



Extended Phase 1 Habitat Survey

Comet Hotel, Comet Way, Hatfield, Hertfordshire

On Behalf of:

Fusion Hatfield Hotels Ltd

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1.0 Introduction and Aims

1.1 Southern Ecological Solutions Ltd. (SES) was commissioned to undertake an extended phase 1 habitat survey of Comet Hotel, Comet Way, Hatfield, Hertfordshire (see Appendix 1).

1.2 The objectives of this extended phase 1 survey were to:

- map the main ecological features within the site and compile a plant species list for each habitat type;
- make an initial assessment of the presence or likely absence of species of conservation concern;
- identify any legal and planning policy constraints relevant to nature conservation which may affect the development;
- determine any potential further ecological issues;
- determine the need for further surveys and mitigation; and
- make recommendations for minimising impacts on biodiversity and providing net gains in biodiversity where possible in accordance with chapter 11: Conserving and Enhancing the Natural Environment, of the National Planning Policy Framework (NPPF) (DfCLG, 2012).

1.3 The site survey was undertaken by suitably qualified ecologist Michelle Tyrrell BSc (Hons) on 10th June 2015 with all areas being accessible at the time of survey.

2.0 Methodology

Desk Study

2.1 SES commissioned an extensive data search for records of protected and notable fauna species and designated sites via the Hertfordshire Environmental Records Centre. The data search encompassed the study area, and up to 2km from its boundary for protected species and up to 5km for designated sites.

Extended Phase 1 Habitat Survey

2.2 The field survey comprised of an extended phase 1 habitat survey (JNCC, 2010) of the development site. This is a standard technique for obtaining baseline ecological information for areas of land, including proposed development sites.

2.3 The dominant and readily identifiable higher plant species identified in each of the various habitat parcels were recorded and their abundances were assessed on the DAFOR scale (Appendix 2):

- D Dominant
- A Abundant
- F Frequent
- O Occasional
- R Rare

2.4 These scores represent the abundance within the defined area only and do not reflect national or regional abundances. Plant species nomenclature follows Stace (1997).

3.0 Constraints

3.1 Desktop data searches are a valuable tool in evaluating a sites potential to hold rare and protected species, it is not however an absolute in confirming presence or absence of noted species due to the nature of how the records are collected.

4.0 Results

Desk Study

4.1 A number of protected and noted species were recorded during the desktop data search. European protected species identified within 2km of the study area include: Multiple bat records: Pipistrelle sp. *Pipistrellus sp.* in 2001 – 2003, Natterer’s bat *Myotis nattereri* in 2001; Noctule *Nyctalus noctula* in 2003 and Chiroptera sp. in 2002. Both Brown-longed ears *Plecotus auritus* and Common Pipistrelle *Pipistrellus pipistrellus* were recorded 670m north-west in 2003. Great crested newt *Triturus cristatus* was also recorded in 2001 and 2002.

4.2 Species protected under UK legislation identified within 2km of the study area include: Grass Snake *Natrix natrix* recorded west in 2000 and Common Lizards *Zootoca vivipara* in 2004. Multiple Badger *Meles meles* records are present in the surrounding area 2000 - 2014.

4.3 Records of UK Biodiversity Action Plan (BAP)/Natural Environment and Rural Communities (NERC) Act priority species identified within 2km of the study area included: Brown Hare *Lepus europaeus* recorded 550m south-west in 2013 and the White-letter Hairstreak butterfly *Satyrrium w-album* recorded 240m south-east from 1996 – 2013. Birds of Conservation Concern within 2km of the site include: Cuckoo *Cuculus canorus*, Barn Owl *Tyto alba*, Hobby *Falco Subbuteo* and Red Kite *Milvus milvus* all between 2003 – 2013.

4.4 The data search also highlighted a number of designated sites within 5km of the site boundaries: (see Table 1 below).

Table 1: Statutory Protected Sites within 5km of the site listed in order of distance from site

Site Name	Designation	Distance and Direction from Site	Reason for Designation
Hazel Grove	LWS	970m	Ancient semi-natural wood (6.04ha) consisting of Pedunculate Oak <i>Quercus robur</i> /Hornbeam <i>Carpinus betulus</i> woodland, supporting mainly Pedunculate Oak standards and old Hornbeam coppice with some Wild Cherry <i>Prunus avium</i> , Ash <i>Fraxinus excelsior</i> , Beech <i>Fagus sylvatica</i> and Sycamore <i>Acer pseudoplatanus</i> . The shrub layer is generally sparse and the ground vegetation in the wood is predominantly Bluebell <i>Hyacinthoides non-scripta</i> and Bramble <i>Rubus fruticosus agg.</i> with additional indicator species such as Yellow Archangel <i>Lamiastrum galeobdolo</i> and Wood Anemone <i>Anemone nemorosa</i> . Remnant boundary hedge banks and ditches with some Hornbeam are present.
Copse at Nast Hyde	LWS	1010m	Ancient semi-natural woodland (2.52ha) remnants partly surrounded by more old secondary woodland and broadleaved plantation. The ancient woodland areas support Pedunculate Oak <i>Quercus robur</i> and Hornbeam coppice with some coppiced Hazel <i>Corylus avellana</i> and Field Maple <i>Acer campestre</i> . The ground flora is dominated by Bluebell and Bramble. They are surrounded by old woodbanks with some laid Hornbeam. The ancient compartments are partly encompassed by secondary, predominantly scrubby Pedunculate Oak woodland with a patchy shrub layer of mainly Hawthorn <i>Crataegus monogyna</i> and Elder <i>Sambucus nigra</i> with Bramble dominant on the ground. A boundary bank and ditch encloses the whole site. The wood supports a varied structure for a small site.

Site Name	Designation	Distance and Direction from Site	Reason for Designation
Home Covert and Round Wood	LWS	1200m	<p>Two areas of ancient semi-natural broadleaved woodland (13.54ha). Home Covert is predominantly Pedunculate Oak and Ash with remnant Hazel coppice with some old Hornbeam, including pollards, around the woodland edge. Sycamore is frequent and Pedunculate Oak has been planted. Other canopy species include Silver Birch <i>Betula pendula</i>, Field Maple and rare Beech. The ground flora supports woodland indicators such as Bluebell, Dog's Mercury <i>Mercurialis perennis</i> and Yellow Archangel.</p> <p>Round Wood is primarily a Hornbeam coppice with some Ash and Silver Birch standards and an occasional Holly <i>Ilex aquifolium</i>, with Bluebell below. The bank along the eastern margin supports old coppiced Hornbeam, Pedunculate Oak and Field Maple also occur at the woodland edge.</p>
Howe Dell School	N/A	1380m	Buildings and environs important for protected species.
Sleapshyde Farm	N/A	1520m	Buildings and environs important for protected species.
Howe Dell/Stream Woods	LWS	1580m	<p>Narrow strip (3.66ha) of ancient Pedunculate Oak/Hornbeam woodland situated on Boulder Clay and glacial gravels overlying Upper Chalk along a stream valley. The stream running through the wood sinks into a swallow-hole at the northern end of the valley.</p> <p>Hornbeam is the predominant tree species although a number of large Ash, Sycamore, Pedunculate Oak, Field Maple and Beech are present. There is a large Crab Apple <i>Malus sylvestris</i> near the centre of the site and the sparse shrub layer includes Hazel, Hawthorn, Blackthorn <i>Prunus spinosa</i>, Elder and rare Midland Hawthorn <i>Crataegus laevigata</i>.</p> <p>The ground flora supports woodland indicators including Bluebell, Wood Anemone <i>Anemone nemorosa</i>, Yellow Archangel and Hairy-brome <i>Bromopsis ramosa</i>. The streamside flora supports species such as Remote Sedge <i>Carex remota</i>, Meadowsweet <i>Filipendula ulmaria</i> and Gypsywort <i>Lycopus europaeus</i>.</p>
Oxleys Wood	LNR and LWS	1710m	Semi-natural wet broadleaf woodland (1.42ha), possibly on former ancient Pedunculate Oak/Hornbeam woodland site. The canopy is principally secondary Pedunculate Oak, Ash, some Elm <i>Ulmus sp.</i> and planted Hybrid Black Poplar <i>Populus x canadensis</i> . There are relict ancient Pedunculate Oak and coppiced Hornbeam along a stream bank on the eastern edge. The ground flora is diverse and supports numerous ancient woodland indicators including Bluebell, Goldilocks Buttercup <i>Ranunculus auricomus</i> , and Wood Melick <i>Melica uniflora</i> . There is a seasonal pond in the north fed by a ditch along the eastern boundary of the wood, which is surrounded by some fen habitat. Water-violet <i>Hottonia palustris</i> , a rare Hertfordshire plant, has been recorded from the pond.
Smallford Trail/Alban Way	LWS	1730m	A dismantled railway route used as a public path/bridleway. The site is predominantly lined with secondary broadleaved woodland and scrub (8.82ha), including some very old coppiced specimens, with remnant areas of grass and tall herbs, mainly along the edges of the path in the east. Mature Pedunculate Oak is dominant with frequent Ash and some Field Maple. The ground flora is locally dominated by Ivy <i>Hedera helix</i> but supports numerous woodland indicators including Pignut <i>Conopodium majus</i> . The areas of rough unimproved grassland and taller herbs support a moderately diverse community including several grassland indicators such as Oxeye Daisy <i>Leucanthemum vulgare</i> , Common Knapweed <i>Centaurea nigra</i> and Bird's-foot Trefoil <i>Lotus corniculatus</i> .
Smallford Pit	LWS	1740m	<p>A largely infilled former gravel pit (61.35ha) supporting well developed secondary grassland along with some former old acid/neutral grassland remnants. Additional habitats include numerous hollows supporting seasonal and more permanent areas of standing water, a pond and a fishing lake. A small brook also runs through the site.</p> <p>The majority of the grassland has developed naturally on the site and is rough and relatively species-poor. Perennial Rye-grass <i>Lolium perenne</i> occurs in the sward in places where attempts were made to restore the site. Pyramidal Orchid <i>Anacamptis pyramidalis</i> and Bee Orchid <i>Ophrys apifera</i> have been recorded in the north of the site. The site is important for invertebrates, such as butterflies and dragonflies, birds, reptiles and also amphibians, with records for Great Crested Newts <i>Triturus cristatus</i>.</p>

Site Name	Designation	Distance and Direction from Site	Reason for Designation
Sleapshyde Gravel Pit	LWS	1760m	Former gravel pit restored to an amenity/wildlife park (24.16ha). The area supports a mosaic of habitats with open water, wet neutral grassland, tall herbs, scattered scrub and plantation. Species recorded in the grassland include Common Knapweed <i>Centaurea nigra</i> , Bulbous Buttercup <i>Ranunculus bulbosus</i> and Common Spotted-orchid <i>Dactylorhiza fuchsia</i> . A flooded pit and connecting stream support bank side trees and scrub, including Hawthorn, Goat Willow <i>Salix caprea</i> and White Willow <i>Salix alba</i> . The site has ornithological interest and a good diversity of dragonflies has been noted.
Grassland Strip near Butterfield Cottage	LNR	1830m	Species-rich, partly wet, unimproved neutral to somewhat acidic grassland (2.91ha) drained by several ditches. Species present in the drier sward include Meadow Buttercup <i>Ranunculus acris</i> , Sheep's Sorrel <i>Rumex acetosella</i> , Lady's Bedstraw <i>Galium verum</i> and Bird's-foot Trefoil. The wetter habitat to the south supports species such as rushes <i>Juncus sp.</i> , Marsh Bedstraw <i>Galium palustre</i> , Ragged Robin <i>Lychnis flos-cuculi</i> , Common Fleabane <i>Pulicaria dysenterica</i> , Water Mint <i>Mentha aquatica</i> . The ditch flora is quite diverse with, in addition to many of the species recorded in the wet grassland, species such as Skullcap <i>Scutellaria galericulata</i> and Gypsywort <i>Lycopus europaeus</i> .

LNR = Local Nature Reserve LWS = Local Wildlife Site N/A = Not applicable.

Extended Phase 1 Habitat Survey

4.5 The phase 1 habitat map of the site is shown within Appendix 1 and the plant species recorded per habitat type are tabled in Appendix 2. Each habitat type is described below.

4.6 The proposed development site is located in the south-west of Hatfield town in Hertfordshire. The Comet Hotel consists of a 1930's hotel building (Grade 2 listed), a newer southern expansion to this building, car parking and amenity grounds. The proposed development involves the renovation of the 1930's building. Demolition of the new build hotel structure and replacement of new student accommodation as University of Hertfordshire is close by. The site consists of broad-leaf woodland to the south-east adjacent to Comet Way, species-poor hedgerows on the south-western boundary, improved grassland and car parking. The site is bounded by main roads leading to the local university buildings and a shopping centre, and a residential area is found on the south-western boundary of the site. The site is circa 1.6 hectares (ha).

4.7 There are 6 broad habitat types found within the site, these are:

- Broadleaved Woodland
- Species-poor Hedgerows
- Amenity Grassland
- Scattered Trees
- Buildings
- Bare Ground

Broadleaved Woodland

4.8 Broadleaved woodland is present adjacent to the south-eastern boundary. The woodland contains a variety of species including Ash, Sycamore and Wild Cherry adjacent to Comet Way (Plate 1). As it gets closer to the hotel the woodland is dominated by Laurel with some planted Pine species *Pinus sp.* on the western edge of the woodland (Plate 2). Towards the southern tip of the woodland a single White Poplar *Populus alba* tree has obvious broken/dead/rotting limbs and a woodpecker hole at a height of approximately 15m from the ground (Plate 3). The woodland extends from the southern tip boundary up the south-west boundary by 10m. This area contains semi-mature Hazel and Ash. The ground flora is dominated by Ivy *Hedera helix* and Bramble *Rubus fruticosus*. There is ample dead wood stacked and distributed throughout the hotel side of the wood, as well as, piles of grass cuttings (Plate 4). The woodland has a steep incline towards Comet Way.

Species-poor Hedgerows

4.9 Two species-poor hedgerows are present on site. The hedgerow along the north-west boundary comprises Sycamore, Elder and a mature Norway Maple, as well as dominant Ivy and Bramble (Plate 5). At the northern end of this hedgerow a highly maintained non-native species (unidentified) is found spanning approximately 10m.

Amenity Grassland

4.10 Amenity grassland is found surrounding the car parking and buildings in the and east, south and west of the site (Plate 6). The sward height is generally low (<15cm) due to regular mowing. Grass species include: Yorkshire Fog *Holcus lanatus*, *Festuca sp.* and Cock's Foot *Dactylis glomerata*. As well as herbaceous species such as Daisy *Bellis perennis*, White Clover *Trifolium repens* and Ribwort Plantain *Plantago lanceolata*.

Scattered Trees

4.11 Scattered trees can be found around the car park south-east of the building and throughout the south-western areas of amenity grassland at a range of maturity stages. Two mature Weeping Willows *Salix x sepulcralis* are found near the entrance of the hotel on the south-east area. The willow found closer to the hotel (T5) displays a horizontal rot hole on the lower limb (Plate 7). A second weeping willow (T4) found in the car park displays one upward facing crevice at a height of approximately 3m (Plate 8).

4.12 Further scattered trees are spread throughout the south of the amenity grassland consisting of Hawthorn *Crateagus monogyna*, Norway Maple *Acer platanoides* (Plate 8), as well as, Pine species surrounding a fenced electrical station.

Buildings

4.13 The main Comet Hotel is a brick-built 1930's grade 2 listed building with a flat roof (Plate 10). A newer expansion was added to the hotel on the south-west of the hotel building which finished with rendered cladding with a flat roof in good condition.

Bare Ground

- 4.14** Bare ground consisting of car parking is found surrounding the hotel to the north-east to the south-east. Further bare ground within amenity grassland is found behind the hotel building to the north-west (Plate 5).

5.0 Findings and Recommendations

Statutory/Non-statutory Sites

- 5.1** With respect to statutory sites, the data search only highlighted Oxleys Wood LNR (1710m distance), primarily designated for its woodland plant assemblage and Grassland Strip near Butterfield Cottage (1830m distance), designated for its species-rich, partly wet, unimproved neutral grassland. These designations are afforded protection under UK law and/or are a material consideration under planning policy and as such direct and indirect effects should be sufficiently considered in accordance with the WCA (1981) as amended.
- 5.2** There are nine non-statutory sites/ Local Wildlife Sites (LWS) (Hazel Grove, Copse at Nast Hyde, Home Covert and Round Wood, Howe Dell/Stream Woods, Oxleys Wood, Smallford Trail/Alban Way, Smallford Pit, Sleafshyde Gravel Pit) within 2km of the site.
- 5.3** It is considered that there will be no direct effects from the proposed development on any of the LWS or either LNR, due to the distance and barriers involved (residential development), as well as the relatively small scale of the proposed development.
- 5.4** Pollution events caused via the construction and operation stages of the development are not predicted to represent a significant adverse effect upon citation or qualifying features of any of the designated sites due to the distance from the proposed development area (970m or further) as well as the small scale of the development. This prediction is made considering the evidence available and air quality assessments have not informed this judgement. Pollution prevention measures in line with common industry best practice should be appropriated.
- 5.5** Additional recreational pressure and disturbance upon the designated sites as a result of development are considered insignificant given the current use as a hotel and the small scale of the development.

Protected Habitats

Woodland and Scattered Trees

- 5.6** A singular block of woodland comprising approximately <0.04ha and numerous scattered trees are found on the south of the site. The woodland includes non-native species such as cherry laurel which reduces its biodiversity value somewhat. It is recommended that woodland and trees are retained where possible and retained trees are protected during construction following BS5387:12 (Trees in relation to design, demolition and construction – Recommendations) as well as pollution prevention guidelines.

Hedgerows

- 5.7 Two species-poor hedgerows are present on the western boundaries of the site. The northern hedgerow includes a highly maintained non-native species for a length of 10m which reduces its biodiversity value somewhat. It is recommended that improvements to existing and retained hedgerows are implemented on site to improve their biodiversity value. All newly planted should be contain five or more native woody species where possible.

Species of Conservation Concern

Plants

- 5.8 No plant species recorded on site are listed under Schedule 8 of the WCA 1981 (as amended) 1981, and it is considered that none are rare or threatened. In addition no invasive species listed under schedule 9 of the WCA (as amended) 1981 were recorded within the sites boundaries.

Bats

- 5.9 All bat species are legally protected under S9 of the Wildlife and Countryside Act (1981) and regulation 41 of The Conservation of Habitats and Species Regulations (2010) thus making bats a material consideration of the planning process.
- 5.10 The desk study uncovered records of several species of bat within the 2km of the sites boundaries: Pipistrelle sp. *Pipistrellus sp.* in 2001 – 2003; Natterer's bat *Myotis nattereri* in 2001; Noctule *Nyctalus noctula* in 2003 and Chiroptera sp. in 2002. Both Brown-longed ears *Plecotus auritus* and Common Pipistrelle *Pipistrellus pipistrellus* were recorded 670m north-west in 2003.
- 5.11 SES undertook a bat roost inspection of the buildings on site in November 2014 (SES, 2014). The 1930's building contained three potential roosting features for bats (SES, 2014), shown in Appendix 1; A potential gap in the brick flashing along the roof on the north edge (T1) did not offer potential for roosting bats due to exposure to light, wind and rain (SES, 2014); Two access points to internal voids were observed in the central second storey courtyard; The first access point (T2) was constructed from ceramic tiles and metal beams that reduced its suitability for roosting bats, as well as significant light pollution (*ibid.*), and the second access point (T3) was an exposed ventilation system that uncovered a gap between a double brick skin along the external wall. Inspection found no evidence of roosting bats and was considered to offer moderate future potential for roosting bats (*ibid.*).
- 5.12 Three trees contained features offering potential for roosting bats. A weeping willow tree (T4) displayed one upward facing crevice at a height of c.3m (Plate 8). This was considered exposed to light, wind and rain, therefore providing negligible potential for roosting bats (*ibid.*). A second weeping willow (T5) displayed a small horizontal rot hole on the lower limb which was also exposed to natural and security lighting (Plate 7). . This was also considered to provide negligible potential for roosting bats (*ibid.*). Finally, a white poplar in the extreme south of the site (T6) displayed dead/broken/rotting limbs and a woodpecker hole at c.15m (Plate 3). Due to these features of potential value to roosting bats this tree has been classed as a Category 1 tree according to the BCT guidelines criteria (Hundt, 2012) shown in Table 2 below.

- 5.13** As such it is recommended that if the white poplar in the extreme south of the site (T6) or the area of the 1930's building (T3) (that show potential bat roosting features) are to be impacted upon through the development, further aerial inspection/emergence surveys should be undertaken to determine their usage by roosting bats.

Table 2. BCT Tree Assessment Criteria

Tree category	Criteria
Category 1*	Trees with multiple, highly suitable features capable of supporting larger roosts.
Category 1	Trees with definite bat potential, having fewer suitable features than Category 1* trees or with potential for use by single bats.
Category 2	Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree has some features which may have limited potential to support bats.
Category 3	Trees with no potential to support bats.

- 5.14** The habitats on site (amenity grassland, woodland, scattered trees and hedgerows) are thought to have low value for local bat populations. Due to this, as well as the largely urban area the site is found within, it is considered that no further surveys are necessary.
- 5.15** There is an opportunity to enhance the site for bats through the inclusion of such measures as bat boxes being installed on the mature trees around the site, and the existing and proposed buildings, away from artificial light. Bat boxes should ideally be erected at a height of greater than 3m and facing south if possible. They should be placed in quiet, undisturbed locations with good connectivity to the wider landscape. Lighting should be directed to avoid directly illuminating the bat boxes and mature trees on site. This applies to construction site lighting and post-development security lighting. See Appendix 6 for details.
- 5.16** In addition species of known benefit to bats can also be included within the landscaping scheme, see Appendix 5 for a non-exhaustive list.

Birds

- 5.17** The versatility of most bird species means they can utilise almost any habitats encountered. The site's habitats provide low foraging and nesting opportunities for common bird species (woodland, scattered trees, species-poor hedgerow and amenity grassland). In combination with the regular disturbance currently experienced on site further assessment is not considered necessary. However, all breeding birds are protected under the Wildlife and Countryside Act 1981 (as amended). Therefore, if any nesting bird habitat is to be lost (woodland, hedgerows, trees and buildings) should be cleared outside of the nesting season (which is generally March to August) or after an ecologist has confirmed active nests are not present.
- 5.18** There is an opportunity to enhance the site for birds through the inclusion of such measures as bird boxes. See Appendix 6 for details.

Badgers

- 5.19** Badgers are legally protected under The Protection of Badgers Act (1992) and as such, are of consideration when applying the principles of the NPPF (DfCLG, 2012).
- 5.20** Multiple Badger records have been recorded in the surrounding area between 2000 and 2014. However, no badger setts, mammal runs/tracks/hairs, foraging or latrines were observed within the site boundaries. Due to the lack of any evidence of badgers present on site it is believed Badgers are not present in or using the proposed development site and thus no further survey is considered necessary.
- 5.21** General precautionary construction techniques sympathetic to badgers (applicable to most sites) should also be used, such as:
- covering trenches at night or leaving a plank of wood leant against the side to ensure they can escape if they were to accidentally fall in
 - covering chemicals overnight

Invertebrates

- 5.22** The site is unlikely to currently support rare or noted invertebrates due to its small size, containing habitats that are ubiquitous within the surrounding landscape and of minimal ecological value (amenity grassland and bare ground). It is not considered that the development site will support rare or noted invertebrates and therefore further survey is not necessary.
- 5.23** Invertebrates are vital yet often overlooked components of terrestrial ecosystems. In the UK, invertebrates include the major pollinating groups, such as bees, butterflies, moths and beetles, as well as forming a substantial food source for other animal groups, such as birds and bats and some predate on garden pests such as aphids. Therefore, encouragement of invertebrates on the site could be provided with increased shelter and/or nesting sites in the form of bug boxes, shown in Appendix 7. Species of wildlife value is found in Appendix 8.

Great Crested Newts

- 5.24** GCN are legally protected under S9 of the Wildlife and Countryside Act (1981) regulation 41 of The Conservation of Habitats and Species Regulations (2010) thus making GCN a material consideration of the planning process.
- 5.25** The site comprises mostly amenity grassland, bare ground and buildings which are considered to be of very little value to GCN. There is no aquatic habitat for breeding within the proposed development site but it does have a small area of broad-leaf woodland (<0.04ha). This habitat has multiple log piles and grass cutting piles that may offer potential foraging, dispersal or hibernating habitat. The data search did uncover records of GCN within the surrounding landscape in 2001 and 2002. However, Comet Way, the A1 motorway and A1057 are considered to be significant dispersal barriers to GCN due to the busy nature of these roads.

5.26 Five ponds are found within 1km of the site shown in Appendix 9. The closest lake (Pond 1) is found 33m to the north of the site within the University grounds. The surrounding vegetation (shrubs and grassland) is highly maintained and although it is only a short distance to the site, the pond is isolated from other aquatic (over 500m) and terrestrial habitats due to the busy A1057 road.

5.27 Therefore it is considered highly unlikely that GCN would be present within the woodland on site and as such no further surveys are considered necessary to ensure compliance with wildlife legislation and planning policy.

Reptiles

5.28 There are four reptile species considered to be the most common and widespread; common lizards *Zootoca vivipara*, slow worms *Anguis fragilis*, adders *Viper berus* and grass snakes *Natrix natrix*. These four species of reptiles are primarily legally protected under the Wildlife and Countryside Act 1981 (as amended) making it an offence to:

- Intentionally, or recklessly, kill or injure any of the above species,
- and/or; Sell, or attempt to sell, any part of the species, alive or dead.

5.29 The site is largely unsuitable for reptiles due to its low plant diversity and management practices. A small area of woodland contains some log piles and grass cuttings which may offer suitable habitats for reptiles. However, the size of the woodland (<0.04ha) and isolation from other suitable habitat in the wider landscape restricts its benefit as potential foraging and hibernating habitat. Grass snakes and common lizards have been recorded within 2km of the site boundary. Nevertheless, busy roads surrounding a large proportion of the site and the urban expansion to the south-west would create significant barriers for reptiles. It is considered that the development site will not support reptiles and therefore further survey is not necessary.

Brown Hare/Hedgehogs

5.30 Observations of UK BAP/NERC Act Brown Hare were recorded 550m south-west of the site in 2013. The study area is not considered to provide suitable habitat within an urban landscape for this species therefore no further action is deemed necessary. Although European Hedgehog data is not found within 2km of the site, some current habitat features such as log and leaf piles offer feeding and nesting areas within the site. Enhancement of the site could be undertaken for Hedgehogs through the retention and enhancement of the hedgerows, log and leaf piles.

5.31 Dispersal/foraging habitat for the hedgehog is thought not to be significantly reduced given the creation of residential dwellings with gardens and green spaces and the retention of much of the site's boundary habitats and the enhancement of the connectivity between these areas. However, access to garden resources may be affected by the installation of fences around the perimeter of the proposed residential properties. Access to foraging and dispersal habitat can easily be retained through; the raising of fence panels or providing cut-outs of 10-15cm in fence panels.

6.0 Conclusions

6.1 The proposed development site is located in the south-west of Hatfield town in Hertfordshire. The site comprises amenity grassland, buildings, hard-standing, scattered trees and a small area of woodland. The majority of the site is predicted to be of low biodiversity. However, the site could be enhanced to benefit a range of species in the future. Current development plans include refurbishment of the 1930's building, the demolition of the new build hotel structure and replacement of this with student accommodation. To adhere to planning policy and relevant wildlife legislation the following precautionary works have been recommended:

- Bats (aerial inspection and/or emergence if works interfere with the White Poplar or noted entrance points into the hotel building outlined in 5.13)
- Design of proposed development should include sufficient green space to facilitate the higher number of people living on the site, specifically for the new student accommodation throughout term-time.
- Retention and protection of trees. Protection during construction should follow BS5387:12 (Trees in relation to design, demolition and construction – Recommendations).
- Precautionary construction techniques sensitive to badgers outlined in 5.19.

6.2 Enhancements to increase the biodiversity value of the site have been recommended:

- Woodland (Retention where possible)
- Hedgerows (Retention, enhancement and recommended new planting)
- Bats (sensitive lighting, bat boxes and planting species of benefit to bats)
- Birds (bird boxes)
- Invertebrates (bug boxes and planting of trees and shrubs with wildlife benefit)
- Hedgehogs (gaps in fencing and log and leaf piles)

6.3 It is considered that any potential adverse impacts from the proposed development upon specific protected species/habitats/designated sites will likely be able to be mitigated for in line with relevant wildlife legislation and planning policy. It should be noted that an opportunity exists for the proposed development to enhance on site biodiversity in accordance with chapter 11: Conserving and Enhancing the Natural Environment, of the National Planning Policy Framework (NPPF) (DfCLG, 2012)..

7.0 References

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Appendix 1: Extended Phase 1 Habitat Map



KEY

Habitat Type

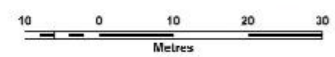
-  Bare Ground
-  Bare Ground - Concrete
-  Broad-leaved Woodland
-  Buildings
-  Amenity Grassland
-  Fence
-  Species Poor Hedgerow

-  Scattered Trees
-  Target Notes

Extended Phase 1 Habitat Survey - Aerial Photo

Site: Cowest - hotel - Harolds

Drawn by:	Date:	Scale:	Rev:
Maple	23/05/2010	1:500 (A3)	1.1
Issued to:		Client:	
Soiltek Ecological Solutions		SES	
Survey Date:		Scale:	
20/11/10		1:1000	
Drawn by:		Drawn by:	
Maple		Maple	
File No:		File No:	
10_2_222711021		10_2_222711021	
Maple		Maple	



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Appendix 2: Species List and Relative Abundance

Common name	Latin name	Broad-leaf Woodland	Species-poor Hedgerow	Scattered Trees	Amenity Grassland
Ash	<i>Fraxinus excelsior</i>	O	O		
Aspen	<i>Populus tremula</i>	O			
Birch sp.	<i>Betula sp.</i>		O		
Blackthorn	<i>Prunus spinosa</i>			O	
Bracken	<i>Pteridium aquilinum</i>			O	
Bramble	<i>Rubus sp.</i>		O		
Cherry	<i>Prunus avium</i>	O			
Cleavers	<i>Galium aparine</i>	O			
Cock's foot	<i>Dactylis glomerata</i>				O
Common Nettle	<i>Urtica dioica</i>	O			
Conifer sp.	<i>Pinophyta sp.</i>		O		
Cow Parsley	<i>Anthriscus sylvestris</i>	O			
Creeping Buttercup	<i>Ranunculus repens</i>				O
Cut-leaved Cranesbill	<i>Geranium dissectum</i>				O
Daisy	<i>Bellis perennis</i>				O
Dandelion	<i>Taraxacum agg.</i>				O
Dock	<i>Rumex sp.</i>				O
Dogwood	<i>Cornus sanguinea</i>	O			
Elder	<i>Sambucus nigra</i>	O	O		
Elm	<i>Ulmus sp.</i>	O			
Fern	<i>Dryopteris spp</i>		O		
Fescue sp.	<i>Festuca sp.</i>				O
Field Bindweed	<i>Convolvulus arvensis</i>				O
Germander Speedwell	<i>Veronica chamaedrys</i>				O
Ground Ivy	<i>Glechoma hederacea</i>	O			
Hawthorn	<i>Crataegus monogyma</i>	O			
Hazel	<i>Corylus avellana</i>	O	O	O	
Hogweed	<i>Heracleum sphondylium</i>		O		
Holly	<i>Ilex aquifolium</i>	O		O	
Hornbeam	<i>Carpinus betulus</i>			O	
Ivy	<i>Hedera helix</i>	O	O		
Laurel sp.	<i>Laurus sp.</i>	O	O		
Medick sp.	<i>Megicago sp.</i>				O
Norway Maple	<i>Acer platanoides</i>		O	O	
Perennial Ryegrass	<i>Lolium perenne</i>				O
Pine	<i>Pinus sp.</i>	R			
Ribwort plantain	<i>Plantago lanceolata</i>				O
Rose sp.	<i>Rosa sp.</i>	O			
Self Heal	<i>Prunella vulgaris</i>				O
Sycamore	<i>Acer psuedoplatanus</i>	O	O	O	
Weeping willow	<i>Salix babylonica</i>			O	

Common name	Latin name	Broad-leaf Woodland	Species-poor Hedgerow	Scattered Trees	Amenity Grassland
White Clover	<i>Trifolium repens</i>				0
White Poplar	<i>Populus alba</i>	R			
Willow	<i>Salix sp.</i>	0			
Wood Avens	<i>Geum urbanum</i>	0			
Yorkshire Fog	<i>Holcus lanatus</i>				0

Appendix 3: Plates

Plate 1. View of broadleaved woodland from Comet Way with the pedestrian walkway adjacent to the site boundary.



Plate 2. A view of Pine sp. on the edge of the broadleaved woodland facing north-east.



Plate 3. View of White Poplar on the southern tip of the site.



Plate 4. View of stacked deadwood in the southern tip of the site.



Plate 5. View of stacked the bare ground and species-poor hedgerow on the north-western tip of the site.



Plate 6. View of amenity grassland facing south with the White Poplar in the distance (T6).



Plate 7. Weeping Willow tree (T5)



Plate 8. Weeping Willow tree (T4)



Plate 9. View of the scattered trees facing north-west towards the power station with Pine surrounding it.



Plate 10. Front view of Comet Hotel facing south-west.



Appendix 4: Suggested Planting List for Hedgerows

To be planted at c.10% each.

Common name	Latin	Hedgerow standards
Aylesbury Prune	<i>Prunus insititia L.</i>	x
Blackthorn	<i>Prunus spinosa</i>	
Buckthorn	<i>Rhamnus cathartica</i>	
Bullace plum	<i>Prunus domestica</i> spp. <i>Insititia</i>	x
Crab apple	<i>Malus sylvestris</i>	
Damson plum	<i>Prunus domestica</i> spp. <i>Insititia</i>	x
Dogwood	<i>Cornus sanguinea</i>	
Field maple	<i>Acer campestre</i>	
Hawthorn	<i>Crataegus monogyna</i>	
Hazel	<i>Coryls avellana</i>	
Holly	<i>Ile aquifolium</i>	
Native Black poplar	<i>Populus nigra</i> ssp. <i>Betulifolia</i>	x
Pendunculate oak	<i>Quercus robur</i>	x
Small-leaved lime	<i>Tilia cordata</i>	x
Spindle	<i>Euonymus europaeus</i>	
Wild privet	<i>Ligustrum vulgare</i>	
Wild service	<i>Sorbus torminalis</i>	x

Appendix 5: Species of Known Benefit to Bats

Table 10: The following table is reproduced from Gunnell, K., Grant, G. and Williams, C. (2012). Landscape and Urban Design for Bats and Biodiversity, Bat Conservation Trust. This table contains a suggested species list of plants that can provide benefit for bats either by providing a food source for insects and/ or roost potential. The plants listed are predominately native to Britain. The small group of non-native plants included for their documented value for wildlife. This list has been checked by the author against Natural England's list of invasive non-native plants.

Plant species	Common name	Native (N)	Type	Benefit	Soil	Light	Extensive green roofs	Living walls	Rain gardens	Hedge/ trees	Beds/ borders
<i>Acer campestre</i>	Field maple	N	T/S	C	Any	Sun/ shade				Y	
<i>Acer platanoides</i>	Norway maple		T	S	Well drained/ alkaline	Sun/ shade				Y	
<i>Acer saoocharum</i>	Sugar maple		T	S	Any	Sun/ shade				Y	
<i>Achillea millefolium</i>	Yarrow	N	HP	C,F	Well drained	Sun				Y	
<i>Ajuga reptans</i>	Bugle	N	HP	C,F	Any	Sun/ shade	Y		Y		
<i>Anthyllis vulneraria</i>	Kidney vetch	N	HP	F	Well drained	Sun	Y				
<i>Aubrieta deltoidea</i>	Aubrieta		H	F	Well drained	Sun/shade		Y			
<i>betula pendula</i>	Sliver birch	N	T	C	Sandy/ acid	Sun				Y	
<i>Cardamine pratensis</i>	Cuckoo- flower	N	HP	F	Moist	Sun/ shade			Y		Y
<i>Carpinus betulus</i>	Hornbeam	N	T	C	Clay	Sun				Y	
<i>Centaurea nigra</i>	Common knapweed	N	HP	C,F	Dry, not acid	Sun	Y				Y
<i>Centranthus ruber</i>	Red valerian		HP	F	Well drained	Sun	Y				Y
<i>Clematis vitalba</i>	Old man's Beard	N	C	F	well drained/ alkaline	Sun				Y	
<i>Corylus avellana</i>	Hazel	N	S	C	Any dry	Sun/ shade		Y		Y	
<i>Crataegus monogyna</i>	Hawthorn	N	S	S,C	Any	Sun/shade				Y	
<i>Daucus carota</i>	Wild carrot	N	Bi	S,C,F	Any	Sun	Y				Y
<i>Dianthus spp.</i>	Pinks	N	A-Bi	F	Well drained	Sun	Y	Y			Y
<i>Digitalis purpurea</i>	Foxglove	N	Bi	C	Well drained	Shade/ partial shade				Y	Y
<i>Erica cinera</i>	Bell heather	N	S	F	Sandy	Full sun					Y
<i>Ersimum cherira</i>	Wallflower		Bi-P	F	Well drained	Sun		Y			Y
<i>Eupatorium</i>	Hemp agrimony	N	H	F	Moist	Sun/ shade			Y		Y
<i>Fagus sylvatica</i>	Beech	N	T	C, R	Well drained alkaline	Sun/shade				Y	
<i>Foeniculum vulgare</i>	Fennel		H	F	Well drained	Sun					Y
<i>Fraxinus excelsior</i>	Common Ash	N	T	C, R	Any	Sun/ shade				Y	
<i>Hebe spp.</i>	Hebe species		S	F	Well drained	Sun /shade				Y	Y

<i>Hedera Helix</i>	Ivy	N	C	F,C	Any	Sun/ shade		Y	Y	Y	Y
<i>Hesperis matronalis</i>	Sweet Rocket		H	F	Well drained/ dry	Sun/ shade					Y
<i>Hyacinthoides non-scripta</i>	Bluebell	N	B	F	Loam	Shade/ partial shade		Y		Y	Y
<i>Ilex aquaifolium</i>	Holly	N	T	C	Any	Sun/ shade				Y	
<i>Jasmine officinale</i>	Common jasmine		C	F	Well drained	Sun		Y			Y
<i>Lavandula spp.</i>	Lavender species		S	F	Well drained / sandy	Sun		Y			Y
<i>Linaria vulgaris</i>	Toadflax	N	HP	C	Well drained/ alkaline	Sun	Y				Y
<i>Lonicera periclymenum</i>	Honeysuckle	N	C	F	Well drained	Sun		Y		Y	
<i>Lotus corniculatus</i>	Bird's foot trefoil	N	HP	F	Well drained/ dry	Sun	Y				Y
<i>Lunaria annua</i>	Honesty		Bi	F	Any	Sun/ partial shade	Y				Y
<i>Malus spp.</i>	Apple		T	C	Any	Sun				Y	Y
<i>Matthiola longipetala</i>	Night - scented stock		A	F	Well drained/ moist				Y		Y
<i>Myosotis spp.</i>	Forget me not species	N	A	F	Any	Sun	Y	Y			Y
<i>Nicotiana glauca</i>	Ornamental tobacco		A	F	Well drained moist	Sun /partial shade			Y		Y
<i>Oneothesa spp.</i>	Evening primrose		Bi	F	Well drained	Sun	Y				Y
<i>Origanum vulgare</i>	Marjoram	N	HP	F	Well drained / dry	Sun				Y	
<i>Populus alba</i>	White poplar	N	T	C	Clay loam	Sun				Y	
<i>Primula veris</i>	Cowslip	N	HP	F	Well drained/ moist	Sun/ partial shade	Y				Y
<i>Primula vulgaris</i>	Primrose	N	HP	F	Moist	Partial shade	Y	Y		Y	Y
<i>Prunus avium</i>	Wild cherry	N	T	C	Any	Sun				Y	Y
<i>Prunus domestica</i>	Plum		T	C	Well drained/ moist	Sun				Y	Y
<i>Prunus spinosa</i>	Blackthorn	N	S	C	Any	Sun/ partial shade				Y	
<i>Quercus petraea</i>	Sessile oak	N	T	C,R	Sandy loam	Sun/ shade				Y	
<i>Quercus robur</i>	Common oak	N	T	R	Clay Loam	Sun/ shade				Y	
<i>Rosa canina</i>	Dog rose	N	S	C	Any	Sun			Y	Y	Y
<i>Salix spp.</i>	Willow species	N	S	S,C	Moist	Sun/ shade			Y	Y	
<i>Sambucus nigra</i>	Elder	N	T	C	Clay loam	Sun				Y	
<i>Saponaria officinalis</i>	Soapwort	N	HP	F	Any	Sun					Y
<i>Saxifraga oppositifolia</i>	saxifage	N	HP	C	Well drained	Sun	Y	Y			Y
<i>Scabiosa columbaria</i>	small scabious	N	HP	F	Well drained/ alkaline	Sun	Y				Y
<i>Sedum spectabile</i>	Ice plant		HP	F	Well drained/ dry	Sun	Y				Y
<i>Silene dioecia</i>	Red campion	N	HP	F	Any	Shade/ partial shade		Y	Y	Y	Y

<i>Sorbus aucuparia</i>	Rowan	N	T	C	Well drained	Sun				Y	
<i>Stachys lanata</i>	Lamb's ear		HP	F	Well drained/ dry	Sun					Y
<i>Symphotrichum spp.</i>	Michalemas daisies		HP	F	Any	Sun					Y
<i>Tages patula</i>	French marigold		A	F	Well drained	Sun					Y
<i>Thymus serpyllum</i>	Creeping thyme	N	HP/S	F	Well drained/ dry	Sun	Y	Y			Y
<i>Tilia x europaea</i>	Common lime		T	C	Any	Sun/ shade				Y	
<i>Trifolium spp.</i>	Clover species	N	H	F	Any	Sun	Y				Y
<i>Valerina spp.</i>	Valerian species	N	HP	F	Moist	Sun/ partial shade			Y		Y
<i>Verbascum spp.</i>	Mulliens	N	Bi, HP	C	Well drained	Sun					Y
<i>Verbena bonariensis</i>	Verbena		HP	F	Well drained/moist	Sun					Y
<i>Viburnum lantana</i>	Wayfaring tree	N	S	C	Any	Sun/ shade				Y	Y
<i>Viburnum opulus</i>	Guelder rose	N	S	C	Moist	Sun/ shade			Y	Y	
<i>Viola tricolor</i>	Pansy	N	A	F	Well drained/ moist		Y	Y			Y

Legend

Type		Benefit	
HP	Herbaceous perennial	C	Moth caterpillar food plant
Bi	Biennial	S	Sap sucking insects (e.g. whiteflies)
BiP	Biennial perennial	F	Flowers attract adult moths
T	Tree	E	Good roost potential
S	Shrub		
H	Herb		
A	Annual		
B	Bulb		
C	Creeper/ climber		

Appendix 6: Bat Lighting and Box Installation Recommendations

Bat lighting:

Bat sensitive lighting should be incorporated to create a bat friendly development such provisions are listed below:

Type of light

Impact can be minimised through the use of low pressure sodium lamps or high pressure sodium instead of mercury or metal halide lamps where glass glazing is preferred due to UV filtration characteristics

Light Spillage

Lighting needs to be directed away from bat foraging areas and roost sites (e.g. hedgerows and trees) using cowels, hoods etc.

Lighting Column

The level of the lighting columns should be as low as possible. For larger columns light can be directed down at a more acute angle reducing horizontal spill.

Light Levels

Light levels should be as low as guidelines permit. If lights are not needed then there should be none, there also should be periods of complete darkness, so lighting should be intermittent where possible.

Bat roosting

There are numerous bat box designs but the Schwegler universal bat box 1FF, shown in Figure 1, provides excellent summer roosting conditions for crevice inhabiting species including common pipistrelles. Integrated bat boxes should be used for buildings, see Figure 2 below for examples.



Figure 1. Recommended Bat Box 1FF Schwegler (<http://www.schwegler-natur.de/>)



Figure 2. Habitat bat box (<http://www.habibat.co.uk/bat-boxes/>)

Appendix 7: Bird and Bug Box Recommendations

Birds

There is almost no habitat where bird boxes are not of benefit. They come in a variety of sizes and should be of solid construction made from wood, woodcrete (wood concrete mix) or thick plastic, with the hole, if there is one, being 12cm from the floor of the box. Boxes can be fixed in many ways and the method must be chosen to suit the location and design; a horizontal or vertical batten will keep a box away from the mounting surface and running water and is ideal for fixing to trees; nails must be checked yearly due to the danger of the box falling as the tree grows. Alternately boxes can be hung from branches or fixed under the eaves of buildings.

If wooden boxes are used a non-toxic preservative should be applied to the outside and not the inside. Minor repairs to the boxes can be carried out in-situ with major work requiring the nest box being removed from its fixing, being carried out when the box is not in use. Chicken wire can be applied to the outside of the box if repeated squirrel damage is experienced.

The direction the boxes are mounted makes little difference as long as they are out of the prevailing wind and not exposed to long hours of sunshine, as this may stress the nestlings. Generally it is thought best to place the boxes facing north to east. The boxes should be kept away from any naturally wet areas on trees and small boxes should be angled slightly forward off the tree. Bird box's should not be placed in the close proximity to feeding stations as most birds are territorial and this may put birds off from nesting and also should be at a suitable height to reduce the risk of predation.

Ten nest boxes per hectare spaced uniformly are recommended, the site is approximately 1.4 ha which would allow for approximately fourteen boxes across the site. Suitable types are detailed below; however please note that nest boxes of the same type should not be sited too close together as this may promote antagonistic behaviour between intra-specific neighbours:

Bug Boxes

Bug boxes are available ready-made from wholesalers or can be simply made from scratch. An example is shown in Figure 1. Most incorporate a simple, open-fronted box made from untreated timber 2cm thick, and filled with cut, hollow canes that act as chambers within which animals can shelter or nest. Hollow canes of varying diameter can be provided in order to attract a variety of different species. All bug boxes should be sited in a warm, sheltered position, out of prevailing winds and close to vegetation, such as within the newly planted and / or retained hedgerows / boundary features.



Figure 1. Bug Box from NHBS (<https://www.nhbs.com/title/173585/bug-box>)

Appendix 8: Trees and shrubs of wildlife benefit

Table 1: Trees and Shrubs of Wildlife Benefit

Common name	Scientific name	Benefits
Shrubs		
Barberry*	<i>Berberis spp.</i>	Nectar, fruit, nesting cover
Blackthorn**	<i>Prunus spinosa</i>	Nectar, fruit, larval foodplant, nesting cover
Broom**	<i>Cytisus scoparius</i>	Nectar, larval foodplant
Buckthorn#**	<i>Rhamnus cathartica</i>	Nectar, berries, larval foodplant, nesting cover
Californian lilac*	<i>Ceanothus spp.</i>	Nectar, nesting cover
Cherry laurel*#	<i>Prunus laurocerasus</i>	Nectar (including extra-floral nectaries)
Dog rose**	<i>Rosa canina agg.</i>	Nectar, fruit, larval foodplant, nesting cover
Dogwood**	<i>Cornus sanguinea</i>	Nectar, fruit, larval foodplant
Elder**	<i>Sambucus nigra</i>	Nectar, fruit, larval foodplant, nesting cover
Field rose	<i>Rosa arvensis</i>	Nectar, larval foodplant, fruit
Firethorn*	<i>Pyracantha spp.</i>	Nectar, fruit, nesting cover
Flowering currant*	<i>Ribes sanguineum</i>	Nectar, larval foodplant
Garden lavender*	<i>Lavandula x intermedia</i>	Nectar
Gorse	<i>Ulex europaeus</i>	Nectar, larval foodplant, nesting cover
Guelder rose**	<i>Viburnum opulus</i>	Nectar, fruit, larval foodplant
Hawthorn**	<i>Crataegus monogyna</i>	Nectar, fruit, larval foodplant, nesting cover
Hazel**	<i>Corylus avellana</i>	Nuts, larval foodplant
Hebe*	<i>Hebe spp.</i>	Nectar
Holly**	<i>Ilex aquifolium</i>	Nectar, fruit, larval foodplant, nesting cover
Laurustinus*	<i>Viburnum tinus</i>	Nectar, nesting cover
Mexican orange*	<i>Choisya ternate</i>	Nectar
Portuguese laurel*	<i>Prunus lusitanica</i>	Nectar, fruit, nesting cover
Rosemary*	<i>Rosmarinus officinalis</i>	Nectar
Spindle#**	<i>Euonymus europaeus</i>	Nectar, fruits
Tutsan	<i>Hypericum androsaemum</i>	Nectar, fruit, larval foodplant
Wayfaring tree**	<i>Viburnum lantana</i>	Nectar, fruit, larval foodplant
Yew#**	<i>Taxus baccata</i>	Berries, nesting cover
Climbers		
Clematis*	<i>Clematis tangutica</i>	Nectar, seeds
Honeysuckle	<i>Lonicera periclymenum</i>	Nectar, fruit, larval foodplant, nesting cover
Ivy	<i>Hedera helix</i>	Nectar, fruit, larval foodplant, nesting cover
Traveller's joy	<i>Clematis vitalba</i>	Nectar, seeds, larval foodplant
Virginia creeper*	<i>Parthenocissus quinquefolia</i>	Nectar, seeds, nesting cover

* Non-native species; # Poisonous; ** Native woody species

Appendix 9: Ponds within 1km of Comet Hotel

