



13a North Common Road, Uxbridge, UB8 1PD.

Ecological Appraisal



March 2019

All Ecology Ltd

Tel: 01453 861210

Email: info@allecology.co.uk

Web: www.allecology.co.uk

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England and Wales Office

All Ecology Ltd,
Haw Street,
Coaley,
Dursley,
Gloucestershire,
GL11 5AY.

Scotland Office

All Ecology Ltd,
Bowfield Road,
Howwood,
Renfrewshire,
PA9 1BZ.

Tel: 01453 861210
Email: info@allecology.co.uk
Web: www.allecology.co.uk

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The results of the survey and assessment work undertaken by All Ecology are representative at the time of surveying.

Every endeavour has been made to identify the presence of protected species on site, where this falls within the agreed scope of works.

The flora and fauna detailed within this report are those noted during the field survey and from anecdotal evidence. It should not be viewed as a complete list of flora and fauna species that may frequent or exist on site at other times of the year.

Up to date standard methodologies have been used, which are accepted by Natural England and other statutory conservation bodies. No responsibility will be accepted where these methodologies fail to identify all species on-site.

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Reference to sections or particular paragraphs of this document taken out of context may lead to misrepresentation.

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1.0 Introduction

Background

- 1.1 In February 2019, All Ecology Ltd was commissioned to undertake an Ecological Appraisal of a site known as 13a North Common Road, Uxbridge, UB8 1PD. The site comprises a detached house with driveway and small lawn to the front (south), with access around the east side to a rear garden where lawns, sheds and a greenhouse are present. Next to this is a large pond surrounded by recently cleared trees and vegetation. The site is enclosed by a mix of fencing and hedges and there are a number of mature trees on the boundary. The site is bordered by residential gardens and houses on all aspects. The driveway connects to a narrow unsealed access road that connects to North Common Road to the south beyond which is a large open space which is Uxbridge Common.
- 1.2 The site is the subject of a planning application to permit the demolition of the existing house followed by the construction of a new residential development of 6 units. The majority of the pond would be filled in but a section would be retained and enhanced.

Objectives and Aim

- 1.3 The main objectives and aim of the survey were to identify features of ecological interest, undertake a basic search of habitats present for evidence of use, or potential use, by protected species, and to identify any other possible ecological constraints to the proposed development.

Site Location



Figure 1: Site location plan.

Aerial Photograph



Figure 2: Aerial photograph of the site.

2.0 Methodology

Personnel

- 2.1 The survey was carried out by James Godbeer BSc Hons MCIEEM, an ecologist with over 11 years' experience working as a consultant. James has extensive experience of managing environmental contracts, and particular experience in surveying, assessment and mitigation for rare and protected species. He has considerable knowledge of the development and planning process including Ecological Impact Assessments, sustainable ecological design and he has completed ecology chapters of Environmental Statements. James holds a number of protected species licences including bats (all species, all counties, Class Licence Registration No. 2015-12313-CLS-CLS), and Great Crested Newts (Class Licence Registration No. 2016-20363-CLS-CLS). He has successfully obtained European Protected Species mitigation licences for a number of bat species including Lesser Horseshoe, Greater Horseshoe, Serotine, Brown Long-eared, Common Pipistrelle and Natterer's bats, for a number of roost types including maternity and hibernation sites.

Desk Study

- 2.2 In order to compile background information on the site and immediate surroundings, Greenspace Information for Greater London (GiGL) was contacted
- 2.3 Information requested was as follows:
- Statutory site designations on or within 1 km of the site
 - Non-statutory site designations on or within 1 km of the site.
 - Records of protected species within the 1 km of the site.
 - Records of rare or notable species within the 1 km of the site.
- 2.4 Additionally, MAGIC (Multi-Agency Geographic Information for the Countryside, 2019) was used to establish the distance and direction of designated sites and species records within the search area
- 2.5 Online OS maps and aerial photographs were inspected for the presence of ponds in the surrounding area.

Habitat Survey

- 2.6 The site was visited on the 25th February 2019 and surveyed in accordance with the Joint Nature Conservation Committee (JNCC) Phase I Habitat Survey methodology (JNCC, 2010). This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential that might warrant further study.

Fauna

- 2.7 The building was inspected externally and internally following the methodology set out in the Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines. 3rd Ed (Collins, 2016).

- 2.8 In summary, the building was searched externally and then internally, where access was available, for any evidence of use by bats and notes were made on the following:
- Location and number of any live bats.
 - Location and number of any corpses or skeletons.
 - Location and number of droppings.
 - Notes on relative freshness, shape and size of droppings.
 - Location and quantity of feeding remains.
 - Location of clean, cobweb-free timbers, crevices and holes.
 - Location of characteristic staining from urine and/or grease marks.
 - Location of known and potential access points to the roost.
 - Location of the characteristic smell of bats if no other evidence is recorded.
- 2.9 Notes were also made on the characteristics and features of the building as follows.
- Type, age and aspect.
 - Wall construction, in particular the type of brick or stone used to build the walls and whether it has cavity walls or rubble- filled walls.
 - Form of the roof, in particular the presence of gable ends, hipped roofs, etc. and the nature and condition of the roof covering.
 - Presence of hanging tiles, weather boarding or other forms of cladding.
 - Nature of the eaves, in particular if they are sealed by a soffit or boxed eave and the tightness of the fit to the exterior walls.
 - Presence and condition of lead flashings.
 - Gaps under eaves, around windows, under tiles, lead flashings etc.
 - Presence and type of roof lining.
 - Presence of roof insulation.
 - Presence of water tanks in loft (note if covered or uncovered).
 - Structure of the roof including the truss type, age and nature of timber work.
 - Information or evidence of work having been undertaken that could affect use of the structure by bats.
- 2.10 The habitats present on the site were also searched for signs of other animal activity. The trees were assessed for their potential to support bat roosts by visually inspecting them from the ground using binoculars and high-powered torches where appropriate. Potential features such as holes, cavities or splits were recorded and then inspected where possible for signs of bats, which including grease/urine stains, scratch marks, droppings or the bats themselves.
- 2.11 The site and surroundings, for a minimum distance of 30 m where access was available, were searched for signs of Badgers. These include setts, latrines, dung pits, snuffle marks or hairs caught in hedges or on fencing.

- 2.12 Incidental observations of invertebrates and birds were recorded and a search made for any signs of current or previous nesting.
- 2.13 Any refugia on site such as logs or other debris were lifted and inspected for reptiles and amphibians. There was a pond on site, and one in one in the surrounding area, which were subject to the Great Crested Newt Habitat Suitability Index (HSI) Assessment to assess its suitability for this species.

Habitat Suitability Index Assessment

- 2.14 Ponds in the surrounding area were subject to the Great Crested Newt Habitat Suitability Index (HSI) Assessment. The assessment was undertaken during the Ecological Appraisal by a Licensed Ecologist (Licence Number CLS001752), trained in the assessment of water bodies for their potential to support populations of Great Crested Newts.
- 2.15 The HSI is a measure of habitat quality using a numerical index between 0 and 1 derived from an assessment of variables known to influence the presence of Great Crested Newts (Oldham et al. 2000). It is used to assess whether a water body warrants detailed surveys to establish presence or absence of newts and aids in the assessment of impacts and the design of mitigation measures. Since January 2008 it has been a requirement to include the results of HSI assessments in European Protected Species (EPS) licence applications.
- 2.16 To calculate the HSI of the water bodies ecologists first record the following variables before applying the HSI calculation to these: pond size; surface area; water depth; water quality; % shade, % macrophyte cover; presence of fish and waterfowl; number of water bodies within 1 km of survey water body; quality of terrestrial habitat surrounding ponds; and type of marginal/aquatic vegetation (Oldham et al. 2000).
- 2.17 Once the HSI score is obtained it can be used to define water body suitability for Great Crested Newts in the following way (National Amphibian Recording Scheme, 2008):

Table 1: HSI Scores

<0.5	Poor
0.5 – 0.59	Below Average
0.6 – 0.69	Average
0.7 – 0.79	Good
>0.8	Excellent

- 2.18 Water bodies scoring less than 0.5 are deemed as unlikely to support Great Crested Newts and further surveys are not usually required.

Equipment

- 2.19 Equipment used to aid the survey included a high-powered torch, binoculars and a camera.

Assessment

2.20 Where a building cannot fully be inspected or the presence of bats entirely ruled out, the potential suitability of the building for roosting bats is assessed and classified as follows (Collins, 2016):

- **Negligible** – Negligible habitat features on site likely to be used by roosting bats.
- **Low** – A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
- **Moderate** – 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 but unlikely to support a roost of high conservation status.
- **High** – A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

Valuation of Ecological Features

2.21 The valuation process used in this report follows the Guidelines for Ecological Impact Assessment in the UK and Ireland from the Chartered Institute of Ecology and Environmental Management (CIEEM, 2006).

2.22 The value of areas of habitat and plant communities has been measured against published criteria where available. Biodiversity Action Plans (BAPs) have been searched to identify whether action has been taken to protect all areas of a particular habitat and to identify current factors causing loss and decline of particular habitats. The presence of injurious and legally controlled weeds has also been taken into account.

2.23 When assigning a level of value to a species, its distribution and status (including a consideration of trends based on available historic records) has been taken into account. Other factors influencing the value of a species are: legal protection, rarity and Species Action Plans (SAPs). Guidance, where it is available, for the identification of populations of sufficient size for them to be considered of national or international importance has also been taken into account.

Nomenclature

2.24 The English name only of flora and fauna species is given in the main text of this report; however, scientific names are used for invertebrates where no English name is available. Vascular plants and charophytes follow the nomenclature of The Botanical Society for the British Isles (BSBI) 2007 database (BSBI, 2007) with all other flora and fauna following the Nameserver facility of the National Biodiversity Network Species Dictionary (<http://www.nhm.ac.uk/nbn/>), which is managed by the Natural History Museum.

3.0 Results

Desk Study

3.1 There is one statutory designated site within 1 km of the site. This is shown in Table 1.

- Fray's Farm Meadows SSSI – 472 m NW

Table 1: Statutory designated sites summary table.

Site Name	Distance	Direction	Reason(s) for Designation
Fray's Farm Meadows SSSI	470 m	NW	One of the last remaining examples of relatively unimproved wet alluvial grassland in Greater London and the Colne Valley
Frays Valley LNR	470 m	NW	Includes two Special Sites of Scientific Interest at Fray's Farm Meadow and Denham Lock Wood, five wet gravel pits, Harefield Place Nature Reserve, a small part of Harefield Golf Course, a small part of Denham Lock Meadow adjacent to the Frays River and the length of Frays River within these boundaries. Grassland, ancient woodland herbs and the protected Desmoulin's Whorl Snail.

3.2 There are six non-statutory designated sites within 1 km of the site. These are shown in Table 2.

Table 2: Non-statutory designated sites summary table.

Site Name	Distance	Direction	Description
London's Canals SINC	810 m	SW	London's canals support a wide range of aquatic flora, amongst which are found a number of locally uncommon species.
Little Britain SINC	880 m	SW	A section of the Colne Valley with a remarkable variety of wildlife habitats, including lakes, rivers, scrub, areas of wasteland, woodland and grassland.
Mid Colne Valley SINC	200 m	W	A section of the Colne Valley with a remarkable range of high-quality wetland

			habitats, including three Sites of Special Scientific Interest.
Uxbridge Ponds SINC	Nearest pond 125 m	SW	Three ponds, which support amphibians including two breeding ponds for Great Crested Newts.
Uxbridge Common Meadows SINC	800 m	SE	A large area of old meadows, with the River Pinn meandering through.
Common Plantation and Park Wood SINC	440 m	NE	Two areas of woodland separated by the Western Avenue.

- 3.3 None of the above sites border the application site and with the exception of the Uxbridge Ponds SINC there is no reasonable likelihood of any direct or indirect impacts to these sites when considering the small scale of the proposals and their isolation from the designated sites by distance and built-up areas.
- 3.4 With regard to the Uxbridge Ponds SINC, no direct impacts are anticipated but indirect impacts through threats to the resident Great Crested Newt population require further consideration. This is given below in the amphibian section.
- 3.5 GiGL provided the following records for protected and notable species within 1 km of the site boundary:
- **Mammals** – Water Vole, Serotine, Myotis sp., Daubenton's Bat, Noctule, Nathusius' Pipistrelle, Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared Bat.
 - **Birds** – Lesser Redpoll, Skylark, Kingfisher, Shoveler, Teal, Wigeon, Meadow Pipit, Swift, Grey Heron, Bittern, Cuckoo, Mute Swan, Lesser Spotted Woodpecker, Little Egret, Reed Bunting, Kestrel, Brambling, Snipe, Swallow, Linnet, Red Kite, Grey Wagtail, Spotted Flycatcher, Curlew, House Sparrow, Tree Sparrow, Willow Warbler, Goldcrest, Whinchat, Stonechat, Woodcock, Starling, Greenshank, Redshank, Redwing, Fieldfare, Mistle Thrush, Lapwing.
 - **Amphibians** – Common Toad, Great Crested Newt, Common Frog.
 - **Reptiles** – Slow-worm, Grass Snake.
 - **Invertebrates** – True bugs, alderflies, beetles, butterflies, moths, true flies,

Habitats

- 3.6 The following habitats or vegetation types were identified during the course of the habitat survey:
- Building
 - Hard standing
 - Amenity grassland
 - Short perennial
 - Introduced shrub

- Species-poor hedge and trees
 - Standing water
 - Standard tree
 - Fence
- 3.7 A short drive, with a hedge to the west and a small area of lawn with introduced shrub and a hedge beyond these, provides access to a two-storey detached house with a lean-to porch to the front and a lean-to conservatory to the rear. The hedge along the west side of the drive extends along the side of the house and for the remainder of the west boundary. Access to the garden is around the east side of the house where an area of lawn extends to the rear of the house where garden sheds, a greenhouse, and patches of short perennial vegetation are present. To the west of these is a large pond formed by a small and large section with an interconnecting channel. The banks around the pond have recently been cleared of scrub and trees leaving mainly bare ground with Ivy and patches of Bramble and marginal vegetation. The site as a whole is bound by species-poor hedges, trees and fences.
- 3.8 The areas of grass are composed of typical amenity species and are dominated by Perennial Ryegrass, with frequent Yorkshire-fog, White Clover and Creeping Buttercup, and occasional Groundsel, speedwell sp. and Dove's-foot Crane's-bill. The short perennial vegetation contained Perennial Sow-thistle, Red Dead-nettle, Herb-Robert, Spanish Bluebell, Crocus, Cyclamen, Garlic Mustard and Pendulous Sedge. Introduced shrubs included roses and Rhododendron.
- 3.9 Within the ponds were patches of re-growing Bulrush and Yellow Iris, with Yellow Iris and Pendulous Sedge also present at the margins. The cleared vegetation, which appeared to be Beech, Willow sp., Silver Birch, Wild Cherry and conifers has left areas of bare ground and Ivy with small patches of Bramble around the large banks surrounding the pond.
- 3.10 The west boundary hedge was formed by Leyland Cypress for the most part, with a mix of Hawthorn, Yew, Ash at the north end. The northeast boundary was a mix of timber panel fencing, Ivy, Wild Privet and Bramble. The east boundary was a defunct line of Hazel, Holly, Yew and Sycamore trees, changing to a solid hedge of Wild Privet and Ivy.



Photograph 1: Drive, front lawn and boundary hedges.



Photograph 2: Pond.



Photograph 3: Pond and back garden.



Photograph 4: North end of the pond and surrounding cleared vegetation.



Photograph 5: Northeast boundary fence.



Photograph 6: West boundary hedge and trees.



Photograph 7: Greenhouse, lawn and cleared vegetation.



Photograph 8: Sheds.

Fauna

Bats

- 3.11 GiGL provided records of Serotine, Myotis sp., Daubenton's Bat, Noctule, Nathusius' Pipistrelle, Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared Bat, all at a location 986 m from the site.

House

- 3.12 Two storey detached house; currently occupied.

External – Brick cavity walls. Tiled roof of gable end construction. Eaves close with fascia boards and soffits, with bargeboards on the gable ends. Chimney stacks with lead flashings. Lean-to glass porch on the front and small conservatory on the rear.

Internal – Typical living space throughout with a loft accessed through a loft hatch on the landing. Loft occupies the main footprint of the house measuring approximately 8.5 m long, 6.5 m wide, 2.5 m high with a chimney breast towards the north end. The floor is partially boarded for storage of household items, with thin fibreglass insulation on the top of ceiling of the rooms below. The roof is lined with bitumen felt and supported by timber rafters, purlins with occasional webs.

Access for Bats – No obvious means of access for bats. The soffits are close fitting to the walls and despite the soffits and fascia boards showing signs of rot, they were still well sealed. One of the bargeboards on the front gable had slightly come away creating a minor crevice behind; however, there were no entry points for bats to gain access further into the building.

Potential Roosting Sites – The roof space is large and undisturbed providing potentially suitable conditions for roosting bats. However, no evidence was found with no indication that any such evidence would not persist for many years and no indication that evidence had been lost through cleaning. In the absence of any access points or evidence of bats it can be confidently concluded that they are absent from the roof space. The void between the roof tiles and roof lining could not be inspected but no potential entry points for bats were noted.

There is no reasonable likelihood of bats using the minor crevice behind the bargeboard that had begun to come away beyond opportunistic, occasional use and it is therefore concluded that roosting bats are likely to be absent from this feature and the remainder of the building.

- 3.13 The garden sheds and greenhouse did not provide any roosting features for bats with the interiors being either open and well lit, or well-sealed against bat entry. The minor covering of ivy on the roofs of the shed did not have any stems of sufficient width to create roosting features.



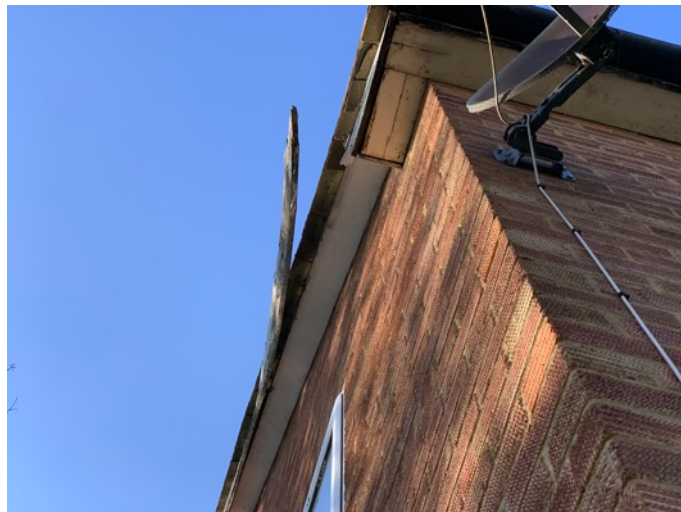
Photograph 9: Rear (north gable).



Photograph 10: East elevation.



Photograph 11: West elevation.



Photograph 12: Bargeboard that had come away creating minor crevice but no exposed void behind and soffits and fascia boards otherwise well sealed.



Photograph 13: Roof space.

- 3.14 None of the trees on site or on the boundaries appeared to have any potential roosting features for bats such as rot holes, split limbs or flaking bark.
- 3.15 The site as a whole is a sheltered garden with large pond that is expected to provide a good source of invertebrates. It is a given that at least small numbers of common urban species will forage or commute across the site. The potential for more notable species would appear to be limited due to the urban situation of the site.

Badgers

- 3.16 GiGL did not supply any records of Badgers. The amenity grassland provides small areas of optimal foraging habitat and the upper portions of the banks around the pond could provide potential sett building habitat; however, a thorough search of the site did not find any evidence of Badgers and it is likely that they are generally absent from the site with the only potential being for passing urban Badgers.

Otters and Water Voles

- 3.17 GiGL provided records of Water Voles from watercourses in the wider area. There are no watercourses on or adjacent to the site and the large pond is totally isolated in the surrounding landscape. There is therefore no potential for these species to be present.

Other mammals

- 3.18 GiGL did not provide any other records of mammals within 1 km of the site. The site is expected to support a small number of common small mammals but the potential for more notable species, such as Hedgehogs is limited due to the now open nature of the site and busy nearby roads. Their presence cannot be entirely ruled out but the habitats provide little cover for this species.

Birds

- 3.19 GiGL provided a large number of bird records including birds of prey, waterfowl, wading birds, and farmland birds. These are not considered to be important in the context of this site and the pond showed no evidence of being used by waterfowl. Records of notable urban species such as House Sparrow and Starling were also provided.
- 3.20 The site provides typical urban garden foraging and nesting opportunities for common birds. Shrubs and trees provide potential nesting sites although no evidence of previous use was recorded. However, it can be assumed that birds are likely to nest in the vegetation in the future and the site more generally provides a limited foraging resource.

Reptiles

- 3.21 GiGL provided three records of Grass Snake and two Slow-worms, the nearest of which were 731 m and 870 m from the site respectively and therefore well isolated from it.
- 3.22 The habitats on site are poor for reptiles. The short areas of grass and small borders of introduced shrub do not provide any cover for reptiles and the cleared areas of scrub and trees are also open with little cover. These were likely to be too heavily shaded previously. The pond may provide amphibian prey for Grass Snakes but the site is surrounded by dense urban areas,

which limits the potential for this species to move through the landscape and in the absence of suitable habitat on site they are expected to be absent.

Amphibians

- 3.23 GiGL provided records of Common Toad, Great Crested Newt, Common Frog. The single record of Common Toad was from a location 905 m from the site. Six records of Common Frog and three of Great Crested Newt are from a location 176 m southwest of the site which roughly corresponds with one of the ponds which is part the Uxbridge Ponds SINC. The most recent Great Crested Newt record is from 2010. Great Crested Newt surveys of this pond and the pond on site were carried out by All Ecology in 2015. These recorded a maximum count of one in the Uxbridge Pond; they were found to be absent from the pond on site although a maximum count of 31 Smooth Newts was recorded.
- 3.24 The site provides limited terrestrial habitat and the main potential value of the site for amphibians is associated with the pond. With regards to Great Crested Newts, the only other pond in the surrounding area not completely isolated from the site is the Uxbridge Pond.

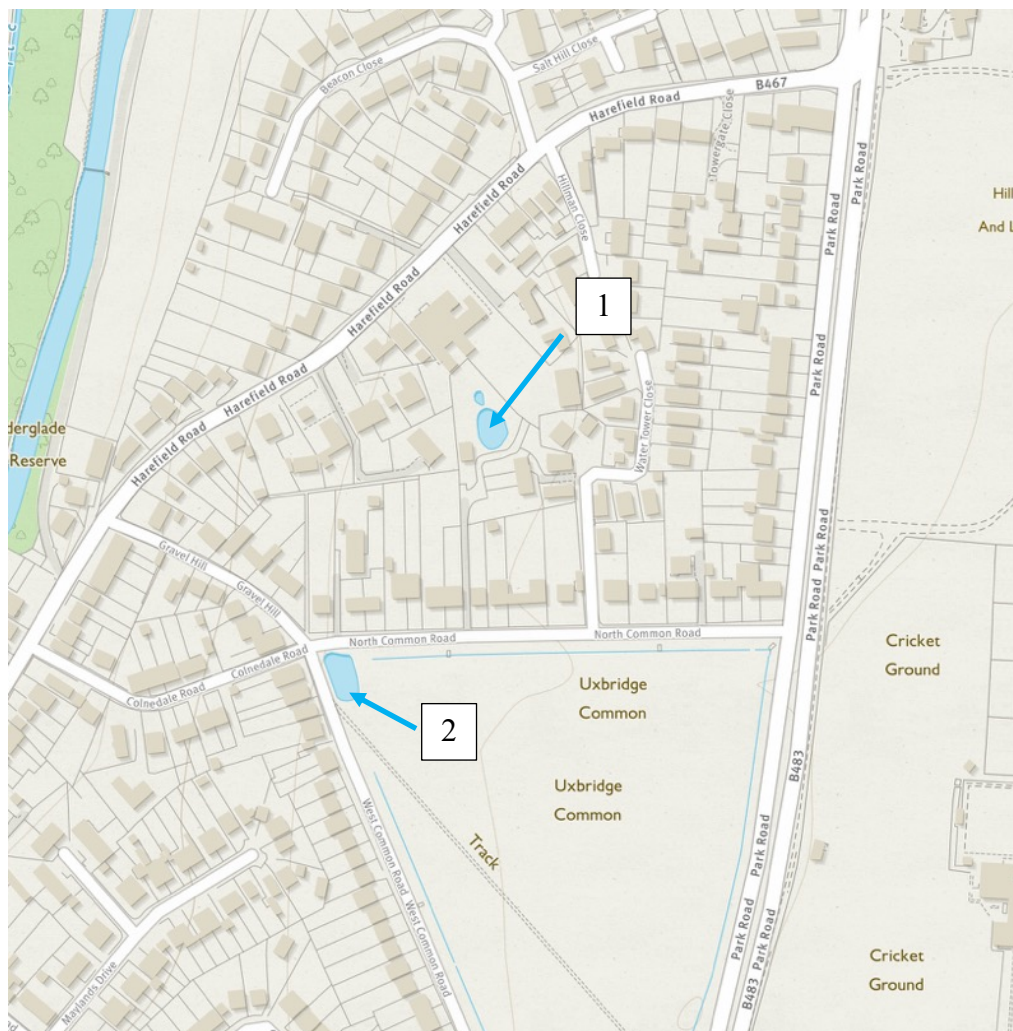


Figure 3: Pond location plan.

- 3.25 Pond 1 is located on site. It was formed by a large section and a small section connected by a channel. Overall it was approximately 35 m long and 20 wide. The water was turbid and marginal vegetation was minimal. There was no sign of waterfowl although it is possible that small

numbers are occasionally present. Ponds such as this can often contain introduced fish but none were seen and they are assumed to be absent. A small number of other ponds are present within 1 km of this pond; however all but one (Pond 2) are well isolated from it by built-up areas and roads. The pond is surrounded by recently cleared scrub and trees but ivy and logs still provide some limited shelter.



Photograph 14: Pond 1.

- 3.26 Pond 2 has the appearance of a village pond set in the northwest corner of Uxbridge Common surrounded by North Common Road to the north, West Common Road to the west and small areas of scrub to the east and south. It is formed with low stone walls and was oval in shape with a length of 30 m x 15 m at its widest point. The water was turbid but aquatic and marginal vegetation was abundant. There was no sign of waterfowl although it is likely that they are occasionally present. Ponds such as this often contain introduced fish but none were observed and for the purposes of the HSI assessment they are presumed to be absent. A small number of other ponds are present within 1 km of this pond; however all but one (Pond 1) are isolated from it by built-up areas and roads. The pond is not directly connected to the site by suitable habitat. Any newts, if present, would need to cross North Common Road, which would not be a barrier to dispersal, and then find their way between houses and along driveways in order to access the site, which is 125 m to the northeast at its closest point.



Photograph 15: Pond 2.

3.27 The Great Crested Newt Habitat Suitability Index assessment gave the following results.

Table 3: HSI Assessment Results

HSI Variables	Pond 1	Pond 2
SI1 - Location	1	1
SI2 - Pond area	0.8	0.9
SI3 - Pond drying	0.9	0.9
SI4 - Water quality	0.33	0.67
SI5 - Shade	1	1
SI6 - Fowl	1	1
SI7 - Fish	1	1
SI8 - Ponds	0.4	0.4
SI9 - Terr'l habitat	0.67	0.67
SI10 - Macrophytes	0.4	0.9
HSI Score	0.69	0.82
Rating	Average	Excellent

3.28 Pond 1 scored 0.69 and a rating of 'average'. Pond 2 scored 0.82 and a rating of 'excellent'. These are above the 0.5 threshold at which further consideration is usually necessary. Pond 2 is relatively isolated from the site and Great Crested Newts were previously found to be absent from Pond 1; however, this survey took place nearly four years ago and it is possible that they have colonised the pond although this is considered unlikely.

Invertebrates

3.29 GiGL provided records of a number of notable invertebrate species the majority of which were from location between 800 m and 1 km to the north of the site. The pond is likely to be the focus of invertebrate interest on site but this has been neglected and aquatic vegetation is minimal. It is likely that invertebrate diversity is limited to species such as midge and mosquito larvae with limited opportunities for more notable species.

- 3.30 The remaining habitats on site are limited and common, the potential for rare, notable or protected species is almost negligible.

4.0 Development Constraints and Recommendations

Development Proposals

- 4.1 The site is the subject of a planning application to permit the demolition of the existing house followed by the construction of a new residential development of 6 units. The majority of the pond would be filled in but a section would be retained and enhanced.

Designated Sites

- 4.2 The Uxbridge Ponds SINC is designated for its three ponds, which support amphibians including two breeding ponds for Great Crested Newts, the nearest of which is 125 m to the southwest of the application site. No direct impacts are anticipated but indirect impacts through threats to the resident Great Crested Newt population require further consideration. This is given below in the amphibian section but in summary if Great Crested Newts are still absent from the pond on site then no impacts to this designated site are predicted.

Habitats

- 4.3 The habitats on site are generally common, of low ecological value and easy to replace. The most important habitat is the pond. It is currently unknown whether the pond qualifies as NERC Priority Habitat. In order to qualify, the presence of protected, NERC Priority, or Red Data Book species would be required, or exceptional assemblages of key species, such as amphibians and dragonflies, or be a rich site for plants and invertebrates. A previous Great Crested Newt survey of the pond in 2015 did not record the presence of this species and none of the other above criteria appear to be met. However, the previous Great Crested Newt survey is considered to be out of date and although unlikely, it may now be present in which case the pond would qualify. Regardless, the pond is an ecological resource, which will provide habitat for a variety of species groups. In order to ensure that the development meets biodiversity policy requirements the loss of a large portion of the pond will need to be off-set but significantly enhancing the part of the pond to be retained. There appears to be significant potential for enhancing the retained part of the pond, which is neglected, until recently was heavily shaded, and is currently turbid, stagnant water with little plant interest.
- 4.4 The enhanced retained portion of the pond should be a minimum of 1 m deep, to provide well insulated areas from extremes in temperature. The pond edges should not be straight and there should be a sloping aspect at one side of the pond to allow wildlife to get in and out. Shallow shelved areas should also be created to provide a diversity of conditions for flora and fauna.
- 4.5 The pond should be planted with native local plants and non-native plants, many of which are invasive, should be avoided. The deeper areas of the pond should be planted with submerged and oxygenating plants such as Common Water-crowfoot, Curled Pondweed, and Water Violet. Floating-leaved plants such as water-lilies and Broad-leaved Pondweed should also be planted here. In the marginal, shallower areas of the pond, marginal plants such as Brooklime, Water Mint, Marsh Marigold, Water Plantain, Yellow Iris, and rushes should be planted.
- 4.6 The pond should be allowed to fill naturally, and the use of tap water avoided as this contains chemicals and cause changes in temperature.

- 4.7 In terms of the on-going management of the pond, the pond should be maintained to have about 50% open water and 50% marginal vegetation. If nutrient levels are high in the pond then marginal vegetation will increase rapidly. If this were the case then any excess vegetation should be removed in September when most animals have completed their lifecycle, but before animals, such as frogs, start to hibernate. Any removal of vegetation should only take place in one half of the pond, leaving the rest for the next year. Any collected sediment and vegetation should be left at the side of the pond for at least 24 hours to allow any trapped animals to crawl back in. Autumn leaves should also be removed at this time to reduce the rate of silting in the pond.
- 4.8 Without any movement in the surface of the water duckweed is likely to cover the pond each year and if nutrient levels in the pond are high then blanket weed can also proliferate. In the spring a net can be used to remove duckweed and a twisted stick or broom can be used to pull blanket weed from the pond. Removed vegetation should be left on the side of the pond for a day or so to allow any caught animals to re-enter the pond, before being taken away and composted elsewhere to avoid the leaching of nutrients back into the pond.
- 4.9 Animals should be allowed to colonise naturally and no attempt should be made to transfer animals to the pond as this can spread disease or other unintended animals or plant life.
- 4.10 The surrounding terrestrial habitat could be long grass and a log or rubble pile for both amphibians and invertebrates could be created on the north edge of the pond.
- 4.11 The boundary hedges were a mix of non-native conifer and native species. The non-native conifer hedges do not qualify as NERC Priority Habitat but the remaining hedges meet the requirement for qualification by containing at least 80% native species. However, all form part of a residential curtilage and therefore cannot qualify as 'important' under the Hedgerow Regulations 1997. It is understood that the boundary vegetation will be retained and the existing access used so no further assessment is required regardless. Consideration should be given to enhancing the hedges by augmenting them with additional native species to create species-rich hedges.
- 4.12 The remaining habitats i.e. the small standard trees, small borders of introduced shrub, hard standing, amenity grassland and buildings, are of low to negligible ecological value.
- 4.13 Where new areas of habitat are to be created, consideration should be given to the seeding of these areas using appropriate seed mixes. Where possible these seeds should be locally sourced to support the genetic integrity of local wild plant populations. Where new trees or shrubs are to be planted, native tree and shrub species should be used as these are most beneficial to invertebrates, and many also produce seeds, nuts and berries that are food for native mammals and birds. Planting of non-native plant species should be limited to those that are not invasive and should prioritise those that provide a good source of nectar for invertebrates e.g. Butterfly-bush, Jasmine.

Protected and Notable Species

Bats

- 4.14 The buildings on site are to be demolished. The sheds and green house do not provide any potential for roosting bats and it has been concluded that roosting bats are absent from the house based on an absence of any evidence or potential access points to the roof spaces or

other voids such as the soffits or under the tiles. No further surveys are required at this time but further deterioration of the building will likely result in an increase in potential for roosting bats so if the demolition is delayed by a year or more then a repeat inspection will be required to confirm that the status of the building is the same as that described within this report.

- 4.15 As a precaution, the contractor should be advised to adhere to the following procedures in the highly unlikely event that bats are found during demolition works:
- If the roost is still in the structure and bats are not injured, stop work and contact a licensed ecologist. If help is not available, allow bats to fly out of harm's way.
 - If material containing a roost has been removed, the roost is not exposed and the bats are not injured, temporarily seal and isolate the roost, stop work and seek advice from a licensed ecologist. If advice is not readily available, re-open it and allow bats to relocate of their own accord.
 - If the roost has been exposed, and especially if bats have been injured, stop work, collect bats in a secure box or bag (using a glove) and contact a licensed ecologist
- 4.16 None of the trees appeared to provide any roosting features for bats. No restrictions on any tree removals with regard to bats, if necessary, are required but it is recommended that the following procedures be employed in the highly unlikely event that a bat or bats are discovered during works:
- If the roost is still on the tree and bats are not injured, seek advice from a licensed ecologist. If help is not available, allow bats to fly out of harm's way.
 - If the timber is felled, the roost is not exposed and the bats are not injured, temporarily seal and isolate the roost and seek advice from a licensed ecologist. If advice is not readily available, position the roost off the ground, re-open it and allow bats to relocate of their own accord.
 - If the roost has been exposed, and especially if bats have been injured, collect bats in a secure box or bag (using a glove) and contact a licensed ecologist.
 - Note the date, locality, type of tree, situation in tree and bat species if known.
- 4.17 The site may be used by small numbers of common urban bat species for foraging, the pond in particular. The character of the site will be significantly changed with regards to these habitats but taking into account the nature and situation of the site, activity surveys for bats are not required. Nevertheless, the aim should be to recreate suitable foraging habitat within the development garden by adhering to the recommendations with regard to the pond and planting, and employing a suitable lighting strategy. Any bats on site are likely to be more light tolerant species but disturbance can be reduced by using more suitable lighting and the presence of more light sensitive species cannot be entirely ruled out. Measures include the use of low UV lights such as warm white LED lamps with a wavelength of 590 nm for external lighting using column lighting with full cut-off directional shielding to ensure that lighting is directed only where required and light spill into adjacent areas is minimised. The boundary hedges and trees, as well as the retained portion of the pond should left unlit.
- 4.18 The development provides an opportunity to enhance the site for roosting bats. New roosting features could be provided within/on the new buildings with integrated roosts or surface mounted boxes/panels. Bat panels such as Schwegler Bat Access Panel 1FE, or bat tubes such

as the Schwegler 1FR Bat Tube can be incorporated into the building exteriors with little visual impact, or roosts such as the Schwegler Bat Roost 1FQ can be erected after building completion.

Other mammals

- 4.19 The potential for other species of protected or notable mammal species to use the site is deemed to be low. No constraints are predicted as a result of the potential presence of passing Badgers or the presence of small mammals but as a precaution it is recommended that during the construction phase of the project any trenches and other excavations are back-filled before nightfall or a ramp left to allow animals to easily exit, and any open pipes larger than 150 mm should be capped off overnight.

Birds

- 4.20 The survey was carried out in February, which is outside the nesting season of March – August/September. There was no evidence of nesting birds on the buildings or in vegetation but both may be used by nesting birds in the future.
- 4.21 All nesting birds are protected under The Wildlife and Countryside Act 1981 (and amendments). No further surveys are recommended at this time but as a precaution it is recommended that any building demolition and vegetation removal be carried out outside of the bird-nesting season of March to August. Where this is not possible, the vegetation and buildings would need to be surveyed for nesting birds by a suitably qualified ecologist prior to works commencing. If they are found, then the nest and surrounding habitat must remain intact until the young have fledged.
- 4.22 The new buildings provide a good opportunity to enhance the site for birds and consideration could be given to the incorporation of new nesting sites for birds in the new buildings. It may be possible to provide nesting features for House Martins, and colony type boxes could be installed at a height of least 2 m to provide nesting sites for birds such as House Sparrows, which have experienced rapid declines and are a NERC Priority Species.
- 4.23 Bird boxes for small birds, such as Blue Tits, could also be erected on buildings; these should be fixed at a minimum of 2 m from the ground, with the entrance hole between north and east to avoid the worst of the weather and prevent the box and its inhabitants becoming overheated in sunny weather.
- 4.24 In order to compensate for any loss of foraging habitat and/or enhance the site, it is recommended that any new planting on site should concentrate on species that are native to the area and ideally produce a range of seeds and berries at varying times of the year. Nectar rich plants could also be used encourage invertebrates on to the site, which in turn provide food for birds as well as other species such as bats. Any overall loss in value of the site for birds is unlikely and the provision of nesting opportunities and the retained garden and any new gardens will provide new habitat for these species

Amphibians

- 4.25 The pond on site (Pond 1) and Pond 2 on Uxbridge Common provide potential breeding habitat for amphibians, including Great Crested Newts and these were therefore subject to the Great Crested Newt HSI Assessment. Pond 1 scored 0.69 and a rating of 'average'. Pond 2 scored

0.82 and a rating of 'excellent'. These are above the 0.5 threshold at which further consideration is usually necessary. Pond 2 was previously found to support great Crested Newts but is relatively isolated from the site with newts having to cross roads, driveways, and gardens in order to access the site. Nevertheless newts present in this pond could potentially access the site including the pond. Great Crested Newts were previously found to be absent from Pond 1; however, this survey took place nearly four years ago and it is possible that they have colonised the pond although this is considered unlikely.

- 4.26 Great Crested Newts and their places of breeding or rest are protected under the Wildlife and Countryside Act 1981 (and amendments) and The Conservation of Habitats and Species Regulations 2010 making it illegal to kill, injure, capture or disturb a Great Crested Newt and to damage or destroy a breeding or resting site of this species. All activities that would otherwise constitute an offence under The Conservation of Habitats and Species Regulations 2010 must be licensed by Natural England. Great Crested Newts are also a UK BAP Priority Species.
- 4.27 Using the Natural England's Great Crested Newt Rapid Risk Assessment, where a breeding pond is to be lost or damaged, the risk of an offence being committed is classified as 'red: offence highly likely'.
- 4.28 Due to the length of time that has passed since the previous survey in 2015, it will be necessary to carry out surveys on Pond 2 to determine Great Crested Newt presence/absence and if present, a population assessment in order to determine the impacts to this species and inform a mitigation strategy and probable licence application. Presence/absence can be determined with four visits using traditional surveys techniques such as bottle trapping, torching, egg search and/or netting. If found an additional two visits are required to enable a population assessment. These surveys must be timed between mid-March and mid-June with 50% of the surveys timed between mid-April and mid-May. Presence/absence can also be determined with single visit to collect water samples and then using the eDNA test. Due to the previous recorded absence of Great Crested Newts from this pond it is recommended that the eDNA method is used as it is highly likely that they are still absent. This may be carried out from mid-April until the end of June; however, this should be carried out as soon as possible (mid-April) in order to leave sufficient time to carry out a population assessment in the event of a positive result.
- 4.29 Any mitigation for Great Crested Newts is dependent on the outcome of the eDNA analysis of Pond 1. In the event of a negative result, no further surveys of Pond 2 are required as this will not be affected and assumed presence will enable reasonable avoidance measures and precautionary method of working to be devised to address the low likelihood of newts from this pond being present in terrestrial habitats on site. In the event of a positive result for Pond 2, full population assessments will be required for both Pond 1 and Pond 2.

Invertebrates

- 4.30 The most important habitat for invertebrates is likely to be the pond with limited value across the remainder of the site; there is little potential for rare or notable species.
- 4.31 The recommendations in relation to the retained portion of the pond will greatly enhance it for invertebrates as will the planting of native species. In order to enhance the development site further for invertebrates, consideration should be given to providing small dead wood piles and/or invertebrate homes for pollinators. This is not only beneficial to invertebrates but also other species groups that depend on them, bats, birds, wildflowers etc.

5.0 References

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