EPR

ECOLOGICAL EXPERTISE, EVOLVED

Streamside, Harpers Road, Ash

Protected Species Report

Prepared on behalf of

Bourne Homes Ltd

Final Report

10 November 2023

19/03-3B

Streamside, Harpers Road, Ash
Protected Species Report

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1. INTRODUCTION

Brief

1.1 Ecological Planning & Research Ltd (EPR) was commissioned by Bourne Homes Ltd in 2023 to provide updated advice on ecological issues in relation to the Proposed Development at Streamside, Ash (herein after referred to as the 'Site'). Planning permission for residential development on the Site was originally sought in 2017, for 24 residential units (17/P/02616).

1.2 To inform this application, Peach Ecology carried out a number of ecological surveys. This included an Ecological Appraisal; Bat surveys (including building inspections, Bat Activity surveys and Bat emergence surveys of buildings within the Site boundary); Reptile presence/absence surveys; Hazel Dormouse nest tube surveys; breeding Bird surveys; and a Badger walkover survey (Peach Ecology, 2017).

1.3 An updated Ecological Appraisal was also undertaken by EPR in 2019 and again in 2022 to verify the baseline conditions of the Site.

1.4 Due to the time lapsed since the ecological surveys were undertaken by Peach Ecology in 2017 updated surveys in relation to Badgers *Meles meles*, bats and reptiles were recommended, as these are the more mobile species found to be present, and so an updated baseline is needed for these species to ensure that mitigation proposals remain adequate.

1.5 Hazel Dormice *Muscardinus avellanarius* nest tube surveys were carried out by Peach Ecology in 2017, however no Dormice, or evidence of Dormice was recorded, and Dormice were assumed likely absent from the Site. No European Protected Species Licences for Dormice have been granted within 5km of the Site, and no records were returned within 2km of the Site. The Proposed Development will also result in limited impacts on arboreal habitat and thus updated Hazel Dormice surveys were not considered necessary.

1.6 Additionally the assemblage of birds identified during the desktop study and previous surveys conducted by Peach Ecology was consistent with the wider landscape, with the general assemblage consisting of garden, woodland and farmland birds. Nightjar *Caprimulgus europaeus* was also previously recorded flying over the Site, but this was considered likely to be linked to the large area of heathland located to the north of the site at Ash Ranges, as habitat on site is not suitable for this species. As the baseline habitats recorded within the Site have not changed, the Site is considered suitable to support the same assemblage of birds. Therefore updated breeding bird surveys are not considered necessary.

1.1 The purpose of these update surveys therefore is to help assess whether there has been any significant change to the baseline situation in respect of bats, reptiles and Badgers since previous surveys were undertaken by Peach Ecology in 2017. The results of these surveys will inform the subsequent mitigation strategy for the Site and subsequent licence applications with Natural England.

1.2 This Protected Species Report provides a summary of the survey methodology and results from the updated 2022 protected species surveys.

1.3 Due to the persecution of Badgers, the information contained within this report that contains details of Badger setts and their locations should be treated as **confidential** and **should not enter the public domain** (although it can be shared with individuals with a legitimate reason to know about Badger distribution).

Survey Area

1.4 Streamside lies on the eastern outskirts of Ash, to the south of the A323 (central grid reference SU 90425 50818). The Site comprises a residential dwelling, garage and other associated buildings and a garden within the southern extent. A small stream, flowing east to west, passes through the centre of the Site. To the north of the stream is a small area of woodland and an improved grassland field with trees around its border.

1.5 With the exception of Ash and Aldershot to the west, the surrounding landscape is predominantly made up of agricultural land, with the Thames Basin Heaths Special Protection Area (SPA) and Thursley, Ash, Pirbright and Chobham Special Area of Conservation (SAC) to the north.

1.6 The Site itself is made up of two distinctive areas, separated by a stream bisecting the Site. To the south of the stream lies the existing residential dwelling and outbuildings, with its associated garden. To the north of the stream is an area of woodland and grassland, surrounded by hedgerows and mature trees.

1.7 Directly adjacent to the western boundary of the Site is the Bellway Wildflower Meadow development which is currently under construction.

Background

Summary of Previous Surveys

Bats

1.8 The programme of bat assessment work undertaken by Peach Ecology in 2017 resulted in the identification of a Brown Long-eared bat *Plecotus auritus* maternity roost within the roof of the main bungalow and a Common Pipistrelle *Pipistrellus pipistrellus* day roost within the main bungalow. The surveys also identified a Common Pipistrelle day roost within the adjacent garage.

1.9 Bat activity surveys undertaken across the Site recorded high levels of Common Pipistrelle foraging activity and more moderate levels of activity by Brown Long-eared bats and *Myotis* species considered likely to include some combination of Brandt's *Myotis brandtii*, Whiskered *Myotis mystacinus*, Daubenton's *Myotis daubentonii* and Natterer's *Myotis nattereri*. Occasional activity by Soprano Pipistrelle *Pipistrellus pygmaeus*, Noctule *Nyctalus noctule*, Leisler's Bats *Nyctalus leisleri*, Serotine *Eptesicus serotinus* and Barbastelle *Barbastella barbastellus* was also recorded.

1.10 The desktop study undertaken by EPR in 2022 returned records of at least four bat species within a 2km radius of the Site including Common Pipistrelle, Pipistrelle Species *Pipisrellus sp,* Brown Long-eared bat and Serotine.

Reptiles

1.11 Peach Ecology carried out a reptile survey on the Site between June and November 2017. The surveys recorded Slow Worm *Anguis fragilis* and Common Lizard *Zootoca vivipara* around the woodland edges within the north of the Site. A peak count of seven adult Slow Worm and one Common Lizard were recorded which constitute 'low' populations of the two species on the Site (HGBI, 1998).

1.12 The adjacent Bellway Wildflower Meadow development scheme recorded 'exceptional' populations of Slow Worm, and a 'good' population of Common Lizard (ACD Environmental, 2016). Reptile exclusion fencing had been installed around the adjacent development site and it is understood that the animals have all been translocated to a nearby off-site receptor location, thereby preventing any further reptiles migrating into the Site.

1.13 The desktop study undertaken by EPR in 2022 identified five reptile species within a 2km radius of the Site including Slow Worm, Grass Snake *Natrix helvetica*, Adder *Vipera berus* and Common Lizard. In addition to this, the records search also returned records of the less common Smooth Snake *Coronella austriaca*. Smooth Snake require well managed heathland with mature heather for shelter on dry, sandy or gravely substrate. Due to the specialist habitats required by this species, their presence on the Site was considered highly unlikely as the Site does not contain supporting habitat for this species.

Badgers

1.14 Information relating to Badgers included historical survey results is provided within **Appendix 5 (Confidential), which should not be released into the public domain for animal welfare reasons**.

Great Crested Newts

1.15 The desk study undertaken by EPR (2022) returned seven records of Great Crested Newt within 2km of the Site, the closest record located 0.6km from the Site from 2019. A single waterbody is present within 500m of the Site, a pond located 420m south-west of the Site. The pond is separated from the Site by the railway line which may act as a partial barrier to dispersal.

1.16 Although Great Crested Newts can roam up to 500m from a pond where the terrestrial habitat is particularly favourable, they are typically much more reliant on habitat within 250m of a pond, and this area typically contains their core habitat that any population will depend upon most (HGBI, 1999).

1.17 Suitable terrestrial habitat within the Site is limited to the woodland and hedgerows with the grassland being regularly mown. The stream on Site is considered to be unsuitable for Great Crested Newt due to the lack of aquatic vegetation, freely flowing water and shallow depth.

1.18 Whilst considered unlikely to be present on Site, precautionary measures for Great Crested Newts will be undertaken as part of the Mitigation Strategy (See **Section 5**).

2. RELEVANT LEGISLATION, POLICY AND GUIDANCE

2.1 The key planning policy documents of relevance include the National Planning Policy Framework (2021), and the Guildford Borough Local Plan 2015-2034 (Adopted 25th April 2019).

2.2 Key legislation relating to the protection of wildlife and nature conservation include:

- The Environment Act 2021;
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- The Protection of Badgers Act 1992 (as amended);
- The Countryside and Rights of Way (CROW) Act 2000:
- The Natural Environment and Rural Communities (NERC) Act 2006 (as amended).

2.3 In addition to this, consideration has been given to:

- Guildford Borough Council: The Local Plan: Strategy and Sites (2015 - 2034), specifically:
  - POLICY P5: Thames Basin Heaths Special Protection Area
  - POLICY ID4: Green and blue infrastructure Biodiversity
- Guildford Borough Council: The Local Plan: Development Management Policies (part 2 of the Local Plan was adopted on 22 March 2023), specifically:
  - POLICY P6: Protecting Important Habitats and Species
  - POLICY P7: Biodiversity in New Developments
  - POLICY P10: Water Quality, Waterbodies and Riparian Corridors
  - POLICY D12: Light Impacts and Dark Skies
  - POLICY D17: Renewable and Low Carbon Energy Generation and Storage
- South East Regional Spatial Strategy (RSS) saved Policy NRM6: Thames Basin Heaths Special Protection Area;
- Planning Practice Guidance Notes: Natural Environment (June 2021); and
- Surrey Nature Partnership: Biodiversity Planning in Surrey (Including Appendix 1: Protected species in Surrey and Appendix 2: Statutory designated sites in Surrey) (March 2019).

2.4 Further information on relevant nature conservation legislation, planning and biodiversity policy is provided in **Appendix 6**.

Bats

2.5 There are 18 species of bat in the UK, seven of which are Species of Principal Importance in England. All bats and bat roosts are protected under Schedule 5 of the Wildlife and Countryside

Act 1981 (as amended). Bats are also a European Protected Species protected under the Habitats Regulations 2017 (as amended). It is an offence to:

- Intentionally or deliberately kill, injure or capture bats;
- Intentionally, deliberately or recklessly disturb bats in such a way as to be likely to significantly affect the ability of any significant group of bats to survive, breed, or rear or nurture their young or the local distribution of or abundance of a species of bat;
- Intentionally, or recklessly damage, destroy or obstruct any place used for shelter or protection (i.e. bat roosts) or intentionally or recklessly disturb a bat whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a bat; and
- Possess, sell or transport a bat, or anything derived from it.

2.6 Development proposals affecting bats or their roosts require a European Protected Species mitigation licence from Natural England.

Reptiles

2.7 All four of the widespread British species of reptile, namely the Common Lizard, Slow-Worm, Grass Snake and Adder, are Species of Principal Importance in England. They are protected under Schedule 5 (Sections 9.1, 9.5a, 9.5b) of the Wildlife & Countryside Act 1981 (as amended) from intentional killing, injury and trade. The habitat of the four widespread reptiles is not legally protected; however the replacement of habitat lost through development may be required through the planning system. Mitigation for these species is not subject to licensing by Natural England but should nonetheless be planned to minimise disturbance and potential project delays.

2.8 The Smooth Snake and the Sand Lizard *Lacerta agilis* are the rarest reptile species in Britain. In addition to the protection that is afforded to the widespread species of reptile listed above, these species are protected further under Schedule 5 (Sections 9.4b and 9.4c) of the Wildlife and Countryside Act 1981 (as amended). They are also European Protected Species protected under the Habitats Regulations 2017 (as amended). This legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Sand Lizards or Smooth Snakes;
- Intentionally, deliberately or recklessly disturb Sand Lizards or Smooth Snakes in such a way as to be likely to significantly affect the ability of any significant group of Sand Lizards or Smooth Snakes to survive, breed, or rear or nurture their young or the local distribution or abundance of either species;
- Intentionally or recklessly damage, destroy or obstruct any place used by Sand Lizards or Smooth Snakes for shelter or protection, or intentionally or recklessly disturb a Sand Lizard or Smooth Snake whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Sand Lizard or Smooth Snake;
- Keep, sell, or exchange Sand Lizards or Smooth Snakes or their eggs; and

- Deliberately take or destroy their eggs.

2.9 Development proposals affecting Smooth Snake or Sand Lizard require a European Protected Species mitigation licence from Natural England.

Badgers

2.10 The Protection of Badgers Act 1992 offers considerable protection to both Badgers and Badger setts. This legislation was enacted to protect the European Badger against baiting and not as a means of species recovery as it is common in England. It is an offence to cruelly treat, kill or take Badgers, but it is also illegal to intentionally or recklessly damage or disturb a Badger sett while it indicates signs of current use by a Badger.

2.11 The Government website contains information to help developers and their proponents avoid sett disturbance and to identify setts that are in current use. It is important to maintain adequate foraging territory in development proposals affecting Badgers as the destruction or severance of large areas of foraging territory could also be taken to include habitat loss. Licences to disturb Badgers and their setts in respect of development may be issued by Natural England provided provisions are made to minimise disturbance.

Great Crested Newt

2.12 The Great Crested Newt is a Species of Principal Importance in England. It is legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is afforded significant further protection as a European Protected Species under the Habitats Regulations 2017 (as amended). Collectively, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Great Crested Newts;
- Intentionally, deliberately or recklessly disturb Great Crested Newts in such a way as to be likely to significantly affect the ability of any significant group of Newts to survive, breed, or rear or nurture their young or the local distribution of or abundance the species;
- Intentionally or recklessly damage, destroy or obstruct any place used by Great Crested Newts for shelter or protection, or intentionally or recklessly disturb a Great Crested Newt whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Great Crested Newt; and
- Possess, sell or transport a Great Crested Newt, or anything derived from it.

2.13 Development proposals affecting the Great Crested Newt require a European Protected Species mitigation licence from Natural England.

3. SURVEY METHODOLOGY

Bats

Update Building Inspection

3.1 An update daytime external and internal inspection of the bungalow (Building A), garage (Building B) and pool house (Building C) at Streamside (see **Map 4**) was undertaken on the 18th May 2022 by Natalie Compton BSc (Hons) ACIEEM, a Natural England level 2 bat survey class licence holder, and Alice Holley BSc (Hons) MSc.

3.2 The buildings were searched externally and internally for evidence of use by bats. The search included looking for suitable bat roosting features and associated potential access/egress points. The search also included looking for direct evidence of bat use such as:

- the presence of bats;
- feeding remains;
- bat droppings on surfaces on and/or immediately adjacent to the building; and
- staining or scratch marks around suitable bat roost locations or suitable access points into the building.

3.3 The external surfaces/features of the buildings were thoroughly searched for evidence of bats, using a high-powered torch and binoculars. The internal inspection comprised of a search of the roof void for evidence of bats using boarded walkways where available.

3.4 Based on this assessment, each building was classified as either a confirmed roost, or as being of High, Medium, Low or Negligible suitability for roosting bats.

Ground Level Tree Assessment

3.5 A survey of trees within the Site was completed on the 18th May 2022 by Natalie Compton BSc (Hons) ACIEEM and Alice Holley BSc (Hons) MSc. The surveys comprised a search from ground level, with the aid of binoculars, for features with suitability to support bats, including woodpecker holes, loose bark, cracks and crevices, broken off limbs and dense Ivy *Hedera helix*, as well as signs of bats, such as scratching and staining.

3.6 A GPS point was taken for each tree assessed and the following information was recorded:

- Tree species;
- Approximate height;
- Approximate diameter at breast height;
- Any potential roost feature, its type, aspect, height and any other descriptive features;
- Suitability for roosting bats; and
- Any constraints to survey.

3.7 Based on the information collected during the surveys, trees were categorised for their suitability for bats in accordance with *Bat Surveys – Good Practice Guidelines* (Collins, 2016)[1]. Based on the features recorded, trees were identified as having either high, moderate, low or negligible suitability.

Update Emergence/Re-entry Surveys

3.8 Dusk emergence and dawn re-entry surveys were undertaken on the main bungalow, the adjacent garage, the pool house and Tree 3.

3.9 Surveys were carried out by experienced bat surveyors equipped with bat detectors (Pettersson D240X, EM Touch Pro, Batlogger M and, where not built-in to the detector, recording equipment Edirol Roland R-09HR). An appropriate number of surveyors were positioned around each building/structure to provide good visual coverage of potential roosting features. Any bats seen or heard were recorded on a detailed map of the survey area, logging any emergence/re-entry and access feature, the time a bat was recorded, bat species/species group, number of bats, direction of flight (where observed) and behaviour, where possible, e.g. commuting, etc. Recordings were later analysed using appropriate software, e.g. BatSound/BatExplorer to confirm identification to species/species groups, as necessary.

3.10 Dusk emergence surveys commenced at least 15 minutes prior to sunset and continued for at least 2 hours. Dawn re-entry surveys commenced at least 2 hours prior to sunrise and continued up to sunrise and for around 15 minutes after sunrise.

3.11 Details of survey timings and weather conditions are provided in **Appendix 1.**

Walked Transect Surveys

3.12 One transect route was walked on each survey visit. The transect route is shown on **Map 12 and 13**, survey dates and weather conditions are contained in **Appendix 1.**

3.13 Survey methods were based on current good practice bat survey guidelines (Collins, 2016) with the transect routes designed to sample a range of different habitats across the Site. As an existing baseline has been recorded for the Site and the baseline habitats remain unchanged, the surveys aimed to update and validate previous survey results. Therefore surveys were undertaken in spring (May 2022) and summer (July 2022). During each survey, details such as species/species group, numbers of bats and direction of flight (where observed) and behaviour, e.g. commuting, foraging and social calling were noted.

3.14 Each transect was walked by a pair of surveyors using either Pettersson D240X (and recording device), or Batlogger M detectors. Surveyors walked each transect at a steady pace recording bat activity (as described above) and would stop for five-minute intervals at pre-determined locations, 'stopping points', along the route of each transect. At each stopping point the number

[1] A 4th edition of the guidelines have since be released in October 2023 but at the time surveys were undertaken this was the most up to date iteration of the guidelines and thus the survey methodologies outlines in this report accord to this version of best practise guidance.

of ‘bat passes’ per species/species group were recorded in addition to bat behaviour. In this report a bat pass is defined as ‘the number of echolocation registrations within a 10 second interval’. For example, this could be a single registration, such as a bat flying past a ‘stopping point’ whilst commuting elsewhere, to repeated registrations, e.g. associated with foraging’. On this basis, a maximum of 6 bat passes can arise from an individual bat per minute.

3.15 The starting location along each route and direction the transect was walked was changed across the surveys to reduce sampling bias as far as reasonably possible. Each dusk survey commenced at sunset and continued for approximately 2 hours.

Automated Static Detector Surveys

3.16 Automated static detectors were deployed to sample different habitats across the Site and gather further information on the bat assemblage and relative bat activity.

3.17 In order to gather initial bat data for the Site and focus future survey effort, two automated static detectors (Anabat Express and/or Swifts) were deployed in May and July 2022 (locations shown in **Map 11**).

3.18 Automated detectors were deployed for five consecutive nights each surveyed month. Weather information for each survey period was provided by Weathernet from the nearest weather station. Survey dates and weather information is provided in **Appendix 1.**

3.19 Bat calls were analysed using appropriate software (Analook and Kaleidoscope) and identified to species/species group based on parameters in Russ (2021) and Middleton *et al.* (2014).

Reptiles

Reptile Survey

3.20 The reptile survey was informed by guidance for reptile surveys (Gent and Gibson, 2003; and Froglife, 1999).

3.21 This involved the use of artificial refuges made of corrugated metal, roofing felt, or other suitable materials distributed in areas likely to support reptiles. These refuges absorb and retain radiant heat more readily than the surrounding ground or vegetation, and often act as ‘magnets’ to animals in the immediate vicinity as favourable microclimates are created beneath them. Cold-blooded reptiles will shelter underneath these refuges and regulate their core temperature whilst safe from disturbance or predation. Refugia varied in size, but none were less than 0.7m x 0.7m (i.e., 0.5m^2).

3.22 Carefully searching beneath such refuges is particularly effective for locating snake species and Slow Worm. Refuge surveys are less effective for locating Common Lizard, and therefore careful observational searches by experienced personnel are useful for this species. Therefore visual searches for openly basking animals of other reptile species were also conducted. A minimum of five to seven visits are recommended to establish presence/ likely absence.

3.23 A total of 35 refugia were deployed in suitable habitat (see **Map 1** for locations) on 18th May 2022. To allow reptiles time to find the refugia they were left to “bed-in” for two weeks prior to the first survey visit.

3.24 Survey visits were scheduled to coincide with suitable weather conditions and ambient temperatures and were spread over the period May to June 2022. On each occasion, a survey route was chosen based on local micro-climatic conditions and walked slowly and quietly with the terrain 3–4 m ahead carefully examined for openly basking reptiles. Each refuge was lifted and examined for the presence of reptiles beneath.

3.25 Froglife Advice Sheet 10 advises that refugia are deployed at a density of 10 per hectare which would equate to 13 refugia for this Site. Therefore, a greater density of refugia were used, which increases the probability of finding animals.

3.26 Survey dates, times and weather conditions are displayed in **Appendix 2**.

Population Size Class

3.27 A commonly used method for interpreting reptile survey data is the Froglife (1999) guidelines, from which **Table 3.1** is taken.

3.28 Figures in the table refer to the maximum numbers of adults seen by observation and/or under artificial refuges (at a density of 10/ha) by one surveyor in one day. The Froglife guidelines should be subject to a degree of interpretation based upon professional experience, as they take no account of the size of the survey area, or the usually localised distribution of reptiles within a survey area.

Table 3.1: Population Size Class Interpretation (Froglife, 1999)

Species	Low Population	Good population	Exceptional population
Slow Worm	<5	5-20	>20
Common Lizard	<5	5-20	>20
Adder	<5	5-10	>10
Grass Snake	<5	5-10	>10

3.29 The Herpetofauna Groups of the British Isles (HGBI) Guidelines (1998) has also been taken into consideration.

Badgers

3.30 The Badger walkover survey was undertaken on 26th July 2022 by Natalie Morrison BSc (Hons) ACIEEM.

3.31 Badgers can be surveyed at any time of year, and most optimally Autumn – Winter, when the animals are still active and the vegetation has died back so it is easier to see evidence of Badger.

3.32 The Update Badger survey was undertaken in good weather conditions using a walkover survey technique, which involved searching for setts and other field signs in the most likely areas within the Site boundary of the Proposed Development and immediately adjacent areas, where views were possible. Any evidence of Badger was recorded including latrines, footprints, hairs caught on fences, mammal paths, dung pits and snuffle holes.

3.33 **Appendix 5** includes definitions of Badger survey signs, sett classification and level of usage.

Survey Limitations and Constraints

3.34 Bats often move roosts on a relatively regular basis, and it is possible that features not found to be used by bats at the time of the survey may later become occupied.

3.35 The ground level tree inspections were undertaken at a less optimal time of year, in May, when trees were in leaf. However, given the majority of trees on Site, this is not considered a significant constraint. Those with suitability to support roosting bats that are due to be removed were also subject to emergence/re-entry surveys.

3.36 It is not always possible to identify some bats to species level from recordings alone, particularly bats in the *Myotis*, *Plecotus* and *Nyctalus* genus and where that was the case identification was made to the species group. Bat species that typically have quieter echolocation calls, particularly Long-eared *Plecotus* species, may be under-recorded across the potential Zone of Influence as the quieter calls makes them less likely to be detected compared to other bat species.

3.37 Bats are nomadic and therefore each survey only provides a snapshot in time. However, a combination of various survey techniques were employed and included repeat visits of fixed-point and roaming positions throughout the core active season for bats. It is therefore considered that the information gathered from these surveys provides a detailed and robust baseline on which to inform the impact assessment and appropriate mitigation.

3.38 All Reptile survey visits were undertaken during appropriate weather conditions. Due to time constraints of the project, the reptile survey visits could not be spread across the entire survey season. However, all surveys were undertaken during optimal times (May and June) as it avoids the high ambient temperatures that affect the reptiles reliability of using the artificial refugia.

4. SURVEY RESULTS

Bats

Building Inspection

Main Bungalow (Building A)

4.1 The main bungalow at Streamside is a single storey rendered brick building with a multiple/intersecting pitched clay tile roof. Wooden cladding is present on the northern, eastern and western elevations (see **Map 5**). Externally several features suitable for roosting bats were included namely:

- Gaps in wooden cladding. Staining and scratches were also noted on the northern elevation beneath gaps in the wooden cladding where bats have been recorded accessing/egressing the building previously;
- Gaps along the ridges tiles;
- Gaps within lead flashing beneath the base of the chimneys; and
- Lifted roof tiles.

4.2 The roof void is a wooden trussed structure lined with bitumen roof felt with insulation present. The floor was boarded except for a small section of the roof void to the south. During the internal roof void inspection several Long-eared type droppings were recorded beneath all ridges. Daylight was visible within the roof space via gaps in wooden cladding across all elevations.

4.3 This Building is a **Confirmed** Brown Long-eared Maternity roost and Common Pipistrelle day roost. Suitable roosting features are illustrated on **Map 5** and photographs are shown in **Appendix 3**.

4.4 Peach Ecology identified the presence of Brown Long-eared bats during an internal roof void inspection on the 27th June 2017. Therefore given the previous use of Building A by Brown Long-eared bats specifically, and that no records of Grey Long-eared *Plecotus austriacus* bats were returned within the wider landscape, it has been concluded that the Long-eared species recorded within the building are most likely to be Brown Long-eared.

Garage (Building B)

4.5 Adjacent to the main bungalow on the southern elevation is a single storey garage comprised of rendered brick with a pitched clay tile roof. The roof itself is tight with no gaps noted beneath tiles or ridge tiles. Wooden cladding is present on the east and west elevations with gaps noted beneath the boards.

4.6 The interior of the garage is open to the rafters with wooden trusses and is lined with bitumen roofing felt. No signs or evidence of bats were recorded within the interior of the garage.

4.7 This Building is a historically **Confirmed** Common Pipistrelle day roost, with three Common Pipistrelle bats recorded emerging by Peach Ecology at the apex western gable end on the 13th July 2017. The features previously used by roosting bats, namely gaps in wooden cladding at the western gable end remain suitable for roosting bats (see **Map 5** and **Appendix 3** for

photographs). Bats regularly move between roosting places between and within buildings and thus as the features remain unchanged and suitable for roosting bats this building is still considered a confirmed day roost for Common Pipistrelle bats.

Pool House (Building C)

4.8 The pool house is a single storey brick mansard clay tile roof. Several features suitable to support roosting bats were recorded across the exterior of the building including gaps under lifted tiles and gaps around the rafter feet between the wall and soffit (see **Map 5** and **Appendix 3** for photographs).

4.9 The interior of the pool house is open to the rafters with a wooden trussed structure and wooden boarding present. The interior is well lit due to French doors across the eastern, southern and western elevations. No signs or evidence of roosting bats was recorded within the building. An old birds nest and a dead Blue Tit *Cyanistes caeruleus* was recorded within the building.

4.10 Overall the pool house was assessed as having **Moderate** suitability to support roosting bats.

Ground Level Tree Assessment

4.11 A total of three trees were assessed as having suitability to support roosting bats namely Tree 1, 2 and 3 (also known as T55, T49 and T24 respectively within the Arboricultural report, see also **Map 3**). Tree 1 and Tree 3 were assessed as having moderate suitability to support roosting bats and Tree 2 was assessed as having low suitability to support roosting bats. A group (G1) of trees across the western boundary had several trees with features suitable to support roosting bats in close proximity. These trees have been clustered where possible based on their overall suitability to support roosting bats. G1 has been assessed as having low suitability to support roosting bats due to dense ivy cover. Ivy when thick stemmed can in itself provide a suitable roosting feature. However at other times may obscure features suitable for roosting bats on the tree itself and as such is assigned low suitability on a precautionary basis.

4.12 Based on the Tree Protection Plan (Merewood, 2022) only one of these trees will be felled as a result of the Proposed Development, namely Tree 3 (T24). Detailed results from the tree inspections are provided in **Appendix 4** and locations are shown on **Map 3**.

Emergence/Re-entry Surveys

4.13 All buildings within the Site were subject to targeted emergence/re-entry surveys (see Maps **6-10**).

4.14 During the emergence/re-entry surveys bats were observed emerging and re-entering the Bungalow (Building A) as follows:

- 06/06/2022: Nine Brown Long-eared bats were observed emerging from the main bungalow from a gap in the wooden cladding on the northern elevation;
- 05/07/2022: One possible emergence by a Common Pipistrelle bat from the apex of the southern gable end of the main bungalow;
- 06/07/2022: Re-entry by 14 Brown Long-eared bats beneath a gap in the wooden cladding on the northern elevation; and

- 19/07/2022: Nine Brown Long-eared bats were observed emerging from the main bungalow from a gap in the wooden cladding on the northern elevation.

4.15 No bats were recorded re-entering or emerging from the garage (Building B) or the pool house (Building C).

4.16 General bat activity was also noted throughout the survey at relatively low levels mainly from Common Pipistrelle and Brown Long-eared bats. Passes from Noctule, Serotine, Soprano Pipistrelle and *Myotis* species were also recorded.

4.17 Results of the emergence/re-entry surveys are summarised on **Maps 6 -10**.

Walked Transect Surveys

4.18 Results from the walked transect surveys have been summarised and presented in **Map 12** and **13**.

4.19 During these surveys, the following species / species groups were recorded (either on stopping points or in between):

- Common Pipistrelle;
- Soprano Pipistrelle;
- Long-eared species; and
- Myotis species.

4.20 During the dusk walked activity transect undertaken on the 31st May 2022 foraging activity was recorded by Common Pipistrelle bats predominately around the central woodland and along the western Site boundary. Brown Long-eared bats were also recorded commuting north through the central woodland from the direction of the main bungalow. A single pass by a Brown Long-eared bat was also recorded commuting along the western hedgerow in the southern section of the Site. A Soprano Pipistrelle bat was also recorded commuting south to north along the northern woodland within the Site.

4.21 During the dusk walked activity transect undertaken on the 26th July 2022 activity by Common Pipistrelle bats was recorded across the Site. Foraging was noted within the central woodland, along the north-western boundary hedgerow and along the north-eastern boundary within the small pocket of woodland. A Common Pipistrelle bat was also recorded passing south to north over the stream towards the central woodland. A single pass by a *Myotis* bat was recorded at 21:51, 55 minutes after sunset.

Automated Detector Surveys

4.22 The automated static detectors deployed in 2022 (for five consecutive nights in May and July) identified bat passes from at least nine different bat species (Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle, Barbastelle, Long-eared bat, Noctule, Serotine, Leisler's, *Nyctalus* species and an unidentified species of *Myotis*). The highest number of passes was by Common Pipistrelle bats. The most passes were made at Location B during the July deployment

with a total of 2955 passes made. The highest number of passes made on a given night by a bat species was 948 passes by Common Pipistrelle on the 27th July 2022.

4.23 Locations of the automated static detectors are shown in **Map 11**. A summary of the automated static detector survey results is provided in **Table 4.1.**

Table 4.1: Summary of automated static detector survey results.

Bat Species	Month	Automated Static Detector Location	
		A	B
Common Pipistrelle	May 2022	347 (1.91)	2072 (11.41)
	July 2022	384 (8.10)	2955 (62.36)
Soprano Pipistrelle	May 2022	89 (0.49)	39 (0.21)
	July 2022	147 (3.10)	225 (1.65)
Long-Eared species	May 2022	12 (0.07)	2 (0.01)
	July 2022	0 (0)	32 (0.68)
Myotis species	May 2022	10 (0.06)	11 (0.06)
	July 2022	2 (0.04)	33 (0.70)
Serotine	May 2022	1 (0.01)	1 (0.01)
	July 2022	4 (0.08)	105 (2.22)
Noctule	May 2022	2 (0.01)	5 (0.03)
	July 2022	21 (0.44)	39 (0.82)
Leislers	May 2022	0 (0)	0 (0)
	July 2022	1 (0.02)	3 (0.06)
Nyctalus Species	May 2022	0 (0)	0 (0)
	July 2022	1 (0.02)	4 (0.08)
Barbastelle	May 2022	1 (0.01)	0 (0)
	July 2022	0 (0)	0 (0)
Nathusius Pipistrelle	May 2022	0 (0)	0 (0)
	July 2022	1 (0.02)	0 (0)
Pipistrelle Species	May 2022	0 (0)	0 (0)
	July 2022	0 (0)	1 (0.02)

**Numbers provided are total number of bat passes per species, with passes per hour shown in brackets. Nyctalus Species = Noctule/Leisler's/Serotine (difficult to differentiate sometimes particularly when at the low end of a Leislers call and the higher end of a Noctule call). Pipistrelle Species = Common/Soprano (difficult to differentiate sometimes when at the low end of a Soprano Pipistrelle and the high end of a Common Pipistrelle. Typically between 49-51kHz).*

4.24 The species most frequently recorded species was Common Pipistrelle, which is common and widespread in England. Soprano Pipistrelle were also recorded which is also a common and widespread species in England.

4.25 Serotine are restricted primarily to southern England and Noctule/Leislers are considered frequent and widespread.

4.26 A small number of unidentified Myotis species passes were recorded. The distribution and status of Myotis bats depends on the species and can range from widespread to restricted and from common to rare.

4.27 Surveys included a small number of passes by Nathusius' Pipistrelle and Barbastelle. Survey results indicate that these species have an infrequent presence within the Zone of Influence. Although distributed across southern England and Wales, Barbastelle are rare in both the UK and across Europe, although there is potential that this species is under-recorded (JNCC, undated).

Reptiles

4.28 The results of the field survey are summarised in **Table 4.2**.

Table 4.2: Reptile Survey results

Date	Slow Worm			
	AM	AF	SA	JUV
31/05/2022	0	1	4	0
06/06/2022	3	1	0	6
10/06/2022	1	3	0	7
14/06/2022	0	0	0	4
17/06/2022	0	0	0	1
20/06/2022	2	2	3	3
24/06/2022	0	3	0	2

*AM = Adult Male, AF = Adult Female, SA=Sub-Adult, Juv=Juvenile

4.29 Slow Worms were the only reptile species recorded within the Site during the survey visits. The survey results are shown in **Map 2**. The peak count of adult Slow Worms was four. Slow worms were recorded across the northern section of the Site around the peripheries of the woodland and hedgerow habitats. Sub-adults and Juveniles were recorded across the surveys further suggesting a healthy breeding population.

4.30 To estimate the population size of a reptile species the maximum number of adults seen in a single visit is required. Froglife recommends at least 20 survey visits using 10 refugia per hectare to estimate population size. Although 20 visits were not completed, an estimate can be accomplished using a higher density of refugia and professional judgement.

4.31 Based on the Froglife Reptile Population Size Class Interpretation (Froglife ,1999) the peak count of adult Slow Worms was four, equating to a Low Population size.

Badgers

4.32 Information relating to Badgers survey results is provided within **Appendix 5 (Confidential), which should not be released into the public domain for animal welfare reasons**.

5. MITIGATION AND FURTHER RECOMMENDATIONS

Bats

5.1 The main bungalow (Building A) has been identified as supporting a maternity roost for Brown Long-eared bats and a day roost for Common Pipistrelle bats. The adjacent garage (Building B) has been identified as supporting a day roost for Common Pipistrelle bats (based on surveys undertaken by Peach Ecology in 2017). Both buildings will be demolished as part of the Proposed Development.

5.2 In order for these buildings to be demolished lawfully, a European Protected Species Licence (EPSL) will be required. The licence application will include a detailed mitigation strategy, developed in accordance with best practice guidance, that will be adopted to avoid harm to bats and to maintain their favourable conservation status. Although full details of the mitigation strategy will be agreed with Natural England through the licensing process, the principal elements will include:

- Sensitive timing of works;
- A pre demolition/felling emergence survey;
- A pre demolition/felling inspection;
- The supervised soft strip of building features or supervised soft felling of trees;
- Provision of appropriate new roosting features in new buildings or on retained boundary trees (for example, bat boxes, recessed bat bricks, external wall mounted boxes, tree mounted boxes or pole mounted boxes).

5.3 No bats were recorded roosting within the pool house (Building C) during the emergence/re-entry surveys undertaken in 2022. The pool house will also be demolished to facilitate the Proposed Development. The pool house still retains features suitable to support roosting bats, therefore, building demolition may be carried out under ecological supervision and a non-licensed method statement which may include all or some of the measures identified above. The extent of ecological supervision will be based on BCT Guidelines and will depend on the suitability of the feature and the anticipated level of risk.

5.4 Likewise no bats were recorded roosting within Tree 3 (T24) during the emergence/re-entry surveys undertaken in 2022. Tree 3 still retains features suitable to support roosting bats, namely woodpecker holes, therefore felling may be carried out under ecological supervision and a non-licensed method statement. Nesting birds were also recorded utilising the woodpecker holes in Tree 3 during the emergence/re-entry surveys. Therefore it is recommended that its removal is undertaken outside of the nesting bird season (March- August inclusive).

5.5 To compensate for the loss of roosts, bat boxes are to be installed within the retained woodland, and a new bat loft will be incorporated into the timber car barn that sits over car parking spaces for plots 3-5, adjacent to the woodland, to compensate for the loss of the Brown Long-eared maternity roost specifically. Detailed floor and elevation plans are included in this application submission but are indicative only as changes may be requested by Natural England as a result of the subsequent licence application. As part of the EPSL application, a method statement will be submitted which will provide further detail on the exact number, locations and specifications of compensation roosts.

5.6 The majority of foraging and commuting by bats was recorded within the woodland edge and Site boundaries which are due to be retained and enhanced within the current design.

5.7 The landscaping plans for the Site includes provision of native species planting which are of benefit to a diverse array of invertebrates which will in turn provide an additional foraging resource for the local bat assemblage.

5.8 The Proposed Development will also implement a sensitive lighting strategy which will minimise light pollution along retained habitats and known roosts and will aim to minimise the use of unnecessary lighting. During construction the Construction Environmental Management Plan will include a restriction on working hours and lighting restrictions.

5.9 Post-development the lighting strategy will ensure that:

- Lighting around the proposed development will be kept as low as safety levels permit;
- Lights will be shielded to make light directional and directed away from sensitive features (in particular boundary habitats and the central woodland);
- Where possible, LED luminaires will be used due to their sharp cut-off and lower intensity (a warm white spectrum should be adopted to reduce blue-light component);
- Foraging and commuting routes will be kept as in as dark a condition as possible; and
- The central woodland will remain unilluminated.

5.10 Further details on the lighting strategy can be found in the Biodiversity Management and Enhancement Strategy (EPR, 2022).

Reptiles

5.11 To prevent killing or injuring of any reptiles during planned vegetation clearance of any suitable reptile habitat, a reptile mitigation strategy will be implemented and will include the following:

- Phased vegetation clearance will take place: first cut to around 15cm above ground to avoid potential direct harm to reptiles, then after a period of 1 week during which reptiles will be able to disperse, a second cut to ground level. Works shall move from west to east to encourage reptiles to disperse into retained habitats.
- An ecologist will hand-search any potential natural/artificial refuges (including potential hibernation features) prior to vegetation clearance. If any refugia needs to be dismantled using an excavator, then this will be supervised by an ecologist. If reptiles are found during this task, then they will be relocated to a retained area of the Site at a safe distance from the clearance works.
- All clearance works must take place in the active reptile period, which is April to September inclusive and during weather conditions suitable for promoting reptile movement. This includes avoiding periods of rain, strong wind and temperatures below 10°C or above 18°C.
- Once the phased clearance has been completed a destructive search will be carried out on any remaining areas of suitable reptile habitat. This involves an ecologist supervising the top layer of soil being removed using an excavator.

- Only once the ecologist is satisfied that all potential reptile habitat has been removed then remedial/construction works can commence on Site.
- To prevent reptiles from entering into the construction area, surrounding habitats must be kept unsuitable for reptiles to prevent them from moving back into the area where they may be subject to harm. Where this is not a feasible option temporary reptile fencing should be erected for the duration of construction works.

5.12 Where the above is not possible, to ensure reptiles do not come to harm during the construction phase, materials should be stored off of the ground, containers are to be kept sealed/covered and trenches should be covered overnight, or planks included to prevent entrapment. Where possible, backfilling of trenched should take place as soon as possible.

Badger

5.13 The Protection of Badgers Act 1992 and the Wildlife & Countryside Act 1981 (as amended) protect Badgers from killing and injury and their setts from removal, damage, obstruction and disturbance.

5.14 Prior to the start of construction on Site, an update Badger survey will be carried out to ensure no new setts have been created within the Proposed Development area. This should be carried out approximately 2-6 months prior to the start of any development so that there is sufficient time to obtain a development licence if necessary.

5.15 It is recommended that any works likely to impact setts recorded within the Site are monitored using wildlife cameras to determine which setts (if any) are in current use and to inform the mitigation strategy submitted as part of a licence application.

5.16 If any setts are confirmed in ‘current use’ and they will be affected by any imminent vegetation clearance or construction works (i.e any works within 30m of the Sett) then they will need to be closed under a Natural England licence (which has an implementation window of July-November inclusive).

5.17 If no mammals are recorded using the setts (including Foxes or Rabbits), then they can be excavated using a digger or infilled with soil.

5.18 If the setts are in use by Foxes, then sensitive site clearance measures should be implemented in accordance with the Wild Mammals (protection) Act 1966. This would involve the following;

- Prior to any Site clearance works taking place the dens should be checked for signs of current use by soft blocking the entrance using twigs and/or a light covering of soil. The dens should then be monitored over a minimum period of 5 days (along with the use of wildlife trail cameras), by a suitably qualified ecologist. If the den is in use additional methods can be applied to discourage them from the area. If there are no signs of current use the dens can be blocked up.

- Complete closure of a den should take place outside of the breeding season for foxes. This is typically **December to June** inclusive, so the closure should take place outside of this period.

- Following the closure, the den should be completely removed as soon as possible, using a digger, to minimise the risk of animals re-excavating the den for use. This should take place under ecological supervision.

5.19 During the construction phase, open trenches must either be covered overnight, or include mammal ladders to prevent accidental entrapment. Such measures should be detailed within the Construction Environmental Management Plan.

Great Crested Newts

5.20 Although considered unlikely to be present within the Site, precautionary measures will be taken to prevent the killing or injuring of any amphibians during planned vegetation clearance of any suitable terrestrial habitat.

5.21 In the first instance suitable terrestrial habitat such as the woodland and hedgerows have been retained where possible and will be enhanced for the benefit of a range of species including amphibians.

5.22 The phased vegetation clearance and destructive search to be undertaken as part of the reptile mitigation strategy will also mitigate any potential harm to individual amphibians caused by the construction works. To ensure amphibians do not come to harm during the construction phase, materials should be stored off of the ground, containers are to be kept sealed/covered and trenches should be covered overnight, or planks included to prevent entrapment. Where possible, backfilling of trenched should take place as soon as possible.

5.23 In the event a Great Crested Newt is encountered during the works, the works will cease and a EPSL from Natural England will be required.

6. REFERENCES

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Maps

MAP 1 Reptile Refugia Locations

KEY

Site boundary

Felt

Tin

SCALE: 1:850 at A3

0 10 20 30 40 50 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 21 March 2023

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P19/03

Aerial Imagery: (c) Getmapping plc,

MAP 2 Reptile Survey 2022 Results

KEY

Site boundary

Slow Worm Present (all lifestages)

Refugia

SCALE: 1:850 at A3

0 10 20 30 40 50 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 21 March 2023

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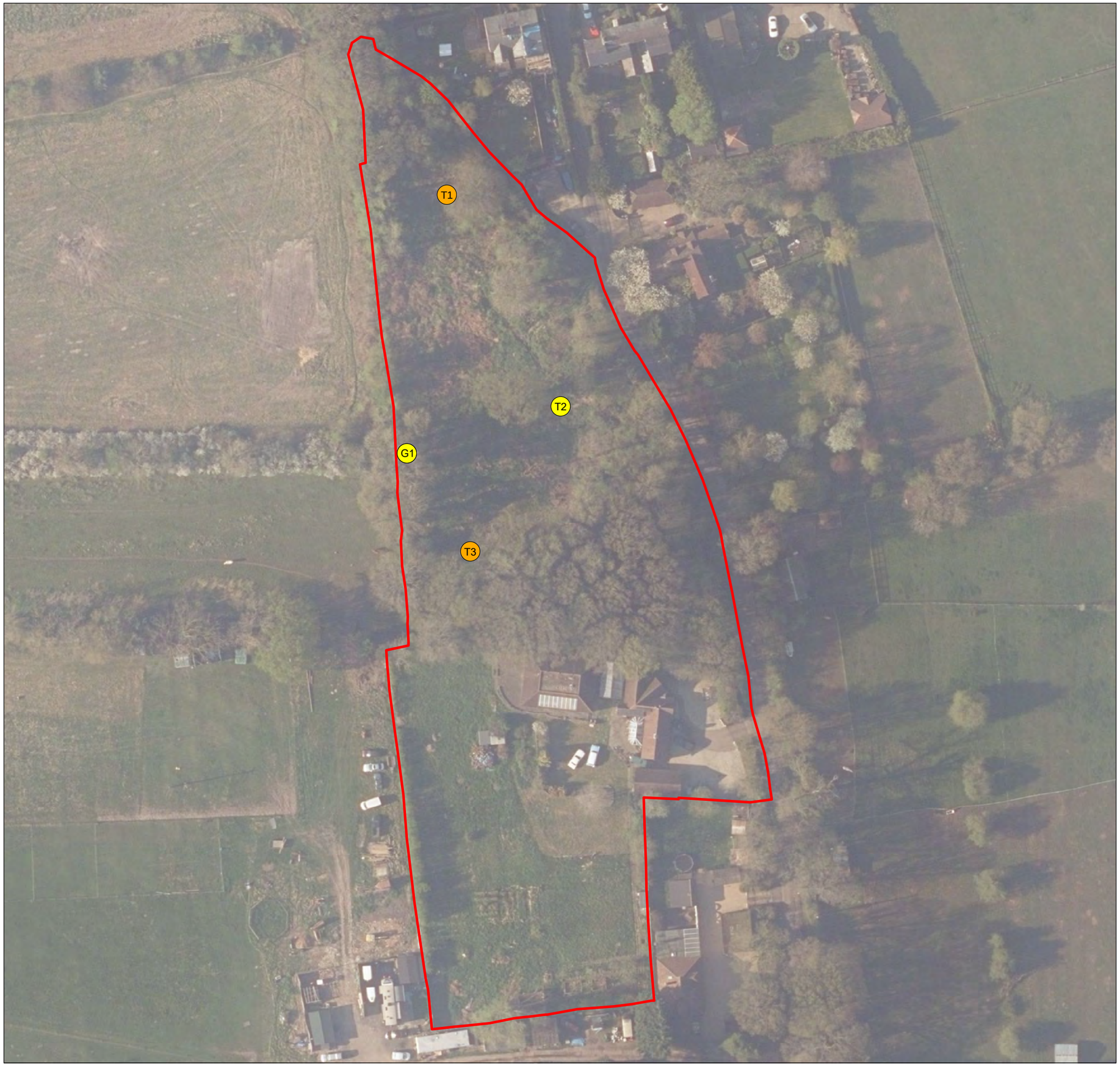
P19/03

Aerial Imagery: (c) Getmapping plc,



MAP 3 Ground Level Tree Inspection Results

KEY

Site boundary

Bat roost suitability

Moderate

Low

SCALE: 1:850 at A3

0 10 20 30 40 50 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 21 March 2023

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P19/03

Aerial Imagery: (c) Getmapping plc,

MAP 4 Bat Roost Suitability Overview

KEY

Site boundary

Bat roost suitability

Confirmed roost

Moderate

SCALE: 1:500 at A3

0 5 10 15 20 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 21 March 2023

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P19/03

Aerial Imagery: (c) Getmapping plc.

MAP 5 Building Inspection Results 2022

KEY

- Site boundary
- Chimneys (Gaps in flashing at base)
- Gap under tile
- Target note
- Gap by rafter feet between wall and soffit
- Gap under ridge tiles
- Gaps in wooden cladding
- Open to the rafters

1 – Daylight visible via gaps in wooden cladding
2 – c. 150 Brown Long-eared droppings
3 – c. 100 Brown long-eared droppings
4 – c. 150 Brownlong-eared droppings

SCALE: 1:200 at A3

0 2 4 6 8 10 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 21 March 2023

Y:\Streamside, Harpers Road\GIS\Protected Species Report\Map5_BuildingInspectionResults 2022_P1903_2138_210323.mxd

P19/03

Aerial Imagery: (c) Getmapping plc.

MAP 6 Dusk Emergence Building A - 06/06/2022

KEY

- Site boundary
- S Surveyor position
- Common Pipistrelle observed flight
- Long-eared observed flight
- Emergence
- (c) Commuting
- (f) Foraging
- x3 Number of bats
- A Building references

SCALE: 1:250 at A3

0 2 4 6 8 10 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 03 April 2023

Y:\Streamside, Harpers Road\GIS\Protected Species Report\Map6_DuskEmergenceBuildingA_060622_P1903_2138_030423.mxd

P19/03

Aerial Imagery: (c) Getmapping plc.

MAP 7 Dawn Re-entry Building B and C - 07062022

KEY

- Site boundary
- Surveyor position
- Common Pipistrelle (heard not seen)
- Long-eared species (heard not seen)
- Noctule (heard not seen)
- Common Pipistrelle observed flight
- Long-eared observed flight
- (f) Foraging
- (p) Pass
- A Building references

SCALE: 1:250 at A3

0 2 4 6 8 10 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 04 April 2023

Y:\Streamside, Harpers Road\GIS\Protected Species Report\Map7_DawnRe-entryBuildingBAndC_070622_P1903_2138_040423.mxd

P19/03

Aerial Imagery: (c) Getmapping plc.

MAP 8 Dusk Emergence Building B and C - 05072022

KEY

- Site boundary
- S Surveyor position
- Common Pipistrelle (heard not seen)
- Soprano Pipistrelle (heard not seen)
- Common Pipistrelle observed flight
- Emergence
- (c) Commuting
- (f) Foraging
- (p) Pass
- A Building references

SCALE: 1:250 at A3

0 2 4 6 8 10 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 04 April 2023

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P19/03

Aerial Imagery: (c) Getmapping plc.

MAP 9 Dawn Re-entry Building A - 06072022

KEY

- Site boundary
- S Surveyor position
- Infrared camera
- Common Pipistrelle (heard not seen)
- Long-eared species (heard not seen)
- Serotine (heard not seen)
- Common Pipistrelle observed flight
- Soprano Pipistrelle observed flight
- Long-eared observed flight
- Re-entry
- (c) Commuting
- (f) Foraging
- (p) Pass
- x3 Number of bats
- A Building references

SCALE: 1:250 at A3

0 2 4 6 8 10 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 03 April 2023

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P19/03

Aerial Imagery: (c) Getmapping plc.

MAP 10 Dusk Emergence Building A and B - 19072022

KEY

- Site boundary
- Surveyor position
- Infrared camera
- Myotis species (heard not seen)
- Noctule (heard not seen)
- Serotine (heard not seen)
- Common Pipistrelle observed flight
- Long-eared observed flight
- Emergence
- (f) Foraging
- (p) Pass
- x3 Number of bats
- A Building references

SCALE: 1:250 at A3

0 2 4 6 8 10 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 03 April 2023

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P19/03

Aerial Imagery: (c) Getmapping plc.

MAP 11 Static Bat Detector Locations

KEY

Site boundary

(A) Automated detector locations

SCALE: 1:850 at A3

0 10 20 30 40 50 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 21 March 2023

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P19/03

Aerial Imagery: (c) Getmapping plc.

MAP 12 Summary of Dusk Bat Activity Survey – 31/05/2022

KEY

- Site boundary
- Transect stopping points
- Transect
- Common Pipistrelle observed flight
- Soprano Pipistrelle observed flight
- Long-eared observed flight
- Myotis species observed flight
- (c) Commuting
- (f) Foraging
- (p) Pass
- x3 Number of bats

SCALE: 1:850 at A3

0 10 20 30 40 50 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 03 April 2023

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P19/03

Aerial Imagery: (c) Getmapping plc.

MAP 13 Summary of Dusk Bat Activity Survey – 26/07/2022

KEY

- Site boundary
- Transect stopping points
- Transect
- Myotis species (heard not seen)
- Common Pipistrelle observed flight
- (f) Foraging
- (p) Pass

SCALE: 1:850 at A3

0 10 20 30 40 50 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 22 March 2023

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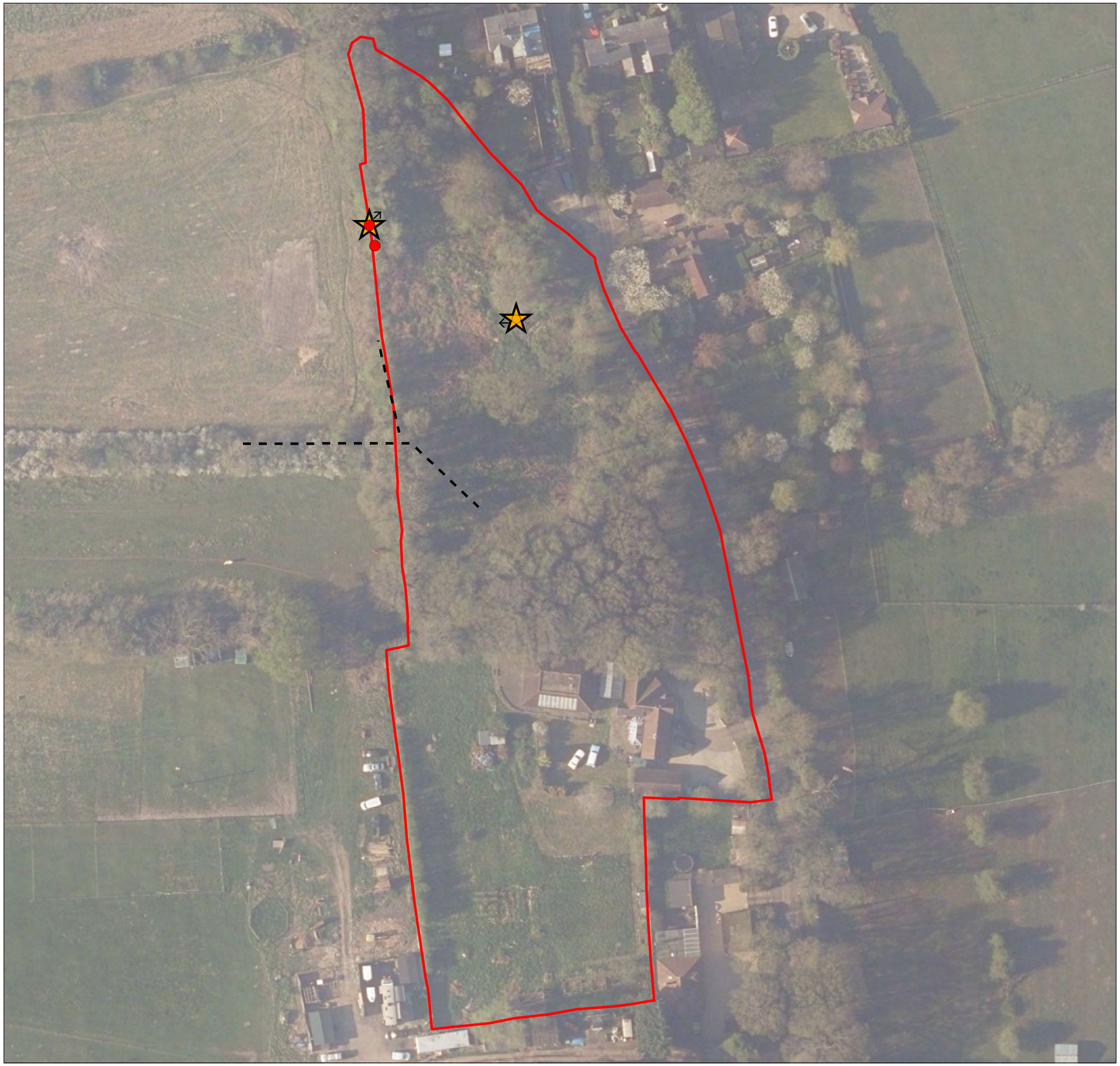
P19/03

Aerial Imagery: (c) Getmapping plc.



MAP 14 Badger Survey Results 2022
(CONFIDENTIAL)

KEY

- Site boundary
- Outlier sett
- Active entrance
- Partially used entrance
- Tunnel direction
- Badger path

SCALE: 1:850 at A3

0 10 20 30 40 50 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 21 March 2023

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P19/03

Aerial Imagery: (c) Getmapping plc.

Appendix 1

Bat Survey Metadata

Table A1.1: Emergence/re-entry survey dates, timings and weather conditions

Date	Building Reference	Sunset /Sunrise Time	Start Time	Finish Time	Temp (°C)	Cloud Cover (%)	Wind (Bf)	Rain
31/05/2022	Tree 4	21:08	20:53	22:38	11	100	1	Dry
06/06/2022	A	21:14	20:59	23:14	14	20	1	Dry
07/06/2022	B & C	04:49	02:49	05:04	10.5	0	0	Dry
05/07/2022	B & C	21:21	21:06	23:21	18	5	0	Dry
06/07/2022	A	04:55	02:55	05:10	12	0	0	Dry
19/07/2022	A & B	21:05	20:50	23:05	24.8	60	1	Dry
20/07/2022	Tree 4	05:06	03:36	05:21	18	20	1	Dry

Table A1.2: Walked transect survey dates, timings and weather conditions

Date	Transect Type	Sunset /Sunrise Time	Start Time	Finish Time	Temp (°C)	Cloud Cover (%)	Wind (Beaufort Scale)	Rain
31/05/2022	Dusk	21:08	21:08	23:08	11	100	1	Dry
26/07/2022	Dusk	20:56	20:56	22:56	19	80	0	Dry

Table A.3. Static Bat Detector Metadata

Recorded from nearest weather station at Aldershot.

Month	Date	Temp (°C)	Rainfall (mm)	Mean Wind (mph)	Sunset	Sunrise
May 2022	31/05/2022	11.2	9.6	6.0	21:08	04:53
	01/06/2022	11.8	3.3	3.6	21:09	04:52
	02/06/2022	12.9	0.0	5.4	21:10	04:51
	03/06/2022	16.4	0.0	9.0	21:11	04:50
	04/06/2022	14.9	2.3	11.6	21:12	04:50
July 2022	27/07/2022	17.1	0.0	5.8	20:57	05:20
	28/07/2022	18.6	0.0	9.1	20:56	05:21
	29/07/2022	19.9	0.0	6.0	20:54	05:23
	30/07/2022	20.1	0.01	8.5	20:53	05:24
	31/07/2022	19.9	0.04	9.4	20:51	05:26

Appendix 2

Reptile Metadata

Table A1.1: Emergence/re-entry survey dates, timings and weather conditions

Date	Start Time	Finish Time	Start Temp (°C)	End Temp (°C)	Weather Conditions
31/05/2022	18:00	18:20	14	14	Dry, light wind
06/06/2022	17:30	18:00	16	16	Dry (rain earlier in day), no breeze overcast
10/06/2022	08:30	09:00	16	17	Dry, no cloud
14/06/2022	08:00	08:35	15	16	Dry, no cloud
17/06/2022	05:45	06:15	15	16	Sunny, partly cloudy
20/06/2022	09:35	10:00	16	17	Sunny, light wind
24/06/2022	07:55	08:25	16	17	Dry, sunny, partly cloudy

Appendix 3
Building Photographs

Photo 1. The Garage (Building B)

Photo 2. The Garage, western elevation

Photo 3. The Garage, wooden cladding western elevation

Photo 4. The Garage interior

Photo 5. The Garage roof

Photo 6. The Pool House (Building C)

Photo 7. Pool House, Gaps under soffit

Photo 8. Pool House interior

Photo 9. The Bungalow (Building A)

Photo 10. Bungalow, Western elevation

Photo 11. Bungalow, northern elevation gaps in cladding (also staining and scratches)

Photo 12. Bungalow, eastern elevation

Photo 14. Bungalow, eastern elevation

Photo 15. Bungalow, Long-Eared droppings by ridge

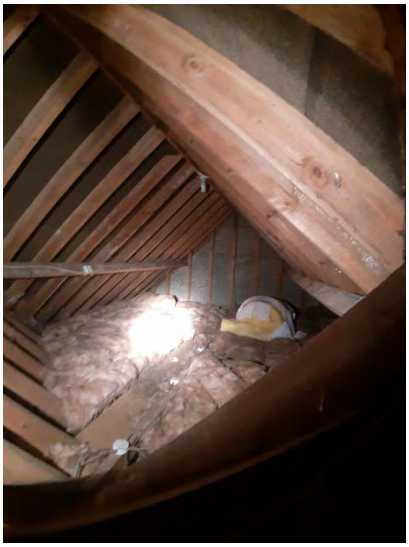


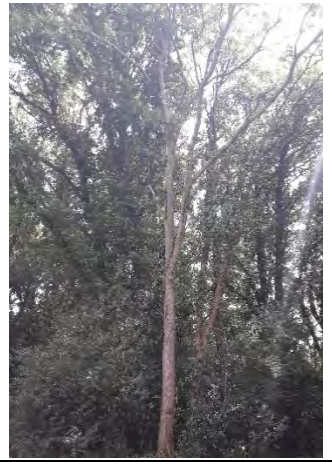
Photo 16. Bungalow roof void, dropping beneath ridge

Photo 17. Bungalow, gap at apex on eastern elevation

Appendix 4

Ground Level Tree Inspection Results

Tree ID (see Map 3)	Tree Plan reference	Tree Species	Scientific Name	Approx. Tree Height (m)	Approx. Tree Diameter at Breast Height (cm)	Features Identified from Ground Level	Feature Height (m)	Feature Aspect	Bat Suitability Following Ground Level Inspection	Photo
T1	T55	Oak	*Quercus robur*	16	730	Crack in a branch	5	north	**Moderate**	 

Tree ID (see Map 3)	Tree Plan reference	Tree Species	Scientific Name	Approx. Tree Height (m)	Approx. Tree Diameter at Breast Height (cm)	Features Identified from Ground Level	Feature Height (m)	Feature Aspect	Bat Suitability Following Ground Level Inspection	Photo
T2	T49	Oak	*Quercus robur*	20	820	Knot hole on the main stem. Back of the hole is visible from the ground but possible it goes down.	6	east	**Low**	
T3	T29	Ash	*Fraxinus excelsior*	20	450	Four Woodpecker holes * evidence of nesting birds in one of them*	8	N	**Moderate**	

Tree ID (see Map 3)	Tree Plan reference	Tree Species	Scientific Name	Approx. Tree Height (m)	Approx. Tree Diameter at Breast Height (cm)	Features Identified from Ground Level	Feature Height (m)	Feature Aspect	Bat Suitability Following Ground Level Inspection	Photo
G1	-	Cluster	-			Dense Ivy	Various	Various	**Low**	

Appendix 5
CONFIDENTIAL Badger Report

INTRODUCTION

Background

Ecological Planning & Research Ltd (EPR) was commissioned by Bourne Homes Ltd in January 2022 to undertake an updated Badger Survey of the Proposed Development at Streamside, Harper's Road, Ash (Hereafter referred to as the 'Site').

An active outlier Badger *Meles meles* sett was identified on Site during the 2017 surveys conducted by Peach Ecology, and signs of activity were recorded across the Site.

This Appendix provides a summary of the survey methodology, results and recommendations for further survey work.

Survey Area

The Site comprises a residential dwelling, garage and other associated buildings and a garden within the southern extent. A small stream, flowing east to west, passes through the centre of the Site. To the north of the stream is a small area of woodland and an improved grassland field with trees around its border. The Survey Area encompassed the entirety of the Site and a suitable buffer zone where access was feasible.

METHODOLOGY

Field Survey

The Badger survey method was conducted following standard guidance (Harris et al 1989[2]; Macdonald et al 1998[3]). The entire Site was systematically walked by Natalie Morrison BSc (Hons) ACIEEM and Ben Kite BSC (Hons) MSc CEcol PIEMA MCIEEM on the 20 January 2022, with particular emphasis on the woodland habitat. An updated walkover was then undertaken by Natalie Morrison on the 26th July 2022.

The survey involved searching for signs of Badger residence and activity, as detailed in **Tables A3.1-A3.3** below.

[2] Harris, S., Creswell. P., and Jefferies, D.J., 1989. *Surveying Badgers*. Mammal Society, London.

[3] Macdonald. D.W., Mace, G. & Rushton, S. 1998. *Proposals for future monitoring of British mammals*. Department of the Environment, Transport and the Regions, and Joint Nature Conservation Committee, London.

Table A3.1: Badger Survey Signs

Sign	Description	Interpretation and Significance
Sett	A complex of burrows (tunnels and chambers) used as a dwelling-place.	Setts are classified according to their size and level of use, providing an indication of their value to the occupiers – see **Tables 2 and 3**. Any sett that is in current use, usually determined as within the last year, is protected by national law.
Entrance	Mouth of a tunnel/ burrow.	Sett classification relies on counting the number of entrances and determining the level of Badger activity at these entrances– see **Tables 2 and 3**.
Day-nest	Above-ground resting-place, often comprising a bed of hay beneath scrub or other cover.	Temporary, usually overnight resting-place, not considered to be given the same level of protection as setts.
Path	Well-worn, determined movement routes, most obvious through long grass, across muddy areas and when there are push-unders.	Badgers are creatures of habitat, using well-established pathways to patrol their territory and reach setts and foraging areas. Continued use of major paths is vital to clan survival.
Push-under	Gap created by a Badger under fencing or other barrier to enable access.	Gives an indication of the level of activity along a path and degree of determination to access an area.
Footprint	Characteristic broad, five-toed, large-padded impression.	Confirms Badger use of an area and gives an indication of the recentness and level of activity along a path, around a sett, or in a foraging area.
Hair	Black and white striped, coarse, angled hairs, often caught on barbs of fencing or thorns, especially at push-unders and found amongst diggings and bedding in sett entrances.	Confirms Badger use of an area and gives an indication of the recentness and level of activity.
Dung	Droppings of a variable consistency, but usually predominantly composed of black matter from earthworms. Also include grain, berries and insect remains. Of a larger size than fox droppings and with a musty, rather than unpleasant, smell.	Confirms Badger use of an area and gives an indication of the recentness and level of activity.
Dung-pit	Small pit that may have originally been a snuffle-hole, but used for the deposition of dung, urine or scent. May or may not contain traces of dung at the time.	Confirms Badger use of an area and gives an indication of the recentness and level of activity.
Latrine	Aggregation of dung-pits, usually showing dung of various ages and with pits containing more than one deposition of dung.	Used by a clan as a social marker of an important feature, including the main sett and path intersections and push-unders, especially near the territory boundary. May be used to mark important foraging resources. At the territory boundary, the neighbouring clan may also contribute to the latrine.
Snuffle-hole	Small pit dug by Badgers in pursuit of retreating earthworms.	Shows Badger use of an area for foraging. Care must be taken interpreting foraging signs, which can be confused with those of other mammals.

Table A3.2: Sett Classification

Sett Type	Average Number of Entrances	Description
Main	15	Sett in continuous use, large, well-established, often extensive and usually with large spoil heaps outside the entrances. There are likely to be well-worn paths leading to the sett and between constituent entrances. It is where the cubs are most likely to be born. There is generally only one main sett per clan of Badgers. Main setts are usually built in very specific locations, where there is the right combination of soil (to facilitate drainage and ease of digging), aspect, slope and cover. Since suitable sett sites are at a premium, main setts are usually long-established, and may have been in use for decades or even centuries.
Annexe	6	Sett closely associated with the main sett (usually within 150m) and linked to the main sett by clear, well-used paths. Annexe setts are not necessarily in use all the time, even if the main sett is very active. If a second litter of cubs are born, this may be where they are reared.
Subsidiary	5	Setts that are not in continuous use and are usually some distance from the main sett (50m or more), with no obvious path connecting them to the main sett. The 'ownership' of such setts can often only be determined by a bait-marking survey.
Outlier	1/2	Small setts that can be found anywhere within a territory and usually have small spoil heaps, indicating that they are not very extensive underground. There are no obvious paths connecting them to other setts, they are only used sporadically and often used by foxes or rabbits when not occupied by Badgers. Again the 'ownership' of such setts can often only be determined by a bait-marking survey.

Table A33: Determining the Level of Badger Activity at Sett Entrances

Activity Level	Description
Well-used	Entrance clear of any debris or vegetation, obviously in regular use and may or may not have been excavated recently.
Partially-used	Entrance not in regular use and may have debris such as leaves and twigs in the entrance, or have moss and/or other plants growing in or around the entrance. Regular use could be resumed after a minimal amount of clearance.
Disused	Entrances that have not been in use for some time, are partially or completely blocked and could not be used without a considerable amount of clearance. If the burrow has been disused for a long time, all that may be visible is a depression in the ground and the remains of the spoil heap, which may be covered in moss or plants.

The Site was examined for Badger presence through the discovery of setts, and their activity levels through identification of field signs (e.g. well-used pathways, foraging holes (snuffle holes), Badger hairs, footprint, dung pits and latrines). Any setts that were discovered were categorised and their entrance numbered and assigned a level of current use.

The survey was undertaken in suitable weather conditions, with no access constraints.

SURVEY RESULTS AND EVALUATION

Field Survey

One active outlier sett was recorded within the north-west corner of the Site with two entrance holes. A third partially-used entrance hole was recorded approximately 30 m east of these entrances. Several mammal runs were recorded throughout the northern extent of the Site, with paths extending within the woodland habitat and heading west within the wider landscape (See **Map 14**). An adult Badger was recorded by the outlier sett during walked bat activities surveys on the 31st May (at 22:32) and 26th July 2022. An adult Badger was also recorded along the north-western boundary at 03:50 during a dawn re-entry survey of Tree 3 on the 20th July 2022.

RECOMMENDATIONS

The Protection of Badgers Act 1992 and the Wildlife & Countryside Act 1981 (as amended) protect Badgers from killing and injury and their setts from removal, damage, obstruction and disturbance.

It is recommended that any works likely to impact these setts are monitored using wildlife cameras to determine which setts (if any) are in current use.

If any setts are confirmed in ‘current use’ and they will be affected by any imminent vegetation clearance or construction works then they will need to be closed under a Natural England licence (which has an implementation window of July-November inclusive).

COMPENSATION & ENHANCEMENTS

As the majority of woodland on Site is to be retained, this will continue to provide foraging opportunities for the local Badger population, whilst retaining woodland edges and hedgerows will maintain connectivity across the site, and the wider landscape.

The addition of new grassland, including landscaped areas, on the Site will create further foraging opportunities. As will the inclusion of native fruit and berry-bearing species, such as Crab Apple, Wild Cherry and Hawthorn, within the landscaping plans.

Appendix 6
Relevant Legislation & Policy

The Environment Act 2021

The Environment Act 2021 places a requirement on the Secretary of State to make regulations setting out long-term targets for air quality, water, biodiversity, resource efficiency and waste reduction. It also requires the Government to produce an Environmental Improvement Plan, to report on progress towards its goals annually, to meet the targets that are set in relation to the improvement of the natural environment and to produce remedial plans should this not be achieved.

In relation to water quality, the Act places new duties on the Government, Environment Agency and sewerage undertakers to reduce the frequency and harm of discharges from storm overflows on the environment, and for monitoring the quality of watercourses affected by those overflows.

It also includes a requirement for an independent Office for Environmental Protection (OEP) to be established, with responsibilities for monitoring and reporting on progress against environmental improvement plans and targets. The OEP will also have investigation and enforcement powers against public authorities failing to comply with environmental law when exercising their functions.

The Act makes provisions for 10% biodiversity gain to become a condition of planning permission in England, through amendments to the Town and Country Planning Act 1990. This will be measured through a biodiversity metric to be published by the Secretary of State. The Act also establishes Biodiversity Net Gain as a requirement for Nationally Significant Infrastructure Projects (NSIPs).

The Act also strengthens the biodiversity duty placed on public authorities through amendments to the Natural Environment and Rural Communities Act 2006 Section 40, requiring such authorities to not only conserve but also enhance biodiversity when exercising their functions. Public authorities will also be required to publish summary reports of actions taken under Section 40 at least every five years.

The Act provides the legal basis for the creation of Local Nature Recovery Strategies (LNRSs) for England (including specifying their content), and the preparation and publication of species conservation strategies and protected sites strategies.

It also creates a new legal vehicle known as a ‘Conservation Covenant’ which is a voluntary, legally binding private agreement between landowners and responsible bodies (the latter designated by the Secretary of State) which conserve the natural or heritage features of the land, enabling long-term conservation. Conservation Covenants are designed to ‘run with the land’ when it is sold or passed on and are intended to eventually become a primary mechanism for the delivery of Biodiversity Net Gain (BNG).

The Act provides new powers for the Government to amend in future Regulation 9 and Part 6 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the ‘Habitats Regulations’) – but “only if satisfied that the regulations do not reduce the level of environmental protection provided by the Habitats Regulations”.

Several aspects of protected species licencing have also been adjusted by the Act. These include the removal of several inconsistencies between the Habitats Regulations and the Wildlife & Countryside Act 1981 (as amended), ensuring that licences issued under the former piece of legislation also apply under the latter, and making it now possible for licences to be issued under Section 16(3) of the Wildlife & Countryside Act 1981 (as amended) for purposes of overriding public interest. The maximum term of a licence that can be issued by Natural England has also been extended from 2 to 5 years.

All biodiversity-related commitments and requirements (as set out in Part 6 of the Act) will come into force upon the adoption of secondary legislation and regulations, following a period of consultation. Timescales are to be confirmed, but this is currently expected to be around late 2023.

The Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) (known as the "Habitats Regulations") were originally drawn up to transpose the European Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the "Habitats Directive") into UK legislation. Following the UK's exit from the European Union, the Habitats Regulations – as amended by Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 – remain in force until such a time as they are superseded by new or updated domestic legislation.

The Habitats Regulations provide for the designation of both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) in the UK, which previously formed part of the Natura 2000 network of protected areas across Europe and are now part of the UK's "National Sites Network". New National Sites may be designated under the Regulations.

The Regulations also prohibit certain actions relating to European Protected Species (EPS), which include *inter alia* Hazel Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus*, European Otter *Lutra lutra* and all native species of bat.

Further information on SPAs, SACs and European Protected Species is provided in the relevant sub-sections of this Appendix.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 is the principal mechanism for the legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. Certain species of bird, animal and plant (including all of the European Protected Species listed above) are afforded protection under Schedules 1, 5 and 8 of the Act. Reference is made to the various Schedules and Parts of this Act (**Table A1.1**) in the section of this Appendix dealing with Legally Protected Species. The Act also contains measures for the protection of the countryside, National Parks, Sites of Special Scientific Interest (SSSIs) and public rights of way as well as preventing the establishment of invasive non-native species that may be detrimental to native wildlife.

Table A1.1: Relevant Schedules of the Wildlife & Countryside Act 1981 (as amended)

Schedule	Protected Species
Schedule 1 Part 1	Protects listed birds through special penalties at all times
Schedule 1 Part 2	Protects listed birds through special penalties during the close season
Schedule 5 Section 9.1 (killing/injuring)	Protects listed animals from intentional killing or injuring
Schedule 5 Section 9.1 (taking)	Protects listed animals from taking
Schedule 5 Section 9.2	Protects listed animals from being possessed or controlled (live or dead)
Schedule 5 Section 9.4a	Protects listed animals from intentional damage or destruction to any structure or place used for shelter or protection
Schedule 5 Section 9.4b	Protects listed animals from intentional disturbance while occupying a structure or place used for shelter or protection
Schedule 5 Section 9.5a	Protects listed animals from being sold, offered for sale or being held or transported for sale either live or dead, whole or part
Schedule 5 Section 9.5b	Protects listed animals from being published or advertised as being for sale
Schedule 8	Protects listed plants from: intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
Schedule 9	Prohibits the release of species listed in the Schedule into the wild.
Schedule 9a	Allows environmental authorities to issue species control orders to landowners, obliging them to control/eradicate invasive and/or non-native species.

Further information on legally protected species, designated wildlife sites and invasive non-native species is provided in the relevant sub-sections of this Appendix.

Countryside & Rights of Way Act 2000

Many of the provisions of the Countryside and Rights of Way (CRoW) Act 2000 have been incorporated as amendments into the Wildlife and Countryside Act (1981) and some provisions have now been superseded by later legislation such as The Natural Environment and Rural Communities Act (2006).

The most relevant changes provided by the CRoW Act include the added protection given to SSSIs and other important sites for nature conservation. Importantly, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on conviction of wildlife offences.

The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act 2006 was intended to raise the profile of biodiversity amongst all public authorities (including local authorities, and statutory undertakers) and to make biodiversity an integral part of policy and decision-making processes. The NERC Act also improved wildlife protection by amending the Wildlife and Countryside Act 1981.

Section 40 (S40) of the Act places a 'Biodiversity Duty' on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions. This includes giving consideration to the restoration and enhancement of species and habitats.

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. This was published in 2007 and is commonly referred to as the "S41 list". Public authorities have a responsibility to give specific consideration to the S41 list when exercising their normal functions. For planning authorities, consideration for Species and Habitats of Principal Importance will be exercised through the planning and development control processes. Further information on Species and Habitats of Principal Importance is provided in the relevant sub-sections of this Appendix.

The Water Environment Regulations 2017

Currently, the overriding legislation relating to freshwater is the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. The Regulations set out objectives to deliver a better water environment based upon achieving a 'good status' for freshwater bodies. The concept of 'good status' is a more rigorous measure of environmental quality than previous measures, which now takes into account not just the chemical status but also the ecological health and the extent of artificial physical modification to rivers.

The Regulations are based upon the concept of protecting water through the management of river basin districts (RBDs) and require the implementation of River Basin Management Plans (RBMPs). Regulation 33 requires public bodies to 'have regard' to the RBMP when making planning decisions, for example through the granting of planning permission with appropriate planning conditions and/or obligations. These could require measures to be implemented (e.g. Sustainable Urban Drainage Systems (SUDS), grey water recycling etc.) or funds to be provided for habitat enhancement schemes.

The Regulations also affect planning policy through the implementation of Programmes of Measures for each river basin district. This involves bringing together funding from various sources and co-ordination of the activities of organisations with an interest in the use of land and water, including developers.

SITES DESIGNATED FOR THE CONSERVATION OF NATURE

There is a hierarchy of nature conservation sites which is based on the level of statutory (legal) protection and the administrative level of importance. Other features of nature conservation interest outside designated sites may also be a material consideration in the determination of planning applications.

Statutory Sites: International

Ramsar Sites, Special Areas of Conservation (SAC) and Special Protection Areas (SPA)

The Conservation of Habitats and Species Regulations 2017 (as amended) provide the primary legal basis for the protection of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) in the UK.

SACs are sites which support internationally important habitats and/or species listed as being of Community Importance in the Annexes of the European Habitats Directive 92/43/EEC. SPAs are sites which support internationally important numbers of bird species listed as being of Community Importance in the Annexes of the European Birds Directive 2009/147/EC. Following the UK's exit from the EU, these now form part of the "National Sites" network rather than the EU Natura 2000 network.

Ramsar sites are wetlands of international importance and although not covered under the Habitats Regulations they are, as a matter of national planning policy, subject to the same strict protection as SACs and SPAs. The majority of terrestrial Ramsar sites in England are also notified as SPAs and/or Sites of Special Scientific Interest (SSSIs).

To avoid confusion with the nationally designated sites described below, EPR refers to SACs and SPAs as 'International sites', given the reasons for their designation.

Any plan or project considered likely to affect an International site (SAC, SPA or Ramsar) must be subject to a Habitats Regulations Assessment (HRA), as set out under Regulation 63 (and Regulation 105 in respect of Land Use Plans) of the Habitats Regulations 2017 (as amended) and the National Planning Policy Framework (NPPF) 2021.

The local authority (or other 'competent authority') carries out the HRA, but the onus is on the developer to provide the necessary information to inform this process, usually in the form of a report.

Under the Habitats Regulations 2017 (as amended), the competent authority must determine in the first instance whether a proposed development is likely to have a significant effect on the SAC/SPA, either alone or in combination with other plans and projects. This stage of the HRA process is known as 'screening'.

If a likely significant effect cannot be precluded (screened out) on the basis of objective information, the competent authority must undertake an 'Appropriate Assessment' to fully assess these implications against the site's conservation objectives. A precautionary approach must be taken with respect to determining whether or not there would be a significant effect, and the appropriate nature conservation body (in most cases Natural England) should be consulted. Except in certain exceptional circumstances prescribed by the Regulations where there are imperative reasons of overriding public interest for allowing a development to proceed, the competent authority may not undertake or authorise the plan or project until they have established (based on the conclusions of the Appropriate Assessment) that the activity will not adversely affect the integrity of the SAC/SPA. This should be the case where no reasonable scientific doubt remains as to the absence of such effects.

Regulation 16A of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 sets out the management objectives of the National Site Network, which can be summarised as follows:

- to maintain or, where appropriate, restore habitats and species listed in Annexes I and II of the Habitats Directive within the UK's territory to a favourable conservation status (FCS); and

- contribute to ensuring, in their area of distribution, the survival and reproduction of wild birds and securing compliance with the overarching aims of the Wild Birds Directive.

The appropriate authorities must also have regard to:

- the importance of protected sites in meeting the above objectives, including breeding, moulting, staging and wintering areas for in the case of migratory bird species;
- their importance for the coherence of the national sites network; and
- the threats of degradation or destruction (including deterioration and disturbance of protected features) on SPAs and SACs.

Government guidance[4] also states that competent authorities have a duty to help protect, conserve and restore the designated features of SACs and SPAs when carrying out their statutory work, including taking decisions that might affect a site. They also have a duty to consider how they can help to prevent the deterioration of the site's habitats from human activity or natural changes, including habitats that support designated species, and prevent significant disturbance of the site's designated species from human activity or natural changes.

Competent authorities include (but are not limited to) local planning authorities, councillors, planning committee members and statutory agencies such as Natural England.

Statutory Sites: National

Nationally important sites include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs). A development proposal that is likely to affect a nationally important site will be subject to special scrutiny by the local planning authority and Natural England. Certain operations may be permitted. Any potentially damaging operations that could have an adverse effect directly or indirectly on the special interest of the site will not be permitted unless the reasons for the development clearly outweigh the nature conservation and/or geological value of the site itself and the national policy to safeguard such sites, as set out in Section 15 of the National Planning Policy Framework (NPPF).

Sites of Special Scientific Interest

The Wildlife and Countryside Act 1981 (as amended) and the CRoW Act 2000 provide the primary legal basis for the protection of Sites of Special Scientific Interest (SSSIs). These sites have been designated to capture the best examples of England's flora, fauna, geological or physiographical diversity.

Public bodies have a duty to take reasonable steps to conserve and enhance the special features of sites of special scientific interest (SSSIs) when carrying out their statutory duties and giving others permission for works, such as reviewing planning applications.

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[4] https://www.gov.uk/guidance/duty-to-protect-conserve-and-restore-european-sites

National Nature Reserves

National Nature Reserves (NNRs) are declared under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981, as amended by the Environmental Protection Act 1990. They are managed to conserve their habitats or to provide special opportunities for scientific study of the habitats communities and species represented within them. NNRs represent the very best parts of England's SSSIs. The majority of NNRs also have European nature conservation designations.

Statutory Sites: Regional/Local

Local Nature Reserves

Local Nature Reserves (LNRs) are declared by local authorities under the National Parks and Access to the Countryside Act 1949 as living green spaces in towns, cities, villages and countryside. They provide opportunities for research and education, or for simply enjoying and having contact with nature. LNRs are usually protected from development through local planning documents which may be supplemented by local by-laws.

Non-Statutory Sites

Local Wildlife Sites

Local planning authorities may designate non-statutory sites for their nature conservation value based on important, distinctive and threatened habitats and species within a national, regional and local context. These sites are not legally protected but are given some protection through the planning system. These sites may be declared as 'County Wildlife Sites', 'Sites of Importance for Nature Conservation' (SINCs), or 'Sites of Nature Conservation Importance' (SNCIs) in local and structure plans. Non-statutory sites are a material consideration when planning applications are being determined. The precise amount of weight to be attached, however, will take into account the position of the site in the hierarchy of sites as set out above. Further information is typically provided in local level planning policy.

Nature Conservation in Areas Outside Designated Sites

Various other features exist outside designated sites that are important for the conservation of nature and which are a material consideration in the planning system.

Habitats of Principal Importance in England

Fifty-six habitat types have been identified as Habitats of Principal Importance for the conservation of biodiversity in England under Section 41 of the NERC Act 2006. Although these habitats are not legally protected, the NPPF, Government Circular 06/05, good practice guidance and the NERC Act place a clear responsibility on planning authorities to further the conservation of these habitats. They can be a material consideration in planning decisions, and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent their net loss and to enhance them where possible. Additional guidance to developers is typically provided in local level planning policy.

The S41 list also includes species as explained below under 'Species of Principal Importance in England'.

Networks of Natural Habitats

Networks of natural habitats link sites of biodiversity importance and provide routes or stepping stones for the migration, dispersal and genetic exchange of species in the wider environment. Examples include rivers with their banks, traditional field boundary systems (such as hedgerows), ponds and small woods. Local planning authorities are encouraged through the NPPF to maintain networks by avoiding or repairing the fragmentation and isolation of natural habitats through planning, policies and development control.

Hedgerows

Hedgerows can act as wildlife corridors that are essential for migration, dispersal and genetic exchange of wild species. Hedgerows that qualify as a Habitat of Principal Importance under S41 of the NERC Act 2006 are a material consideration in the planning system.

Under the Hedgerow Regulations 1997, it is an offence to remove a hedgerow classed as 'important' under the criteria set out by the Regulations without submitting a notice to the Local Planning Authority and waiting for their decision. The Regulations are aimed at countryside hedges and do not apply to hedges around private dwellings or where planning permission has been granted for a project that includes hedge removal. Hedgerows that satisfy wildlife, archaeological, historical or landscape criteria qualify as 'important' under the Regulations. If a hedgerow is not important, the Local Planning Authority may not prevent its removal; however, Local Planning Authorities are required under the Regulations to protect and retain important hedgerows unless satisfied that the circumstances justify their removal.

Tree Preservation Orders

Tree Preservation Orders (TPOs) may be declared under the Town and Country Planning Act 1990 and the Town and Country Planning (Trees) Regulations 1999 to protect individual trees and woodlands from development and cutting. TPOs are primarily put in place to preserve amenity or for landscape conservation reasons. The importance of trees as wildlife habitat may be taken into account, but alone is not sufficient to warrant a TPO. For this reason, TPOs do not fit comfortably under the remit of nature conservation and are generally dealt with by an arboricultural consultant rather than an ecologist. Further guidance on TPOs in relation to development is available from the Department for Communities and Local Government.

Ancient Woodland & Veteran Trees

Ancient woodlands are defined as areas continuously wooded since at least 1600 AD. Even an ancient wood which has been replanted may still have remnants of ancient woodland wildlife and historical features and has potential to be restored. Ancient woodland is not a statutory designation and does not provide legal protection, but local authorities are advised under the NPPF and National Planning Practice Guidance (NPPG) not to grant planning permission for any development that would result in the loss or deterioration of ancient woodland, ancient trees or veteran trees unless there are 'wholly exceptional reasons' and 'a suitable compensation strategy in place'. Local Planning Authorities must take into account Natural England and the Forestry Commission's *Standing Advice for Ancient Woodland and Veteran Trees,* available on the www.gov.uk website.

Surface & Ground Waters

Surface waters (including flowing and standing water) and ground water can directly and indirectly impact upon the conservation of nature.

Guidance on pollution prevention is hosted on the Government's website and focuses on regulatory requirements. This covers topics including the prevention of pollution if you are a business, managing business and commercial waste, oil storage, working on or near water, and managing water on land. Careful planning and the application of these guidelines can help reduce the risk of construction and maintenance work causing pollution to surface and ground waters. Some activities with the potential to impact watercourses or groundwater may require consent under the Water Resources Act 1991.

Water Resources Act (WRA) 1991

Under the WRA there is strict regulation of discharges (including sediment, chemicals, nutrients) to rivers, lakes, estuaries and groundwaters. It also aims to ensure that polluters cover the costs associated with pollution incidents.

PLANNING POLICY & GUIDANCE

This section set out the main planning policy and government guidance that relates to the conservation of nature at all levels of government.

National Level

National Planning Policy Framework 2023

The National Planning Policy Framework (NPPF) 2023 sets out the Government's planning policies for England and how these should be applied in local-level policy and decision making. The NPPF has a clear "presumption in favour of sustainable development" (paragraph 11), with economic, social and environmental objectives. This presumption does not apply where a plan or project has failed the 'appropriate assessment' test under the Habitats Regulations (paragraph 182).

Section 15 of the NPPF provides guidance on conserving and enhancing the natural environment through the planning system, as summarised below.

Firstly, planning policies and decisions should contribute to and enhance the natural and local environment by applying the following key principles:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; and
- preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.

Section 15 also requires planning policies and decisions to limit the impact of artificial light pollution on nature conservation.

Secondly, when determining planning applications, local planning authorities should apply the following key principles:

- if significant harm resulting from a development cannot be avoided, adequately mitigated or (as a last resort) compensated for, then planning permission should be refused;
- proposed development that is likely to have an adverse effect on a SSSI (either individually or in combination with other developments) should normally be refused;
- planning permission should normally be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and ancient or veteran trees, unless there are 'wholly exceptional reasons' and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported, while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

In the case of SSSIs and irreplaceable habitats, exceptions may be made if it can be clearly demonstrated that the benefits of the development, in that location, clearly outweigh the costs in terms of loss or adverse impacts.

Section 15 specifies that listed or proposed Ramsar sites, potential European sites, and sites identified or required as compensatory measures for adverse effects on designated/listed or potential/proposed European and Ramsar sites should be given the same protection as designated European sites.

Section 15 includes the following text on air quality:

- Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas;
- Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications; and
- Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.

The NPPF also sets out principles for plan-making, including the allocation of land with the least environmental or amenity value, and taking a strategic approach to maintaining and enhancing networks of habitats and green infrastructure by identifying, mapping and safeguarding components of local wildlife-rich habitats, wider ecological networks, wildlife corridors and stepping stones, and those areas identified by national and local partnerships for habitat management, enhancement, restoration or creation.

Government Circular 06/05: Biodiversity and Geological Conservation

The Government produced Circular 06/05 to provide guidance on the application of the law to the conservation of nature. Although the document is in the process of being updated, Paragraphs 98 and 99 remain relevant as they set out the following principles and obligations:

- The presence of protected species is a material consideration when determining a development proposal;
- Local authorities should consult with Natural England before granting permission, and consider imposing planning conditions or obligations to secure the long-term protection of the species;
- The presence of protected species, and the extent to which thy may be affected by the proposed development, must be established before permission is granted;
- Given the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development.

MHCLG Planning Practice Guidance

Revised and updated Planning Practice Guidance (PPG) was launched by the Department for Communities and Local Government (now the Ministry of Housing, Communities and Local Government, MHCLG) as a web-based tool in March 2014 to accompany the NPPF. The webpages are set out in a Q&A format. The PPG consolidates and supersedes existing guidance on a range of planning-related topics, clarifies some of the statements made in the NPPF, and provides links to relevant legislation and other sources of advice.

The Guidance outlines a number of important principles in relation to nature conservation and biodiversity, including the need to integrate biodiversity into all stages of the planning process and to consider opportunities to enhance biodiversity and contribute to the Government's commitments and targets set out in *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*.

The guidance also requires that "an ecological survey will be necessary in advance of a planning application if the type and location of development are such that the impact on biodiversity may be significant and existing information is lacking or inadequate", and recommends that "local planning authorities should only require ecological surveys where clearly justified, for example if they consider there is a reasonable likelihood of a protected species being present and affected by development."

Other guidance

In addition to the Planning Practice Guidance, various other forms of guidance and standards are available in relation to biodiversity and the development process. Of particular note is *British Standard BS42020:2013 Biodiversity – Code of practice for planning and development*, published in August 2013, which replaces *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom*.

This document is designed to complement the NPPF and is aimed at organisations concerned with ecological issues throughout the planning process, including local authorities, developers, planners and ecological consultants. It sets out step-by-step recommendations on how to incorporate biodiversity considerations at all stages of the planning process, with a focus on the provision of consistent, high

quality and appropriate ecological information, effective decision making, and high standards of professional conduct and competence.

Regional Level

Regional plans (such as the South East Plan Regional Spatial Strategy) have been revoked, but some specific policies have been saved. The only policy saved from the South East Plan is Policy NRM6, which relates to the Thames Basin Heaths Special Protection Area (TBH SPA).

Local Level

Guildford Borough Council: The Local Plan: Strategy and Sites (2015 - 2034)

POLICY P5: Thames Basin Heaths Special Protection Area

This policy states:

1. Permission will only be granted for development proposals where it can be demonstrated that doing so would not give rise to adverse effects on the ecological integrity of the Thames Basin Heaths Special Protection Area (SPA), whether alone or in combination with other development. Where one or more adverse effects on the integrity of the SPA will arise, measures to avoid and mitigate these effects must be delivered and secured in perpetuity. These measures are unlikely to be acceptable unless agreed with Natural England in accordance with South East Plan policy NRM6.

2. The following principles apply:

   a) There is an “exclusion zone” set at 400m linear distance from the SPA boundary. Permission will not be granted for development that results in a net increase in residential units within this zone. Proposals for other types of development within this zone must undertake Habitats Regulations Assessment to demonstrate that they will not harm the integrity of the SPA.
   b) There is a “zone of influence” between 400m and 5km linear distance from the SPA boundary. Where net new residential development is proposed within the zone of influence, avoidance and mitigation measures must be delivered prior to occupation of new dwellings and in perpetuity. Measures must be based on a combination of 1) the provision, improvement and/or maintenance of Suitable Alternative Natural Greenspace (SANG) and 2) Strategic Access Management and Monitoring (SAMM).
   c) Residential development of over 50 net new dwellings that falls between five and seven kilometres from the SPA may be required to provide avoidance and mitigation measures. This will be assessed on a case-by-case basis and in consultation with Natural England.

SANGs

3. The following principles apply to the provision of SANG:

   a) A minimum of 8 hectares of SANG land (after discounting to account for current access and capacity) should be provided per 1,000 new occupants.
   b) Developments must fall within the catchment of the SANG that provides avoidance, except developments of fewer than 10 net new residential units.
   c) The Council will collect developer contributions towards avoidance and mitigation measures, including SANG (unless bespoke SANG is provided) and SAMM.

d) Developments may secure or provide bespoke SANG. Proposals for new SANGs are unlikely to be acceptable unless agreed by Natural England. Large developments may be required to provide bespoke SANG.

4. Where further evidence demonstrates that the integrity of the SPA can be protected using different distance thresholds or with alternative measures (including standards of SANG provision different to those set out in this policy), the Council will agree these in consultation with Natural England.

POLICY ID4: Green and blue infrastructure Biodiversity

This policy states that:

1. The Council will maintain, conserve and enhance biodiversity and will seek opportunities for habitat restoration and creation, particularly within and adjacent to Biodiversity Opportunity Areas (BOAs). The Council will produce a Green and Blue Infrastructure Supplementary Planning Document (SPD) setting out how this approach will be implemented.

2. New development should aim to deliver gains in biodiversity where appropriate. Where proposals fall within or adjacent to a BOA, biodiversity measures should support that BOA's objectives. The SPD will set out guidance on how this can be achieved.

3. The designated sites in the following hierarchy are shown on the Policies Map or as subsequently updated: (a) European sites: Special Protection Areas (SPA) and Special Areas of Conservation (SAC) (b) National sites: Sites of Special Scientific Interest (SSSI) (c) Local sites: Sites of Nature Conservation Importance (SNCI) and Local Nature Reserves.

4. Permission will not be granted for development proposals unless it can be demonstrated that doing so would not give rise to adverse effects on the integrity of European sites, whether alone or in combination with other development. Any development with a potential impact on SPA or SAC sites will be subject to a Habitats Regulations Assessment.

5. Permission will only be granted for development proposals within or adjacent to national sites where it can be demonstrated that doing so would not be harmful to the nature conservation interests of the site and its function as an ecological unit.

6. Permission will not be granted for proposals that are likely to materially harm the nature conservation interests of local sites unless clear justification is provided that the need for development clearly outweighs the impact on biodiversity. Where this test is met, every effort must be made to reduce the harm to the site through avoidance and mitigation measures.

<u>Guildford Borough Council: The Local Plan: Development Management Policies</u>

Policy P6: Protecting Important Habitats and Species

This policy states that:

1. Development proposals for sites that contain or are adjacent to irreplaceable habitats, priority habitats, habitats hosting priority species, sites designated for their biodiversity value and all aquatic habitats are required to preserve the relevant ecological features through the application of the mitigation hierarchy, and to deliver enhancements to the ecological features in line with

Policy P7. The habitats should be protected by appropriate buffers and, if necessary, barriers in order to prevent adverse impacts, including those resulting from recreational use.

Irreplaceable habitats

2. Irreplaceable habitats will be protected. Development proposals that result in the loss, damage or deterioration of irreplaceable habitats will be refused, unless there are wholly exceptional reasons and the exceptional benefits of the development proposal outweigh the loss of the habitats. Proposals for compensation will not form part of this assessment. However, if wholly exceptional reasons have been demonstrated, a suitable compensation strategy to address the level of harm predicted will be required that delivers appropriate and proportionate compensation in terms of quality and quantity. Proposals for compensation will be additional to other requirements relating to biodiversity, including biodiversity net gain requirements.

3. A habitat will be considered to be irreplaceable if it meets the definition in the NPPF glossary or guidance issued by the Surrey Nature Partnership, or if it is identified as irreplaceable in the Local Nature Recovery Strategy, or it is on land identified in an established inventory, such as the Revised Ancient Woodland Inventory (RAWI).

Ancient woodland and significant trees

4. Where ancient woodland falls within or adjacent to a development site, the following measures are required.

    a. The submission of information setting out the location of all significant ancient or veteran trees (a BS5837 Survey).

    b. An appropriate buffer between new development and the ancient woodland of a minimum of 15 metres or a greater distance if specified by national policy.

    c. A clear separation between the woodland and the rest of the development, delineated by a physical feature such as a wildlife permeable barrier, a cycle lane, path or lightly trafficked road.

    d. Site design that discourages harmful activities such as the use of the woodland as a cut-through where well-used paths do not currently exist.

5. Development proposals for sites that contain significant trees, including ancient and veteran trees and ancient woodland, are expected to incorporate the trees and their root structures and understorey in undeveloped land within the public realm, and to provide green linkages between them.

Priority species and habitats

6. Development proposals are required to protect and enhance priority species and habitats. They include:

    a. Species and Habitats of Principal Importance for Conservation (of biological diversity in England);

b. species and habitats identified as priorities in the Local Nature Recovery Strategy and strategies produced by Natural England and the Surrey Nature Partnership;

c. wildlife corridors and stepping-stones as defined by the NPPF or identified in the Local Nature Recovery Strategy, in Development Plan Documents, by Natural England, in Supplementary Planning Documents and in Surrey Nature Partnership documents; and

d. compensatory habitat sites and biodiversity net gain sites.

Policy P7: Biodiversity in New Developments

General principles

1. Development proposals, including those exempt from minimum biodiversity net gain standards, are required to seek maximum biodiversity gain on site balanced with delivering other planning priorities and to follow the mitigation hierarchy.

2. Development proposals within or adjacent to a Biodiversity Opportunity Area (BOA) are required to:

    a. contribute towards the achievement of the objectives of the BOA as set out in the relevant BOA policy statement (and its successor revision documents);

    b. protect and enhance designated and priority habitats and species within the BOA; and

    c. improve habitat connectivity across and/or into the BOA.

3. In addition to the BOAs, biodiversity measures are required to align with and deliver the Local Nature Recovery Strategy (to be prepared) and take account of other national, regional and local biodiversity strategies.

4. Major development proposals are required to set out plans for long term management and maintenance of on-site biodiversity.

Planting schemes, landscaping and water management

5. Planting and landscaping schemes, open spaces, Sustainable Drainage Systems (SuDS) and Natural Flood Management measures are expected to incorporate species, habitats and management regimes that provide best biodiversity benefit as set out in BOA policy statements and other strategies.

6. Tree canopies are expected to be retained and new tree planting is expected to focus on the creation of new connected tree canopies and/or the extension of existing canopies, unless doing so would adversely impact on sensitive species or habitats. Tree planting schemes are expected to provide resilience in terms of climate, disease and ageing, incorporating large species with long lifespans where opportunities arise.

7. Planting schemes are expected to use UK sourced, native species, unless imported strains of native species would offer greater resilience and are free from disease.

Measures on building structures

8. Development proposals are required to include appropriate features in or on building structures that support nature, will last for the lifetime of the development and will cater for appropriate species and habitats.

Site design

9. Development proposals are expected to be designed to create areas of new habitat and provide appropriate links and corridors between new and existing habitats, avoiding and reversing fragmentation and species isolation. Development sites and built features are expected to be permeable for wildlife.

10. In areas where invasive species are present, site design should not facilitate their spread. Where invasive species are present on development sites, they should be eradicated, or controlled where eradication is not possible. Planting schemes must not include invasive plants.

11. Major development proposals are expected, and minor development proposals are encouraged, to deliver measures that promote a sense of community ownership of green spaces and habitats.

Biodiversity Net Gain

12. Qualifying development proposals submitted after the national scheme comes into effect are required to achieve a biodiversity net gain of at least 20 per cent, or the advised national minimum amount, whichever is greater, measured using the national biodiversity net gain calculation methodology.

13. Where previously developed land is exempted from biodiversity net gain under the relevant regulations, a minimum net gain will not be required unless the site supports at least one protected or priority species population or habitat, or an assemblage of species with an otherwise demonstrably high biodiversity value. Where these are present, a measurable 20 per cent net gain for relevant habitats will be required.

14. Biodiversity gains are required to be delivered in a manner that is consistent with the biodiversity policies in this plan and LPSS 2019 Policy ID4: Green and Blue Infrastructure so that measures are focused on local priorities and will provide the best biodiversity value.

15. New habitats and habitat improvements that contribute towards the achievement of biodiversity net gain are required to be secured and maintained for at least 30 years, or a period of time set out in national policy or legislation if this is greater.

16. Where the applicant is unable to provide the gains on-site, provide the gains off-site or fund gains off-site on third-party sites, a justified and proportionate financial contribution to fund off-site measures will be secured.

17. Development proposals for the creation of biodiversity sites will be supported where these are well located and will be appropriately managed in order to align with local, regional and national strategies and provide best biodiversity value.

Policy P10: Water Quality, Waterbodies and Riparian Corridors

General principles

1. Development proposals that would result in a deterioration in the chemical or ecological status/potential of a waterbody, or prevent improvements to the chemical or ecological status/potential, will not be permitted.

2. Development proposals that contain or are in the vicinity of a waterbody are required to demonstrate that they have explored opportunities to improve its chemical and ecological status/potential. Where a waterbody is covered by the Water Environment Regulations, proposals are required to align with the objectives of the Thames river basin district River Basin Management Plan.

3. Non-residential developments, excluding essential infrastructure, that would have a very high water usage are expected to include water collection and storage measures sufficient to avoid, or significantly reduce if avoidance is not possible, abstraction from existing surface-level and groundwater resources or recourse to the public water supply.

Development affecting watercourses

4. Development proposals are required to explore opportunities to improve and/or restore the flow and functioning of a watercourse.

5. Development proposals are required to retain or reinstate an undeveloped buffer zone on both sides of a main river measuring a minimum of 10 metres from the top of the riverbank that is supported by a working methods statement detailing how the buffer zone will be protected during construction, and a Landscape and Ecological Management Plan detailing how it will be enhanced in the long-term. For ordinary watercourses, an appropriate buffer is expected that is sufficient to protect and enhance the biodiversity and amenity value of the watercourse.

6. Development proposals that include the culverting of watercourses, hard bank revetment or which prevent future opportunities for de-culverting and naturalisation of watercourse banks will not be permitted. Development proposals are expected to return banks to a natural state.

7. Where barriers to fish movement (e.g. weirs) are present in a watercourse, proposals are expected to include the removal of that barrier, or measures to allow for the natural movement of fish within the watercourse where removal is not feasible.

8. Development proposals are required to identify opportunities for Natural Flood Management, creating wetland features and reconnecting rivers with their floodplains in order to restore natural processes, enhance biodiversity and help manage flood risk.

Ground and surface drinking water

9. Development proposals within Source Protection Zones and Drinking Water Protected Areas are required to demonstrate that they have had regard to all Environment Agency position statements that are relevant to the proposals.

Policy D12: Light Impacts and Dark Skies

1. Development proposals are required to be designed to minimise obtrusive light (light pollution) and the adverse impacts of obtrusive light on sensitive receptors. Consideration must be given to potential adverse impacts on privacy, amenity, and the natural environment, including wildlife, sensitive habitats, and sites designated for their nature conservation value.

2. Proposals for light-generating development, or proposals for light-sensitive development that are likely to be affected by existing artificial lighting, are required to submit a Light Impact Assessment as part of the planning application. Light Impact Assessments are required to clearly detail any potential significant adverse impacts that artificial lighting may have on privacy, amenity, and the natural environment, including wildlife, sensitive habitats and sites designated for their nature conservation value

3. Where potential significant adverse impacts from artificial lighting have been identified, Light Impact Assessments are required to detail the appropriate avoidance and mitigation measures that will be implemented to prevent, avoid and/or mitigate those impacts.

4. Proposals for light-generating development are required to prevent and/or avoid unacceptable light spillage into natural terrestrial and aquatic habitats, or their buffer zones.

5. Where there will be an unacceptable adverse impact on sensitive receptors which cannot be avoided and/or adequately mitigated, the planning application will be refused.

Dark Skies

6. In more remote locations of the Surrey Hills AONB, with darker skies, development proposals that cause light pollution will be resisted.

Policy D17: Renewable and Low Carbon Energy Generation and Storage

1. Proposals for renewable and low carbon energy generation and energy storage development, covering both power and heat, will be supported, with strong support for community-led initiatives.

2. Where such development is proposed in the Green Belt, climate change mitigation and other benefits will be taken into account when considering whether very special circumstances exist.

3. Proposals are required to demonstrate that the design of the scheme has sought to minimise visual impacts and that the management of the site will maximise opportunities for biodiversity while avoiding practices that are harmful to biodiversity.

4. For temporary permissions, provision must be made for the decommissioning of the infrastructure and associated works and the full restoration of the site once operation has ceased.

BIODIVERSITY PLANS AND STRATEGIES

The NERC Act 2006 places a duty on local authorities to have due regard to biodiversity when exercising their normal functions, and the NPPF requires planning policies to “promote the conservation, restoration

and enhancement of priority habitats, ecological networks and the protection and recovery of priority species, and identify and pursue opportunities for securing measureable net gains for biodiversity" (paragraph 174). These targets are set out in a range of biodiversity plans and strategies from the international through to the district level.

An overview of the key biodiversity plans and strategies in the UK, and their implications for development, are set out below.

National level

The *UK Biodiversity Action Plan 2007* (UK BAP) has been superseded by the *UK Post-2010 Biodiversity Framewo*rk and individual national biodiversity strategies. The UK Framework sets out the overarching vision, strategic goals and priority activities for the UK's work towards international biodiversity targets (known as the 'Aichi Targets'), as agreed by 192 parties at the UN Convention on Biological Diversity in 2010.

In England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services* is the national biodiversity strategy, which has the stated mission "(…) to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people." In order to focus activity and assess performance in achieving this mission, Biodiversity 2020 sets out objectives relating to terrestrial and marine habitats and ecosystems, species and people.

Local level

While BAPs at the national level have now been superseded by *the UK Post-2010 Biodiversity Framework* and *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*, many county and district level BAPs still exist.

Biodiversity Net Gain

The Environment Act 2021 makes provisions for 10% biodiversity gain, as measured by a metric (currently published by Defra), to become a condition of planning permission in England. This will come into force upon the adoption of secondary legislation and regulations. Timescales are to be confirmed, but this is currently expected to be around late 2023. A publicly accessible register of Biodiversity Gain Sites will be set up during this time, and the Secretary of State will publish and consult on the biodiversity metric to be used, as well as on the wording of the secondary legislation itself.

The Act specifies that biodiversity gain can be delivered on and/or offsite, and establishes the basis for purchasing off-site credits to meet the 10% obligation if required. Land used to deliver biodiversity gain must be maintained for at least 30 years, and planning conditions will require a biodiversity gain plan to be submitted to and approved by the planning authority prior to commencement of development.

It also clarifies that the baseline biodiversity value of a site should be taken from the date on which planning consent is granted, unless otherwise agreed with the LPA (but not before the secondary legislation comes into force). This excludes any activities undertaken without planning permission (or other relevant permissions) after 30 January 2020 which have had the effect of reducing the biodiversity

value of the land. In such cases, “the pre-development biodiversity value is to be taken to be its biodiversity value immediately before the carrying on of the activities.”

Biodiversity net gain (BNG) is already enshrined in the key principles of the NPPF, and some local planning policies already include a requirement to deliver a minimum net gain figure (typically 10% or 20%). Enhancement measures may not just benefit biodiversity. There are many functional benefits to be won from strategically planned green infrastructure projects such as semi-natural urban green spaces, sustainable drainage schemes (SUDS) and green roofs.