

GEOSPHERE ENVIRONMENTAL

REPORT NUMBER: 4702,EC/PEA/TC,RF,KL/02-03-20/V1

SITE: 38-42 Hampton Road, Teddington, TW11 0JE

DATE: 02/03/2020



DOCUMENT CONTROL SHEET

Report Number: 4702,EC/PEA/TC,RF,KL/02-03-20/V1
 Client: Howarth Homes PLC
 Project Name: 38-42 Hampton Road, Teddington, TW11 0JE
 Project Number: 4702,EC
 Report Type: Preliminary Ecological Appraisal
 Status: Final
 Date of Issue: 02 March 2020

Issued By:

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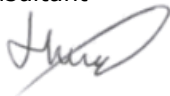
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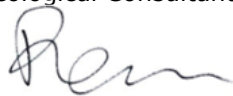
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VERSION RECORD

Version	Date	Document Revision Details	Prepared By	Admin
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Executive Summary

Report Description	<p>This Preliminary Ecological Appraisal report has been prepared by Geosphere Environmental Limited for Howarth Homes PLC and relates to the proposed residential development of the site at 38-42 Hampton Road, Teddington, TW11 0JE.</p> <p>The purpose of this report is to identify potential ecological constraints to development, particularly in relation to potential legally protected species onsite, confirm the need for further survey work to confirm all baseline ecological conditions, if necessary and highlight opportunities for ecological enhancement.</p>
Summary of Main Findings	<p>The site comprises buildings and hardstanding, introduced shrubs, scattered trees and amenity grass.</p> <p>The findings of the extended Phase 1 Habitat Survey confirm that the habitats onsite have the potential to support: low numbers of common widespread passerine breeding birds, and occasional foraging by low numbers of more light tolerant species of bats. Adjacent to the site is a tree with low bat roost potential, however street lights in close proximity reduces the likelihood of use.</p> <p>The site is not considered suitable for reptiles, Great Crested Newt, Badger, Hedgehog, Water Vole, Otter or Hazel Dormouse.</p>
Ecological Constraints	<p>The constraints to development will be ensuring the development does not provide lighting overspill, over and above the existing light levels, and the unmitigated removal of habitats considered suitable for protected species, including trees and introduced shrubs suitable for low numbers of foraging bats and common species of breeding birds.</p>
Avoidance measures & Timings of Works to reduce impact	<ul style="list-style-type: none"> • The proposed development should be designed such that there is no increase in lighting overspill, over and above the existing lighting levels. • Trees and shrubs should be retained on site where possible. • Any clearance of vegetation, should be timed to avoid the bird nesting season (March to August inclusive). If this is not possible, these habitats can only be removed following confirmation by a suitably qualified ecologist that they are not in active use by nesting birds.
Mitigation measures	<p>Any trees or shrubs lost during the development should be replaced within the final development. Wildlife friendly plants should be selected for any replacement planting.</p>
Biodiversity Enhancement Opportunities	<p>Opportunities exist for the provision of ecological enhancements in the form of integrated bat and bird bricks or bat and bird boxes and improving access into the site for Hedgehog.</p>
Conclusions	<p>The recommendations within Section 7 of this report should be adhered, to reduce the impact on protected species. Provided the recommendations within Section 7 of this report are undertaken and mitigation measures adhered to, then potential negative impacts on protected species, if present, will be negligible.</p>

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1. INTRODUCTION

This Preliminary Ecological Appraisal report has been prepared by Geosphere Environmental Limited for Howarth Homes PLC and relates to the proposed residential development of the site at 38-42 Hampton Road, Teddington, TW11 0JE. Any limitations and conditions pertaining to the report are stated within Appendix 1, with a full list of technical references provided within Appendix 2.

The report relates to the proposed development of the 0.1 hectare (ha) site for residential use as shown in Drawing ref. L1000 P3 included within Appendix 3. The site is located at National Grid reference TQ15047115.

The development boundary is shown on Figure 1 below:

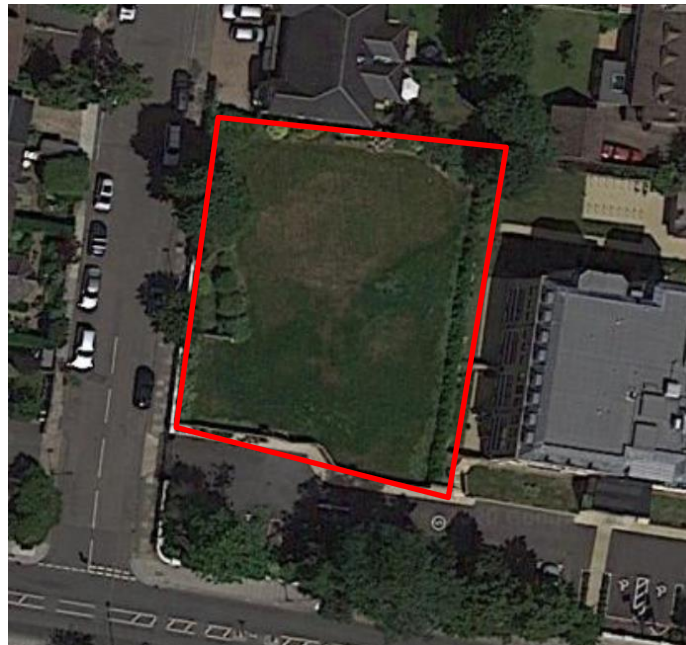


Figure 1 – The proposed development boundary is outlined in red

1.1 Aims

This report provides baseline data for the assessment of the ecological features of the site and identifies any potential constraints with regards to protected species. It also outlines recommendations for further surveys if necessary.

2. LEGISLATIVE AND POLICY CONTEXT

2.1 Current UK Legislation

The main legislation that applies to ecological issues within England and Wales is as follows:

- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 transposes 'The Conservation of Habitat and Species Regulations 2017', regarding the conservation of natural habitats and of wild fauna and flora (formally the EC Habitats Directive). Under the regulations, public bodies have a duty in exercising their functions to provide for the protection of 'European Sites' and 'European Protected Species' (EPS).
- The Wildlife and Countryside Act 1981, (WCA) (as amended) provides detail on a range of protection and offences relating to wild birds, other animals, and plants. The level of protection depends on which Schedule of the Act the species is listed on. Licences are available for specific purposes to permit actions that would otherwise constitute an offence in relation to species.
- The Natural Environment and Rural Communities, (NERC), Act 2006 imposes an obligation on all public bodies, including local authorities, to consider whether their activities can contribute to the protection of wildlife. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England and states that: "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity."

Species-specific legislation is detailed within Appendix 4.

2.2 Planning Policy

The recommendations of this report are in line with the key principles of the Ministry of Housing, Communities and Local Government (MHCLG) (July 2019) National Planning Policy Framework (NPPF) (ref. **R.1**) and Government Circular 05/06: Biodiversity and Geological Conservation (ref. **R.2**).

Local planning policies relating to ecology are invariably based upon the conservation of species protected under the above legislation, including species and habitats of principal importance listed under Section 41 of the NERC Act 2006; and the protection of designated sites.

All of these features are considered within the scope of this Preliminary Ecological Appraisal and therefore any recommendations made herein, are likely to be in line with this policy.

3. METHODOLOGY

3.1 TECHNICAL APPROACH

The PEA has been undertaken following guidelines provided by CIEEM's Guidelines for Preliminary Ecological Appraisal, (ref. **R.3**), and BS 42020: 2013 Biodiversity standards, (ref. **R.4**) to provide an indication of the ecological value of the site and the potential for the site to be used by protected species.

Scientific names and common names of plant species identified are as they appear in Stace, (ref. **R.5**).

The conclusions and recommendations for further works are in accordance with current legislation and guidance.

3.2 Ecological Desk Study

A data search was conducted of freely available biological records. The sources of information included:

- The Multi-Agency Geographic Information for the Countryside (MAGIC) online database (ref. **R.6**) was consulted to obtain geographic information on key statutory designated nature conservation sites of relevance to the site;
- Greenspace Information for Greater London (GIGL) was contacted to provide details of legally protected species and non-statutory designated conservation sites within 1km of the site. Only records of protected species from within the last ten years are considered within this report;
- Ordnance survey maps were used to identify ponds/ditches within 500m of the site to assess the potential for Great Crested Newt (GCN) within the immediate vicinity of the site.

All relevant desk study data obtained is attached in Appendix 5, except for detailed lists of species given the sensitive nature of the information.

3.3 Preliminary Ecological Appraisal

The surveys used to inform the Preliminary Ecological Appraisal comprise of a Phase 1 Habitat and Protected Species Scoping Survey, more often referred to as an extended Phase 1 Habitat Survey.

An extended Phase 1 Habitat Survey of the site was undertaken on 19 February 2020 by Tom Cox TechArborA. The weather conditions at the time of the survey were light rain and strong breeze with an approximate temperature of 8°C.

The Phase 1 Habitat Survey involved a walkover of the site in which the habitats are classified according to JNCC Phase 1 Habitat Survey guidelines, (ref. **R.7**). Habitats on and adjacent to the site were mapped and target notes added for any interesting or notable biodiversity features.

The frequency and cover of each species identified as they are distributed in each habitat is estimated using the DAFOR scale, (ref. **R.8**), as follows:

- Dominant - >75% cover;
- Abundant – 51-75% cover;
- Frequent – 26-50% cover;
- Occasional – 11-25% cover;
- Rare – 1-10% cover;
- Locally dominant (LD), abundant (LA) and frequent (LF) is also used where the distribution is patchy.

The site was assessed for its suitability to support protected species and other species of conservation importance, which could pose a planning constraint. All signs and areas of habitat considered suitable for protected species or those of conservation interest, were recorded and photographed. These include burrows, droppings, footprints / paths, hairs, refuges and particular habitat types, such as ponds, known to be used by certain class of fauna. Any mammal paths found were noted down and followed where possible. Sites are taken in the context of their surroundings and so include the immediate environs outside of site boundaries, where appropriate.

All established trees that could be accessed onsite were inspected and assessed in terms of their suitability (negligible, low, moderate or high) to support roosting bats, in line with the Bat Conservation Trust (BCT) survey guidelines (ref. **R.9**).

All ponds within 500m of the site were also assessed for their suitability for Great Crested Newt (*Triturus cristatus*) if the ponds were publicly accessible or if access had been granted prior to the survey. This includes a habitat suitability index (HSI) assessment (ref. **R.10**) which assesses the pond based upon a number of factors including the size, water quality, permanence, shading, presence of fish, the number of nearby ponds and macrophyte cover. A score between 0 and 1 is given; where 0 represents poor suitability and 1 represents excellent suitability.

3.4 Ecological Impact Assessment

The ecological evaluation and impact assessment detailed below is based upon CIEEM Guidelines for Ecological Impact Assessment in the United Kingdom, (ref. **R.11**).

CIEEM Guidelines state that the value or potential value of an ecological resource or feature should be determined within a defined geographical context from an international to site scale as follows:

- On an International scale, e.g. Ramsar, SAC or SPA site;
- On a UK scale, for example a SSSI or a National Nature Reserve, (NNR);
- On a National scale, e.g. a reserve of importance to England/Northern Ireland/Scotland/Wales;
- On a Regional scale, e.g. a local site with important regional habitats or UKBAP species;
- On a County scale, e.g. a local site with a habitat that is characteristic of the County or rare on a County

scale, or with LBAP species;

- On a District scale, e.g. a site with wildlife corridors likely to improve the biodiversity of the area;
- Local or Parish, e.g. areas of green space in a predominantly urban environment;
- On a Site scale, e.g. habitats with value within the zone of influence only.

The potential for protected species to use the habitats onsite contributes significantly towards the potential value of the habitats onsite.

4. DESK STUDY RESULTS

4.1 Nature Conservation Sites

There are no designated sites within the site boundary.

Two statutory designated nature conservation sites are located within 2km of the site. The closest is a Site of Special Scientific Interest (SSSI) and a Local Nature Reserve (LNR) called Bushy Park and Home Park located 200m south of the site. This 540 hectares (ha) site contains extensive Acid Grassland and Veteran trees and is considered important for supporting nationally assemblages of Saprophytic (dead and decaying wood) invertebrates. This SSSI is separated from site by, residential development and roads.

Biological records have confirmed the presence of five non-statutory designations within the 1km search radius. All of these are designated as Sites of Nature Conservation Interest (SINC) the closest of which is Bushy Park and Home Park which is located 200m south of the site.

SPA's, SAC's and Ramsar receive additional protection under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, as such a wider search was undertaken for internationally protected sites.

There are seven sites with International Protection within 20km of the site, South West London Waterbodies (Ramsar, SPA), Thames Basin Heaths (SPA), Mole Gap to Reigate Escarpment (SAC), Thorsley, Ash, Pirbright and Chobham (SAC), Richmond Park (SAC) and Wimbledon Common (SAC). The nearest of these is South West London Waterbodies (Ramsar, SPA) located 3km to the west of the site. This site comprises a number of reservoirs and former gravel pits in the Thames Valley which support internationally important numbers of Gadwall (*Mareca strepera*) and Shoveler (*Anas clypeata*).

Only those designations that have good habitat connectivity to the site, whose qualifying features have the potential to make use of habitats present at the site, or sites which are potentially impacted by development at the site are considered relevant in the context of this report.

4.2 Protected Species Records

There are records of 218 protected and notable species listed within 1km of the site returned from Greenspace Information for Greater London. Absence of records should not be taken as confirmation that a species is absent from the search area.

Table 1 provides a summary below:

Table 1 – Selected Protected and Notable Species Records				
Common Name	Scientific Name	Biological Records Within 2km	Date of Most Recent Record	Protective Status *
Amphibian				
Common Frog	<i>Rana temporaria</i>	Yes	1999	WCA Sch 5 (Common. Documented decline up to 1970s, since then appears to have stabilised).
Common Toad	<i>Bufo bufo</i>	Yes	1999	UKBAP, WCA Sch 5, NERC.
Great Crested Newt	<i>Triturus cristatus</i>	Yes	2018	UKBAP, WCA Sch 5 + 6, HabsDir.
Reptile				
Common Lizard	<i>Zootoca vivipara</i>	No	N/A	UKBAP, WCA Sch 5, NERC.
Slow Worm	<i>Anguis fragilis</i>	No	N/A	UKBAP, WCA Sch 5, NERC.
Adder	<i>Vipera berus</i>	No	N/A	UKBAP, WCA Sch 5, NERC.
Grass Snake	<i>Natrix natrix</i>	Yes	2015	UKBAP, WCA Sch 5, NERC.
Mammal				
Badger	<i>Meles meles</i>	No	N/A	PBA.
Otter	<i>Lutra lutra</i>	No	N/A	UKBAP, WCA Sch 5 + 6, HabsDir.
Water Vole	<i>Arvicola amphibius</i>	Yes	2004	UKBAP, WCA Sch 5, HabsDir.
Hedgehog	<i>Erinaceus europaeus</i>	Yes	1999	NERC, UKBAP, WCA Sch 6.
Barbastelle Bat	<i>Barbastella barbastellus</i>	No	N/A	HabsDir, WCA Sch 5 + 6.
Whiskered Bat	<i>Myotis mystacinus</i>	No	N/A	HabsDir, WCA Sch 5 + 6.
Natterer's Bat	<i>Myotis nattereri</i>	No	N/A	HabsDir, WCA Sch 5 + 6.
Serotine Bat	<i>Eptesicus serotinus</i>	Yes	2014	HabsDir, WCA Sch 5 + 6.
Noctule Bat	<i>Nyctalus noctula</i>	Yes	2004	HabsDir, WCA Sch 5 +6, NERC, UKBAP.
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	Yes	2017	HabsDir, WCA Sch 5 + 6, NERC, UKBAP.

Table 1 – Selected Protected and Notable Species Records

Common Name	Scientific Name	Biological Records Within 2km	Date of Most Recent Record	Protective Status *
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	Yes	2004	HabsDir, WCA Sch 5 + 6.
Brown Long-eared Bat	<i>Plecotus auritus</i>	Yes	2004	HabsDir, WCA Sch 5 + 6, NERC, UKBAP.
Daubenton's bat	<i>Myotis daubentonii</i>	Yes	2004	HabsDir, WCA Sch 5 + 6, NERC.
Brown Hare	<i>Lepus europaeus</i>	No	N/A	UKBAP.
Hazel Dormouse	<i>Muscardinus avellanarius</i>	No	N/A	HabsDir, NERC, UKBAP, WCA Sch 5 + 6.

Plants

A single Schedule 8 species was returned, Bluebell (*Hyacinthoides non-scripta*). No Schedule 9, UKBAP or NERC s41 species were returned within the records.

Invertebrates

Records of 162 species of invertebrate were returned within the biological records 22 of these are UKBAP, NERC s41 species.

Birds

Records of 37 bird species were returned within the biological records, four of these are schedule 1 birds including Fieldfare (*Turdus pilaris*), Redwing (*Turdus iliacus*), Whimbrel (*Numenius phaeopus*) and Merlin (*Falco columbarius*). There are also 7 NERC S41 and UKBAP species within the records.

Notes:

*WCA Sch 1 - Wildlife and Countryside Act (1981) Schedule 1. WCA Sch 5 - Wildlife and Countryside Act (1981) Schedule 5 (Killing, injuring and sale of certain species), WCA Sch 6 - Wildlife and Countryside Act (1981) Schedule 6 (Animals which may not be killed or taken by certain methods), WCA Sch 8 - Wildlife and Countryside Act (1981) Schedule 8 (Plants which are protected), UKBAP - UK Biodiversity Action Plan Species, NERC- Natural Environment and Rural Communities Act (2006) Section 41. Species and Habitats of Principal Importance. PBA - Protection of Badgers Act (1992). HabsDir- Conservation of Habitats and Species Directive (2010) Annex II, Annex IV. BoCC Red / Amber - Birds of Conservation Concern - Red or Amber listed.

4.3 Habitat Suitability Index Assessments

A single pond was identified within 500m of the site as shown in Drawing ref. 4702,EC,002/Rev0, in Appendix 3. The pond is separated from site by residential buildings and busy roads and as such no HSI assessments were undertaken, as this acts as a sufficient barrier to Great Crested Newt dispersal.

5. FIELD SURVEY RESULTS

The results of the Phase 1 Habitat Survey and Protected Species Scoping Survey are detailed below and annotated on Drawing ref. 4702,EC/001/Rev0, attached in Appendix 3. Descriptions of the target notes (TN) and relevant photographs are included in Appendix 6.

5.1 Site-Specific Limitations

The access gate was screwed shut during the survey however, the site was visible over a low wall. The habitats onsite are limited and the site has poor connectivity to habitats in the wider area. As such it is considered that full access to the site would not considerably alter the findings of this report.

5.2 Phase 1 Habitat Survey

The following habitat types were recorded within the survey area:

- Buildings and hardstanding;
- Introduced shrub;
- Scattered trees;
- Amenity Grass;
- Wall/fence.

5.2.1 Habitat Within the Development Zone

The majority of the site is an amenity grass lawn which is dominated by a single species, Perennial Rye Grass (*Lolium perenne*). This is bordered to the north, west and east by introduced shrubs (TN1) including occasional occurrences of Butterfly Bush (*Buddleja davidii*) and Holly (*Ilex aquifolium*), and scattered trees with rare occurrences of Cherry (*Prunus sp*).

To the west of the site there is a line of large Common Lime (*Tilia x europaea*) street trees which are well lit by streetlamps (TN2).

The site is surrounded by walls and fences.

5.2.2 Outside the Development Zone

The site is largely separated from habitats in the wider area by residential development and busy roads on all sides.

6. SPECIES APPRAISAL

6.1 Plants

No evidence of any rare plants was noted during the site survey. The habitats are regularly managed as an urban garden space. As such, protected species of plant are unlikely to be present.

6.2 Invertebrates

The site is an urban garden, comprising mostly of amenity grassland (a mown lawn), and as such the fairly low species diversity within the habitats onsite means that the site is unlikely to be utilised by a large or diverse assemblage of rare or nationally important invertebrates.

6.3 Amphibians

There is one pond within 500m of the site. This pond is referred to as Pond 1 on Drawing ref. 4702,EC/002/Rev0 within Appendix 3. The pond was located 450m south of the site and was separated by residential buildings and busy roads. The site lacks suitable breeding or terrestrial linkages and is not considered suitable for Great Crested Newts.

6.4 Bats

6.4.1 Habitats onsite

The site contains some introduced shrubs that provides very limited foraging habitat for bats. The site has connectivity to other residential gardens, and the site may be used occasionally by low numbers of more light tolerant species of bat such as pipistrelles (*Pipistrelle* spp.).

6.4.2 Habitats adjacent to the site

The building adjacent to the site is a newly built residential flat and has no bat roosting potential.

The large Lime street trees to the west of the site are street trees and are assumed to be well lit by street lamps at night. In one of these trees, there is a hole in the stem at approximately 5m high on the south facing side. The location of the tree is shown on the Phase 1 Habitat Plan Drawing ref. 4702,EC/001/Rev 0. These trees may provide some limited foraging, and have low roosting potential for more light tolerant species of bats.

6.5 Reptiles

The grassland and shrubs onsite are considered sub optimal for reptiles, the site itself is walled off from the surrounding area and isolated by residential development and busy roads. As such the site is not considered suitable for reptiles.

6.6 Birds

Common and widespread passerine species were noted during the survey using the introduced shrubs and scattered trees. There is potential for birds to nest within the shrubs and trees, during the nesting season.

6.7 Badger

The site is walled-off with limited connectivity to any habitat in the wider area and as such is considered unsuitable for badger.

6.8 Other Fauna

The site is not considered suitable for Hedgehog, Water Vole, Otter or Hazel Dormouse.

7. EVALUATION, CONSTRAINTS AND RECOMMENDATIONS

7.1 Nature Conservation Sites

The desk study identified two nature conservation sites with statutory designation, and five non-statutory designated nature conservation sites within 2km radius of the site. Seven internationally protected sites (Ramsar, SPA and SAC) were noted within 20km.

The development site does not contain any habitats which could support the important species associated with either the statutory or non-statutory sites, and there is not potential habitat connectivity between the site and the statutory sites.

It is considered unlikely, given the distance from the survey area and localised nature of the proposed development works, that the sites with statutory or non-statutory protection will be directly affected by any construction activity on the surveyed area. It is considered unlikely that residential development at 32-42 Hampton road, Teddington, TW11 0JE, is of sufficient size to have any indirect impacts on the designated sites.

7.2 Habitat Constraints

The introduced shrubs and scattered trees provide some habitat for invertebrates, and some potential habitat for foraging bats. Although this greenspace is of low value, all greenspace in London provides some value and should be retained, or replaced if possible. Unmitigated removal would have an impact of up to site significance.

The scattered trees should be retained where possible. Any trees or introduced shrubs that are removed during development should be replaced within the landscaping of the final development using species considered beneficial to wildlife. Trees should be protected implemented according to BS 5837: 2012 'trees in relation to design, demolition and construction' (ref. **R.12**).

7.3 Legally Protected and Notable Species

The ecological evaluation and impact assessment for protected species is detailed Table 2 below:

Table 2 – Protected Species - Ecological Constraints and Recommended Actions					
Ecological Constraint/ Receptor	Biological Records Within 2km	Value of Supporting Feature	Impact without Appropriate Mitigation in Place	Recommended Actions (Avoidance/mitigation/compensation Measures and Recommendations for Further Works)	Timing Restrictions
Bats – Scattered trees, introduced shrubs and large street trees adjacent site.	Yes	The habitats onsite provide foraging habitat of a very low importance. Adjacent to the site is a tree with low potential for roosting bats, and provides low value foraging habitat.	Impacts from development are considered up to site significance only.	Any trees or shrubs lost during the development should be replaced within the final development. Wildlife friendly plants should be selected for any replacement planting. Avoidance Measures: The proposed development should avoid an increase the lighting levels onsite, as well as avoid increased overspill onto adjacent trees with low roost potential.	N/A.
Breeding Birds – Scattered trees, introduced shrubs and large street adjacent site.	Yes	Habitats offer value to breeding birds for common passerine birds and are considered important on a site scale.	Site scale	To ensure that no offences occur under the WCA, it is recommended that any vegetation clearance work is undertaken outside of the bird nesting season. If it is not possible to undertake clearance works outside of the breeding bird season, a suitably qualified ecologist should be employed to determine if nesting birds are using the site prior to works commencing, to avoid negative impact on protected species. Any active nests that are found would need to be provided with a 10m buffer which would have to be left until the young had fledged, (typically four weeks from eggs being laid for the garden and woodland species likely to be present). Clearance works within the area can recommence only once the nest is no longer in use.	Clearance during September to February only unless supervised by an ecologist.
				Alternatively, avoidance measures such as habitat retention and protection should be designed into the scheme to avoid negative impact. This should include: <ul style="list-style-type: none"> Retention of the introduced shrubs and scattered trees. 	N/A.

8. GENERAL ENHANCEMENTS AND OPPORTUNITIES

The following general enhancements have been recommended to be included within the final development Scheme:

- All soft landscaping proposed within the final development plan should ideally be planted with native species. A list of such species is available within Appendix 7;
- Integrated bat/bird bricks could be installed within the final development. If integrated bird/ bat bricks are not possible, then external boxes should be installed. Examples are attached in Appendix 8;
- Connectivity for Hedgehog could be improved by creating an access into the site, from the adjacent residential gardens. A 15cm diameter hole should be placed at the base of the boundary wall/ fence to allow Hedgehog to pass beneath.

9. CONCLUSIONS

The proposed development will not adversely affect statutory or non-statutory designated nature conservation sites.

None of the habitats that occur within the survey area were considered to have high ecological importance on an international, national, regional or county scale. The habitats onsite are of site significance only.

The findings of the extended Phase 1 Habitat Survey confirm that the habitats onsite have the potential to support foraging bats and common widespread passerine birds. The recommendations within Section 7 of this report should be adhered, to reduce the impact on protected species.

Opportunities exist for the provision of ecological enhancements in the form of integrated bat/bird boxes and the incorporation of locally-sourced native plant species, or those of known wildlife benefit, into the landscape strategy.

APPENDICES

Appendix 1 – Report Limitations and Conditions

General Limitations and Exceptions

This report was prepared solely for our Client for the stated purposes only and is not intended to be relied on by any other party or for any other use. No extended duty of care to any third party is implied or offered.

Geosphere Environmental Ltd does not purport to provide specialist legal advice.

The Executive Summary, Conclusions and Recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon until considered in the context of the whole report.

Interpretations and recommendations contained within the report represent our professional opinions, which were arrived at in accordance with currently accepted industry practices at the time of reporting and based upon current legislation in force at that time.

Ecology Limitations and Exceptions

Any limitations associated with the report will be stated. The consequences of any limitations, findings and/or recommendations in the report are made clear in line with CIEEM (2013) 'Guidelines for Preliminary Ecological Appraisal' (GPEA) and BSI (2013) BS 42020:2013 Biodiversity – 'Code of practice for planning and development'.

This report is prepared and written in the context of the proposals stated in the introduction to this report and should not be used in a differing context.

The wildlife and habitats present on any site are subject to change over time. Surveys of this kind can have limited validity, with the possibility of behaviour patterns and territory boundaries varying over time, due to the dynamics of adjacent populations.

New information, improved practices and legislation may necessitate an alteration to the report in whole or in part after its submission. Therefore, with any change in circumstances or after the expiry of one year from the date of the report, the report should be referred to us for re-assessment and, if necessary, re-appraisal.

It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation of the natural environment.

The scoping survey does not assess the presence or absence of a species, but is used to assess the potential for habitat to support them. Additional surveys may be recommended if, on the basis of the preliminary assessment or during subsequent surveys, it is considered reasonably likely that protected species may be present.

This survey does not constitute an invasive species survey and should not be treated as such.

Owing to seasonal variances and prevailing weather, conditions may sometimes be sub-optimal for surveying and this may delay or disrupt planned survey programmes. If applicable, full details are given in the report.

Geosphere Environmental Ltd may not be aware of information that could be held by other organisations or individuals, and it is always possible for features of nature conservation interest to be unrecorded during surveys.

Scientific survey data will be shared with local biological records centre in accordance with the CIEEM professional code of conduct.

Appendix 2 – References

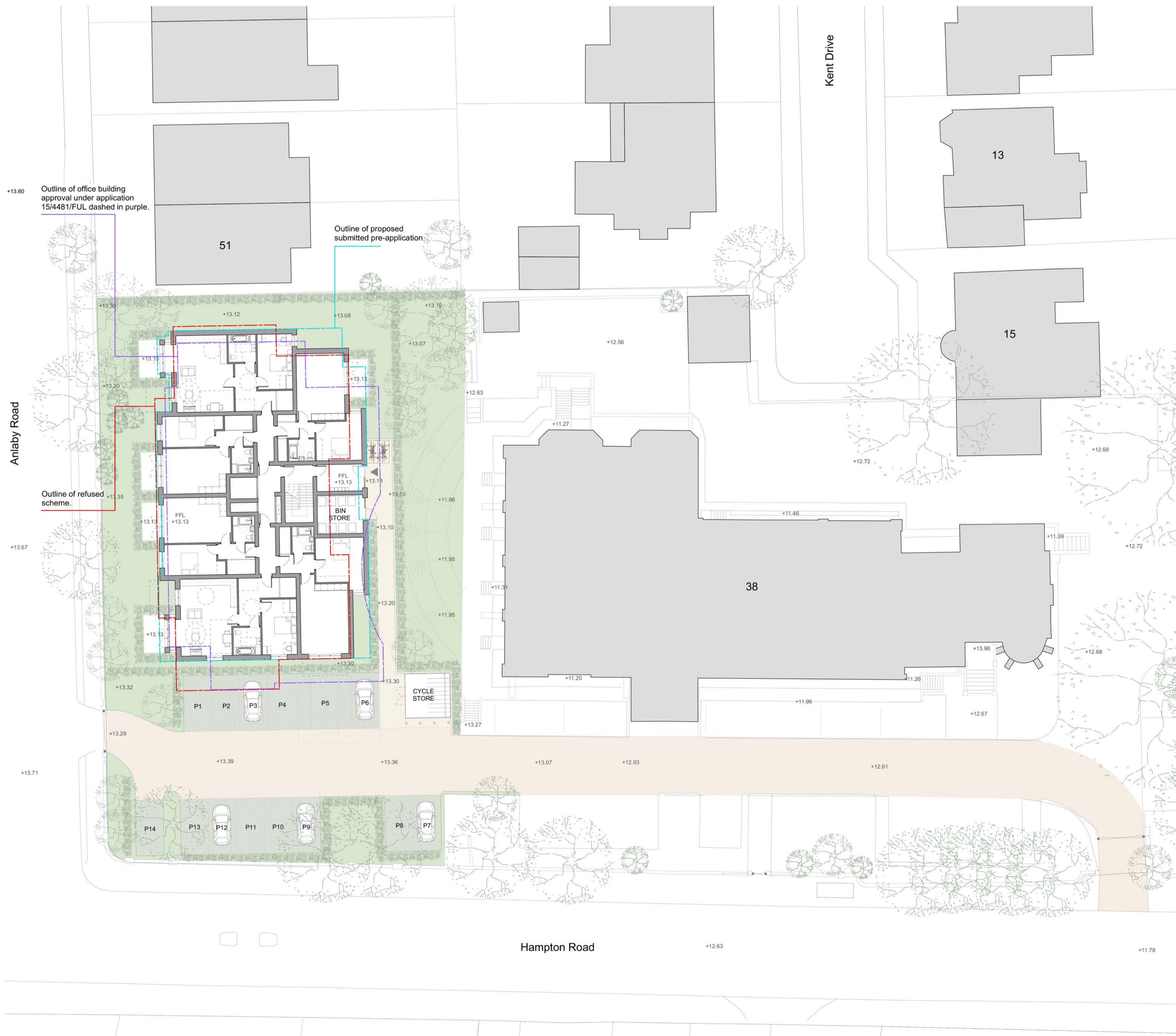
- R.1.** Ministry of Housing, Communities and Local Government (MHCLG) (July 2019) National Planning Policy Framework (NPPF).
- R.2.** ODPM (2005) Government Circular: Biodiversity and Geological Conservation – statutory obligations and their impact within the planning system.
- R.3.** CIEEM (December 2017) Guidelines for Preliminary Ecological Appraisal, 2nd ed. Chartered Institute of Ecology and Environmental Management, Winchester.
- R.4.** BSI (2013) BS 42020:2013 Biodiversity – Code of practice for planning and development. BSI Standards Limited 2013.
- R.5.** Stace, C. A. (2010). New Flora of the British Isles (third edition), Cambridge University Press.
- R.6.** Magic 25 February 2020 Site Check Report. www.magic.gov.uk.
- R.7.** JNCC, (2010). 'Handbook for Phase I Habitat Survey: A technique for environmental audit' (reprint). Joint Nature Conservation Committee, Peterborough.
- R.8.** Goldsmith, B. (1991). Monitoring for Conservation and Ecology, Chapman & Hall.
- R.9.** BCT (2016). 'Bat Surveys – Good Practice Guidelines' Bat Conservation Trust, London, 3rd Edition.
- R.10.** Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155.
- R.11.** CIEEM, (2016). Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland (Second edition dated January 2016).
- R.12.** BS 5837: (2012), 'Trees in Relation to Design, Demolition and Construction'.

Appendix 3 – Drawings

Proposed Site Plan – Drawing ref. L1000 P3

Phase 1 Habitat Survey Plan – Drawing ref. 4702,EC/001/Rev0

Pond Location Plan – Drawing ref. 4702,EC/002/Rev0



1 Proposed Site Plan
Scale: 1:200



2 Proposed Block Plan
Scale: 1:500

0 5 25 M

DISCLAIMER
Do not scale from this drawing.
Drawings based on survey information provided by others.
Verify all dimensions on site.
Drawing should be read in conjunction with information from all other design consultants and contractors.
All drawings in digital format are for reference only, paper copies are available on request.
Copyright to these drawings and the designs shown therein are retained by Progress Planning.

Rev	Date	Reason for Issue	Chk
P3	10.01.20	Client amendments	KL
P2	11.12.19	Client amendments	KL
P1	03.12.19	Client amendments	KL

Rev	Date	Reason for Issue	Chk

PROGRESS PLANNING
Land & Development
Progress Planning
Waterside House 20 Riverside Way
Uxbridge UB8 2YF




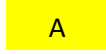


Project Title
38-42 Hampton Rd, Teddington TW11 0JE
Project Number
022
Date
10 January 2020

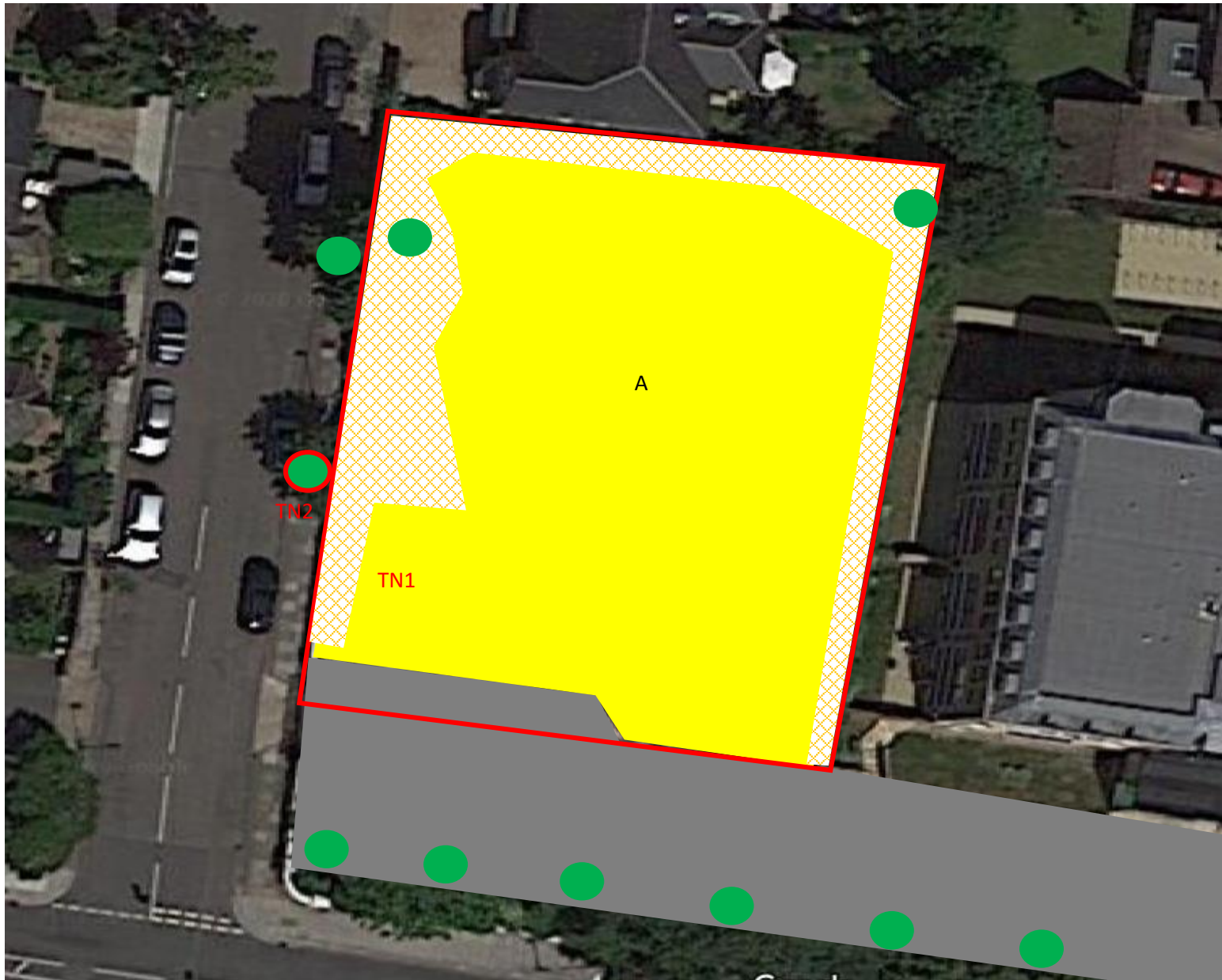
Drawing Title
Proposed Site Plan & Block Plan
Drawing Number
L1000
Revision
P3

Drawing Status
Preliminary
Scale / North Point
1:200 @ A1 / 1:400 @ A3
1:500 @ A1 / 1:1000 @ A3



LEGEND

-  Boundary (Fencing/wall/gate)
-  Introduced Shrub
-  Scattered Trees
-  A Amenity Grass
-  Hard standing
-  Tree with low roost potential



PROJECT

38-42 Hampton Road, Teddington, TW11 0JE

TITLE

Phase 1 Habitat Plan

DRAWING NUMBER

4702,EC/001/Rev0

SCALE

NTS

DATE

20/02/2020

DRAWN BY

TC

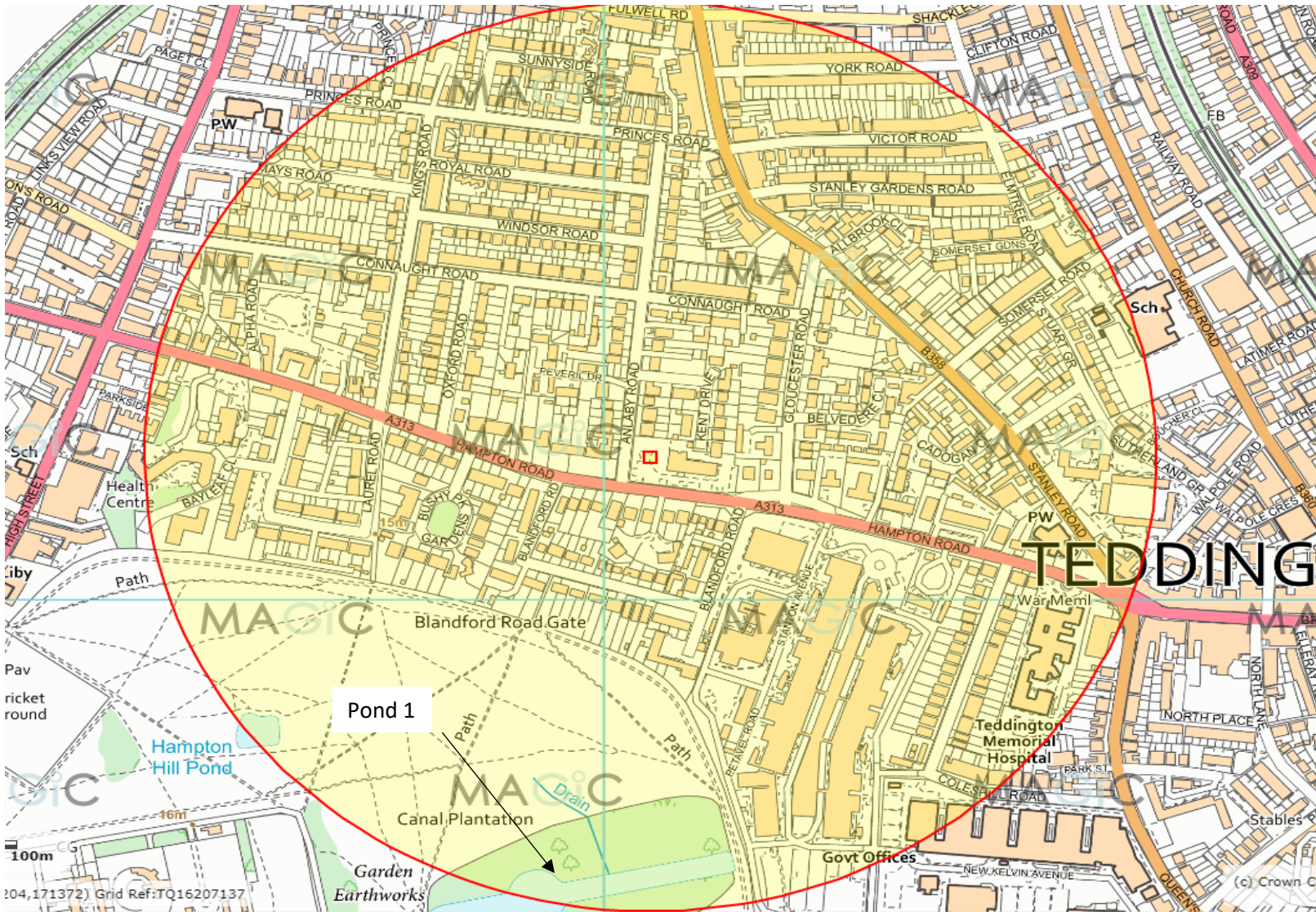
CHECKED BY

RF

LEGEND



500m Buffer of the site



PROJECT

38-42 Hampton Road, Teddington, TW11 0JE

TITLE

Pond Location Plan

DRAWING NUMBER

4702,EC/002/Rev0

SCALE

NTS

DRAWN BY

TC

DATE

20/02/2020

CHECKED BY

RF



Appendix 4 – Species-Specific Legislation

Badger

The Protection of Badgers Act 1992 exists for welfare reasons, to protect badgers from cruelty. Under the act it is a criminal offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so, or to intentionally or recklessly interfere with a sett.

Bats

All bat species are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010. It is illegal to kill or injure bats, cause disturbance at their resting places or to block access to, damage or destroy their roost sites.

Great Crested Newts

Great Crested Newts are protected under the Wildlife and Countryside Act 1981 (as amended) Section 5 and the Conservation of Habitats and Species Regulations 2010. It is illegal to intentionally or deliberately kill, injure or capture Great Crested Newts or intentionally, deliberately or recklessly damage or destroy their breeding and resting places or obstruct access to their place of shelter or protection.

Hazel Dormouse

Hazel Dormice are protected under the Wildlife and Countryside Act 1981 (as amended) Schedule 5 and the Conservation of Habitats and Species Regulations 2010. It is illegal to intentionally or deliberately kill, injure or capture a Dormouse or intentionally, deliberately or recklessly disturb a Dormouse, or damage its breeding or resting place or obstruct its place of shelter or protection.

Otters and Water Voles

Otters are protected under the Wildlife and Countryside Act 1981 (as amended) Schedule 5 and the Conservation of Habitats and Species Regulations 2010. It is illegal to take, injure, kill or sell an otter, it is also an offence to damage, destroy or obstruct access to a resting place or disturb or harm an Otter at any time.

Water Voles are protected under the Wildlife and Countryside Act 1981 (as amended) Schedule 5. It is illegal to deliberately kill, injure, capture or disturb them or to destroy, damage or obstruct access to any places used for shelter or protection

White-clawed Crayfish

White-clawed Crayfish (*Austropotamobius pallipes*) are protected under the Wildlife and Countryside Act 1981 (as amended) Schedule 5, Sections 9(1) & 9 (5). It is an offence to intentionally take White-clawed

Crayfish from the wild or to sell them. It is also a qualifying Annex II species for some Special Areas of Conservation under the Habitats Directive.

Birds

Wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). It is illegal to take or harm them, their nests (whilst in use or being built) or their eggs.

Additionally, for some species listed under Schedule 1 of the Act, it is an offence to intentionally or recklessly disturb the adults while they are in and around their nest or intentionally or recklessly disturb their dependent young.

Reptiles

Common reptiles include Slow-worm, Adder, Grass Snake and Common Lizard. These are protected under the Wildlife and Countryside Act 1981 (as amended) Schedule 5, Sections 9 (1) & 9 (5) only. It is illegal to kill or injure them.

It is not illegal to capture, disturb or to damage their habitats. However, the reptiles themselves are protected so any works to damage their habitat could risk causing harm to reptiles and hence could be illegal.

Rare reptiles which include Sand Lizard and Smooth Snake are restricted to a few locations in Britain and are fully protected under the Wildlife and Countryside Act 1981 (as amended) Schedule 5, Section 9 and the Conservation of Habitats and Species Regulations 2010. It is illegal to kill, injure or intentionally disturb them whilst occupying a 'place used for shelter or protection' and destruction of these places.

Appendix 5 – Desk Study Data

2/20/2020

Site Check Report Report generated on Thu Feb 20 2020
You selected the location: Centroid Grid Ref: TQ15047115
The following features have been found in your search area:

Local Nature Reserves (England) - points

Reference	1008934
Name	HAM LANDS
Hectares	60.01
Hyperlink	https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1008934

Local Nature Reserves (England)

Reference	1008934
Name	HAM LANDS
Hectares	60.01
Hyperlink	https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1008934

Sites of Special Scientific Interest (England)

Name	Bushy Park and Home Park SSSI
Reference	1477753
Natural England Contact	Conservation Delivery Team
Natural England Phone Number	0845 600 3078
Hectares	540.39
Citation	2000738
Hyperlink	http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s2000738

Areas of Outstanding Natural Beauty (England)

No Features found

National Nature Reserves (England) - points

No Features found

National Nature Reserves (England)

No Features found

National Parks (England)

No Features found

Ramsar Sites (England) - points

No Features found

Ramsar Sites (England)

No Features found

Special Areas of Conservation (England) - points

No Features found

Special Areas of Conservation (England)

No Features found

Special Areas of Conservation (Wales) - points

No Features found

Special Areas of Conservation (Wales)

No Features found

Special Protection Areas (England) - points

No Features found

Special Protection Areas (England)

No Features found

Biosphere Reserves (Scotland) - points

No Features found

Biosphere Reserves (Scotland)

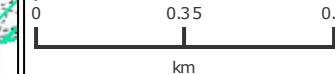
No Features found



Legend

-  Local Nature Reserves (England)
-  National Nature Reserves (England)
-  National Parks (England)
-  Ramsar Sites (England)
-  Sites of Special Scientific Interest (England)
-  Special Areas of Conservation (England)
-  Special Areas of Conservation (Wales)
-  Special Protection Areas (England)
-  Biosphere Reserves (Scotland)

Projection = OSGB36
 xmin = 510100
 ymin = 169100
 xmax = 519100
 ymax = 173700



Map produced by MAGIC on 20 February, 2020.
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Site Check Report Report generated on Thu Feb 20 2020
You selected the location: Centroid Grid Ref: TQ15047116
 The following features have been found in your search area:

Ramsar Sites (England) - points

Name SOUTH WEST LONDON WATERBODIES
Reference UK11065
Hectares 830.26

Ramsar Sites (England)

Name SOUTH WEST LONDON WATERBODIES
Reference UK11065
Hectares 830.26

Special Areas of Conservation (England) - points

Name WIMBLEDON COMMON
Reference UK0030301
Hectares 351.38
Hyperlink <http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?eucode=UK0030301>

Name RICHMOND PARK
Reference UK0030246
Hectares 846.43
Hyperlink <http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?eucode=UK0030246>

Name WINDSOR FOREST & GREAT PARK
Reference UK0012586
Hectares 1685.92
Hyperlink <http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?eucode=UK0012586>

Name MOLE GAP TO REIGATE ESCARPMENT
Reference UK0012804
Hectares 894.33
Hyperlink <http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?eucode=UK0012804>

Special Areas of Conservation (England)

Name WIMBLEDON COMMON
Reference UK0030301
Hectares 351.38
Hyperlink <http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?eucode=UK0030301>

Name RICHMOND PARK
Reference UK0030246
Hectares 846.43
Hyperlink <http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?eucode=UK0030246>

Name WINDSOR FOREST & GREAT PARK
Reference UK0012586
Hectares 1685.92
Hyperlink <http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?eucode=UK0012586>

Name THURSLEY, ASH, PIRBRIGHT & CHOBHAM
Reference UK0012793
Hectares 5154.33
Hyperlink <http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?eucode=UK0012793>

Name MOLE GAP TO REIGATE ESCARPMENT
Reference UK0012804
Hectares 894.33
Hyperlink <http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?eucode=UK0012804>

Special Protection Areas (England) - points

Name SOUTH WEST LONDON WATERBODIES
Reference UK9012171
Hectares 830.26

Special Protection Areas (England)

Name SOUTH WEST LONDON WATERBODIES

2/20/2020

Reference	UK9012171
Hectares	830.26

Name	THAMES BASIN HEATHS
Reference	UK9012141
Hectares	8309.5

Proposed Ramsar Sites (England) - points
No Features found

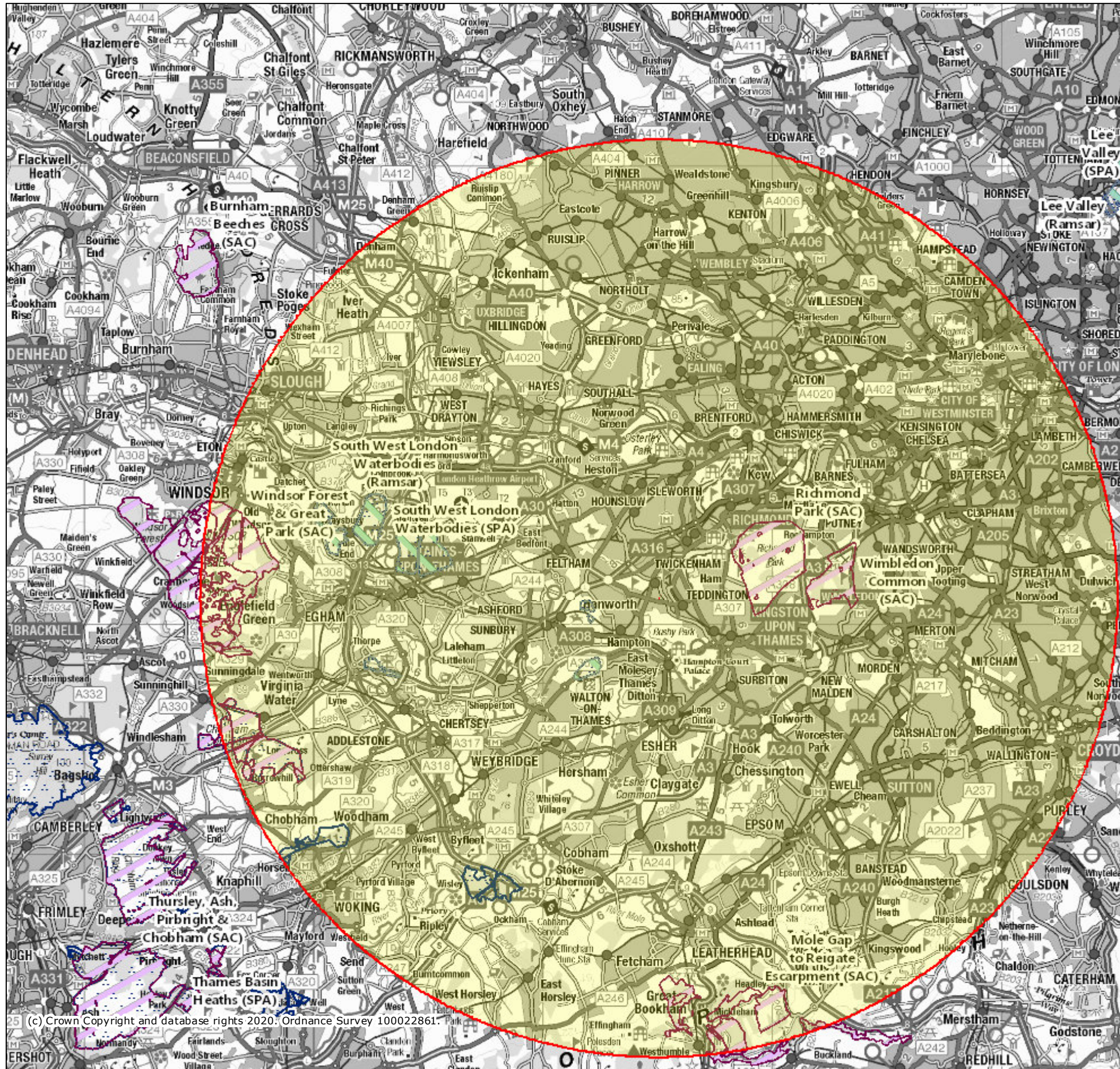
Proposed Ramsar Sites (England)
No Features found

Possible Special Areas of Conservation (England) - points
No Features found

Possible Special Areas of Conservation (England)
No Features found

Potential Special Protection Areas (England) - points
No Features found

Potential Special Protection Areas (England)
No Features found



Legend

- Ramsar Sites (England)
- Proposed Ramsar Sites (England)
- Special Areas of Conservation (England)
- Possible Special Areas of Conservation (England)
- Special Protection Areas (England)
- Potential Special Protection Areas (England)

Projection = OSGB36
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 km

Map produced by MAGIC on 20 February, 2020.
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

Appendix 6 – Target Notes

Target Note 1



NOTES

Target Note 1

The site is amenity grassland dominated by a single species and surrounded by introduced shrubs.

Target Note 2

The site is bordered to the east by large Lime street trees which are well lit by street lamps

Target Note 2



PROJECT

38-42 Hampton Road, Teddington, TW11 0JE

PROJECT NUMBER

4702,EC

TITLE

**Ecological Target Notes
Relating to Extended Phase 1 Habitat
Survey**

DATE

02/03/2020

PAGE NO.

1 of 1

Appendix 7 – Example Plant Species

PLANTS CONSIDERED BENEFICIAL TO BATS



The lists of plants below are considered suitable species for foraging bats. When buying native plants, ensure they are from a reputable source, as many wildflowers are illegally taken from the wild.

Trees

Common Name	Latin Name	Common Name	Latin Name
Apple	<i>Malus domestica</i>	Plum	<i>Prunus domestica</i>
Bird Cherry	<i>Prunus padus</i>	Rowan	<i>Sorbus aucuparia</i>
Crab Apple	<i>Malus baccata</i>	Sugar Maple	<i>Acer saccharum</i>
Medlar	<i>Mespilus germanica</i>	Sycamore	<i>Acer pseudoplatanus</i>
Norway Maple	<i>Acer platanoides</i>	Whitebeam	<i>Sorbus aria</i>
Pear	<i>Pyrus communis</i>	Wild Cherry	<i>Prunus avium</i>

REFERENCES

shrubs

Common Name	Latin Name	Common Name	Latin Name
Field Maple	<i>Acer campestre</i>	Butterfly Bush	<i>Buddleja davidii</i>
Hazel	<i>Corylus avellana</i>	Golden Ball Buddleia	<i>Buddleja globose</i>
Hawthorn	<i>Crataegus monogyna</i>	Hebe	<i>Hebe spp.</i>
Heather	<i>Erica vagans</i>	Privet	<i>Ligustrum ovalifolium</i>
Cherry Laurel	<i>Prunus laurocerasus</i>	Wayfaring	<i>Viburnum lantana</i>

Climbers

Common Name	Latin Name	Common Name	Latin Name
Dog Rose	<i>Rosa canina</i>	Ivy	<i>Hedera helix</i>
Guelder Rose	<i>Viburnum opulus</i>	Jasmine (night scented)	<i>Cestrum nocturnum</i>
Honeysuckle	<i>Lonicera periclymenum</i>		

Herbaceous Plants

Common Name	Latin Name	Common Name	Latin Name
Angelica	<i>Angelica sylvestris</i>	Lemon Balm	<i>Melissa officinalis</i>
Aubretia	<i>Aubretia deltoidea</i>	Marjoram	<i>Origanum majorana</i>
Candytuft	<i>Iberis sempervirens</i>	Knapweed	<i>Centaurea nigra</i>
Corn Cockle	<i>Agrostemma githago</i>	Mallow	<i>Malva sylvestris</i>
Cornflower	<i>Centaurea cyanus</i>	Ox-eye Daisy	<i>Leucanthemum vulgare</i>
Corn Marigold	<i>Glebionis segetum</i>	Primrose	<i>Primula vulgaris</i>
Borage	<i>Borago officinalis</i>	Yarrow	<i>Achillea millefolium</i>
English Marigolds	<i>Calendula officinalis</i>	Rosemary	<i>Rosmarinus officinalis</i>
Lavender	<i>Lavandula spp.</i>	Sweet Cicely	<i>Myrrhis odorata</i>
Musk Mallow	<i>Malva moschata</i>		

TITLE
Plants Considered Beneficial to Bats

DATE
02/03/2020

PAGE NO. 1 of 1

Appendix 8 – Example bird and bat bricks/boxes

EXAMPLE BAT AND BIRD BRICKS AND BOXES

EXAMPLE BAT BRICKS AND BOXES

Integrated Bat Box: Istock Enclosed Bat Box 'B'



Large 215 x 290mm



Large Bespoke
215 x 290 mm



Small Red
215 x 215 mm

The Istock Enclosed Bat Box 'B' is designed for integration into the wall of new buildings or conservation projects and is intended to provide summer roosting space for pipistrelles specifically. It provides a discrete home for bats, with several roosting chambers to provide zones of differing temperatures within the box. The bats are contained within the box itself and the entrance at the bottom allows droppings to fall out, meaning that the box is maintenance free.

Integrated Bat Box: Standard bat Box



Bat boxes can be supplied in brick fronted, half bond and quarter bond brickwork or alternatively with a stainless-steel mesh fitted to the front. The mesh is designed for optimum adhesion in render and stonework applications. A basic version can be fitted directly behind weatherboarding or into studwork.

These bat boxes are best positioned in sunlit clusters, at a height of 3-6 metres and ideally facing a variety of aspects as bats will move around a building as the seasons change.

This product makes an ideal bat house for most of the UK's bat species, including Pipistrelles, who will use it for roosting, hibernating and (in maternity roosts) bringing up their young. The entrance hole and internal design can be tailored to suit different species of bat e.g. Bechstein's and Serotine.

The box is self-cleaning. The bat boxes are supplied with a non-removable front as standard.

SOURCE

<http://www.nhbs.com/title/16055>
1

SOURCE

<http://www.birdbrickhouses.co.uk/brick-nesting-boxes/bat-box/>

TITLE

Example Bat and Bird Bricks and Boxes

DATE

02/03/2020

PAGE NO.

1 of 5

External Bat Box: Schwegler 1FQ bat box



The structure of the 1FQ has been designed with bat behaviour in mind. For example, the outside of the front panel has been roughened to enable the animals to land and hang onto it securely. Access is via a step-like recess which enables even young and inexperienced bats, to safely access the box. The inside of the box has rough pieces of wood incorporated which provide good insulation and are also used by the bats as perches. The internal layout provides three different areas from which bats can hang and which offer different levels of light and temperature. There are also non-slip areas, gaps ranging from 1.5 to 3.5cm in width and various places for individuals to hide.

Installation of the 1FQ is achieved using the four screws and plugs provided. The back panel is initially screwed onto the wall (using four screws) and then the front panel is attached to this. It can easily be attached to most types of external brick, timber or concrete and can also be placed inside a roof space. (If fixing to timber then the gaps between the wall and the box should be sealed with silicone to prevent moisture being trapped here). The box should be positioned a minimum of three metres above the ground and where there is a clear flight path for bats entering and leaving. If desired, the front panel can be painted to match your building using an air-permeable paint.



SOURCE

<http://www.nhbs.com/title/16055>
1

External Bat Box: 1FF Schwegler Bat Box with Built-in Wooden Rear Panel



The Schwegler 1FF bat box is spacious enough for bats to use as a summer roost or nursery site and is open at the bottom, allowing droppings to fall out so it does not need cleaning. The 1FF is, therefore, especially suitable for hanging in inaccessible places such as high in trees, or on steep slopes and house walls.

The 1FF is manufactured from long-lasting Woodcrete, which is a blend of wood, concrete and clay which will not rot, leak, crack or warp, and will last for at least 20 - 25 years, making it suitable for long-term mitigation projects.

The inner dimensions of the 1FF have a reducing width making it ideal for bat species which inhabit crevices such as pipistrelle and noctule bats. For conservation projects and studies, the entire front of the box can be easily swung open for inspection purposes.

The 1FF bat box can be sited in trees or on buildings and is best positioned at a height of between 4 to 6 metres.

SOURCE

<https://www.nhbs.com/1ff-schwegler-bat-box-with-built-in-wooden-rear-panel>

TITLE

Example Bat and Bird Bricks & Boxes

DATE

02/03/2020

PAGE NO.

2 of 5

External Bat Box: 2F Schwegler Bat Box with Double Front Panel



This box has a front panel and a second inner wooden panel fitted to it to create a cavity wall. This provides ideal quarters for bats that inhabit crevices, such as Nathusius' Pipistrelle (*Pipistrellus nathusii*), Daubenton's Bat (*Myotis daubetonii*) and the Common Pipistrelle (*Pipistrellus pipistrellus*).

It has been designed as a summer roosting space for bats and has a simple entrance hole at the front. The Schwegler 2F double front panel is removable and can be converted in to a bird nest box using a replacement 1B front panel if there is no evidence of bat activity after a couple of years. The 2F Double Front Panel is manufactured from long-lasting Woodcrete, which is a blend of wood, concrete and clay which will not rot, leak, crack or warp, and will last for at least 20 - 25 years, making it suitable for long-term mitigation projects. Woodcrete is breathable and maintains a stable temperature inside the box and the 2F is painted black to absorb warmth. It also provides a good rough surface for bats to cling on to and climb.

The 2F Double Front Panel bat box can be sited in trees or on buildings and is best positioned at a height of between 3 to 6 metres.

SOURCE

<https://www.nhbs.com/vincent-pro-bat-box>

External Bat Box: Vincent Pro Bat Box



This attractive bat box has been designed by leading bat researcher, Collin Morris, based on a tried and tested design from the Vincent Wildlife Trust.

The box features three vertical chambers of different sizes, providing ideal roosting space for a variety of species. Beneath the crevice entrances is a ladder which provides a rough surface for bats to land.

Proven with seven UK species: Barbastelle, Leisler's, common pipistrelle, soprano pipistrelle, brown long-eared, Natterer's and whiskered bat.

TITLE

Example Bat and Bird Bricks and Boxes

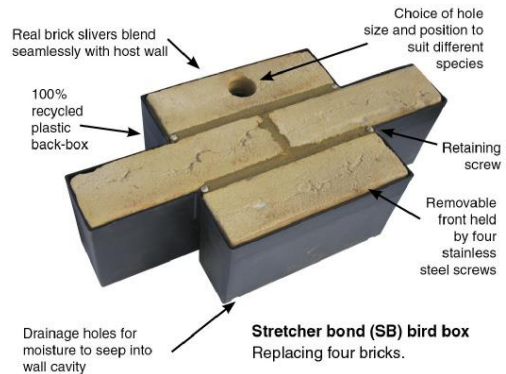
DATE

02/03/2020

Please note that once bats have inhabited a roost (integrated or external box) they may only be disturbed by licensed bat workers.

EXAMPLE BIRD BRICKS & BOXES

Integrated Bird Brick House: The Standard Box



This standard nesting box is suitable for House Sparrows and members of the Tit family. The single entrance hole allows the entire internal area to be available for nesting and roosting. The aperture size will vary according to the target species. For example, a 48 mm entrance hole can be produced to accommodate Starlings. The ideal internal depth is 140 mm, however if cavity width is limited, boxes can be manufactured with a reduced depth (minimum 100 mm).

SOURCE

<http://www.birdbrickhouses.co.uk/brick-nesting-boxes/nesting-boxes/>

Integrated Bird Brick House: Sparrow terrace box



This has the same external dimensions as the standard box but has two entrance holes and two separate compartments – ideal for the sociable nature of House Sparrows. The terrace box is also suitable for Redstarts, Black Redstarts and Wagtails.

SOURCE

<http://www.birdbrickhouses.co.uk/brick-nesting-boxes/nesting-boxes/>

External Bird House: 1SP Schwegler Sparrow Terrace



The Sparrow Terrace has been designed to help redress the balance of falling house sparrow numbers. The current UK population of 6 million pairs is half what it was in 1980 and this is thought to be due to habitat destruction and lack of suitable nesting spaces. Sparrows are social birds and like to nest in company. This terrace provides ideal nesting opportunities for three families and will last many decades. It may also occasionally attract tits, redstarts and spotted flycatchers.

The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of houses in built-up areas, and on industrial and agricultural buildings such as barns, sheds and factories. Due to its weight (15kg), it is not suitable for fences or garden sheds. Ideally place the terrace two metres or more above the ground. Cleaning is advisable but not necessary.

SOURCE

<https://www.nhbs.com/1sp-schwegler-sparrow-terrace>

TITLE

Example Bat and Bird Bricks and Boxes

DATE

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External Bird House: 1B Schwegler Bird Nest Box (General)



These Woodcrete nest boxes last for at least 20-25 years. Woodcrete is a breathable blend of wood, concrete and clay which will not rot, leak, crack or warp, whilst preventing condensation and maintaining more constant temperatures inside than wooden boxes.

Schwegler bird boxes are backed by conservation organisations, government agencies and forestry experts and experiments have shown that the highest density of bird populations (i.e. breeding pairs per hectare) is achieved with Schwegler nest boxes.

They are carefully designed to provide a stable environment and to mimic natural nest and roost sites with internal brood chamber dimensions that are similar to natural woodpecker cavities. Schwegler have a patented method of installation on trees that prevents the tree trunk from growing over the hanger from which the box is suspended.

SOURCE

<https://www.nhbs.com/1b-schwegler-nest-box>

TITLE

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