



WESTON HOMES

BISHOP'S STORTFORD
GOLF CLUB,
HERTFORDSHIRE

Ecological Assessment

April 2017
7201.EcoAs.vf1

COPYRIGHT

The copyright of this document
remains with Ecology Solutions
The contents of this document
therefore must not be copied or
reproduced in whole or in part
for any purpose without the
written consent of Ecology Solutions.

CONTENTS

1	INTRODUCTION	1
2	SURVEY METHODOLOGY	2
3	ECOLOGICAL FEATURES	5
4	WILDLIFE USE OF THE SITE	7
5	ECOLOGICAL EVALUATION	12
6	PLANNING POLICY CONTEXT	18
7	SUMMARY AND CONCLUSIONS	22

PLANS

PLAN ECO1	Site Location and Ecological Designations
PLAN ECO2	Ecological Features
PLAN ECO3	Bat Activity Survey Results
PLAN ECO4	Reptile Survey Results

FIGURES

FIGURE 1	SM2BAT+ Activity 30.08.2016 - 06.09.2016
----------	--

PHOTOGRAPHS

PHOTOGRAPH 1	Rough grassland
PHOTOGRAPH 2	Scrub area
PHOTOGRAPH 3	Thicket of <i>Prunus</i> spp.
PHOTOGRAPH 4	Tall ruderal area
PHOTOGRAPH 5	Hardstanding area in the north of site

PHOTOGRAPH 6	Recolonising ground with scrub on the mounds
PHOTOGRAPH 7	Pool in recolonising area
PHOTOGRAPH 8	Pool within the scrub area

APPENDICES

APPENDIX 1	Information downloaded from Multi-Agency Geographic Information for the Countryside (MAGIC)
------------	---

1. INTRODUCTION

1.1. Background & Proposals

- 1.1.1. Ecology Solutions was commissioned by Weston Homes August 2016 to complete an ecological assessment of land at Bishop's Stortford Golf Club, Hertfordshire (see Plan ECO1).
- 1.1.2. The site is proposed for a new residential development.

1.2. Site Characteristics

- 1.2.1. The site is located on the eastern edge of Bishop's Stortford and less than a kilometre west of the M11, and is located on the western side of Bishop's Stortford Golf Club. To the immediate east and south of the site is the golf course. To the north and west of the site is housing and gardens.
- 1.2.2. The site consists of a range of habitats including scrub, tall ruderal areas, rough grassland, recolonising ground, trees and mature scrub as well as two small pools.

1.3. Ecological Assessment

- 1.3.1. This document assesses the ecological interest of the site as a whole. The importance of the habitats within the site is evaluated with due consideration given to the current guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM)¹.
- 1.3.2. Where necessary mitigation measures are recommended so as to safeguard any significant existing ecological interest within the site and, where appropriate, potential enhancement measures are put forward and reference made to both National and Local Biodiversity Action Plans, now being referred to as priority habitats / species.

¹CIEEM (2016). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal*. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.

2. SURVEY METHODOLOGY

2.1. The methodology utilised for the survey work can be split into three areas, desk study, habitat survey and faunal survey. These are discussed in more detail below.

2.2. Desk Study

2.2.1. In order to compile background information on the site and the surrounding area, Ecology Solutions contacted Herts Environmental Record Centre and Essex Wildlife Trust Biological Record Centre.

2.2.2. Further information on designated sites from a wider search area was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC)². This information is reproduced at Appendix 1, and where appropriate illustrated on Plan ECO1.

2.3. Habitat Survey

2.3.1. The site was surveyed on 16 August 2016 based around extended Phase 1 survey methodology³, as recommended by Natural England, whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail.

2.3.2. Using the above method, the site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified.

2.3.3. All the species that occur in each habitat would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent at different seasons. The survey work was undertaken within the optimal period for Phase 1 and botanical surveys, and given the habitats present and the species evident at the time of survey it is considered an accurate assessment of the habitat present.

2.4. Faunal Survey

2.4.1. Obvious faunal activity, such as birds or mammals observed visually or by call during the course of the surveys was recorded. Specific attention was paid to any potential use of the site by protected species, priority species (formerly referred to as BAP species), or other notable species.

2.4.2. In addition to general observations of faunal activity, specific surveys were completed for Badger *Meles meles*, bats and reptiles.

Badgers

2.4.3. The site was surveyed for Badgers in August 2016.

² <http://www.magic.gov.uk>

³ Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit*. England Field Unit, Nature Conservancy Council, reprinted JNCC, Peterborough.

- 2.4.4. The surveys comprised two main elements: firstly, searching thoroughly for evidence of Badger setts. For any setts encountered each sett entrance was noted and plotted, even if the entrance appeared disused. The following information was recorded:
- i) The number and location of well used or very active entrances; these are clear of any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently.
 - ii) The number and location of inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance or have plants growing in or around the edge of the entrance.
 - iii) The number of disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be together with the remains of the spoil heap.
- 2.4.5. Secondly, evidence of Badger activity such as well-worn paths, run-throughs, snagged hair, footprints, latrines and foraging signs was recorded so as to build up a picture of the use of the site by Badgers.

Bats

- 2.4.6. All trees within the site were assessed for their potential to support roosting bats. Features typically favoured by bats or evidence of past use by bats were searched for including:
- Obvious holes, e.g. rot holes and old Woodpecker holes;
 - Dark staining on the tree, below the hole;
 - Tiny scratch marks around a hole from bats' claws;
 - Cavities, splits and or loose bark from broken or fallen branches, lightning strikes etc.; and
 - Very dense covering of mature Ivy over trunk.
- 2.4.7. To ascertain the current bat activity within the site and wider study area Ecology Solutions completed bat activity surveys in August 2016 during suitable weather conditions.
- 2.4.8. Each transect began approximately one and a half hours after dusk and continued for approximately three hours after dusk to maximise the encounter rate of bats i.e. both early and late emerging species. The echolocation calls of bats were recorded using EchoMeter EM3+ bat detectors which together with direct observation were used to identify the species present and record the number of bat passes. If bats were detected, walking stopped and observations were made on the bats behaviour i.e. foraging or commuting, species identification and numbers present. The survey was conducted when the night-time temperatures were above 10°C. The insectivorous diet of bats means there is little or no food available when

temperature falls below this level. The weather conditions for the surveys were ideal to sub-optimum.

- 2.4.9. In addition, one SongMeter SM2+ recorder was strategically placed within the site to record any important foraging or commuting routes throughout the evening. The SM2+ was placed on site on 30 August and was left on site for seven nights. Following the completion of the surveys all of the recorded data was analysed using the Analook computer program.
- 2.4.10. Field surveys were undertaken with regard to best practice guidelines issued by Natural England (2004⁴), the Joint Nature Conservation Committee (2004⁵) and the Bat Conservation Trust (2016⁶).

Reptiles

- 2.4.11. Specific surveys for reptiles were undertaken at the site during September 2016. The methodology utilised principally derived from the guidance given in Froglife Advice Sheet 10⁷, the *Herpetofauna Workers Manual*⁸, the Herpetofauna Groups of Britain and Ireland's (HGBI) advisory note⁹ and Natural England's Standing Advice for Reptiles¹⁰.
- 2.4.12. Areas of suitable habitat were surveyed for the presence of reptiles using artificial refugia ("tins"). A total of 37 50cm x 50cm roofing felt tins were placed within areas of suitable habitat including the recolonising ground in the north of the site as well as the rough grassland areas as well as areas of tall ruderal species. The tins provide shelter and heat up quicker than the surroundings in the morning and can remain warmer than the surroundings in the late afternoon. Being ectothermic (cold blooded), reptiles use them to bask under and raise their body temperature which allows them to forage earlier and later in the day.
- 2.4.13. The tins were allowed a period to 'bed in' before surveys commenced. To determine presence / absence, the tins were checked for reptile activity over seven visits at appropriate times of the day (avoiding the middle of the day when the ambient air temperature is at its highest) in accordance with Natural England guidance. Optimum weather conditions for reptile surveying are temperatures between 10°C and 17°C, intermittent or hazy sunshine and little or no wind.

⁴ Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough

⁵ Mitchell-Jones, A.J. & McLeish, A.P. (Eds.) (2004). *Bat Workers' Manual*. 3rd edition. Joint Nature Conservation Committee, Peterborough.

⁶ Collins, J. (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 3rd Edition. The Bat Conservation Trust, London.

⁷ Froglife (1999) *Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

⁸ Gent, T and Gibson, S. (2003). *Herpetofauna Workers' Manual*. JNCC, Peterborough.

⁹ Herpetofauna Groups of Britain and Ireland (HGBI). (1998). *Evaluating Local Mitigation / Translocation Programmes: Maintaining Best Practice and Lawful Standards*.

¹⁰ Natural England (2011). Standing Advice for Reptiles.

http://www.naturalengland.org.uk/Images/Reptile%20feb11_tcm6-21712.pdf

3. ECOLOGICAL FEATURES

3.1. A habitat survey was undertaken at the site on 16 August 2016 by Ecology Solutions. The vegetation present enabled the habitat types to be satisfactorily identified and an accurate assessment of the ecological interest of the habitats to be undertaken.

3.2. The following main habitat / vegetation types were identified within the site:

- Rough grassland;
- Scrub;
- Trees and mature scrub;
- Tall ruderal;
- Hardstanding;
- Recolonising ground; and
- Pool;

3.3. The location of these habitats is shown on Plan ECO2, and described individually below.

3.4. Rough Grassland

3.4.1. The rough grassland covers a small area of the site and does not appear to have any routine management (see Photograph 1). Species present include Rough Meadow-grass *Poa trivialis*, False Oat-grass *Arrhenatherum elatius*, Common Fleabane *Pulicaria dysenterica*, Field Bindweed *Convolvulus arvensis*, Perforate St Johns-wort *Hypericum perforatum*, Wild Marjoram *Organum vulgare* and Wild Carrot *Daucus carota*.

3.5. Scrub

3.5.1. The majority of the site is scrub. The scrub comprises Bramble *Rubus fruticosus* with some interspersed Common Nettles *Urtica dioica*, Hedge Bindweed *Calystegia sepium*, Goldenrod *Solidago canadensis*, White Bryony *Bryonia alba*, immature Horse Chestnut *Aesculus hippocastanum*, Dogwood *Cornus sanguinea* and Blackthorn *Prunus spinosa*. The ground flora is very sparse in the areas of very dense scrub (see Photograph 2).

3.6. Trees and Mature Scrub

3.6.1. Scattered trees and mature scrub occur throughout the site. There is a thicket of *Prunus* spp in the centre of the site; other species present include White Poplar *Populus alba*, Silver Birch *Betula pendula*, Horse Chestnut, Hornbeam *Carpinus betulus* and Cherry *Prunus avium* (see Photograph 3).

3.7. Tall Ruderal

3.7.1. Tall ruderal habitat borders the rough grassland and scrub areas. Species present in this habitat include Hogweed *Heracleum sphondylium*, Rosebay Willowherb *Chamerion angustifolium*, Figwort *Scrophularia nodosa*, Teasel *Dipsacus fullonum*, Honeysuckle *Lonicera periclymenum* (encroaching into the site from the neighbouring garden), Common Nettle, Bramble and Black Horehound *Ballota nigra* (see Photograph 4).

3.8. **Hardstanding**

- 3.8.1. Hardstanding ground covers a very small proportion of the site. There is a small amount of fly tipping in the hardstanding area (see Photograph 5).

3.9. **Recolonising Ground**

- 3.9.1. In the north of the site is an area that appears to have been stripped of vegetation and debris creating mounds which now support scrub and ruderal species. Pioneer species are now starting to recolonise the flatter areas (see Photograph 6). Species recorded in this area include Ribwort Plantain *Plantago lanceolata*, Perforate St John's-wort, Hoary Ragwort *Senecio erucifolius* and Common Ragwort *Senecio jacobaea*.

3.10. **Pool**

- 3.10.1. There are two pools within the site, one of which is located within the recolonising ground and is void of any aquatic vegetation. The pool does not appear to be permanent. The second pool is located within the scrub area in the northeast of the site: this pool supports a small amount of Greater Reedmace *Typha latifolia* (see Photographs 7 and 8).

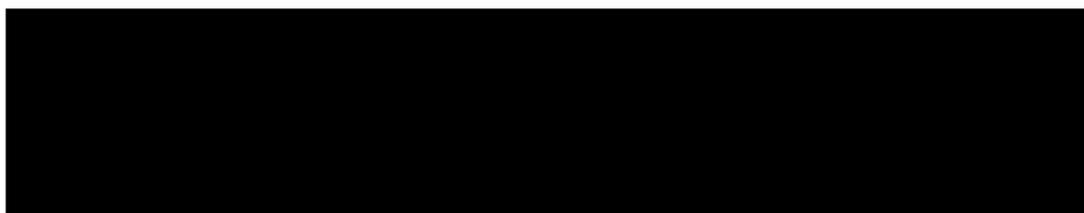
4. WILDLIFE USE OF THE SITE

4.1. General observations were made during the surveys of any faunal use of the site and wider study area with specific attention paid to the potential presence of protected species.

4.2. Badgers

4.2.1. No Badger setts were recorded within or immediately adjacent to the site. A number of mammal paths, which could possibly be attributed to Badger, were recorded within the site within the rough grassland and scrub habitat, but these may equally be attributable to Deer species. Owing to some areas of scrub being impenetrable it would be unreasonable to rule out the presence of Badger sett.

4.2.2. The site offers reasonable foraging and dispersal opportunities for Badgers, though no specific evidence of this was recorded.



4.3. Bats

4.3.1. There are no buildings or other structures within the site that could offer opportunities for roosting bats. None of the trees present have features with potential to support roosting bats. The scrub and rough grassland areas in the site could offer some foraging opportunities.

Activity Survey 30.08.16 (EM3+)

4.3.2. The results of the activity survey completed on the evening of 30 August are summarised below and illustrated on Plan ECO3.

4.3.3. The survey was undertaken in favourable weather conditions. There was no precipitation and there was a gentle breeze during the survey and no cloud cover.

4.3.4. The survey recorded a limited level of bat activity. Bats were recorded passing over the site, and also foraging around the Oak tree just off-site. Common Pipistrelle *Pipistrellus pipistrellus*, Noctule *Nyctalus noctula*, Brown Long-eared *Plecotus auritus* and a single Soprano Pipistrelle *Pipistrellus pygmaeus* were all recorded passing over the site. Common Pipistrelles were also recorded foraging along the eastern boundary. The first Common Pipistrelle registration was 47 minutes after sunset. The first registration of Noctule activity 59 minutes after sunset. A single Brown Long-Eared registration was recorded 1 hour and 50 minutes after sunset and Soprano Pipistrelle activity was recorded 1 hour and 26 minutes after sunset.

4.3.5. The results are summarised in Table 4.1 below.

Species	Number of Registrations	First Registration after sunset
Common Pipistrelle	84	47 minutes
Noctule	3	59 minutes
Soprano Pipistrelle	1	1 hour 26 minutes
Brown Long-eared bat	1	1 hour 50 minutes

Table 4.1 Activity survey results 30 August.

Static Detector Surveys (SM2BAT+)

- 4.3.6. For each night of survey, the total number of bat registrations per species was calculated. This gives an impression of the overall level of bat activity on a given survey night, as well as the proportion of activity attributed to a given species or group of species (*Myotis* species are not generally separated).
- 4.3.7. Secondly, for each night of survey the bat registrations were calculated on a minute-by-minute basis for each species, allowing data to be presented for an entire survey night.
- 4.3.8. This method allows conclusions to be drawn as to whether particular species or groups are recorded early and late in the survey night which might suggest that they are commuting through the site to foraging grounds elsewhere, or whether they are recorded throughout the entire night which might suggest that the site itself is a foraging ground. The distinction is important to inform the evaluation of use of the site by bats and any mitigation measures that might be recommended.
- 4.3.9. The results of the static detector survey undertaken for seven nights between 31 August and 5 September are summarised below. The position of the single static detector deployed is shown on ECO3.
- 4.3.10. Overall a moderate level of activity was recorded over the seven nights. The majority of registrations were attributed to Common Pipistrelle, with activity recorded every night and 134 registrations recorded in total over the seven night period. Activity was highest in the early evening and early morning. The earliest registration was recorded 14 minutes after sunset; this was recorded on the fourth night and was attributed to Common Pipistrelle. A registration by a Pipistrelle species was also recorded at this time of the fifth night. The latest registration was recorded on the fourth night 21 minutes before sunrise. The timings of the registrations suggest there may be a roost nearby but is unlikely to be on site. The results suggests that bats are commuting through the site to forage elsewhere.

- 4.3.11. The results from the static detector are summarised in Figure 1 and Table 4.2 below.

Night	Common Pipistrelle	Soprano Pipistrelle	Pipistrelle sp.	Myotis sp.	Total Registrations
30.08.16	30	9	0	0	39
31.08.16	20	6	0	0	26
01.09.16	16	2	0	1	19
02.09.16	42	6	5	0	53
03.09.16	4	2	1	0	7
04.09.16	8	1	1	0	11
05.09.16	14	1	2	0	17
Total	134	27	10	1	172

Table 4.2 Static bat detector results 30.08.16 – 05.09.16.

Background Records

- 4.3.12. A number of bat records were returned from the data search. The most recent record returned for Common Pipistrelle is dated from 2015 and was recorded approximately 1.6km southeast of the site. The closest record was recorded in 2004 in a 1km grid square approximately 0.4km southwest of the site at its closest location.
- 4.3.13. A total of 30 records were returned for Soprano Pipistrelle the closest and most recent where recorded approximately 0.5km southeast of the site in 2015.
- 4.3.14. A total of ten records were returned for Pipistrelle species *Pipistrellus sp.* The closest records dates from 2001 as was recorded within the same 1km grid square as the site. The most recent record was recorded at a location approximately 1.4km north of the site in 2012.
- 4.3.15. The closest and most recent record for Nathusius's Pipistrelle *Pipistrellus nathusii* was recorded within a 1km grid square approximately 0.4km south of the site at its closest point this record dates from 2003.
- 4.3.16. A total of three records were returned for Brown Long-eared Bat. The closest was recorded in 2003 in a 1km grid square approximately 0.4km west of the site at its closest point. The most recent records date from 2008, from a location approximately 1.8km south east of the site.
- 4.3.17. The closest record for Daubenton's Bat *Myotis daubentonii* was returned from 2003 within a 1km grid square approximately 0.4km south west of the site at its closest point. The most recent record dates from 2007 and was recorded approximately 2.5km northeast of the site.
- 4.3.18. A total of three records for Natterer's Bat *Myotis nattereri* was returned all from the same location approximately 1.7km southeast of the site in 2007.
- 4.3.19. A number of records were also returned for Noctule Bat all were recorded in the same location approximately 3.1km northeast of the site in 2008.
- 4.3.20. In addition a total of five records where returned for unknown bat species. The closest was recorded in 2002 within the same 1km grid square as the

site. The closest record dates from 2010 and was recorded approximately 3.3km northeast of the site.

4.4. Other Mammals

- 4.4.1. Other than the potential presence of Deer species as noted above, no other evidence of mammal species was recorded. One Muntjac *Muntiacus reevesi* was seen during the bat activity survey. An assemblage of common mammal species is likely to be present.
- 4.4.2. A number of Fallow Deer *Dama dama* records were returned from the data search. The closest record was recorded in 2003 approximately 1km east of the site. The most recent record returned was from 2010 at a location approximately 1.8km southeast of the site.
- 4.4.3. In addition to deer records one record for Brown Hare *Lepus europaeus* was returned. The record dates from 2010 and was recorded approximately 1.8km southwest of the site.
- 4.4.4. A single record for a Hedgehog *Erinaceus europaeus* was returned. The record dates from 2003 and was recorded approximately 0.2km south of the site.

4.5. Birds

- 4.5.1. The hedgerows and scrub provide good nesting and foraging opportunities for a variety of bird species. There is, however, no evidence to suggest that any notable species would be reliant on the site.
- 4.5.2. A Green Woodpecker *Picus viridis*, Dunnock *Prunella modularis*, and Greenfinch *Chloris chloris* were heard calling in the site during survey work.
- 4.5.3. Records returned by the desk study for bird species protected under the Wildlife & Countryside Act 1981 Schedule 1 include Kingfisher *Alcedo atthis*, Fieldfare *Turdus pilaris*, Bearded Tit *Panurus biarmicus*, Redwing *Turdus iliacus* and Red Kite *Milvus milvus*. All these species were recorded in 2014 within the same 1km grid square approximately 0.4km west of the site at its closest point. Osprey *Pandion haliaetus* was recorded in the same 1km in 2012. Merlin *Falco columbarius* was also recorded in the same 1km grid square in 2011. A single record for Barn Owl *Tyto alba* was also returned. The record dates from 2013 and was recorded within a 1km grid square approximately 1.4km east of the site at its closest point. Records for Green Sandpiper *Tringa ochropus* were also returned. The records are from a location within a 1km grid square approximately 2.6km north of the site at its nearest point, the records date from 2014. A single record for Peregrine *Falco peregrinus* was returned, the location of this record is from a 1 km grid square approximately 1.22km south of the site at its closest point the record dates from 2012.

4.6. Reptiles

- 4.6.1. Ecology Solutions conducted presence / absence reptile surveys at the site following standard guidelines and during suitable weather conditions

throughout September 2016. A summary of weather conditions and results is shown in Table 4.3 below.

Survey Number	Date	Time	Cloud Cover (%)	Temp. (°C)	Number of Slow Worms Recorded
1	08.09.16	09:30	20	18	0
2	12.09.16	15:00	70	24	0
3	16.09.16	13:30	100	14	0
4	09.09.16	13:50	100	19	1
5	21.09.16	13:20	90	21	0
6	23.09.16	16:20	15	21	0
7	27.09.16	13:00	100	17	0

Table 4.3 Reptile Survey Results 2016 and weather conditions.

4.6.2. A single adult Slow Worm *Anguis fragilis* was recorded. This individual was recorded in the northern area of rough grassland and is shown on Plan ECO4. This single record of an adult Slow Worm would be indicative of a wider population, albeit a small one within the site.

4.6.3. The most recent records returned for reptiles were for two Common Lizards *Zootoca vivipara*. Recorded in 2014 located within the wider golf course area, approximately 0.3km southeast of the site. The most recent records of a Grass Snake *Natrix natrix* and Slow Worm were recorded in 2003 approximately 0.3km southwest of the site.

4.7. Amphibians

4.7.1. There are two water bodies located within the site in the form of two small pools. It is unlikely that the pools support Great Crested Newts *Triturus cristatus* due to the lack of vegetation within the pool and is therefore not optimum habitat for this group.

4.7.2. A total of six records were returned for Great Crested Newt. The closest record was recorded in 2001 in a location approximately 1.7km east of the site. The most recent records date from 2004 are a located approximately 2.7km north of the site.

4.8. Invertebrates

4.8.1. The habitats within the site are likely to support a range of common invertebrate species.

4.8.2. A number of records for invertebrate species were returned from the data search. The most recent records returned date from 2013 and include records for Small Emerald *Hemistola chrysoprasaria*, Mottled Rustic *Caradrina Morpheus*, Grey Dagger *Acrionicta psi*, Dot Moth *Melanchna persicariae*, Large Nutmeg *Apamea anceps*, White Ermine *Spilosoma lubricipeda* and Blood-vein *Timandra comae*. All these records are from a location approximately 0.9km southwest of the site. The closest record is for two records of White-letter Hairstreak *Satyrrium w-album* from a location approximately 0.3km south of the site and dates from 2006.

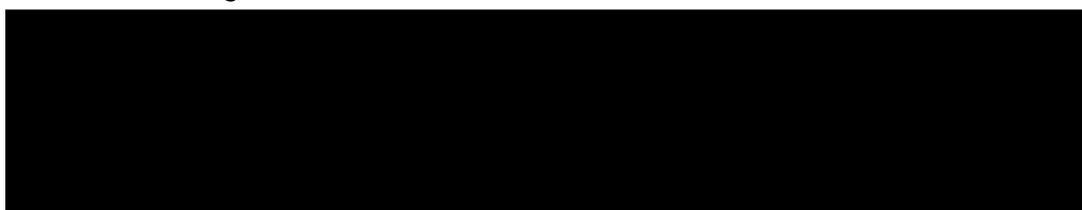
5. ECOLOGICAL EVALUATION

5.1. The Principles of Ecological Evaluation

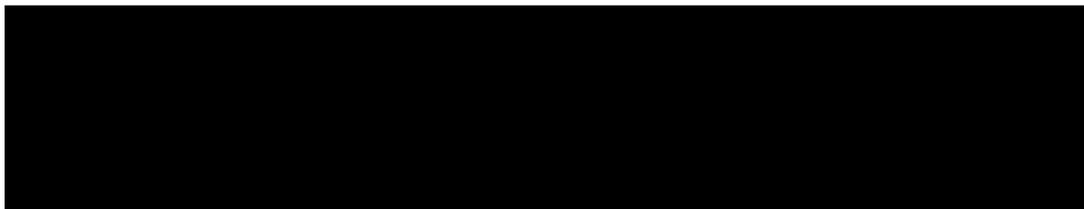
- 5.1.1. The latest guidelines for ecological evaluation produced by CIEEM propose an approach that involves professional judgement, but makes use of available guidance and information, such as the distribution and status of the species or features within the locality of the project.
- 5.1.2. The methods and standards for site evaluation within the British Isles have remained those defined by Ratcliffe¹¹. These are broadly used across the United Kingdom to rank sites so priorities for nature conservation can be attained. For example, current Sites of Special Scientific Interest (SSSI) designation maintains a system of data analysis that is roughly tested against Ratcliffe's criteria.
- 5.1.3. In general terms, these criteria are size, diversity, naturalness, rarity and fragility, while additional secondary criteria of typicalness, potential value, intrinsic appeal, recorded history and the position within the ecological / geographical units are also incorporated into the ranking procedure.
- 5.1.4. Any assessment should not judge sites in isolation from others, since several habitats may combine to make it worthy of importance to nature conservation.
- 5.1.5. Further, relying on the national criteria would undoubtedly distort the local variation in assessment and therefore additional factors need to be taken into account, e.g. a woodland type with a comparatively poor species diversity, common in the south of England, may be of importance at its northern limits, say in the border country.
- 5.1.6. In addition, habitats of local importance are often highlighted within a local Biodiversity Action Plan (BAP). The Hertfordshire BAP highlights a number of habitats and species. Where these occur within the application site they are highlighted below.
- 5.1.7. Levels of importance can be determined within a defined geographical context from the immediate site or locality through to the International level.
- 5.1.8. The legislative and planning policy context are also important considerations and have been given due regard throughout this assessment.

5.2. Habitat Evaluation

Designated Sites



¹¹ Ratcliffe, D A (1977). *A Nature Conservation Review: the Selection of Study areas of Biological National Importance to Nature Conservation in Britain*. Two Volumes. Cambridge University Press, Cambridge.



5.2.2. **Non-statutory Designations.** There are no non-statutory designated sites of nature conservation interest within the site. The nearest non-statutory site is Woodland by Raynham Road Local Wildlife Site (LWS). This LWS is a small woodland approximately 0.3km northwest of the site. Owing to the nature of the proposed development it is unlikely to have any adverse effects on the LWS.

5.2.3. A large number of further non-statutory sites are located in the wider area as shown on Plan ECO1, but no significant adverse effects are anticipated as a result of the development of the site.

Habitats

5.2.4. The scrub and rough grassland present on the site are not considered to be of significant nature conservation importance. Its loss to the development of the site is of no significance.

5.2.5. The trees and border vegetation are of some ecological interest. They should be retained wherever possible. Nevertheless any loss can be compensated through the provision of new landscape planting.

5.2.6. Any landscape planting scheme should be based around a diverse range of native species and / or species of known wildlife value.

5.3. Faunal Evaluation

Badgers

5.3.1. **Legislation.** The Protection of Badgers Act 1992 consolidates the previous Badgers Acts of 1973 and 1991. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status.

5.3.2. As well as protecting the animal itself, the 1992 Act also makes the intentional or reckless destruction, damage or obstruction of a Badger sett an offence. A sett is defined as "any structure or place, which displays signs indicating current use, by a Badger". 'Current use is defined by Natural England as any use within the preceding 12 months.

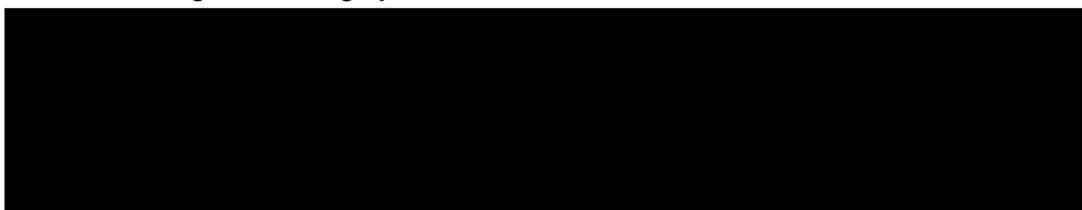
5.3.3. In addition, the intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence by constituting 'cruel ill treatment' of a Badger.

5.3.4. Local Authorities are therefore obliged to consult Natural England over any application that is likely to adversely affect Badgers.

5.3.5. Any work that disturbs Badgers is illegal without a licence granted by Natural England. Unlike the general conservation legislation, the Badgers Act 1992

makes specific provision for the granting of licences for development purposes, including for the destruction of setts.

- 5.3.6. Guidance produced by Natural England in 2002 developed guidelines on the types of activity that it considers should be licensed within certain distances of sett entrances. For example using heavy machinery within 30 metres of any entrance to an active sett, and lighter machinery within 20 metres, or light work such as hand digging within 10 metres, all may require a license.
- 5.3.7. 'Interim guidance' issued by Natural England in September 2007 specifically states *"it is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no badger is disturbed and the sett is not damaged or obstructed."*
- 5.3.8. The guidance goes on to state, *"Where interference with a sett showing signs of use cannot be avoided during the development, a licence should be sought from Natural England."*
- 5.3.9. This guidance no longer makes reference to any 30m / 20m / 10m radius as a threshold for whether a licence would be required. Nonetheless, it is stated that tunnels may extend for 20 metre so care needs to be taken when implementing excavating operations within the vicinity of a sett and to take appropriate precautions with vibrations and noise, etc. Fires / chemicals within 20 metres of a sett should specifically be avoided.
- 5.3.10. This interim guidance allows greater professional judgement as to whether an offence is likely to be committed by a particular development activity and therefore whether a licence is required or not. For example, if a sett clearly orientates southwards into an embankment it may be somewhat redundant to have a 30 metre-exclusion zone to the north.
- 5.3.11. It should be noted that a licence cannot be issued until the site is in receipt of a full and valid planning permission and that generally licences are not granted between December and June inclusive to avoid disruption to the Badger breeding cycle.



- 5.3.13. **Mitigation.** It is recommended that prior to ground works commencing the site is checked to ensure no setts have been excavated in the intervening period.
- 5.3.14. During the construction process all dug ground should be levelled and compacted wherever possible. This will prevent Badgers from attempting to excavate setts prior to completion of the demolition works. Planks should be left in any uncovered trenches to allow any Badger that may stray onto the site an escape route. Materials should be stored in the storage container in order to avoid the chance of Badgers coming onto site and potentially injuring themselves.

Bats

- 5.3.15. **Legislation.** All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (“the Habitats Regulations”). These include provisions making it an offence:
- Deliberately to kill, injure or take (capture) bats;
 - Deliberately to disturb bats in such a way as to significantly affect:-
 - (i) be likely to impair their ability to survive, to breed or rear or nurture their young; or to hibernate or migrate; or
 - (ii) to affect significantly the local distribution or abundance of the species to which they belong;
 - To damage or destroy any breeding or resting place used by bats;
 - Intentionally or recklessly to obstruct access to any place used by bats for shelter or protection (even if bats are not in residence).
- 5.3.16. The words deliberately and intentionally include actions where a court can infer that the defendant knew that the action taken would almost inevitably result in an offence, even if that was not the primary purpose of the act.
- 5.3.17. The offence of damaging (making it worse for the bat) or destroying a breeding site or resting place is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.
- 5.3.18. In accordance with the Habitats Regulations the licensing authority (Natural England) must apply the three derogation tests as part of the process of considering a licence application. These tests are that:
1. the activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
 2. there must be no satisfactory alternative; and
 3. the favourable conservation status of the species concerned must be maintained.
- 5.3.19. Licences can usually only be granted if the development is in receipt of full planning permission.
- 5.3.20. **Site Usage.** There are no buildings or trees within the site that could be used for roosting. During the activity survey bat activity was limited. The highest number of registrations was from Common Pipistrelle. A single call by a Brown Long-eared Bat and Soprano Pipistrelle were also noted, as well as Noctule calls from bats flying overhead during the activity survey. The highest area of activity was concentrated around an Oak tree to the east of the site. Results from the static detector show a higher number of registrations in the early evening and early morning, with infrequent registrations during the night.
- 5.3.21. The results suggest that bats are commuting through the site to forage elsewhere. The timings of the registrations suggest there may be a roost nearby but is unlikely to be on site. The Oak tree just off-site is a focus of activity, and generally the boundary features of the site are good.

- 5.3.22. **Mitigation.** It is recommended that the existing vegetation on the boundaries be retained wherever possible, as well as ensuring that the lighting scheme for the proposed development has due regard to the potential presence of foraging and commuting bats. As an enhancement, bat boxes such as Schwegler 1FF could be provided on retained trees on the site.

Birds

- 5.3.23. **Legislation.** Section 1 of the Wildlife and Countryside Act 1981 (as amended) is concerned with the protection of wild birds, whilst Schedule 1 lists species that are protected by special penalties. All species of birds receive general protection whilst nesting.
- 5.3.24. **Site Usage.** A small number of bird species were recorded during the course of the habitat surveys completed by Ecology Solutions, but the site is not considered to be of any specific ornithological interest. The scrub areas offer the most potential for nesting birds as well as foraging opportunities.
- 5.3.25. **Mitigation.** As a precaution to avoid a possible offence, it is recommended that removal of suitable nesting habitats be undertaken outside the breeding season (March to July inclusive) or checked for nesting birds by a trained ecologist immediately prior to removal.
- 5.3.26. New landscape planting should seek to include a number of fruit bearing species to offer a foraging resource. To enhance nesting opportunities bird boxes such as Schwegler Box 1B with a 32mm entrance hole could be installed on retained trees.

Reptiles

- 5.3.27. **Legislation.** All six British reptile species receive a degree of legislative protection that varies depending on their conservation importance.
- 5.3.28. Rare, endangered or declining species receive 'full protection' under the Wildlife and Countryside Act 1981 (as amended) as well as protection under the Conservation of Habitats and Species Regulations 2010 (as amended). Species that are fully protected are Smooth Snake *Coronella austriaca* and Sand Lizard *Lacerta agilis*. These receive the following protection from:
- Killing, injuring, taking;
 - Possession or control (of live or dead animals, their parts or derivatives);
 - Damage to, destruction of, obstruction of access to any structure or place used for shelter or protection;
 - Disturbance of any animal occupying such a structure or place; and
 - Selling, offering for sale, possession or transport for purposes of sale (live or dead animal, part or derivative).
- 5.3.29. Owing to their abundance in Britain, Common Lizard, Slow Worm, Grass Snake and Adder *Vipera berus* are only 'partially protected' under the

Wildlife and Countryside Act 1981 (as amended) and as such only receive protection from:

- Deliberate killing and injuring;
- Being sold or other forms of trading.

- 5.3.30. Therefore, if reptiles are present within a site, a scheme of translocation can be implemented to avoid the offence of killing / injury.
- 5.3.31. **Site Usage.** The site supports suitable opportunities for this group particularly in the recolonising ground and surrounding rough grassland and scrub, where there is an absence of any formal management regime.
- 5.3.32. Reptile presence / absence surveys carried out in September 2016 confirmed the presence of Slow Worms. Only one individual adult was recorded however this would be indicative of a wider population (albeit a small one) within the site.
- 5.3.33. Recent records returned from the desk study also indicate the presence of both Slow Worm, Common Lizard and Grass Snake in close proximity to the site.
- 5.3.34. **Mitigation and Enhancements.** Prior to the commencement of any site clearance or construction activity a reptile translocation exercise will be implemented in order to remove Slow Worms from the site. This may involve a degree of habitat manipulation to encourage reptiles to move away from particular areas.
- 5.3.35. This exercise will follow standard methodology, namely the deployment of a high density of artificial refugia to attract reptiles in order that they may be captured and removed. This exercise would be effective from April to October depending on weather. Daily checks of the site would be required for a minimum of thirty days, after this the site would be subject to a destructive search with the habitat removed and made unsuitable for reptiles. Owing to the nature of the proposed development the reptile population cannot be maintained on site. A suitable off-site receptor site will therefore be found.
- 5.3.36. A number of possible receptor sites have been identified in the wider golf club site, which are currently subject to survey to assess their suitability and establish the nature of any existing reptile populations. The chosen receptor site would be subject to some enhancement, possibly by enlarging its area by expanding the area of rough, or by providing a hibernaculum. There is ample time in the development programme to facilitate such work.

6. PLANNING POLICY CONTEXT

- 6.1. The planning policy framework that relates to nature conservation at the site is issued at two main administrative levels: nationally through the National Planning Policy Framework (NPPF); and locally through the planning policies of East Hertfordshire District Council.
- 6.2. Any proposed development will be judged in relation to the policies contained within these documents.

6.3. National Policy

National Planning Policy Framework

- 6.3.1. Guidance on national policy for biodiversity and geological conservation is provided by the NPPF, published in March 2012. It is noted that the NPPF continues to refer to further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system provided by Circular 06/05 (DEFRA / ODPM, 2005) accompanying the now-defunct Planning Policy Statement 9 (PPS9).
- 6.3.2. The key element of the NPPF is that there should be “*a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking*” (paragraph 14). It is important to note that this presumption “*does not apply where development requiring Appropriate Assessment under the Birds or Habitats Directives is being considered, planned or determined*” (paragraph 119).
- 6.3.3. A number of policies in the NPPF are comparable to those in PPS9, including reference to minimisation of impacts to biodiversity and provision of net gains to biodiversity where possible (paragraph 109) and ensuring that Local Authorities place appropriate weight to statutory and non-statutory nature conservation designations, protected species and biodiversity.
- 6.3.4. The NPPF also considers the strategic approach which Local Authorities should adopt with regard to the protection, enhancement and management of green infrastructure, priority habitats and ecological networks, and the recovery of priority species.
- 6.3.5. Paragraph 118 of the NPPF comprises a number of principles which Local Authorities should apply, including encouraging opportunities to incorporate biodiversity in and around developments; provision for refusal of planning applications if significant harm cannot be avoided, mitigated or compensated for; applying the protection given to European sites to potential SPAs, possible SACs, listed or proposed Ramsar sites and sites identified (or required) as compensatory measures for adverse effects on European sites; and the provision for the refusal for developments resulting in the loss or deterioration of ‘irreplaceable’ habitats unless the need for, and benefits of, the development in that location clearly outweigh the loss.
- 6.3.6. National policy therefore implicitly recognises the importance of biodiversity and that with sensitive planning and design, development and conservation of the natural heritage can co-exist and benefits can, in certain circumstances, be obtained.

6.4. Local Policy

East Herts Local Plan

- 6.4.1. East Herts Local Plan Second Review has been prepared in accordance with the transitional arrangements set out in the Planning and Compulsory Purchase Act 2004. This local plan ceased to have effect following a direction by the Secretary of State under Paragraph 1(3) of Schedule 8 to the Planning and Compulsory Purchase Act 2004, but some policies have been saved. Policies that are relevant for this report are detailed below.
- 6.4.2. **SD1 Making Development more Sustainable** is concerned with ensuring all proposals for development of 15 dwellings or more will be expected to be accompanied by a sustainability statement. That explains how the proposed development will protect and enhance the natural and built environment.
- 6.4.3. **ENV1 Design and Environmental Quality** is concerned with the creation of appropriate habitat in accordance with the Hertfordshire Local Biodiversity Action Plan should be provided.
- 6.4.4. **ENV2 Landscaping** states that existing landscape features should be retained and enhanced. Where losses are unavoidable compensatory planting or habitat creation will be sought. It also states the need for landscape features survey, as well as the need for landscaping proposals to include how targets in the Hertfordshire Local Biodiversity Action Plan will be met.
- 6.4.5. **ENV11 Protection of Existing Hedgerows and Trees** is concerned with ensuring the retention of existing hedgerows and trees, and their reinforcement by new planting of native broad-leaved species. It goes on to state that where tree and hedgerow removal is unavoidable replacement planting of broad-leaved species will be expected.
- 6.4.6. **ENV14 Local Sites** states that development likely to have an adverse effect on a wildlife site will not be permitted, unless it can be clearly demonstrated that there are reasons for the proposal, which outweigh the need to safeguard the substantive nature conservation value of the site. It goes on to state that where development is permitted which would damage the nature conservation value of the site, damage will be kept to a minimum. Mitigation and compensatory measures may be considered by the District Council.
- 6.4.7. **ENV15 Nature Conservation Area Management Agreements** is concerned with management agreements of sites with the District council under Section 39 of the Wildlife and Countryside Act 1981, as a means of controlling inappropriate types of permitted development or other activities which threaten the conservation interest of a site. It goes on to say that any development outside any Nature Conservation Areas which may have an adverse effect directly or indirectly on such area will be subject to the same considerations as proposals within the designated areas.
- 6.4.8. **ENV16 Protected Species** states that any development that may have an adverse effect on Badgers and other protected species will only be

permitted where harm to these species can be avoided. Where permission is granted conditions will be imposed that seek to facilitate the survival of existing species, as well as encouraging the provision of new habitats, disturbance must be kept to a minimum, and the provision of alternative habitats to sustain current levels of population.

- 6.4.9. **ENV17 Wildlife Habitats** is concerned with ensuring that appropriate habitat creation are included in plans.

East Herts District Plan (Pre-submission Version)

- 6.4.10. The East Herts District Plan as not yet been adopted, but once adopted, the policies in the District Plan will replace the policies in the Local Plan 2007. The District Plan sets out the Council's planning framework for the district. It covers the period 2011-2033. The pre-submission District Plan was agreed by Council on 22 September 2016.

- 6.4.11. **Policy BISH9 East of Manor Links** is specific to this development site. Section E is concerned with responding to existing landform and incorporating existing landscaping with new developments, by creating quality local green infrastructure which maximises opportunities presented by existing landscape features, to create net gains to biodiversity.

- 6.4.12. **Policy DES2 Landscaping** states that development proposals must demonstrate how they will retain, protect and enhance existing landscape features which are of amenity and / or biodiversity value. Part two of this policy states that in exceptional circumstances, where losses are unavoidable and justified, compensatory planting or habitat creation will be sought, either within or just outside the development site.

- 6.4.13. **Policy DES3 Design of Development** part 3 section b, states that development proposals which create new realms, or have a significant impact on the public realm should maximise opportunities for urban greening.

- 6.4.14. **Policy NE2 Sites of Nature Conservation Interest (non-designated)** states that all proposals should achieve a net gain in biodiversity (using the Biodiversity Impact Assessment Calculator (BIAC)) and avoid harm to, or the loss of features that contribute to the local wider ecological network. Part two states that proposals will be expected to apply the mitigation hierarchy of avoidance, mitigation and compensation, and integrate ecologically beneficial planting and landscaping into the overall design.

- 6.4.15. **Policy NE3 Species and Habitats** consists of seven parts. The first part is concerned with enhancing biodiversity and creating opportunities for wildlife. The second part is concerned with ensuring proposals can demonstrate how they will improve biodiversity value of the site and surrounding environment. It also highlights the need for ecological surveys. Part 3 is concerned with the protection of trees and hedgerows wherever possible. Proposals where significant damage is likely will not be permitted, however mitigation in the form of native tree planting with a buffer of 10m may be considered. Part 4 of this policy states that proposals will be expected to protect and enhance locally important biodiversity sites and other notable ecological features of conservation value. Part 5 of this policy is concerned with ensuring that proposals avoid impacting on Species and

Habitats of Principal Importance as published under section 41 of NERC 2006. Part 6 of this policy is concerned with mitigation and compensation measures being employed when circumstances exist that outweighs any harm or damage to a species or habitat. Part 7 states that integrated bird and bat boxes will be expected in all development bordering public green space and beneficial habitat.

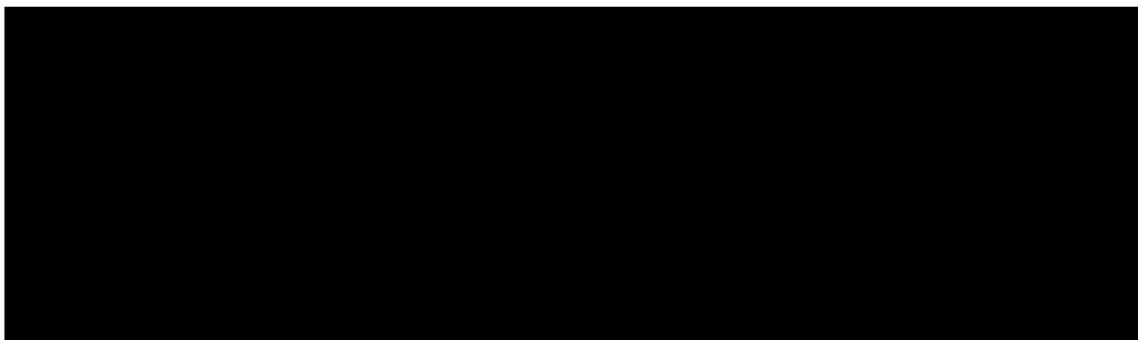
- 6.4.16. **Policy NE4 Green Infrastructure** is concerned with the protection and enhancement of green infrastructure. Loss and fragmentation of green infrastructure should be avoided, as well as ensuring that lighting will not adversely impact on green infrastructure that function as nocturnal wildlife movement and foraging corridors. It also states that maximising opportunities to improve the green infrastructure network must be done in accordance with the Council's Green Infrastructure Plan, its Parks and Open Spaces strategy, the Hertfordshire Biodiversity Action Plan, Living Landscape Schemes, and locally identified Nature Improvement Areas.
- 6.4.17. **Policy CC1 Climate Change Adaption** is concerned with integrating green infrastructure into the design process. This can be achieved through some of the following methods; appropriate tree planting, green roofs and walls and soft landscaping.
- 6.4.18. **Policy EQ3 Light Pollution** states that external lighting schemes must prevent impacts on the local ecology.

6.5. Discussion

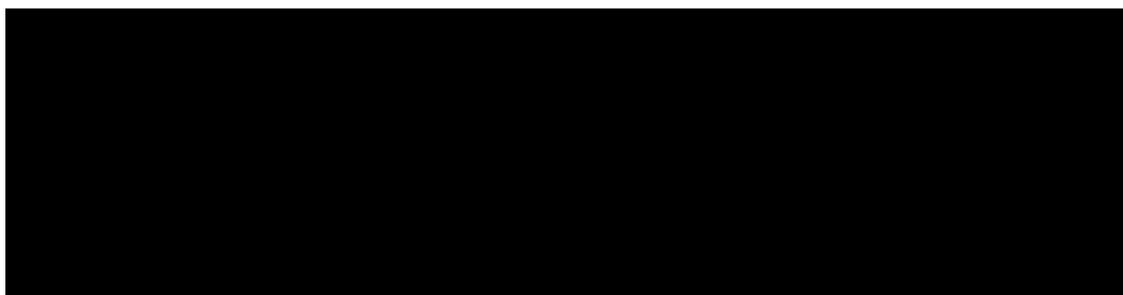
- 6.5.1. The site is not subject to any statutory or non-statutory nature conservation designations. Though there is a non-statutory site located within close proximity of the development site it is unlikely the proposed development will have any adverse effects on the LWS. The site does offer some limited opportunities for nesting birds and foraging bats. The site also supports Slow Worms. Nevertheless with good design it is considered that adverse effects on these species could be avoided or adequately mitigated. There is no evidence to suggest that a scheme compliant with the planning policies examined above could not be brought forward.

7. SUMMARY & CONCLUSIONS

- 7.1. Ecology Solutions was commissioned by Weston Homes in August 2016 to complete an ecological assessment of land at Bishop's Stortford Golf Club, Hertfordshire.
- 7.2. The site is proposed for a new residential development.
- 7.3. The site was subject to an extended Phase 1 habitat survey in August 2016. A desk-based study was also undertaken.



- 7.5. **Non-statutory Designations.** There are no non-statutory designated sites of nature conservation interest within the site. The nearest non-statutory site is Local Wildlife Site Woodland by Raynham Road. This LWS is a small woodland approximately 0.3km northwest of the site. Owing to the nature of the proposed development it is unlikely to have any adverse effects on the LWS.
- 7.6. A large number of further non-statutory sites are located in the wider area as shown on Plan ECO1, but no significant adverse effects are anticipated as a result of the development of the site.
- 7.7. **Habitats.** Habitat surveys were carried out in August 2016 in order to ascertain the general ecological value of the application site and to identify the main habitats and associated plant species.
- 7.8. The scrub and rough grassland present on the site are not considered to be of significant nature conservation importance. Its loss to the development of the site is of no significance.
- 7.9. The trees and border vegetation are of some ecological interest. They should be retained wherever possible. Nevertheless any loss can be compensated through the provision of new landscape planting.
- 7.10. Any landscape planting scheme should be based around a diverse range of native species and / or species of known wildlife value.

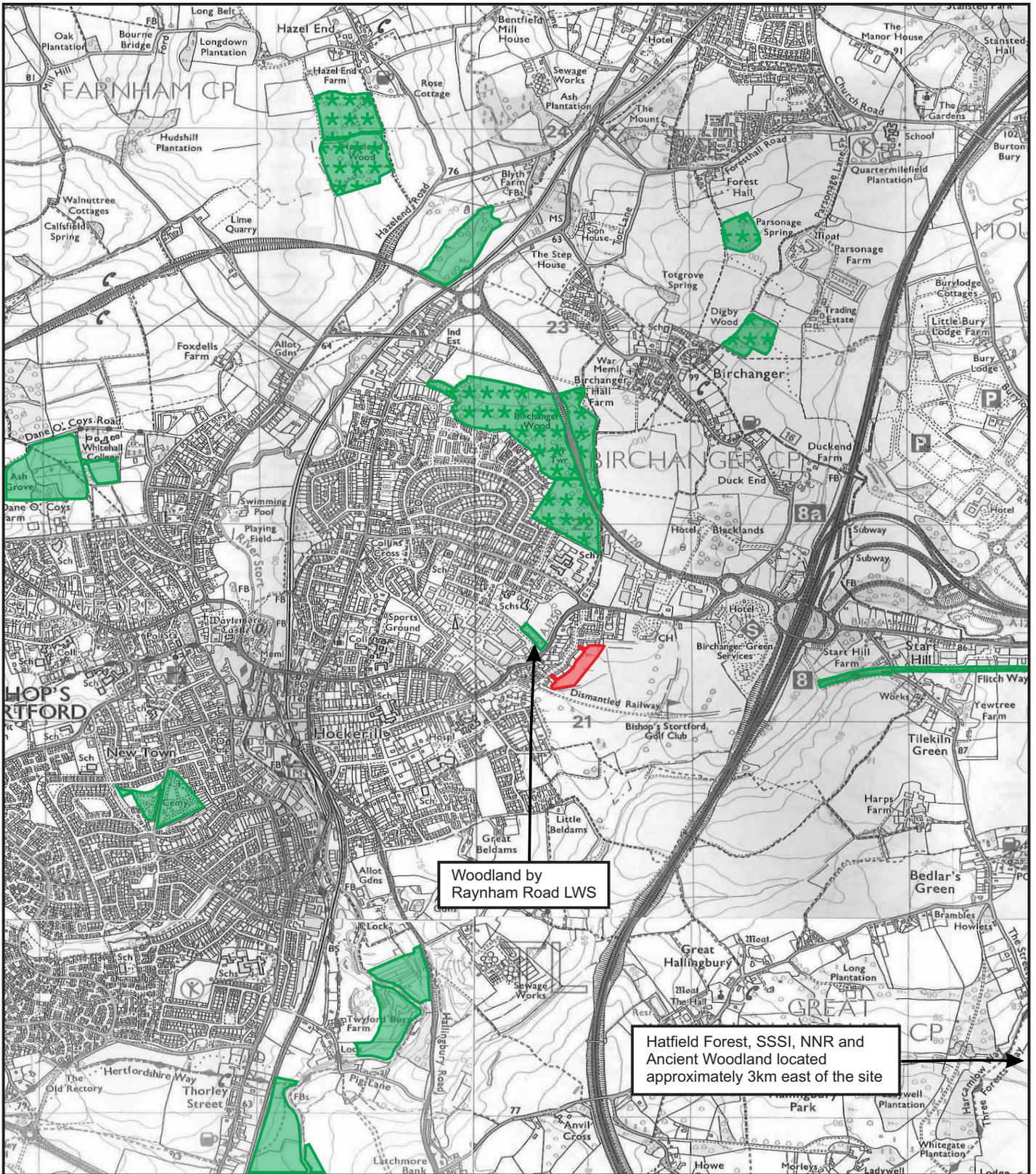


- 7.12. **Bats.** There are no buildings or trees within the site that could be used for roosting. During the survey bat activity was limited. The highest number of registrations was from Common Pipistrelle. Calls by a Brown Long-eared Bat and Soprano Pipistrelle were also noted, as well as Noctule calls from bats flying overhead. The highest area of activity was concentrated around an Oak tree to the east of the site. The results of the activity survey and static detector indicate that bats are commuting through the site to forage elsewhere. The Oak tree just off-site is a focus of activity, and generally the boundary features of the site are good. It is therefore recommended to retain existing boundary vegetation wherever possible, as well as installing bat boxes on retained trees.
- 7.13. **Birds.** A small number of bird species were recorded during the course of the habitat survey completed by Ecology Solutions. The site is not considered to be of ornithological interest. The scrub offers the most potential for nesting birds as well as foraging opportunities. As a precaution to avoid a possible offence, it is recommended that removal of suitable nesting habitats be undertaken outside the breeding season (March to July inclusive) or checked for nesting birds by a trained ecologist immediately prior to removal. New landscape planting should seek to include a number of fruit bearing species to offer a foraging resource. To enhance nesting opportunities it is recommended that bird boxes be installed on retained trees.
- 7.14. **Reptiles.** The site supports suitable opportunities for reptiles, particularly in the recolonising ground, areas of rough grassland and scrub where there is an absence of any formal management regime. Presence / absence surveys carried out in September 2016 confirmed the presence of Slow Worms. Only one individual was recorded but this would indicate a wider population within the site. Prior to the commencement of any site clearance or construction activity, a reptile translocation exercise following standard methodology will be implemented in order to remove Slow Worms from the site to a suitable off-site receptor area. A number of possible receptor sites have been identified in the wider golf club site, which are currently subject to survey to assess their suitability and establish the nature of any existing reptile populations. The chosen receptor site would be subject to some enhancement, possibly by enlarging its area by expanding the area of rough, or by providing a hibernaculum. There is ample time in the development programme to facilitate such work.
- 7.15. In summary the site is not subject to any statutory or non-statutory nature conservation designations. Though there is a non-statutory site located within close proximity of the development site it is unlikely the proposed development will have any adverse effects on the LWS. The site does offer some limited opportunities for nesting birds and foraging bats. The site also supports Slow Worms. Nevertheless with good design it is considered that adverse effects on these species could be avoided or adequately mitigated. There is no evidence to suggest that a scheme compliant with the planning policies examined in this report could not be brought forward. Overall it is considered that there are no overriding ecological constraints to the development of the site.

PLANS

PLAN ECO1

Site Location and Ecological Designations



KEY:

-  SITE LOCATION
-  LOCAL WILDLIFE SITE (LWS)
-  ANCIENT & SEMI-NATURAL WOODLAND

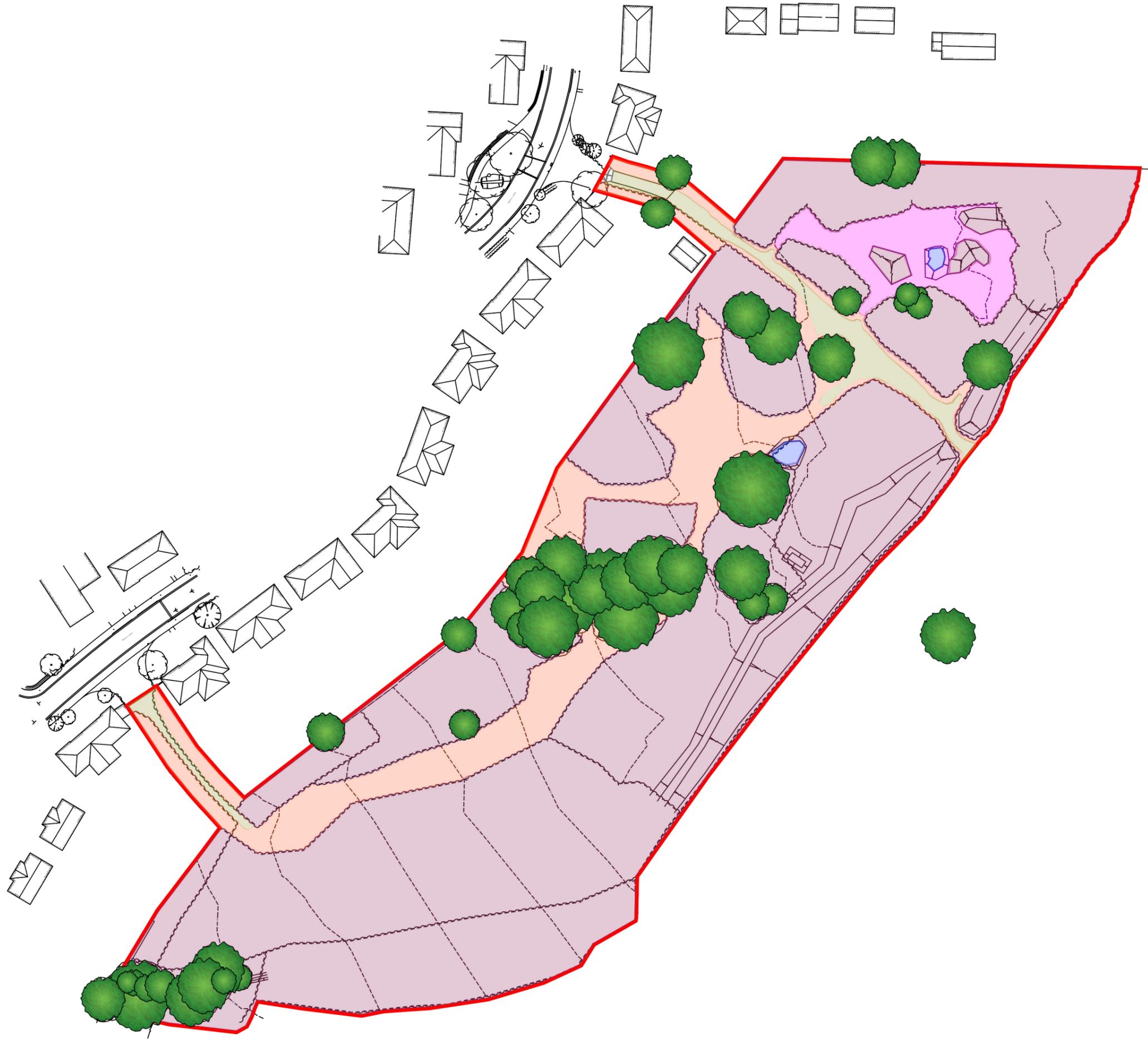


7201: BISHOP'S STORTFORD GOLF CLUB, HERTFORDSHIRE

PLAN ECO1: SITE LOCATION AND ECOLOGICAL DESIGNATIONS

PLAN ECO2

Ecological Features



- KEY:**
-  SITE BOUNDARY
 -  POOL
 -  SCRUB
 -  TALL RUDERAL
 -  ROUGH GRASSLAND
 -  HARDSTANDING
 -  RECOLONISING GROUND
 -  TREE / MATURE SCRUB



7201: BISHOP'S STORTFORD GOLF CLUB, HERTFORDSHIRE

PLAN ECO2:
ECOLOGICAL FEATURES

PLAN ECO3

Bat Activity Survey Results



KEY:

-  SITE BOUNDARY
-  TRANSECT ROUTE
-  STATIC BAT DETECTOR
-  COMMON PIPISTRELLE
-  NOCTULE
-  BROWN LONG-EARED
-  SOPRANO PIPISTRELLE
-  FLIGHT PATH OF COMMON PIPISTRELLE

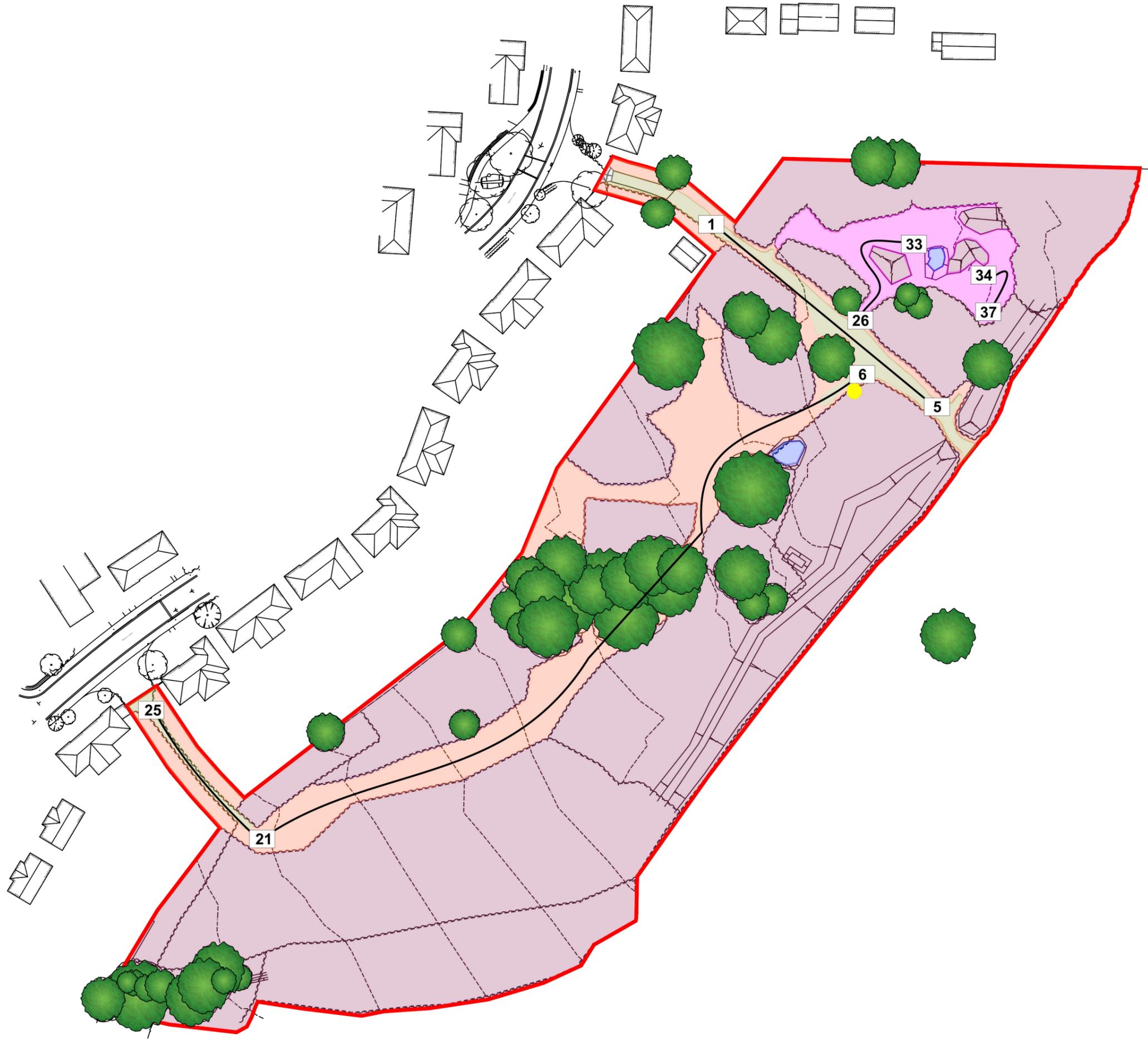


7201: BISHOP'S STORTFORD GOLF CLUB, HERTFORDSHIRE

PLAN ECO3:
BAT ACTIVITY SURVEY RESULTS

PLAN ECO4

Reptile Survey Results



KEY:

-  SITE BOUNDARY
-  ADULT SLOW WORM
-  REPTILE TINS



7201: BISHOP'S STORTFORD GOLF CLUB, HERTFORDSHIRE

PLAN ECO4:
REPTILE SURVEY RESULTS

FIGURES

FIGURE 1

SM2BAT+ Activity 30.08.16 - 06.09.16

PHOTOGRAPHS

PHOTOGRAPH 1: Rough grassland



PHOTOGRAPH 2: Scrub area



PHOTOGRAPH 3: Thicket of *Prunus* spp.



PHOTOGRAPH 4: Tall ruderal area



PHOTOGRAPH 5: Hardstanding area in the north of site



PHOTOGRAPH 6: Recolonising ground with scrub on the mounds



PHOTOGRAPH 5: Pool in recolonising area



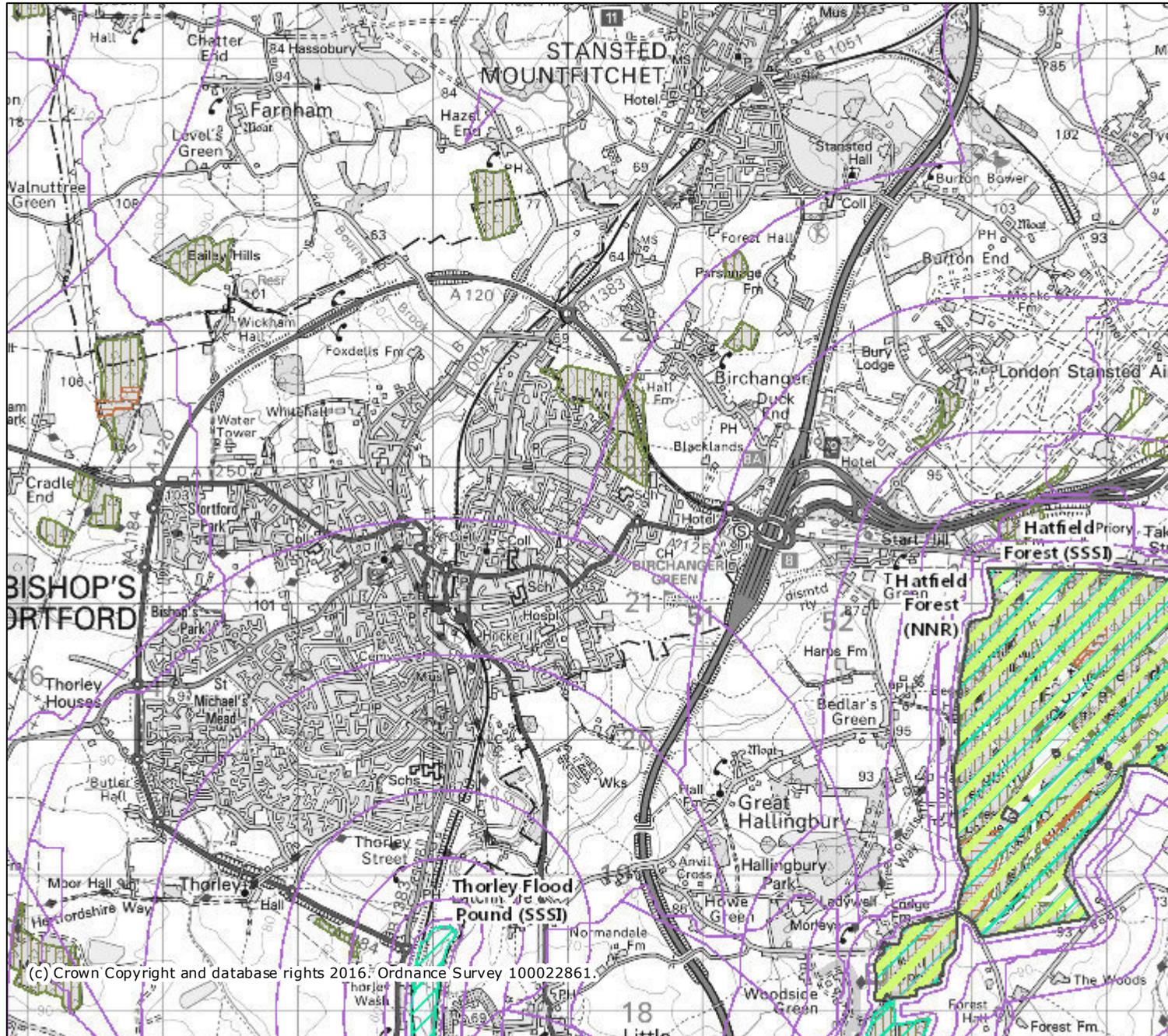
PHOTOGRAPH 6: Pool within the scrub area



APPENDICES

APPENDIX 1

Information downloaded from Multi-Agency
Geographic Information for the Countryside (MAGIC)



Legend

National Nature Reserves (England)

Ramsar Sites (England)

Sites of Special Scientific Interest (England)

SSSI Impact Risk Zones – to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)

Special Areas of Conservation (England)

Special Protection Areas (England)

Ancient Woodland (England)

Ancient and Semi-Natural Woodland

Ancient Replanted Woodland

Projection = OSGB36

xmin = 539200

ymin = 216100

xmax = 561100

ymax = 227100

Map produced by MAGiC on 28 October, 2016.

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.



ecology solutions

ecology solutions (east) ltd • cokenach estate • barkway • royston • hertfordshire • SG8 8DL
t 01763 848084 e east@ecologysolutions.co.uk w www.ecologysolutions.co.uk

e c o l o g y s o l u t i o n s f o r p l a n n e r s a n d d e v e l o p e r s