

Table 3.3: Classifying the suitability of bat foraging and commuting habitat (Collins, 2016).

Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated or poorly connected to habitat in the surrounding landscape. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in parkland) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that bats may use for commuting such as tree-lines and scrub or linked back gardens. Habitat that connects to the wider landscape that bats may use for foraging such as trees, scrub grassland and water.
High	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, tree-lines and woodland edge. High quality habitat that is well-connected to the wider landscape that is likely to be used regularly by commuting bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

3.4.4 Hazel Dormouse

The site was assessed for potential to support the hazel dormouse *Muscardinus avellanarius*, in accordance with the *Dormouse Conservation Handbook* (Bright, et al., 2006). Dormice typically use connected woodland, hedgerows and scrub that contain suitable food plants. Aerial images were used to assess the connectivity of any suitable habitat on the site to woodland and hedgerows within the wider area.

3.4.5 Reptiles

The site was assessed for suitability to support common species of reptile with reference to the *Herpetofauna Workers' Manual* (Gent & Gibson, 2003) and *Froglife Advice Sheet 10 An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation* (Froglife, 1999).

3.4.6 Other Species

The site was assessed for suitability to support other protected and notable fauna species / assemblages including dormice, water vole, otter, invertebrates and other mammals.

3.4.7 Invasive Species

The site was searched for non-native invasive plants listed on Schedule 9 of the Wildlife and Countryside Act (HMSO, 1981) Japanese knotweed *Fallopia japonica*.

3.5 Nature Conservation Evaluation and Impact Assessment

3.5.1 Nature Conservation Evaluation

Designated sites, habitats and species (where presence has been identified) have been evaluated in accordance with the *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial and Freshwater* (CIEEM, 2018).

These guidelines aim to give consistency in evaluating the importance of the ecological features within and around a site, which help inform any effects or impacts a scheme will have upon them.

A value of the ecological features (designated sites, habitats or species) has been assigned according to their level of importance using the following terms:

- International and European
- National
- Regional
- County
- Local

3.5.2 Ecological Impact Assessment

The assessment of predicted Ecological Impacts (positive, negative or neutral) was based on the results of the walkover survey, the desk study, relevant literature and professional knowledge of ecological processes and functions.

3.6 Limitations and Assumptions

Access was available to the entire site and the baseline conditions reported represent those identified at the time of the survey. The survey date falls outside the optimal season for botanical work. However, the habitat descriptions and evaluations are considered to be accurate due to the common and widespread habitats recorded and the vegetation being clearly visible at the time of survey. Although a reasonable assessment of the site can be made during a single survey, seasonal variations are not observed.

This assessment provides an overview of the likelihood of protected / notable species occurring on the site (negligible, low, moderate, or high). Absence of a species cannot be presumed where no evidence was found. Further actions have been recommended where there is reasonable likelihood of a protected species being present and impacted by the development proposal. This is based on the suitability of the habitat and any evidence observed.

This assessment does not constitute a full botanical survey or a Phase 2 pre-construction survey for Japanese knotweed.

Assuming conditions within the site and the development proposal remain unchanged, the results of this assessment are likely to remain valid for up to three years i.e. until December 2021 (BSI, 2013). If works have not yet commenced by this time it may be necessary to update the assessment.

4 Baseline Conditions

The following section presents the results, evaluation and discussion of the designated sites, habitats and protected / notable species, which may be impacted by the proposed development.

4.1 Designated Sites

4.1.1 Statutory Sites

Statutory sites designated for nature conservation within the vicinity of the site are provided in **Table 4.1**. No statutory designated sites of international or European importance were present within 10km of the site. Sites of Special Scientific Interest (SSSI) are of **national importance**, Local Nature Reserves are of **local importance**.

The site falls within the Wain Wood SSSI IRZ, however the development does not meet criteria for impacts that would likely lead to a significant effect on this SSSI. Therefore, no consultation with Natural England and no specific mitigation is required for this SSSI.

There were no habitats or species within the site that serve as qualifying features of the nearby statutory sites. The application site was not linked to these sites due to the intervening land being suburban development and open farmland (Natural England, 2018).

The construction of two residential dwellings in an existing residential area is unlikely to negatively impact the designated sites through an increase in visitor pressure. Overall, the proposed development is not considered likely to have any impacts on the statutory designated sites and therefore will not be considered any further within this assessment.

Table 4.1: Designated sites of international importance within 5km of the application site.

Site Name	Distance & Direction from Site	Area (ha)	Reasons for Designation
Purwell Meadows LNR	1.4km NE	8.59	Purwell Meadows is a mixture of meadow land and play areas, The River Purwell flows through the area joining the River Hiz further downstream in Walsworth, kingfishers are native to the area.
Oughtonhead Common LNR	2.5km NW	17.35	Oughtonhead Common is a local nature reserve with a wide variety of wildlife habitats. River Oughton flows alongside the common.
Wain Wood SSSI	3km SE	19.2	Wain Wood lies on a north-east facing slope of the decalcified boulder clay. An ancient seat natural oak/hornbeam <i>Quercus</i> species/ <i>Carpinus betulus</i> woodland, approaching the northern limit of its natural range, it represents an example of a habitat now much reduced in extent nationally through woodland clearance or felling and restocking with conifers. The wood supports an interesting butterfly community, of which purple hairstreak <i>Thecla quercus</i> is a notable example.
Norton Common LNR	4.9km NE	25.69	Formerly arable and grazing land, Norton Common is a Local Nature Reserve in the heart of Letchworth. The woodland is alive with birds. Roam, through grassland full of wildflowers, find mineral-rich springs feeding the Pix Brook and see traces of ancient farming.

4.1.2 Non-Statutory Sites

Eleven non-statutory sites designated for nature conservation were located within 2km of the application site. Details are provided in **Table 4.2**. LWSs are of **local importance**.

It is considered that the development will be small enough and located sufficiently far enough from any of this site for there to be any direct or indirect impacts on its habitats.

Further, there does not appear to be any direct public path, hydrological link or other habitat connectivity between the non-statutory sites and the application site (Natural England, 2018). Therefore, no significant impacts to the non-statutory site is expected and therefore it will not be considered any further within the assessment.

Table 4.2: Non-statutory site within 2km of the application site.

Site Name	Distance & Direction from Site	Area (ha)	Reasons for Designation
Windmill Hill LWS	0.4km NW	2.81	Public open space on a calcareous gravel hill supporting short grassland. A steep roadside bank supports an interesting grassland flora including Wild Clary <i>Salvia verbenaca</i> , a species rare in Hertfordshire. Wildlife Site criteria: Grassland indicators.
Folly Alder Swamp LWS	0.6km SE	5.69	An old semi-natural Alder <i>Alnus glutinosa</i> woodland with neutral/acid fen and marshy grassland remnants bordering Ippollitts Brook. A system of spring seepages is present plus an old pollarded Hornbeam <i>Carpinus betulus</i> hedge borders the eastern side. The site supports a rich higher plant flora with species recorded such as Greater Tussock-sedge <i>Carex paniculata</i> , Lesser Pond-sedge <i>Carex acutiformis</i> , Hemp-agrimony <i>Eupatorium cannabinum</i> , Marsh Horsetail <i>Equisetum palustre</i> , Bog Stitchwort <i>Stellaria uliginosa</i> and Marsh Marigold <i>Caltha palustris</i> in the fen/marsh areas; and woodland indicators in the ground layer including Yellow Archangel <i>Lamium galeobdolon</i> , Broad Buckler-fern <i>Dryopteris dilatata</i> and Bluebell <i>Hyacinthoides non-scripta</i> . Wildlife Site criteria: Wet woodland; woodland indicators.
Priory Park Icehouse LWS	0.9km W	0	Building and environs important for protected species. Wildlife Site criteria: Species.
Hitchin Railway Cutting LWS	0.9km NE	0	Chalk cutting with calcareous grassland, scrub and bare rocky ground. Also, railway station with old shunting yards and old water tank. Site with great crested newt, smooth newt, toad and frog. Wildlife Site criteria: Species.
The Willows (Hitchin) LWS	1.2km W	3.74	Alder <i>Alnus glutinosa</i> /willow <i>Salix</i> spp. fen woodland with areas of marshy grassland and scrub. Ash <i>Fraxinus excelsior</i> with Hazel <i>Corylus avellana</i> coppice below becomes dominant to the western end. Lesser Pond-sedge <i>Carex acutiformis</i> is frequent in the wetter parts. Contains small streams and springs, a source of the River Hiz. Wildlife Site criteria: Wet woodland; woodland indicators.

Site Name	Distance & Direction from Site	Area (ha)	Reasons for Designation
Purwell Meadows LWS	1.4km NE	9.53	Old pastures along the River Purwell and its associated streams, mostly of unimproved calcareous grassland with areas of marshy ground and associated springs, some scrub, a former cress bed and secondary neutral grassland. The site supports a diversity of lower and higher plant species including a number of species uncommon or rare in Hertfordshire. Species of interest recorded include Quaking Grass <i>Briza media</i> , Spiny Rest-harrow <i>Ononis spinosa</i> , Greater Bird's-foot Trefoil <i>Lotus pedunculatus</i> , Common Fleabane <i>Pulicaria dysenterica</i> , Water Horsetail <i>Equisetum fluviatile</i> , Blunt-flowering Rush <i>Juncus subnodulosus</i> , Brown Sedge <i>Carex disticha</i> , Bottle Sedge <i>Carex rostrata</i> , Adder's-tongue <i>Ophioglossum vulgatum</i> and Southern Marsh-orchid <i>Dactylorhiza praetermissa</i> . The meadows are of local importance to birds especially for passage and feeding. Protected species have been recorded on the site. Wildlife Site criteria: Grassland indicators; fen and swamp indicators.
River Purwell, Walsworth Common LWS	1.5km N	0.33	River Purwell and banks with some botanical interest and record of Water Vole <i>Arvicola amphibius</i> . Wildlife Criteria: Species.
Charlton Mill Pool LWS	1.5km SW	1.04	Old mill pool formed by the widening of the river channel with fluctuating water level. South of the lake the river flows in several shallow muddy channels through swamp and wet willow <i>Salix</i> sp./Alder <i>Alnus glutinosa</i> woodland on the spring source. When the water level is high the river probably floods most of the wood. Some planted Hybrid Black Poplar <i>Populus x canadensis</i> is present. Wildlife Site criteria: Wet secondary woodland.
Maydencroft Manor Farm, Gosmore LWS	1.6km SW	0	Building and environs important for protected species. Wildlife Site criteria: Species.
Wymondley Transforming Station LWS	1.8km SE	21.83	Old gravel pit landscaped to form grounds of transforming station. Raised banks support rough calcareous grassland plus there are areas of gravel and scrub. Grassland indicators and species uncommon in Herts have been recorded including Common Knapweed <i>Centaurea nigra</i> , Bird's-foot Trefoil <i>Lotus corniculatus</i> , Fairy Flax <i>Linum catharticum</i> , Ploughman's Spikenard <i>Inula conyza</i> , Grass Vetchling <i>Lathyrus nissolia</i> , Fairy Flax <i>Linum catharticum</i> , Bee Orchid <i>Ophrys apifera</i> , Common Spotted-orchid <i>Dactylorhiza fuchsii</i> , Yellow-wort <i>Blackstonia perfoliata</i> and Pyramidal Orchid <i>Anacamptis pyramidalis</i> . Wildlife Site criteria: Grassland indicators.
St Ibbs Bush LWS	1.9km S	0	Building and environs important for protected species. Wildlife Site criteria: Species.

Site Name	Distance & Direction from Site	Area (ha)	Reasons for Designation
Purwell Railway LWS	TL204285	2.60	Railway embankment supporting species-rich neutral/calcareous grassland and scrub on the south-west facing side. A variety of grasses and herbs have been recorded including species such as Agrimony <i>Agrimonia eupatoria</i> , Common Knapweed <i>Centaurea nigra</i> , Greater Knapweed <i>Centaurea scabiosa</i> , Oxeye Daisy <i>Leucanthemum vulgare</i> , Wild Marjoram <i>Origanum vulgare</i> , Meadowsweet <i>Filipendula ulmaria</i> , Field Scabious <i>Knautia arvensis</i> , Meadow Vetchling <i>Lathyrus pratensis</i> , Knapweed Broomrape <i>Orobanche elatior</i> , Burnet Saxifrage <i>Pimpinella saxifraga</i> and Salad Burnet <i>Sanguisorba minor</i> . A diversity of butterfly species has also been recorded. Wildlife Site criteria: Grassland indicators.
Purwell Ninesprings LWS	TL205291	7.82	A complex matrix of wetland habitats including mature Alder <i>Alnus glutinosa</i> woodland, wet meadows, an extensive sedge bed, reed beds, a pond, a former cress beds and a series of water filled ditches. The whole area surrounds the outflow of the Ninesprings from the underlying Melbourne rock. The vegetation supports a variety of marsh plants including Ragged Robin <i>Lychnis flos-cuculi</i> and Marsh Marigold <i>Caltha palustris</i> and is excellent for bryophytes. It is also important locally for birds, amphibians and mammals. Wildlife Site criteria: Fen and swamp indicators; marshy grassland indicators.

4.2 Habitats

The habitats below were recorded within the site during the survey. No protected, BAP, Habitats of Principal Importance or locally important floral species were recorded during the survey. Habitat types are described below and shown on the Phase I Habitat Map (**Appendix 1**).

- Buildings
- Hard-standing / Bare ground
- Scrub
- Scattered trees
- Ruderal vegetation

4.2.1 Buildings

A description of the buildings within the site is provided in relation to their bat roosting suitability in **Section 4.3.3**.

4.2.2 Hard-standing

An access driveway, hardstanding and bare ground parking areas were recorded within the site (**Photo 4.1**). These areas of habitat are of **negligible** importance and are not therefore considered any further within this assessment.



Photo 4.1: Hard-standing / bare ground facing north-east.

4.2.3 Scrub

Within the north-west of the site boundary was an area of bramble *Rubus fruticosus* dominated scrub with occasional butterfly bush *Buddleja davidii* (**Photo 4.2**). Bramble scrub is ubiquitous in its range, of **negligible** importance and therefore considered any further within this assessment.



Photo 4.2: Bramble dominated scrub within the north-west of the site

4.2.4 Scattered Trees

Approximately six small broadleaved trees were located within or close to the site boundary. Species comprised apple *Malus* sp, pear *Pyrus* sp. and plum *Prunus* sp (**Photo 4.3**). The fruit trees were not considered to be an S41 traditional orchard habitat. Scattered trees were considered important at the site level. A small number of trees are to be removed for development.

Precautionary measures to protect any retained trees that may be affected by construction works are recommended in **Section 5**.



Photo 4.3: Apple and plum trees adjacent to the site.

4.2.5 Ruderal vegetation

Patches of ruderal vegetation were present at the margins of the hard-standing. Species present included common nettle *Urtica dioica*, bristly ox tongue *Helminthotheca echioides*, canadian fleabane *Conyza canadensis*, spear thistle *Cirsium vulgare* and groundsel *Senecio vulgaris*.

The ruderal vegetation lacked botanical interest, species diversity and structure. It and was therefore considered to be of **negligible** importance.

No further action is recommended and ruderal vegetation is not considered any further within this assessment.

4.3 Protected and Notable Species

Records of protected / notable species for the last ten years have been considered within the assessment below. Older records have been considered where appropriate. None of the records pertain to the site.

4.3.1 Amphibians

HERC returned four records of great crested newt, two of which were from the last ten years. There were also nine recent records of common toad returned.

There were no waterbodies within the site and none were visible within 250m of the site boundary (Natural England, 2018). It was considered unlikely that significant populations of amphibians were present locally due to an absence of breeding ponds. It was considered highly unlikely that amphibians were present within the site due to the poor quality and unsuitability of its dominant habitats (hard-standing / bare ground and buildings). No impacts on great crested newts or other species of amphibian are anticipated.

Amphibians will therefore not be included any further within this assessment.

4.3.2 Badgers

HERC returned eight recent confidential records of badgers. No badger setts or evidence of badger activity (latrines, pathways, footprints, snuffle holes or badger hairs) were recorded on or within 30m of the site boundary. The site was bounded by close board fencing and held **negligible potential** badgers (sett building and foraging) due to the dominance of hard-standing and buildings within the site.

General precautionary measures to protect nocturnal mammals are recommended in **Section 5**. Badgers are not considered any further within this assessment.

4.3.3 Bats

HERC returned 29 recent bat records comprising five known species. The records are summarised in the table below (**Table 4.3**). Magic returned four records of granted EPSM bat licences from within 2km of the site (**Table 4.4**).

Table 4.3: Bat records within 2km of the site.

Bat Species	Protection	Nearest and Most Recent Records
Common pipistrelle <i>Pipistrellus pipistrellus</i>	CHSR ¹ ; WCA ² .	Five records, the nearest 1.9km SW, the latest 2016.
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	CHSR, WCA; SPIE ³ .	One records, the nearest 1.9km W from 2008.
Brown long-eared bat <i>Plecotus auritus</i>	CHSR, WCA; SPIE.	Three records, the nearest 2.7km SW, the latest 2010.
Noctule <i>Nyctalus noctula</i>	CHSR, WCA; SPIE	Two records, the nearest 1.9km SW, the latest 2014.
Natterer's bat <i>Myotis nattereri</i>	CHSR, WCA.	16 records, the nearest 1.9km SW, the latest 2016.
A bat <i>Chiroptera</i>	CHSR, WCA.	Two records, the nearest 630m S and latest 2016.

Table 4.4 Bat EPSM licence records within 2km of the application site (Natural England, 2018).

Case Reference	Species Present	Roost	Distance & Direction	Licence Start & End Dates
EPSM2012-5034	Common Pipistrelle	Resting place	c.650m W	11/12/2012 to 30/09/2014
2016-21240-EPS-MIT	Soprano Pipistrelle	Resting place	c.1.8km NW	20/03/2016 to 19/03/2021
EPSM2010-2585	Brown Long-eared	Resting place	c.1.9km W	24/11/2010 to 01/11/2012
EPSM2009-1327	Brown Long-eared	Resting place	c.1.9km W	22/10/2009 to 31/08/2010

4.3.3.1 Roosting (Buildings)

A number of buildings previously used for storing agricultural machinery present within the site have been described below. No bats or signs of bats were recorded during the survey, refer to **Appendix 1** for the building locations.

Building 1

A timber framed storage shed, approximately 10m long and 5m wide with a pitched, corrugated metal sheet roof. A large partially open doorway was present at one end of the building with windows present on the eastern and western elevations. The windows were either single glazed, or unglazed and covered with plastic sheeting. The building was clad with single skin weatherboarding or metal sheeting. Internally the building was damp, light and draughty and

¹ Conservation of Habitats and Species Regulations 2017.

² Wildlife and Countryside Act 1981 (as amended).

³ Species of Principal Importance in England of Section 41 of the Natural Environmental and Rural Communities Act (NERC), 2006.

although there were opportunities for bats to enter the building it was considered to hold **negligible** suitability for roosting bats. No bats or signs of bats were recorded.



Photo 4.5: Building 1, exterior facing west.



Photo 4.6: Building 1, interior facing north-west.

Building 2

A timber structure approximately 13m long and 7m wide, divided into three sections with a sloped, corrugated metal sheet roof. The western section of the building was used for storage, the central section was a regularly used workshop and the eastern section was an open fronted sheltered seating area. Intact, single glazed windows were present on the western elevation with two sets of large, double doors present on the southern side of the building. A large gap c.20cm x c.4m was present above the doorway at the western end of the building. The building was clad with single skin weatherboarding and corrugated metal sheeting.

Internally the building was damp, light and draughty and although bats could enter through several large openings it was considered to hold **negligible** suitability for roosting bats. No bats or signs of bats were recorded.



Photo 4.7: Building 2, western elevation.



Photo 4.8: Building 2, internal storage area.

Overall Suitability for Roosting Bats in Buildings

Two buildings were present within the site. Though different in terms of size, the style of construction was similar and they were in poor condition. Neither building contained features suitable for roosting bats. No further bat surveys of the buildings were considered necessary.

4.3.3.2 Roosting (Trees)

Six early mature fruit trees present within and adjacent to the site were not considered large enough to hold features capable of supporting roosting bats. Due to their small size the trees could be thoroughly inspected and no potential roost features were visible from the ground.

A small number of the trees are to be removed for the development, these were too small to have features that could be used by roosting bats and therefore held **negligible value** for roosting bats. Roosting bats are not considered any further within this assessment.

4.3.4 Foraging and Commuting

The site was dominated by hard-standing and buildings with small patches of scattered scrub and ruderal vegetation. These predominantly artificial habitats held limited opportunities for foraging and commuting bats. No mature trees or hedgerows were present within the site and it was of **negligible** suitability for foraging bats.

The site overall held **negligible value** for foraging or commuting bats. Foraging and commuting bats are not considered any further within this assessment.

4.3.5 Birds

HERC returned numerous records of birds listed as Annex I (Birds Directive), Schedule 1 (WCA) and/or of Conservation Concern (BoCC4). A full list of species can be found below (**Appendix 3**).

Bird interest (nesting / foraging) is likely to be confined to the small trees and buildings. The site was therefore considered to hold **moderate value** for widespread species of nesting bird. The site overall was, however, considered to hold **negligible value** for significant bird species and assemblages.

Further action for nesting birds is recommended in **Section 5**.

4.3.6 Invertebrates

HERC returned four recent records of stag beetle *Lucanus cervus* which are listed on *Schedule 5* of the WCA. There were also numerous records of notable (Section 41 NERC Act 2006) butterfly and moth.

There was no rotting or buried deadwood on the site which could support the saproxylic larvae of the stag beetle. Further, habitats to be significantly impacted by the proposals (hard-standing, buildings and a small patch of scrub) were unlikely to support other rare or notable invertebrate species. The site was therefore considered to hold **negligible** potential for rare / notable invertebrates. Therefore, no further survey or mitigation is recommended and invertebrates are not considered any further within this assessment.

4.3.7 Hazel Dormouse

HERC did not return any records for hazel dormouse. The site did not contain suitable dormouse habitat; hedgerows, dense scrub or woodland. According to aerial images, the site was also isolated from suitable habitat in the surrounding landscape. The site was therefore considered to hold **negligible** potential for dormice.

Therefore, hazel dormouse is not considered any further within this assessment and no further survey or mitigation is recommended.

4.3.8 Reptiles

HERC returned six recent records of and slow-worm *Anguis fragilis*. Older records of grass snake *Natrix Helvetica* and common lizard *Zootoca vivipara* were also returned.

The site was small in area and was dominated by habitats not typically favoured by reptiles and was also unconnected to areas of suitable habitat. It was considered unlikely that the site would support reptiles as a consequence of isolation, habitat unsuitability and its relatively small area.

Therefore, reptiles are not considered any further within this assessment and no further surveys or mitigation are recommended.

4.3.9 Hedgehogs and Other BAP / Rare Species

HERC returned 18 recent records of hedgehog *Erinaceus europaeus*. Habitat within the site was generally of **low** potential for hedgehogs. The hard standing, ruderal vegetation and scattered scrub offered limited foraging opportunities. The site held **low value** for hedgehog and precautionary avoidance measures are recommended in **Section 5**.

The site and habitats within the site were assessed with regard to potential for other protected, rare or notable species which have not been considered above. It was concluded that the proposed development didn't represent a risk to other protected, rare or notable species.

No further actions are recommended with respect to other protected, rare or notable species.

4.3.10 Invasive Plants

No invasive plant species listed under Schedule 9 of the WCA were noted on site during the survey.

No further action has therefore been recommended

4.4 Summary of the Important Ecological Receptors

Habitats, species and species groups that are considered to have negligible nature conservation value are not considered important ecological features in the context of this assessment. Any impact on such a feature as a result of the development is considered unlikely to have a significant effect on the conservation status of such habitats or species on a local, regional, national or international scale.

The important ecological receptors that have been considered at the impact assessment stage are:

- Woody habitats and buildings with potential to support nesting birds.

5 Impact Assessment

This section characterises the impacts and the subsequent effects (both positive and negative) of the proposed development on the important ecological features within the site. It also sets out avoidance, mitigation, compensation and enhancement measures, and assesses the significance of the residual effects (both positive and negative) of the development on these features.

It is recommended that the mitigation measures identified in **Section 5.1** onwards will be incorporated into the detailed design proposals for the Scheme and implemented as part of the overall development of the application site.

5.1 Scattered Trees and Buildings with Nesting Bird Potential

Potential Impacts

The proposed development will result in the loss of up to six scattered trees and two buildings. Without mitigation, works during the construction phase have potential to:

- Damage or destroy active nests; and
- Reduce the number of bird nesting opportunities through the removal of shrubs and small trees.

Mitigation

In order to mitigate this, the buildings and vegetation will be cleared between September and February (inclusive) to avoid the breeding bird season. Alternatively, an ecologist will check potential nesting habitat immediately before clearance if it is scheduled during the breeding season (March to August inclusive). Any active nests identified will be retained in situ with a suitable buffer until the ecologist has confirmed that the chicks have fledged and the nest is no longer active.

Significance of Residual Effects

It is anticipated that the construction phase of the development will result in no significant effects on nesting birds if the mitigation and the general mitigation measures in this section are implemented.

5.2 General Mitigation

The following will be implemented during the construction phase of the development to comply with national and local planning policy, current legislation and best practice:

- General measures to avoid or minimise any negative effects on ecological receptors including following the pollution prevention guidelines (PPG) and CIRIA guidelines.
- Protection of retained trees close to the proposed works, including the installation of root protection areas where required during construction with Heras fencing in line with Trees in Relation to Design, Demolition and Construction – Recommendations BS5837:2012 (BSI, 2012);
- Cover any trenches, holes or deep pits overnight, or use secured planks to allow any animals that fall in to escape during construction. A member of staff should check the site at the end of each working day to ensure that these provisions to protect nocturnal species (such as hedgehog) have been made.

5.3 Enhancements

The recommendations below are designed to enhance the value of the site for wildlife, as encouraged through the National Planning Policy Framework, and to help achieve Herts BAP targets (see **Appendix 2**):

- 1) Install two Schwegler 1B General Purpose Bird Boxes onto new buildings. Choose boxes with a variety of nest-hole sizes to attract a variety of species (e.g. 26mm, 32mm and 55mm oval). Fit the boxes at least 3m above the ground, avoiding direct sunlight (not directly south-facing) and prevailing wind;
- 2) Install two Schwegler IFF and / or 2F Bat Boxes onto new buildings to enhance roosting opportunities within the site for bats. Typically bat boxes are installed at least 5m above the ground and facing in a southerly direction to receive sun for part of the day. Locations close to artificial lighting are to be avoided, ideally boxes will be located adjacent to commuting or foraging habitat such as lines of trees or hedgerows. Clear access for bats to the boxes should be maintained over the longer term which may involve light intervention (e.g. the pruning of over-hanging branches or ivy). Always consult with an experienced bat ecologist regarding the installation and positioning of bat boxes;
- 3) Incorporate native species within the planting schedules of any new soft landscaping. A list of suitable, wildlife friendly, fruit and nectar bearing species is provided below (**Appendix 4**);
- 4) Provide a hedgehog house within a sheltered location e.g. at the base of shrub beds, preferably a distance away from parking areas or roads; and
- 5) Avoid use of pesticides and use environmentally safe wood preservatives (for sheds and fences etc).

6 Conclusion

The development can proceed with minimal impact to habitats and protected / notable species assuming the mitigation measures outlined within **Section 5** are implemented.

There is also the opportunity to enhance the development for local wildlife in the long-term by implementing the enhancement measures.

7 References

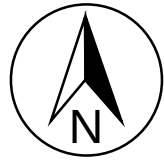
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Appendix 1 Phase I Habitat Map



Legend

- Building
- Hardstanding / Bare Ground
- Scattered Scrub
- Site Boundary
- Scattered Broad-leaved Tree
- Fence
- Ruderal Vegetation

Project

83 Whitehill Road, Hitchin, SG4 9HP

Title

Phase 1 Habitat Map

Client

Orchard Home Developments Ltd



agb Environmental Ltd

Newmarket Business Centre, 341 Exning Road,
Newmarket. CB8 0AT
Tel: 01638 663 226
Email: Info@agbenvironmental.co.uk
Web: www.agbenvironmental.co.uk

Date 14th December 2018

Scale NTS

Project number . Drawing number

P3252.2.0

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Appendix 2 Legislation & Planning Policy

Legislation

Conservation of Habitat and Species Regulations (CHSR)

The *CHSR 2017* transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English law, making it an offence to deliberately capture, kill or disturb wild animals listed under Schedule 2 of the Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

Wildlife & Countryside Act (WCA)

The *WCA 1981*, as amended by the *Countryside and Rights of Way Act (CROW) 2000* and the *Natural Environment and Rural Communities Act (NERC) 2006*, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act; intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act; intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
- Pick or uproot any wild plant listed under Schedule 8 of the Act.

Sites of Special Scientific Interest (SSSI) are designated under this Act.

Special Protection Areas (SPA) are strictly protected sites, designated under the Birds Directive, for rare and vulnerable birds and for regularly occurring migratory species.

Natural Environment & Rural Communities (NERC) Act

The *NERC Act 2006* amends the *CROW Act*, by further extending the requirement to have regard for biodiversity to all public authorities, which includes local authorities and local planning authorities and requires that the Secretary of State consults Natural England (NE) in the publication of the list of living organisms and habitat types deemed to be of principal importance in conserving biodiversity.

Relevant Protected Species Legislation

Species	Relevant Legislation	Level of Protection
Birds	Protection under the <i>Wildlife and Countryside Act, 1981 (as amended)</i> .	It is an offence to: - intentionally kill, injure or take any wild bird. - intentionally take, damage or destroy nests in use or being built (including ground nesting birds). - intentionally take, damage or destroy eggs. - Species listed on Schedule 1 of the WCA or their dependant young are afforded additional protection from disturbance whilst they are at their nests.
Bats	European protected species under the <i>Conservation of Habitats and Species Regulations 2017</i> . Full protection under <i>Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended)</i> . Protected by the <i>Wild Mammals (Protection) Act 1996</i> .	It is an offence to: - intentionally kill, injure, or take any species of bat. - intentionally or recklessly disturb bats. - intentionally or recklessly damage destroy or obstruct access to bat roosts.
Wild Mammals	The <i>Wild Mammals (Protection) Act 1996</i> .	This makes it an offence to: crush or asphyxiate any wild mammal with intent to inflict unnecessary suffering. This may apply during site clearance for development, particularly where burrowing animals such as foxes and rabbits are present, since such animals could be crushed or asphyxiated in their burrows by heavy machinery.

National Planning Policy

National Planning Policy Framework (NPPF)

The NPPF sets out current government policy on biodiversity and nature conservation and places a duty on planners to make material consideration to the effect of a development on legally protected species when considering planning applications (MHC&LG, 2018). The NPPF also promotes sustainable development by ensuring that developments take account of the role and value of biodiversity and that it is conserved and enhanced within a development.

The NPPF works in conjunction with Government Circular 06/2005 '*Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System*.'

Regional and Local Planning Policy and Guidance

Local Structure Plans

County, District and Local Councils have Structure Plans and other policy documents that include targets and policies which aim to maintain and enhance biodiversity. These are used by Planning Authorities to inform planning decisions.

Biodiversity Action Plans

The UK Biodiversity Action Plan (UKBAP) was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. A 'UK Post-2010 Biodiversity Framework' was published in July 2012, and succeeded the UKBAP. Much of the work for the UK BAP is now focussed at a country level due to devolution and the creation of country-level biodiversity strategies.

The UKBAP lists of priority species and habitats are still valuable reference sources. Notably, they have been used to help draw up statutory lists of priority species and habitats as required under Section 41 of the NERC act.

Hertfordshire Biodiversity Action Plan

The Local Habitat and Species Action Plans were first produced in 1999, with subsequent revisions. A list of all species for Hertfordshire are listed online at

http://www.hef.org.uk/nature/biodiversity_vision/index.htm (Last visited 14/12/2018)

UK Post-2010 Biodiversity Framework

The UK Post-2010 Biodiversity Framework (2012) was produced in response to a change in strategic thinking following the publication of the Convention of Biological Diversity's Strategic Plan for Biodiversity 2011–2020. The Strategic Plan consists of 20 new biodiversity targets for 2020, termed the 'Aichi biodiversity targets' and the launch of the new EU Biodiversity Strategy in May 2011.

The framework sets a structure for action across the UK between now and 2020, including a shared vision and priorities for UK-scale activities to help deliver the Aichi targets and the EU Biodiversity Strategy. A major commitment by Parties to the Convention of Biological Diversity is to produce a National Biodiversity Strategy and/or Action Plan (NBSAP).

Natural England Standing Advice

Natural England has adopted national standing advice for protected species. It provides a consistent level of basic advice which can be applied to any planning application that could affect protected species. It replaces some of the individual comments that Natural England has provided in the past to local authorities.

Appendix 3 Bird Species Recorded Within 2km of the Site

Table A3.1: Protected and endangered bird species recorded within 2km of the site.

Common Name	Latin Name	Selected Designations
Barn Owl	<i>Tyto alba</i>	Berne:A2; BoCC4:Green; ECCITES:A; WCA1
Bittern	<i>Botaurus stellaris</i>	BAP; Berne:A2; BoCC4:Amber; Bonn:A2; BirdsDir:A1; S41; WCA1
Brambling	<i>Fringilla montifringilla</i>	Berne:A3; WCA1
Black-tailed Godwit	<i>Limosa limosa</i>	BAP; Berne:A3; BoCC4:Red; Bonn:A2; BirdsDir:A2.2; KRDB1; S41; WCA1
Cetti's Warbler	<i>Cettia cetti</i>	Berne:A2; KRDB3; WCA1
Common Crossbill	<i>Loxia curvirostra</i>	Berne:A2; WCA1
Common Scoter	<i>Melanitta nigra</i>	BAP; Berne:A3; BoCC4:Red; Bonn:A2; BirdsDir:A2.2; S41; WCA1
Common Tern	<i>Sterna hirundo</i>	Berne:A2; BoCC4:Amber; Bonn:A2; BirdsDir:A1
Corn Bunting	<i>Miliaria calandra</i>	BAP; Berne:A3; BoCC4:Red; KRDB2; S41
Cuckoo	<i>Cuculus canorus</i>	BAP; Berne:A3; BoCC4:Red; S41; KRDB2
Fieldfare	<i>Turdus pilaris</i>	Berne:A3; BoCC4:Red; BirdsDir:A2.2; WCA1
Firecrest	<i>Regulus ignicapillus</i>	Berne:A2; BoCC4:Green; KRDB1; WCA1
Grasshopper Warbler	<i>Locustella naevia</i>	BAP; Berne:A2; BoCC4:Red; KRDB1; S41
Green Sandpiper	<i>Tringa ochropus</i>	Berne:A2; BoCC4:Amber; Bonn:A2; WCA1
Grey Wagtail	<i>Motacilla cinerea</i>	Berne:A2; BoCC4:Red
Herring Gull	<i>Larus argentatus</i>	BAP; BoCC4:Red; BirdsDir:A2.2; S41; KRDB2
Hobby	<i>Falco subbuteo</i>	Berne:A2; Bonn:A2; ECCITES:A; WCA1
House Sparrow	<i>Passer domesticus</i>	BAP; BoCC4:Red; KRDB2; S41
Kingfisher	<i>Alcedo atthis</i>	Berne:A2; BoCC4:Amber (subsp. Red); BirdsDir:A1; WCA1
Lesser Redpoll	<i>Carduelis cabaret</i>	BAP; Berne:A3; BoCC4:Red; KRDB1; S41
Linnet	<i>Carduelis cannabina</i>	BAP; Berne:A2; BoCC4:Red; KRDB2; S41
Little Egret	<i>Egretta garzetta</i>	Berne:A2; BoCC4:Green; ECCITES:A; BirdsDir:A1; KRDB3
Marsh Tit	<i>Parus palustris</i>	BAP; Berne:A2; BoCC4:Red; S41; KRDB2
Mediterranean Gull	<i>Larus melanocephalus</i>	Berne:A2; BoCC4:Amber; Bonn:A2; BirdsDir:A1; KRDB3; WCA1
Mistle Thrush	<i>Turdus viscivorus</i>	Berne:A3; BoCC4:Red; BirdsDir:A2.2
Peregrine	<i>Falco peregrinus</i>	Berne:A2; BoCC4:Green (subsp. Amber); Bonn:A2; ECCITES:A; BirdsDir:A1; KRDB1; WCA1
Pied Flycatcher	<i>Ficedula hypoleuca</i>	Berne:A2; BoCC4:Red; Bonn:A2
Red Kite	<i>Milvus milvus</i>	Berne:A3; BoCC4:Green; Bonn:A2; ECCITES:A; BirdsDir:A1; WCA1
Redwing	<i>Turdus iliacus</i>	Berne:A3; BoCC4:Red; BirdsDir:A2.2; WCA1
Skylark	<i>Alauda arvensis</i>	BAP; Berne:A3; BoCC4:Red; BirdsDir:A2.2; KRDB2; S41

Common Name	Latin Name	Selected Designations
Song Thrush	<i>Turdus philomelos</i>	BAP; Berne:A3; BoCC4:Red; BirdsDir:A2.2; KRDB2; S41
Spotted Flycatcher	<i>Muscicapa striata</i>	BAP; Berne:A2; BoCC4:Red; Bonn:A2; KRDB2; S41
Starling	<i>Sturnus vulgaris</i>	BAP; BoCC4:Red; BirdsDir:A2.2; S41; KRDB2
Turtle Dove	<i>Streptopelia turtur</i>	BAP; Berne:A3; BoCC4:Red; Bonn:A2; ECCITES:A; BirdsDir:A2.2; KRDB2; S41
Whinchat	<i>Saxicola rubetra</i>	Berne:A2; BoCC4:Red; Bonn:A2
Yellow Wagtail	<i>Motacilla flava</i>	BAP; Berne:A2; BoCC4:Red; S41; KRDB2
Yellowhammer	<i>Emberiza citrinella</i>	BAP; Berne:A2; BoCC4:Red; KRDB2; S41

Appendix 4 Wildlife-Friendly Planting

Table A4.1: Native and wildlife-friendly shrubs (Natural England, 2008).

Common Name	Scientific Name
Hazel	<i>Corylus avellana</i>
Elder	<i>Sambucus nigra</i>
Goat willow	<i>Salix caprea</i>
Hawthorn	<i>Crataegus monogyna</i>
Dog rose	<i>Rosa canina</i>
Guelder rose	<i>Viburnum opulus</i>
Gorse	<i>Ulex europaeus</i>
Broom	<i>Cytisus scoparius</i>
Wayfaring tree	<i>Viburnum lantana</i>
Shrubby cinquefoil	<i>Potentilla fruticosa</i>
Raspberry	<i>Rubus idaeus</i>
Alder buckthorn	<i>Frangula alnus</i>
Wild privet	<i>Ligustrum vulgare</i>
Barberry	<i>Berberis × stenophylla</i>
Barberry	<i>Berberis vulgaris</i>
Bell heather	<i>Erica cinerea</i>
Bilberry	<i>Vaccinium myrtillus</i>
Black currant	<i>Ribes nigrum</i>
Blackthorn	<i>Prunus spinosa</i>
Buckthorn	<i>Rhamnus catharticus</i>
Butcher's-broom	<i>Ruscus aculeatus</i>
Cowberry	<i>Vaccinium vitis-idaea</i>
Cross-leaved heath	<i>Erica tetralix</i>
New Zealand holly	<i>Olearia macrodonta</i>
Daphne	<i>Daphne odora</i>
Dogwood	<i>Cornus sanguinea</i>
Field rose	<i>Rosa arvensis</i>
Firethorn	<i>Pyracanthus angustifolia</i>
Flowering Currant	<i>Ribes sanguineum</i>
Gooseberry	<i>Ribes uva-crispa</i>
Hebe 'Midsummer Beauty'	<i>Hebe</i> sp.
Holly	<i>Ilex aquifolium</i>
Japanese quince	<i>Chaenomeles japonica</i>
Lilac	<i>Syringa vulgaris</i>
Mexican orange	<i>Choisya ternata</i>
Mezereum	<i>Daphne mezereum</i>
Midland hawthorn	<i>Crataegus laevigata</i>
Oregon grape	<i>Mahonia aquifolium</i>
Osier	<i>Salix viminalis</i>
Portugal laurel	<i>Prunus lusitanica</i>
Privet	<i>Ligustrum ovalifolium</i>
Purple willow	<i>Salix purpurea</i>
Snowy mespilus	<i>Amelanchier canadensis</i> , <i>Amelanchier lamarckii</i>
Spindle	<i>Euonymus europaeus</i>
Spurge laurel	<i>Daphne laureola</i>
Sweet briar	<i>Rosa rubiginosa</i>

Common Name	Scientific Name
Wild privet	<i>Ligustrum vulgare</i>

Table A4.2: Native and wildlife-friendly trees (Natural England, 2008).

Common Name	Scientific Name
Pedunculate oak	<i>Quercus robur</i>
Ash	<i>Fraxinus excelsior</i>
Wych elm	<i>Ulmus glabra</i>
Whitebeam	<i>Sorbus aria</i> agg.
Rowan	<i>Sorbus aucuparia</i>
Aspen	<i>Populus tremula</i>
Apple	<i>Malus domestica</i>
Bird cherry	<i>Prunus padus</i>
Common alder	<i>Alnus glutinosa</i>
Crab apple	<i>Malus sylvestris</i>
Crack willow	<i>Salix fragilis</i>
Downy birch	<i>Betula pubescens</i>
Field maple	<i>Acer campestre</i>
Hornbeam	<i>Carpinus betulus</i>
Juniper	<i>Juniperus communis</i>
Large-leaved lime	<i>Tilia platyphyllos</i>
Small-leaved lime	<i>Tilia cordata</i>
Pear	<i>Pyrus communis</i>
Scots pine	<i>Pinus sylvestris</i>
Sessile oak	<i>Quercus petraea</i>
Silver birch	<i>Betula pendula</i>
Sweet chestnut	<i>Castanea sativa</i>
Wild cherry	<i>Prunus avium</i>
Wild service-tree	<i>Sorbus torminalis</i>
Yew	<i>Taxus baccata</i>