ECOLOGICAL EXPERTISE, EVOLVED

Streamside, Harpers Road, Ash

Ecological Impact Assessment

Prepared on behalf of

Bourne Homes Ltd

Final Report

15 November 2023

19/03-1B

Streamside, Harpers Road, Ash

Ecological Impact Assessment

Report Release Sheet

Draft/Final:	Final Report
Issue Number:	19/03-1B
Date:	15 November 2023
Client:	Bourne Homes Ltd Langborough House Beales Lane Surrey GU10 4PY
Main Author(s):	Natalie Compton BSc (Hons) ACIEEM
Contributors/Surveyors:	Ben Kite BSc (Hons) MSc CEcol PIEMA MCIEEM
Report Prepared for Issue by:	…… Natalie Compton BSc (Hons) ACIEEM
Report Approved for Issue by:	…… Ben Kite BSc (Hons) MSc CEcol MCIEEM PIEMA

Ecological Planning & Research Ltd, The Barn, Micheldever Station, Winchester, Hampshire, SO21 3AR

t. 01962 794720 **e.** info@epr.uk.com **w.** www.epr.uk.com

Company registration number: 8592380

Streamside, Harpers Road, Ash

Ecological Impact Assessment

Contents

MAPS

APPENDICES

Streamside, Harpers Road, Ash
Ecological Impact Assessment

Executive Summary

In 2023, Ecological Planning & Research Ltd (EPR) was commissioned to provide updated ecological advice for a planning application for residential development at Streamside, Harpers Road, Ash.

The Proposed Development includes the provision of 24 residential dwellings with associated infrastructure and landscaping. A series of protected species surveys were carried out within the Site by Peach Ecology in 2017 including Bat surveys (building inspections, Bat activity surveys and Bat emergence surveys of buildings within the Site boundary), breeding Bird surveys, Badger survey, Hazel Dormouse nest tube surveys, and Reptile presence/absence surveys. In 2019 and 2022, EPR carried out an updated Ecological Appraisal in order to update the ecological baseline and to verify if the conditions of the Site had changed significantly in the time lapsed. Updated surveys in relation to bats, reptiles and Badgers were also undertaken by EPR in 2022.

Overall, ecological work conducted to date has confirmed the presence of the following Important Ecological Features within the potential Zone of Influence of the proposals:

- the Thames Basin Heaths Special Protection Area (SPA);
- the Thursley, Ash, Pirbright and Chobham Special Area of Conservation (SAC);
- the Ash to Brookwood Heaths Site of Special Scientific Interest (SSSI);
- an area of Lowland Mixed Deciduous Woodland with the Site;
- an assemblage of bats including roosting bats within the Main Bungalow and Garage; and
- an assemblage of breeding birds.

In addition to this, the presence of a low population of common Reptile species is known within the Site as well as Badger setts and Badger activity with the Site. Mitigation measures have been outlined to ensure legal compliance with respect to these species.

The following report sets out an Ecological Impact Assessment of the Proposed Development with regards to these Important Ecological Impact Features and includes measures to avoid, mitigate and, if necessary, compensate for significant residual effects. Ecological enhancement measures are also proposed to provide biodiversity net gains in line with local and national planning policy.

Subject to implementation of the proposed measures within this Ecological Impact Assessment, the Proposed Development will not result in any significant negative residual effects on the remaining Important Ecological Features within the Site. It will deliver biodiversity net gain through habitat enhancement and creation, as well as by the additional delivery of integrated bird and bat boxes.

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 to verify the baseline conditions of the Site.

1.4 Planning permission for the Site was refused at appeal in July 2019 on the grounds of design, which were found to be in conflict with local policy. Ecology matters, including potential impacts on nearby designated sites, were ultimately resolved and did not form part of the reason for refusal.

1.5 An update Ecological Appraisal was carried out by EPR in January 2022 to update the ecological baseline data. Updated survey work in the relation to bat, reptiles and Badgers were also undertaken in 2022 to inform the proposed mitigation and compensation with respect to the adjusted layout and design of the resubmission.

Site Location and Context

1.6 Streamside lies on the eastern outskirts of Ash, to the south of the A323 (central grid reference SU 90425 50818; **Map 1**). 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.

1.7 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.

1.8 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 (**Map 3**).

1.9 The Site falls within the Thames Basin Lowlands National Character Area, an area characterised by lowlands and flat valley plains, intersected by meandering rivers.

1.10 The bedrock geology of the Site is 'Bagshot Formation – Sand'. The Bagshot Formation is a sand formation that manifests freely draining sandy soils that naturally develop acidic habitats. There are no recorded superficial deposits on the Site.

1.11 The Site is allocated under **Policy A31** of the Guildford Borough Local Plan Strategy and Sites 2015-2034 (Adopted 25th April 2019).

1.12 Directly adjacent to the western boundary of the Site is the Bellway Wildflower Meadow development which is currently under construction. This development is for 154 residential dwellings (with associated access and infrastructure), as part of the wider Policy A31 allocation. Outline planning permission was granted in May 2019 (16/P/01679). With Reserved Matters planning permission approved in July 2020 (19/P/02197).

Outline of the Proposed Development

1.13 The Proposed Development is a residential scheme of 24 dwellings with associated access and landscaping. As part of the proposals, the central woodland is to be retained. An indicative masterplan can be found in **Appendix 1**.

Relevant Legislation, Policy and Guidance

1.14 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).

1.15 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).

1.16 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).

1.17 Further information on relevant nature conservation legislation, planning and biodiversity policy is provided in **Appendix 2**.

2. ASSESSMENT METHODOLOGY

Introduction

2.1 The approach to Ecological Impact Assessment (EcIA) taken in this report accords with guidance presented in the Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland* (CIEEM, 2019).

2.2 In summary, EPR takes the following step-wise approach to EcIA:

- Prediction of the activities associated with a proposed scheme that are likely to generate biophysical changes which may lead to significant effects (either positive or negative) upon Important Ecological Features (IEFs);
- Identification of the likely Zone of Influence (ZoI) of those activities;
- Scoping to select the ecological features (habitats, species, ecosystems and their functions/processes) that are likely to fall within the predicted ZoIs and be affected by the activities;
- Evaluation of IEFs likely to be affected – both negatively and positively;
- Identification of likely impacts (positive and negative) on IEFs, together with an assessment of the geographic level at which effects are likely to be significant;
- Application of the mitigation hierarchy - refinement of the proposed scheme to incorporate impact avoidance and/or mitigation measures for negative effects on IEFs, and enhancements in order to deliver net gains;
- Assessment of the significance of residual effects and identification of any policy drivers for additional mitigation or compensation in the event of residual significant negative effects; and
- Advice on conformance with policy and legislation.

2.3 Further information regarding the methods for ecological evaluation and impact assessment are provided in **Appendix 3**.

Likely Biophysical Changes and Zone of Influence

2.4 The activities associated with the Proposed Development which are likely to lead to biophysical changes, and could accordingly give rise to ecological impacts, are set out in **Table 2.1** below, which is drawn from Box 9 of the EcIA Guidelines (CIEEM, 2019).

2.5 The Zone of Influence (ZoI) of a proposed development is defined by the EcIA Guidelines as *"… the area(s) over which ecological features may be affected by the biophysical changes caused by the proposed project and associated activities"*.

2.6 In this case, the ZoI of the Proposed Development will encompass different areas, and thus potentially impact upon different ecological receptors, depending upon the spatial extent of the relevant biophysical change (e.g. light, noise, habitat loss, recreational disturbance). The ZoI(s) relevant to this assessment are summarised in **Table 2.1** below.

Table 2.1: Activities and Biophysical Changes associated with the Proposed Development which may give rise to ecological impacts, and associated Zone(s) of Influence.

Activity	Potential Impact	Zone of Influence
Site Clearance and Construction Phase		
Access and travel on / off site	Noise / visual / lighting disturbance of vulnerable species	Site and immediately adjacent land
Assembly and storage areas for machines and materials; construction compounds	Loss and fragmentation of habitats Noise / visual / lighting disturbance to vulnerable species	Site and immediately adjacent land
Vegetation clearance, ground, excavation and structural works, demolition and alteration operations	Loss and fragmentation of habitats Damage to vulnerable habitats Direct harm to vulnerable species Noise / visual /vibration/ lighting disturbance to vulnerable species Change to surface and ground water flows Dust generation	Site and immediately adjacent land
Lighting of work area	Disturbance to vulnerable species	Site and immediately adjacent land
Drainage	Change of groundwater flows Change of water quality in groundwater Change in habitats fed by groundwater flows	Site and immediately adjacent land
Operational Phase		
Access and travel on / off site	Noise / visual / lighting disturbance to vulnerable species	Site and immediately adjacent land
Occupation of new houses: urban effects	Noise / visual / lighting disturbance to vulnerable species Loss and fragmentation of habitats by trampling Increased risk of cat predation Degradation and pollution of vulnerable habitats through urban effects (such as fly tipping, introduction of non-native species, arson)	Approximately 400m radius of new housing
Recreation	Fragmentation of habitats by trampling Noise / visual disturbance to vulnerable species by members of the public and/or dogs	Up to around a 5km radius

3. ECOLOGICAL BASELINE

Overview

3.1 The ecological baseline has been compiled following the programme of surveys set out in **Table 3.1** below. Further information regarding the survey work carried out, including methodologies, metadata and results is provided in **Appendix 4**.

3.2 Full details of Peach Ecology survey work can be found within the separate Ecological Assessment (Peach Ecology, 2017).

Table 3.1: Overview of ecological survey programme.

Survey Type	Ecological Consultant	Month	Year
Phase 1 Habitat Survey	Peach Ecology	June	2017
External Building Inspection	Peach Ecology	June	2017
Internal Building Inspection	Peach Ecology	June	2017
Bat Emergence/Re-entry Surveys	Peach Ecology	June – August	2017
Bat Activity Surveys	Peach Ecology	June – October	2017
Reptile Surveys	Peach Ecology	June – November	2017
Bird Surveys	Peach Ecology	June – July	2017
Dormouse Surveys	Peach Ecology	June – November	2017
Badger Survey	Peach Ecology	June	2017
Site Walkover	EPR	January	2019
Update Ecological Appraisal	EPR	October	2019
Update Ecological Appraisal	EPR	January	2022
Update Badger Survey	EPR	January	2022
Update Building Inspection	EPR	May	2022
Ground Level Tree Assessment	EPR	May	2022
Update Emergence/ Re-entry Surveys	EPR	May – July	2022
Update Bat Activity Surveys	EPR	May – July	2022
Automated Static Detector Surveys	EPR	May – July	2022
Badger walkover survey	EPR	July	2022
Update Reptile Survey	EPR	May – June	2022

Ecological Appraisal

3.3 The Update Ecological Appraisal 2022 was the starting point for determining the ecological features potentially needing to be considered within this EcIA.

3.4 A detailed desktop study was carried out as part of the Update Ecological Appraisal to gather contextual ecological and geographical information including a Background Ecological Data Search by Surrey Biodiversity Information Centre (SBIC, 2022). The desktop study did not identify any significant changes to the distribution in protected and notable species which was likely to impact upon the species assemblage on the Site.

3.5 The Update Ecological Appraisal identified that the habitats present on Site had not changed significantly from those described by Peach Ecology (2017) and by EPR in 2019. It was determined that, given the management of the Site (including mowing and periodic scrub removal) the ecological baseline within the Zone of Influence of the proposals is likely to have remained unchanged from that previously reported within the earlier application.

3.6 Following on from the Update Ecological Appraisal and a review of existing survey data, a number of species were also scoped out from the need for further consideration as part of this EcIA.

3.7 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. **As a result, Hazel Dormice are not considered further within this EcIA.**

3.8 The Stream recorded within the Site was not considered suitable for Water Vole *Arvicola amphibious* or Otter *Lutra lutra* due to the lack of vegetation and shallow water levels. The desk study did not return any records of Water Vole or Otter within 2km of the Site in the last 10 years. **As a result Water Vole and Otter are not considered further within the EcIA.**

3.9 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.

3.10 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).

3.11 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.

3.12 Given the lack of records within 500m of the Site and the barrier to the waterbody to the south-west of the Site Great Crested Newts are considered unlikely to be present on Site. **As a result Water Vole and Otter are not considered further within the EcIA.**

3.13 As there is some limited terrestrial habitat for amphibians within the Site precautionary measures for Great Crested Newts will be undertaken as part of the Mitigation Strategy that must be taken to ensure compliance with these are detailed in **Section 7** below.

Designated Sites

3.14 The desktop study identified several designated sites within a 5km radius of the Site, the locations of which are shown on **Map 1.**

Internationally Designated Sites

Thames Basin Heaths SPA

3.15 Part of the Thames Basin Heaths Special Protection Area (SPA) lies within a 5km radius of the Site, approximately 580m north. The is designated because it supports populations of Dartford Warbler *Sylvia undata*, Nightjar *Caprimulgus europaeus* and Woodlark *Lullula arborea*. All of these species are listed under Annex I of The Birds Directive (79/409/EEC as amended by Directive 2009/147/EC).

3.16 The site is protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and is of **International Importance**.

3.17 **Policy P5** of the Guildford Local Plan, and Saved **Policy NRM6** of the South East Regional Spatial Strategy (RSS), state that all new residential development within a 5km radius of the Thames Basin Heaths SPA must provide impact avoidance and mitigation measures to avoid negative impacts on the SPA.

Thursley, Ash, Pirbright and Chobham SAC

3.18 Thursley, Ash, Pirbright & Chobham Special Area of Conservation (SAC) lies within 5km of the Site, approximately 580m north. The area is designated because of the presence of certain habitat types listed on Annex 1 of the Habitats Directive, including Northern Atlantic Wet Heaths, European Dry Heaths and Depressions on peat substrates of the *Rhyncosporion*.

3.19 The site is designated under European legislation and is of **International Importance**.

Nationally Designated Sites

3.20 The desk study returned seven non-statutory designated sites for nature conservation within 5km of the Site.

3.21 Four Sites of Special Scientific Interest (SSSI) fall within 5km of the Site. A brief description of these can be found in **Table 3.2** below.

Table 3.2. SSSI's location within 5km of the Site.

Site Name	Primary Reason for Designation	Condition	Approx. Distance from Site
Ash to Brookwood Heaths	Supports large area of dry heathland	Favourable - Unfavourable, no change	580m
Basingstoke Canal	Supports nationally important aquatic plants and invertebrates	Favourable – Unfavourable, declining	1.3km
Seale Chalk Pit	Geological Interest	Favourable	2.6km
Puttenham & Crooksbury Commons	Supports historic heathland	Favourable – Unfavourable, no change	4.1km

3.22 Three Local Nature Reserves were recorded within 5km of the Site including **Lakeside Park LNR** located 1.5km north-west of the Site, **Snaky Lane LNR** located 3.5km north-west and **Rowhill Copse LNR** located 4.9km west of the Site. The closest of the three LNRs, Lakeside

Park is designated for its wet habitats including river, ponds, lakes, reed beds, orchid meadow and wet woodland known to support Dragonflies, Butterflies and Bats.

3.23 These sites are of **National Importance**.

3.24 The Proposed Development only falls within the SSSI Impact Risk Zone of Ash to Brookwood Heaths SSSI. Any development which results in a total net gain in residential units is considered to increase the risk of a negative effect on this SSSI.

3.25 Ash to Brookwood Heaths, as part of the Thames Basin Heaths SPA, supports ground nesting birds which are particularly susceptible to disturbance. An increase in visitors to this area as a result of additional development is therefore likely to result in an adverse impact on the site and its ecologically sensitive features.

3.26 Given their distance to the Site, the most likely impacts on the remaining SSSI's is through increases in recreational activity.

3.27 Seale Chalk Pit is closed to the public, and therefore impacts arising as a result of new development are not considered likely.

3.28 Given its designation for aquatic ecology, impacts on the Basingstoke Canal are also considered unlikely as a result of the Proposed Development.

3.29 Puttenham Common is actively managed as a nature reserve and is therefore managed with visitor access in mind, thereby minimising impacts of visitors on sensitive receptors.

3.30 **With the exception of Ash to Brookwood Heaths SSSI, the Proposed Development is not anticipated to impact upon the above SSSI's.**

3.31 Potential impacts on Ash to Brookwood Heaths SSSI are considered in **Section 4** below.

3.32 Given their distance to the Site and nature of their designation no impacts are anticipated on the three LNRs. **As a result LNRs are not considered further within this EclA**

Local Wildlife Sites

3.33 A total of 20 Sites of Nature Conservation Importance (SNCI) were identified within 2km of the Site. A summary of the SNCIs are provided in **Table 3.3** below.

Table 3.3. SNCIs within 2km of the Site.

Site Name	Nature Conservation Interest	Approx. Distance and Bearing from Site
Whitegate Copse SNCI	The site consists of a complex of privately owned woods (most of which are ancient semi-natural). In total, more than 300 vascular plant species have been recorded from the SNCI, including a large number of locally rare and scarce species and a county rarity, at its only known west Surrey location. The SNCI is also important for mammals, birds, fungi, bryophytes and invertebrates.	0.6km, S
Green Lane East SNCI	See Whitegate Copse SNCI.	0.8km, S

Kiln Copse SNCI	See Whitegate Copse SNCI.	1.0km, SE
Kiln Copse (North) SNCI	See Whitegate Copse SNCI.	1.0km, SE
Ash Green Wood SNCI	See Whitegate Copse SNCI.	1.3km, S
Highfield Copse (North) SNCI	See Whitegate Copse SNCI.	1.3km, SE
Wyke Wood SNCI	See Whitegate Copse SNCI.	1.3km, NE
Ash Lodge Meadows SNCI	A mosaic of seasonally waterlogged semi-improved mesotrophic grassland, scrub and secondary woodland.	1.4km, SW
Highfield Copse SNCI	See Whitegate Copse SNCI.	1.4km, SE
Wyke School Wood SNCI	The site is important for its large central swathe of relict wet heath and surrounding Oak *Quercus robur* woodland is included within the SNCI boundary.	1.6km, NE
Cardinals Fields SNCI	A mosaic of seasonally waterlogged semi-improved mesotrophic grassland, scrub and secondary woodland.	1.6km, SW
Wyke Churchyard SNCI	The site supports unimproved and semi-improved mesotrophic grassland.	1.7km, NE
The Gold and Lakeside Park SNCI	The site supports a mosaic of open water, stands of emergent vegetation, scrub and grassland.	1.8km, NW
Grubground Copse SNCI	See Whitegate Copse SNCI.	1.8km, SE
Catherine Frith SNCI	See Whitegate Copse SNCI.	1.9km, E
Shawfield Lane Meadow SNCI	Species-rich unimproved mesotrophic grassland.	1.9km, W
Normandy Common SNCI	The site is selected for its mosaic of habitats including pockets of acid grassland, ponds, ditches and woodland. Notable invertebrates recorded on the site include Stag Beetle *Lucanus cervus.*	2.1km, NE
Steel Hill SNCI	Three small areas supporting broad-leaved semi-natural woodland and scrub, plus patches of remnant heath and grassland. Over 110 vascular plants are known from the site which is continuous with the Ash to Brookwood Heaths SSSI. Steel Hill also lies adjacent to the Basingstoke Canal SSSI.	2.2km, N
Inwood Copse and Whitegrass Copse SNCI	See Whitegate Copse SNCI.	2.3km, S
Wanborough Wood SNCI	See Whitegate Copse SNCI.	2.3km, SE

3.34 As SNIC's, these sites are considered to be of **County Importance**.

3.35 The closest of the designated Sites is Whitegate Copse and Green Lane East. The remaining SNCIs are of distances of 1km or more from the Site.

3.36 The most likely impact on these sites is as a result of recreational use by new residents. However, both Sites are privately owned woodland and thus public access is restricted. Based on the distances and nature of the designation of the remaining SNCIs no adverse impacts are anticipated as a result of the Proposed Development.

3.37 **As a result, impacts arising from new residents is not considered likely and as a result Local Wildlife Sites are not considered further within this EcIA.**

Habitats and Vegetation

Desktop Study

3.38 The desk study returned 27 Ancient Semi-Natural Woodland Sites within 2km of the Site. The closest area of Ancient Semi-Natural Woodland is located 75m south of the Site (see **Map 1** for locations).

Field Survey

Buildings and Hardstanding (u1b: Developed Land; sealed surface)

3.39 A number of buildings were recorded within the southern extent of the Site, including the main house, a garage, a pool house and some derelict sheds (**Map 3**). A driveway and paved areas surrounding the buildings were also recorded.

3.40 Building inspections identified the main house, garage and pool house as having varying suitability for roosting bats, whilst the sheds were considered to be of negligible suitability. The main house and garage were found to support roosting bats in surveys undertaken by Peach Ecology in 2017 (see Bat Section below).

Garden with introduced shrub and ruderal vegetation (u1: Built-up areas and gardens)

3.41 The garden to the main residential property within the southern extent of the Site is of little ecological value and is subject to regular mowing. Similarly, whilst some introduced shrub may provide foraging resources for invertebrates and birds, they are not considered to be of any real ecological value. The ruderal vegetation recorded along the southern boundary of the Site comprised largely of Common Nettle *Urtica dioica,* Cleavers *Galium aparine* and Herb Robert *Geranium robertianum* which are common and widespread and is considered to be of low ecological value. Therefore it is considered to be of no more than **Zone of Influence importance**.

Woodland (w1c: Lowland mixed deciduous woodland)

3.42 The north of the Site is predominantly contains deciduous woodland, with a large clearing (**Map 3**). The woodland itself is largely dominated by mature Oak *Quercus robur* and Ash *Fraxinus excelsior*, with elements of understorey comprising of Hazel *Corylus avellana,* Elm *Ulmus minor*, Holly *Ilex aquifolium*, Wild Privet *Ligustrum vulgare*, Hawthorn *Crataegus monogyna*, Field Maple *Acer campestre* and Yew *Taxus baccata,* with climbers such as Honeysuckle *Lonicera periclymenum* and Ivy *Hedera helix*. The ground flora includes Nettle *Urtica dioica*, Hedge Woundwort *Stachys sylvatica*, Bramble *Rubus fruticosus agg*, Wood Avens *Geum urbanum,* Lesser Celandine *Ficaria verna*, Ground Ivy *Glechoma hederacea*, Greater Stitchwort *Stellaria holostea* and Herb-Robert.

3.43 A small number of Ancient Woodland Vascular Plant species (AWVPs) were noted including Holly, Wood Sedge *Carex sylvatica*, Bluebell *Hyacinthoides non-scripta* and Bush Vetch *Vicia sepium*, mainly around the boundaries of the Site.

3.44 Despite this the woodland is recently established, with historical evidence showing it as an open field as recently as the 1940's. The First Edition 1" to the mile Ordnance Survey Map (1845-50) does not show any woodland in this area.

3.45 The 1870-1886 (1:2500), and 1873 (1:10,560) Ordnance Survey Maps, and various other editions of these scales of Ordnance Survey Map up until 1935 all show the northern part of the field as an open farm field without woodland, albeit some of these maps do show some mature trees indicated as being present within the field boundaries themselves.

3.46 The Land Utilisation Map of 1938 keys the Site as arable land.

3.47 Aerial photography taken of the Site in the 1940's shows that the southern section of the northern part of the Site (now covered by mature Oak and Ash) is in the process of becoming wooded, but the remainder of the northern area is still largely an open field (with a handful of visible trees).

3.48 The 1969-1972 (1:2,500) Ordnance Survey Map shows for the first time the whole northern part of the Site as being sufficiently wooded to have been keyed as woodland, albeit the distribution of the symbology indicates uneven/patchy distribution of woodland in this land parcel that appears mainly confined to the peripheries of the northern field.

3.49 The oldest arboreal habitats are confined to the boundaries of the Site, with the area of retained woodland in the southern part of the Northern part, being the 'next oldest' area.

3.50 In addition to this, the woodland is also subject to additional factors that limit its potential to support biodiversity, including the presence of non-native invasive species such as Laurel. The older woodland area has been allowed to grow up into a tall, shaded forest structure which limits light ingress to the understorey and suppresses development of the ground flora and understorey (with the exception of Holly, which further limits light and suppresses diversity when allowed to take over).

3.51 As a result of the above the woodland on Site is considered to be at the 'lower' end of biodiversity in terms of the range of habitats that can be described as Lowland Mixed Deciduous Woodland Section 41 Habitat.

3.52 Considering the above, the woodland is considered to be of **Local Importance** and is therefore an Important Ecological Feature and impacts upon it will be subject to appropriate mitigation measures, as set out in **Section 4**.

3.53 Prescriptions to improve the overall value of the woodland and provide biodiversity net gain in line with national planning policy is detailed in **Section 5** below.

Hedgerows (h2: Hedgerows)

3.54 The hedgerow recorded along the north-west boundary of the Site was dominated by Pedunculate Oak, Ash, Holly and young Elm. This hedgerow is considered to be an old hedgerow of high ecological value, which is supported by the presence of Bluebell within the ground flora.

3.55 The hedgerow adjacent to this section to the south, which connects to the central woodland, is gappy and consists mostly of young trees including Oak and Ash. For this reason, it is of limited ecological value.

3.56 A hedgerow was also recorded within the south-west boundary of the Site and was dominated by Hawthorn and Blackthorn. This hedgerow is considered to be of low ecological value.

3.57 When taking into account all hedgerows on the Site, they are considered to be of no more than **Zone of Influence importance**.

3.58 Prescriptions to retain and enhance the hedgerows within the Site and provide biodiversity net gain in line with national planning policy is detailed in **Section 5** below.

Species poor grassland (g4: Modified grassland)

3.59 The central clearing within the northern extent of the Site is dominated by Perennial Ryegrass *Lolium perenne* and includes species which are indicative of disturbance, such as Cleavers and Common Nettle. Its peripheries are bordered with scrub and occasional trees. This area of grassland is not considered to be of any significant ecological value.

Dense scrub (h3h: Mixed scrub)

3.60 An area of dense scrub and scattered trees was recorded along the southern bank of the stream that passes through the Site. Species recorded within this habitat type included Hazel and Ash. The scrub and scattered trees are considered to be of low ecological value as may provide foraging resources for invertebrates and birds. This area of scrub is considered to be of no more than **Zone of Influence importance**.

Introduced Shrub

3.61 An area of Introduced shrub was also recorded along the southern bank of the Stream. Species recorded included Garden Privet *Ligustrum ovalifolium* and *Mahonia* Sp. Species recorded are non-native ornamental planting with offers negligible ecological value.

Stream (r2b: Other rivers and streams)

3.62 The Stream bisects the Site from east to west and runs along the south-eastern boundary (**Map 3**). Its banks are steep and shaded from dense scrub along its southern edge. As a result of the shaded conditions, parts of the bank are bare. A small amount of brooklime *Veronica beccabunga* was recorded within the stream but no other submerged, emergent or floating aquatic vegetation was recorded. The stream was heavily silted in 2019. When surveyed in 2022 water levels were low and leaf debris was recorded within the Stream.

3.63 The stream is uniform along much of its length, with steep banks, creating a homogenous habitat of little ecological value.

3.64 Given the current poor condition, the stream and its associated habitats are considered to be of **Zone of Influence importance** only and are therefore not considered further within this EclA.

3.65 However, prescriptions are included in **Section 5** to enhance the condition of the stream, and legal considerations are set out in **Section 7**.

Invasive Non-Native Species

3.66 The desk study returned records of the following Invasive Non-Native species within 2km of the Site:

- Nuttall's Waterweed *Elodea nuttallii*;
- Himalayan balsam *Impatien glandulifera*;

- Carolina Water-shield *Cabomba caroliniana*;
- Eastern Grey Squirrel *Sciurus carolinensis*;
- Yellow Archangel *Lamiastrum galeobdolon subsp. Argentatum;*
- Himalayan Cotoneaster *Cotoneaster simonsii*;
- Montbretia *Crocosmia pottsii x aurea = C. x crocosmiiflora*;
- Japanese Knotweed *Reynoutria japonica*;
- New Zealand Pigmyweed *Crassula helmsii*;
- Three-cornered Garlic *Allium triquetrum*; and
- Rhododendron *Rhododendron ponticum*.

3.67 Rhododendron and Cherry Laurel *Prunus laurocerasus* were recorded within the northern extent of the Site in the woodland edge habitat.

3.68 Rhododendron is an Invasive Non-Native species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) which means that it is an offence to plant or otherwise cause the species to grow in the wild.

3.69 Cherry Laurel is also considered an invasive species as it is capable of shading out native species and degrades habitats.

3.70 Spread of all invasive species combined could result in further deterioration of native plant diversity locally with potential impacts significant at the **Local** level.

Fauna

Bats

3.71 The desktop study returned records of at least four bat species (see **Map 2**) within a 2km radius of the Site including:

- Common Pipistrelle *Pipistrellus pipistrellus;*
- Pipistrelle Species *Pipisrellus sp;*
- Brown Long-eared *Plecotus auritus;* and
- Serotine *Eptesicus serotinus.*

3.72 The desktop study returned 43 granted European Protected Species Licences for bats within 5km of the Site, the closest being a licence for the destruction of a resting place for Common Pipistrelle bats (2018-33536-EPS-MIT) located 0.6km from the Site.

3.73 The programme of bat assessment work undertaken by Peach Ecology in 2017 and updated by EPR in 2022 resulted in the identification of:

- A **Brown Long-eared Bat maternity roost** within the roof of the **main bungalow**;
- **Common Pipistrelle day (non-breeding) roost** within the **main bungalow**;
- **Common Pipistrelle day (non-breeding) roost** within the **garage**;
- High levels of Common Pipistrelle foraging activity, including "*as many as 6 or more bats… at one time*";

- 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 and Natterer's *Myotis nattereri*; and
- Occasional activity by Soprano Pipistrelle *Pipistrellus pygmaeus*, Noctule *Nyctalus noctule*, Leisler's Bats *Nyctalus leisleri*, Serotine *Eptesicus serotinus* and Barbastelle *Barbastella barbastellus*.

3.74 Full details of results of the 2022 surveys can be found in the Protected Species Survey Report (EPR, 2022).

3.75 Barbastelle are a nationally rare and declining species and as such are a Species of Principle Importance under Section 41 of the NERC Act (2006). The results of the static detector surveys carried out by Peach Ecology indicate that Barbastelle, either a single individual or different individuals on different occasions, briefly passed through the Site on seven occasions over the course of 4 nights in June 2017. No Barbastelle were recorded in any other month. The scarcity of calls and their timing in relation to typical Barbastelle emergence (24 minutes after sunset, Zeale *et al*, 2012) indicate that the Site does not form part of an important commuting route for Barbastelle.

3.76 The levels of *Myotis* activity recorded are consistent with occasional although not necessarily infrequent foraging by relatively low numbers of *Myotis* species.

Evaluation

3.77 The Site most notably supports a maternity roost of Brown Long-eared Bats, and presents foraging opportunities used extensively by Common Pipistrelle and more moderately by Brown Long-eared and *Myotis* species. Soprano Pipistrelle, Serotine, Noctule, Leisler's and Barbastelle were each recorded infrequently, indicating that the features present within the ZoI have limited importance to the conservation of these species at any scale.

3.78 Using the evaluation method of Wray *et al* (2010) framework leads to a **County** level valuation of both the *Myotis* foraging resource, Brown Long-eared bat maternity roost and **Local** level for Common Pipistrelle day roosts.

3.79 The bat assemblage is therefore considered to be an Important Ecological Feature of value at up to the **County** level, and is considered further below.

Breeding Birds

3.80 The assemblage of birds identified during the desktop study was consistent with the wider landscape, with the general assemblage consisting of garden, woodland and farmland birds (see **Map 2** for species record locations).

3.81 Breeding bird surveys were carried out by Peach Ecology between June and July 2017 (Peach Ecology, 2017).

3.82 A total of 30 bird species were recorded, including 4 amber-listed species (Dunnock *Prunella modularis*, Bullfinch *Pyrrhula pyrrhula*,Song Thrush *Turdus philomelos* and Stock Dove *Columba oenas*). Of these, 25 species are considered as 'breeding species'.

3.83 In addition to this, an incidental recording of a Nightjar *Caprimulgus europaeus* flying over the Site was made during an evening bat survey.

Evaluation

3.84 Nightjar regularly fly up to a few kilometres beyond their breeding sites over a mix of habitats to forage (Alexander & Cresswell, 1990). Given the poor suitability of the habitats on site for this species, it is considered likely that the individual recorded passing through the Site was on a foraging excursion from the nearby Ash to Brookwood Heaths SSSI to the north (where heathland habitat is present) and does therefore not have a bearing on the overall evaluation of the breeding bird assemblage.

3.85 With regard to the evaluation method developed by Fuller (1980 & 1982), adapted with respect to modern breeding bird populations, the breeding bird assemblage is considered to be of **Local Importance.**

Badger

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

3.87 The Badger population is considered to be of **Zone of Influence importance** only. As a result, Badgers are not considered further within this EcIA.

3.88 There are, however, legal obligations with regards to Badgers, and the measures that must be taken to ensure compliance with these are detailed in **Section 7** below.

Reptiles

3.89 The desktop study identified five reptile species within a 2km radius of the Site (see **Map 2**), including Slow Worm *Anguis fragilis*, Grass Snake *Natrix helvetica*, Adder *Vipera berus* and Common Lizard *Zootoca vivipara*.

3.90 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 is highly unlikely as the Site does not contain supporting habitat for this species.

3.91 Peach Ecology carried out a reptile survey on the Site between June and November 2017.

3.92 The surveys recorded Slow Worm and Common Lizard 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).

3.93 The adjacent 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.

3.94 EPR conducted update reptile surveys in 2022 and found the peak count of adult Slow Worms was four, equating to a low Population size. Full details of results can be found in the Protected Species Survey Report (EPR, 2022).

Evaluation

3.95 In 2019, the woodland clearing within the northern parcel had recently been cleared of Bracken and other tall ruderal vegetation that would have been reducing the suitability of the area for reptiles. This area continues to be well managed and cleared at the time of survey in 2022. The grassland sward within the centre of the Site is also regularly mown.

3.96 Given the well managed nature of the Site, and the high numbers of reptiles on the neighbouring site, it is likely that the reptile population identified on the Proposed Development Site was a newly established population, having recently occupied the Site from the adjacent development.

3.97 Since 2017, when the initial surveys were carried out, ongoing management has resulted in a short grassland sward within the woodland clearing, which no longer presents suitable habitat for reptiles. In addition to this, a reduction in scrub habitats around the periphery of the Site has decreased the amount of edge habitats available, therefore further reducing the Sites suitability for reptiles.

3.98 When considering the wider population, the reptile assemblage is considered likely to have been of **Local Importance** prior to its translocation. However, the proportion of this population which inhabits the Zone of Influence for the Proposed Development is likely to be of no more than **Zone of Influence Importance** due to the low levels of habitat available and previous low numbers recorded within this area. As a result, reptiles are not considered further within this EcIA.

3.99 There are, however, legal obligations with regards to reptiles, and the measures that must be taken to ensure compliance with these are detailed in **Section 7** below.

Summary of Important Ecological Features

3.100 With reference to the assessment criteria set out in **Appendix 3**, IEFs that are considered to be of Local importance or greater to be taken forward for impact assessment in **Section 4** are summarised in **Table 3.4** below.

Table 3.4 Important Ecological Features to be considered further in this EcIA.

Feature	Importance
Thames Basin Heaths SPA	International
Thursley, Ash, Pirbright and Chobham SAC	International
Ash to Brookwood Heaths SSSI	National
Lowland Mixed Deciduous Woodland	Local
Bats	County
Breeding Birds	Local
Invasive Non-Native Species	Local

4. IMPACT ASSESSMENT

Introduction

4.1 This section examines the potential for significant ecological impacts and effects on IEFs as a result of the biophysical changes arising from the Proposals, both during the site clearance and construction phase and operational phase. Where impacts are identified, opportunities for impact avoidance and mitigation are explored. If the potential for significant residual effects remains after mitigation, then opportunities for compensation are also set out.

Impact Avoidance by Design

4.2 In accordance with the principle of the mitigation hierarchy, the scheme has been designed to avoid ecological impacts as far as possible in the first instance, thus reducing the need for extensive mitigation measures.

4.3 Impact avoidance measures incorporated into the Proposed Development include:

- Retention of central and northern boundary woodland; and
- Retention of hedgerows.

Mechanisms for Implementing and Securing Mitigation

4.4 Throughout this section reference is made to a suite of plans and strategies which will include and expand upon the key principles of the impact avoidance and mitigation measures described below, and which can be secured through planning conditions or obligations, including:

- Construction Environmental Management Plan (CEMP);
- Lighting Strategy; and
- Biodiversity Management and Enhancement Strategy (BMES).

Impact Assessment

Thames Basin Heaths SPA & Thursley, Ash, Pirbright and Chobham SAC

Assessment of Impacts and Mitigation – Operational Phase

Recreational Impacts

4.5 The Proposed Development will result in an additional 23 dwellings (24 new residential dwellings, including the replacement of the existing 'Streamside' residence) within 5km of Internationally Designated Sites, including the Thames Basin Heaths SPA.

4.6 With the increase in residents in the area as a result of the additional residential dwellings, it can be expected that in the absence of mitigation there may be an increase in the recreational demands of nearby protected sites. An increase in the number of visitors can have detrimental impacts on a site. For example, high foot traffic can result in trampling and ultimately habitat degradation. In addition, ground nesting birds are sensitive to disturbance. An increase in recreation activities, in particular off-lead dog walking, has been shown to result in negative

impacts on populations as a result of reduced fitness and breeding success (Underhill-Day, 2005).

4.7 In order to mitigate the impact of additional visitors to the SPA, provision of Suitable Alternative Natural Greenspace (SANG) will be secured through existing SANG within the vicinity. Three viable options for securing capacity have been identified in privately provided 'bespoke' SANG being delivered nearby in conjunction with other large development proposals.

4.8 The 3 possible SANG options include:

- Bewley SANG;
- Gleeson SANG; or
- Bellway SANG.

4.9 In addition to this, a contribution will be made to Strategic Access Management and Monitoring (SAMM) Strategy which aims to monitor and address the impacts of those who do visit the SPA.

4.10 Whilst there is no specific guidance relating to the required approach to avoid negative impacts on the SAC, the measures delivered to avoid impacts on the SPA will also address potential impacts on the SAC.

4.11 Further detailed assessment to inform a Habitats Regulation Assessment is included within **Appendix 6**.

Ash to Brookwood Heaths SSSI

Assessment of Impacts and Mitigation – Operational Phase

Recreational Impacts

4.12 Any residential development which results in a net gain of dwellings is likely to, unmitigated, have a significant effect on Ash to Brookwood Heaths SSSI. The SSSI, which forms part of the Thames Basin Heaths SPA, is also a nature reserve managed by Surrey Wildlife Trust. In the absence of mitigation, an increase in visitor numbers to the site may result in habitat degradation, negatively impacting the heaths for which the SSSI is designated.

4.13 However, the recreational impact avoidance strategy to be delivered to reduce impacts on the SPA (as outlined above) will also address impacts on the SSSI, which forms part of the SPA (and other designated sites within the Zone of Influence). As a result, significant impacts on these sites are not envisaged.

Lowland Mixed Deciduous Woodland

Assessment of Impacts and Mitigation – Site Clearance and Construction Phase

4.14 Whilst the woodland is due to be retained and does not fall directly within the development footprint, the root system will extend further into the Site, and potentially into the construction area.

4.15 In the absence of mitigation this could result in damage to individual trees, and their root systems resulting in a significant permanent negative impact at the local level.

4.16 A Construction Environment Management Plan (CEMP) will be implemented to ensure impacts are avoided where possible by protecting sensitive areas, notably the Root Protection Areas (RPAs) and canopy, during the construction phase. This will include the provision of a protective fence and the implementation of standard pollution prevention measures.

4.17 With the implementation of this mitigation, **no significant residual impacts** are anticipated.

Bat Assemblage

Assessment of Impacts and Mitigation – Site Clearance and Construction Phase

Removal of Roosts and Suitable Roosting Features

4.18 Unmitigated, the demolition of the Main Bungalow will result in the loss of a confirmed maternity roost for Brown Long-eared Bats and a confirmed day (non-breeding roost) for Common Pipistrelle. The demolition of the garage will result in the loss of daytime roosts for Common Pipistrelle bats. Loss of roosts through conversion and redevelopment is a major cause of decline in these species (BCT, 2010). Although no roost was recorded by Peach Ecology in 2017 or EPR in 2022 within the Pool House, this building is considered suitable to support roosting bats.

4.19 In the absence of mitigation, the loss of the Brown Long-eared maternity roost would result in a **permanent negative impact** significant at the **County level**, whilst the loss of Common Pipistrelle day roosts would result in a **permanent negative impact** significant at the **Local level**.

4.20 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, in accordance with best practice guidelines.

4.21 To compensate for the loss of roosts, bat boxes are to be installed within the 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. 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.

4.22 Providing mitigation as outlined above is implemented, no significant residual impacts are anticipated.

Harm, Death or Disturbance and loss of Potential and Confirmed Bat Roosts

4.23 Should bats be present within roosts at the time of demolition works, there would be a high risk of injury or death to bats. Although the injury or death of individual bats is unlikely to represent a significant impact on the conservation status of the bat assemblage above Zone of Influence level, this would result in an offence under the provisions of the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended).

4.24 Prescriptions for the appropriate timings, supervisions and control of works affecting the buildings with bat roosts will be agreed with Natural England and will become conditions of any issued EPSL.

Loss of Foraging and Commuting Habitat

4.25 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 proposals. However, the Proposed Development will result in some loss of foraging areas, particularly the open grassland in the northern part of the Site.

4.26 In the absence of mitigation this loss of foraging/commuting routes will result in a **permanent negative impact** significant at the **Local** level.

4.27 To compensate for this loss, native species will be included within the landscaping plans which are of benefit to invertebrates. This will in turn provide an additional foraging resource for the local bat assemblage.

4.28 Habitat creation works to be undertaken on the Site (outlined in **Section 5**) will also benefit the invertebrate assemblage on site, and thereby provide benefits to bats.

4.29 With the correct implementation of mitigation, **no significant residual impacts** are anticipated.

Disturbance

4.30 Bats are highly sensitive to light, and therefore insensitive lighting on the construction site may discourage bats from usual commuting routes and foraging areas, as well as negatively impacting known and potential roosts.

4.31 In the absence of mitigation, the lighting of foraging and commuting areas would result in a **temporary negative impact** significant at the **Zone of Influence level only**.

4.32 Illumination of roosts would result in a **temporary negative impact** significant at the **local level**, whilst illumination of the maternity roosts would result in a **temporary impact** significant at the **County level**.

4.33 In order to mitigate against these potential disturbances, a CEMP will be implemented on the construction site, which will include tree protection and measures to reduce the impacts of noise and vibration. A lighting strategy will also be included which will prevent light pollution along retained habitats and known roosts and will aim to minimise the use of unnecessary lighting. This will include a restriction on working hours and lighting restrictions. The CEMP will remain in place throughout the duration of the construction works.

4.34 With the correct implementation of mitigation, **no significant residual impacts** are likely.

Assessment of Impacts and Mitigation – Operational Phase

Light Pollution and Disturbance

4.35 Once complete, the Proposed Development has the potential to result in increased lighting levels within the immediate vicinity of the Site. Due to the light-sensitive nature of bats, if important foraging areas and commuting routes, such as the hedgerows, woodland edge and retained woodland, were to be significantly illuminated, this could deter bats from using an area.

4.36 In the absence of mitigation, this will have a **permanent negative impact** on the bat assemblage, significant the **Local level**.

4.37 To prevent long-term disturbance to the local bat assemblage, a lighting strategy will be implemented which will detail specifications for lighting to minimise impacts and provide detailed plans to ensure sensitive areas are not significantly and unnecessarily illuminated.

4.38 The lighting strategy will take into account the guidance provided in Bats and Lighting (Stone, 2013) and the guidance contained within Bats and Artificial Lighting at Night (2023) (Guidance note 08/23 produced jointly by the Bat Conservation Trust and the Institute of Lighting Professionals).

4.39 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.

4.40 In addition to this sensitive lighting is to be installed within residential gardens, prior to occupation, in an attempt to minimise the risk of homeowners installing potentially disturbing lighting.

4.41 Further details on the lighting strategy can be found in the Biodiversity Management and Enhancement Strategy (EPR, 2023).

4.42 With the correct implementation of an appropriate strategy, **no significant residual effects** on bats are anticipated.

Bird Assemblage

Assessment of Impacts and Mitigation - Site Clearance and Construction Phase

Disturbance

4.43 During the construction phase of the Proposed Development, an increase in noise and vibrations has the potential to negatively impact upon the breeding bird assemblage by deterring birds from the immediate vicinity. Works undertaken during the breeding season (March – mid-September inclusive) will be the most detrimental.

4.44 Those areas most affected will be those which fall directly in, or adjacent to, the construction footprint. The central woodland, which is due to be retained, will likely see lower levels of disturbance but will not remain entirely undisturbed.

4.45 In the absence of mitigation, disturbance during the construction phase is likely to result in a **temporary negative effect** on the bird assemblage, significant at the **Local level**.

4.46 To reduce the impacts of noise, light and vibration during the construction phase, a CEMP will be implemented. This will include a restriction on working hours and lighting restrictions. The CEMP will remain in place throughout the duration of the construction works.

4.47 Subject to the implementation of mitigation, no significant residual effects are anticipated.

Loss of Nesting and Foraging Habitat

4.48 Whilst the majority of woodland and peripheral vegetation on the Site is due to be retained, the Proposed Development will result in the loss of some nesting and foraging opportunities for the local bird assemblage.

4.49 In the absence of mitigation, this will result in a **permanent negative effect** significant at the **Local level**.

4.50 To compensate the loss of nesting opportunities which will arise from removal of vegetation, bird boxes are to be installed within the woodland, and on retained trees around the Site. These nest boxes will comprise a mix of types in order to cater for the range of species recorded on the Site.

4.51 The loss of foraging habitats will be compensated through the provision of native fruit and berry-bearing species within the landscaping plans. In addition to this, new habitat creation (as outlined in **Section 5**) will further provide foraging opportunities, including increasing the invertebrate assemblage which will provide an important foraging resource during the breeding season.

4.52 With the implementation of the above mitigation, the Site will provide more foraging opportunities than currently exist and therefore a **permanent positive impact** is anticipated, likely to be significant at the **Zone of Influence** level.

Assessment of Impacts and Mitigation - Operational Phase

Increased Predation

4.53 Given the nature of the Proposed Development, it can be expected that there will be an increase in the number of domestic pets in the area, most notably domestic cats. This will therefore result in an increase in predation pressure on the bird assemblage.

4.54 As domestic cats are known to roam on average 400m from their homes, in the absence of mitigation, there will be a **permanent negative impact,** significant at the **Zone of Influence** level.

4.55 To reduce the risk of predation, thorny species, such as Hawthorn will be included within the landscaping plans in order to create additional areas of cover for birds and their nests, which will decrease the risk of predation from domestic cats.

4.56 The provision of enhancements designed to benefit the bird assemblage (as outlined in **Section 5** and detailed within the Biodiversity Management and Enhancement Strategy (EPR, 2022)) aims to increase the carrying capacity of the Site for birds by providing additional foraging and nesting opportunities. It can be expected that this will result in an increase in the number of birds within the Zone of Influence, thereby offsetting potential predation by the introduction of a small number of domestic cats.

4.57 Providing mitigation is implemented as above, **no significant residual impacts** on the bird assemblage are anticipated as a result of increased predation.

Invasive Non-Native Species (INNS)

Assessment of Impacts and Mitigation - Site Clearance and Construction Phase

Spread

4.58 During the construction phase of the Proposed Development, spread of Rhododendron would be likely to constitute an offence. The woodland is due to be retained but will not remain entirely undisturbed due to enhancements works which will include removal of any Invasive non-native species, and also the removal of dumped and fly-tipped material.

4.59 Rhododendron is a long-lived, evergreen, woody shrub which spreads via seeds and stem layering. The seeds spread by wind and occasionally in contaminated soil. Regrowth will occur from cut stumps. Rhododendron plants produce seeds at age 10 years or more, usually 12 to 20 years (regrowth from mature cut stumps can produce seeds after 2 years). The seed bank can persist for up to 3 years; however, seeds rarely remain viable for more than 1 year (particularly in wetter soil). Rhododendron can spread rapidly through woodlands forming impenetrable thickets, reducing access and amenity. Once populations become well established and mature, control can become extremely difficult and expensive.

4.60 In the absence of mitigation, during the construction phase spread of an Invasive Species is likely to occur via contaminated soil and plant materials if disturbed during construction. This would result in a **permanent negative effect** on native species and habitats at the **Local level**.

4.61 To reduce the risk of spread, a CEMP will be implemented. The CEMP will include appropriate methods for removal and biosecurity measures to be implemented to prevent spread during construction (e.g. contractors have been made aware of the plant and clean tools/boots/equipment after working in affected areas). The CEMP will remain in place throughout the duration of the construction works.

4.62 Details to control the Rhododendron, and Cherry Laurel, during the construction phase are detailed within the Biodiversity Management and Enhancement Strategy (EPR, 2022). Control measures will include cutting larger plants over winter and stump treatment with herbicide. Any plants removed from the soil should be chipped with the chippings being retained onsite or taken offsite to an appropriately licence landfill.

4.63 Subject to the implementation of mitigation, **no significant residual effects** are anticipated.

Assessment of Impacts and Mitigation - Operational Phase

Control

4.64 Ongoing control measures will be required to control Invasive Non-Native Species one the development is operational. This will include monitoring for regrowth and monitoring for the presence of Rhododendron plants as part of ongoing management of the woodland areas. Control is considered complete once two full growth seasons have passed without regrowth.

4.65 Providing mitigation is implemented as above, **no significant residual impacts** on the bird assemblage are anticipated as a result of increased predation.

Summary of Impact Assessment

4.66 **Table 4.1** below provides a summary of the potential impacts of the Proposed Development on IEFs, opportunities for impact avoidance and mitigation, or compensation where significant residual effects have the potential to remain.

Table 4.1: Summary of Impact Assessment.

Feature	Importance	Unmitigated Impacts	Mitigation	Significance of Residual Effects	Compensation
Site Clearance and Construction Phase					
Lowland Mixed Deciduous Woodland	Local	Damage to root system and trees	Implementation of CEMP to include suitable buffer zones	None	N/A
Bats	County	Injury or death	Supervision of demolition works	None	N/A
		Disturbance	Implementation of CEMP	None	N/A
		Roost loss	Provision of bat boxes	None	N/A
		Loss of foraging habitat	Planting of native species and habitat creation	None	N/A
Birds	Local	Injury, death and/or nest destruction	Checks to be carried out prior to vegetation removal	None	N/A
		Loss of nesting and foraging habitat	Provision of bird boxes. Planting of native species and habitat creation	None	N/A
INNS	Local	Spread of Schedule 9 listed species	Implementation of CEMP with Biosecurity measures	None	N/A
Operational Phase					
Thames Basin Heaths SPA	International	Habitat Degradation	Recreational Impact Avoidance strategy	None	N/A
Thursley, Ash, Pirbright and Chobham SAC	International	Habitat Degradation	Recreational Impact Avoidance Strategy	None	N/A
Ash to Brookwood Heaths SSSI	National	Habitat Degradation	Recreational Impact Avoidance Strategy	None	N/A
Bats	County	Disturbance	Implementation of lighting strategy	None	N/A
Birds	Local	Increased risk of predation	Creation of complex dense habitats including thorny species	ZoI	N/A
INNS	Local	Spread of Schedule 9 listed species	Ongoing monitoring for regrowth	None	N/A

5. BIODIVERSITY NET GAIN

Introduction

5.1 This section describes the way in which the Proposals can achieve biodiversity net gain alongside development, in accordance with the relevant National and Local biodiversity policies and strategies summarised at **Appendix 2**.

Net Gain Calculations

5.2 The Planning Practice Guidance Notes: Natural Environment (GOV, 2021) details the expectations and approach for achieving Biodiversity Net Gain.

5.3 Section 15 of the NPPF provides guidance on conserving and enhancing the natural environment through the planning system and states that planning policies and decisions should contribute to and enhance the natural and local environment through "*minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures".*

5.4 Section 15 also states that "*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."*

5.5 Planning Practice Guidance Notes: Natural Environment (GOV,June 2021) also provides guidance and The Guildford Borough Local Plan 2015-2034, addresses Biodiversity Net Gain in Policy P7: Biodiversity in New Developments: It states:

"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.".

5.6 Furthermore **Policy P7: Biodiversity in New Developments of the** Guildford Borough Local Plan: Development Management Policies states that '

"5. 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."

5.7 In order to demonstrate the application's compliance with this policy, The Biodiversity Metric 4.0 was used to establish the overall biodiversity impact of the Proposed Development. The Pre and Post Development Calculations and Condition Assessment are provided in **Appendix 7**.

5.8 In order to achieve 20% net gain, habitat creation and enhancements have been incorporated throughout the Proposed Development, including the creation and enhancement of Section 41 Priority Habitats.

5.9 With the provision of habitat creation and enhancement on-site as proposed, a Biodiversity Net Gain of **15.79%** can be achieved for Habitat units and **139.00%** for Hedgerow units. A detailed

River Condition Assessment for the Stream element of the proposals has not been carried out due to the only impacts being enhancements.

5.10 In order to achieve a 20% net gain as per the requirements of the Guildford Borough Local Plan an additional 0.2 habitat units are required. The appropriate number of biodiversity units will need to be secured with a local offset provider.

Habitat Creation & Enhancement

5.11 Prescriptions for habitat creation and enhancement, as outlined below, along with details of ongoing habitat management are set out in detail in the Biodiversity Management and Enhancement Strategy (EPR, 2022).

Woodland

5.12 Habitat enhancement and management is to be used to improve the condition of the retained woodland and increase its value to biodiversity.

5.13 Such works include the removal of limited amounts of Holly, tree thinning and rotational coppicing in order to improve light penetration and aid in the establishment of ground flora and understorey.

5.14 The planting of native woodland bulbs/rhizomes, such as Bluebell, will aid in improving ground flora where existing biodiversity is limited.

5.15 Scalloped habitats will be created around the woodland, with transitional habitats to provide opportunities for reptiles and invertebrates.

5.16 The proposals also include the creation and management of new woodland habitats to the south of the stream to be planted with native species of local provenance.

Lowland Acid Grassland

5.17 Ground tests carried out on Site have shown that it is capable of supporting Lowland Dry Acid Grassland, a Habitat of Principal Importance under Section 41 of the NERC Act (2006). This is possible as the site is located over sandy and gravelly substrates that naturally manifest acid grassland and heathy habitats in the absence of artificial influence such as agriculture. Sandy arisings from the development footings can therefore be used to create new areas of acid grassland around the scheme, where there is sufficient light for grassland to develop. Whilst the target will be to create lowland dry acid grassland, on a precautionary basis in the event this created habitat fails to reach full Priority status the development will result in the creation of 0.09ha of other lowland acid grassland.

5.18 The acid grassland will be incorporated into open habitats, including the woodland edge habitats, woodland clearings and areas surrounding the stream (where sufficiently elevated to remain dry).

Hedgerows

5.19 To improve connectivity, and biodiversity value, gaps in existing hedgerows will be filled in using laying or layering where possible.

5.20 Newly created hedgerows of native species, to include Hazel, Blackthorn and Hawthorn.

Stream

5.21 To improve riparian and aquatic habitats within and around the stream, selective vegetation thinning will be carried out around the banks to improve light penetration (in particular, removal of the non-native Garden Privet from the southern bank, to allow light to reach the stream channel), therefore facilitating the growth of aquatic and marginal vegetation. In addition to this, planting will take place along the length of the stream to aid the establishment of aquatic and marginal vegetation.

5.22 To increase the variety of habitats along the length of the stream small areas of the stream's banks will be reprofiled to create a variety of more shallowly sloping gradients.

5.23 New aquatic habitats will be provided by using woody debris to create pools and riffles, slowing the water and increasing the variety of freshwater habitats.

Wildlife Boxes

5.24 To provide additional nesting/roosting opportunities, bird and bat boxes will be incorporated into the Proposed Development. These will include bat and bird boxes integrated into new dwellings which face onto open green spaces, woodland and hedgerows.

5.25 Bat boxes included will be aimed at species known to be present both on Site and within the wider area, to include Pipistrelle *Sp*, Noctule and *Myotis Sp*.

5.26 Integrated bird boxes will be aimed at birds of conservation concern within the area, including House Sparrow *Passer domesticus* and Swift *Apus apus.*

5.27 Tawny Owl *Strix aluco* have been recorded within the wider area, and therefore a Tawny Owl box is to be positioned within the retained woodland in order to provide nesting opportunities for this species.

5.28 Two Kingfisher *Alcedo atthis* nest boxes are to be incorporated into the banks of the stream in order to provide nesting opportunities for the species, which is currently absent from the Site but has been recorded within the area.

5.29 Invertebrate boxes are to be included within the Proposed Development, to provide additional shelter opportunities for the invertebrate assemblage. These will include a variety of boxes to cater for a range of species and further diversity the local assemblage.

Hedgehogs

5.30 Hedgehogs *Erinaceus europarus* are a Species of Principle Importance under S41 of the NERC Act 2006. Therefore, where Hedgehog are likely to be present enhancements should be provided. Whilst no Hedgehogs have been observed on Site, the data returns have identified them within the area, and habitats on Site are suitable.

5.31 Hedgehog boxes will be situated on Site, within a linear feature in a secluded area where they are unlikely to be disturbed. Alongside this, to maintain habitat connectivity between gardens, gaps will be included in garden fences, which can be specifically incorporated into the gravel

boards. The landscaping proposals also provide connectivity around the boundaries of the residential scheme.

Landscaping

5.32 The incorporation of open green spaces within the Proposed Development, including residential gardens, will provide additional foraging opportunities for a range of species, including garden birds identified during the bird surveys.

5.33 Native species will be included within the landscaping plans, particularly fruit and seed-bearing species, to provide foraging opportunities for birds, Badgers and invertebrates, which will in turn benefit the local bat assemblage.

5.34 The formal landscaping around the residential dwellings will also include plants that will be beneficial to invertebrate pollinators.

5.35 Log piles will be created to provide shelter for reptiles. This will also provide invertebrate habitat which will in turn provide foraging opportunities for reptiles, bats and birds.

Biodiversity Metric 4.0

5.36 The Site covers a total area of approximately 1.31 ha. The baseline habitats identified within the Site vary in ecological value. The baseline habitats present within the Site comprises hardstanding (very low distinctiveness) lowland mixed deciduous woodland (high distinctiveness with mixed scrub (medium distinctiveness), vegetated gardens, modified grassland, introduced shrub and tall ruderal vegetations (all low distinctiveness). Other baseline habitats on site include hedgerow and the stream (high distinctiveness).

5.37 Based on available evidence, all baseline habitats were of poor condition (i.e. they are poor/moderate examples of the habitat type in question) except the native species rich hedgerow which is due to be retained (and is of good condition). The Site's lowland mixed deciduous woodlands accrue the highest biodiversity unit pre-development with 2.35, the most of any single habitat type. The respective baseline biodiversity values for habitat units (area-based habitats), hedgerow units and the stream (linear features) are outlined in **Appendix 7**.

5.38 All baseline habitats and habitats retained, created or enhanced are presented within the accompanying Biodiversity Metric 4.0 calculation tool assessment. Condition assessment proformas undertaken for each habitat type to inform the calculation tool is also provided in **Appendix 7**.

5.39 Considering the proposals, the Proposed Development would result in +0.76 biodiversity units for habitat units (area-based habitats), indicating a net gain of 15.79%. The Proposed Development would also result in +1.43 biodiversity units for hedgerows indicating a net gain of 139%. In order to achieve a 20% net gain as per the requirements of the Guildford Borough Local Plan an additional 0.2 habitat units are required. The appropriate number of biodiversity units will need to be secured with a local offset provider.

6. CONSEQUENCES FOR DECISION MAKING

Summary of Mechanisms to Secure Impact Avoidance, Mitigation and Compensation Measures

6.1 The following strategies, which will be secured by planning conditions and/or obligations, will be required to ensure the successful implementation of the impact avoidance, mitigation and compensation measures set out in **Section 4**:

- Construction Environmental Management Plan (CEMP);
- Lighting Strategy; and
- Biodiversity Management and Enhancement Strategy (BMES).

6.2 In additional A European Protected Species Licence (EPSL) will be required for buildings on-site where bat roosts have been identified.

6.3 Legal obligations with regards to protected species, and the measures that must be taken to ensure compliance with these are also detailed in **Section 7** below.

Biodiversity Net Gain

6.4 In accordance with national and local policy, the Proposed Development will deliver biodiversity enhancements to avoid, mitigate and/or compensate for the potential impacts described in **Section 4**, as described in **Section 5**, thereby delivering biodiversity net gain. The enhancement measures are intended to benefit known features of ecological importance present within the ZoI, as well as biodiversity in general, and to contribute towards targets set out within the NPPF and the Guildford Local Plan. Key deliverables include:

- The creation of Lowland Acid Grassland;
- The creation and management of new woodland habitat.
- The restoration and enhancement of Lowland Mixed Deciduous Woodland;
- Enhancement of the stream;
- Creation of new species rich hedgerow and enhancement of existing hedgerows;
- Provision of bat and bird boxes (to be incorporated into new buildings and installed on mature trees);
- Installation of invertebrate boxes;
- Hedgehog boxes to be placed in suitable retained vegetation, and Hedgehog ‘highways’ between residential gardens to maintain connectivity;
- The provision of soft landscaping to include native species, including nut and berry bearing species of benefit to birds and small mammals
- Provision of log piles for hibernating reptiles;

6.5 In order to achieve a 20% net gain as per the requirements of the Guildford Borough Local Plan an additional 0.2 habitat units are which will be secured with a local offset provider.

Conclusion

6.6 This EcIA has predicted that, subject to the implementation of the impact avoidance, mitigation and compensation measures set out in **Section 4**, the Proposed Development will not have significant negative residual effects on IEFs, and will conform to all applicable nature conservation related legislation and policy, as set out at **Appendix 2**.

6.7 As a result of the enhancement measures proposed, biodiversity net gain will also be secured, in accordance with relevant planning and biodiversity policy.

7. LEGAL CONSIDERATIONS

7.1 Should planning permission be granted for the Proposed Development, the following legal considerations will apply, in accordance with the following items of legislation:

- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- Countryside and Rights of Way Act (2000);
- The Natural Environment and Rural Communities (NERC) Act 2006;
- The Protection of Badgers Act 1992;
- The Wild Mammals (Protection) Act 1996;
- The Hedgerow Regulations 1997; and
- Invasive Alien Species (Enforcement and Permitting) Order 2019 (as amended)

7.2 Full details of legislation can be found in **Appendix 2**.

Badger

7.3 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.

7.4 Prior to the start of construction on Site, an update Badger survey will be carried out to ensure no new setts gave 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.

7.5 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.

7.6 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).

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

7.8 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.

7.9 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 CEMP.

Nesting Birds

7.10 Under the Wildlife & Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g. game birds), to intentionally kill, injure or take any wild bird and to take, damage or destroy their nests or eggs. Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) affords extra protection for certain species and applies harsher penalties for offences. Any intentional or reckless disturbance of a Schedule 1 bird, whilst it is nesting or rearing dependent young, constitutes an offence. . Therefore, should planning permission be granted, any vegetation that has the potential to support nesting birds should ideally be removed outside of the breeding bird season (March – mid-September inclusive).

7.11 Where this is not possible, a nesting bird check must be carried out by a suitably experience ecologist within 24 hours before vegetation removal. Should nesting birds be found, works in the immediate vicinity must cease immediately and a suitable buffer area, to be determined by a suitably qualified ecologist, should be put in place around the nest. Works may only recommence when an ecologist has deemed that the nest is no longer active.

Reptiles

7.12 All four species of common and widespread British reptiles are protected under Schedule 5 (Sections 9.1, 9.5a, 9.5b) of the Wildlife and Countryside Act 1981 (as amended) from intentional or reckless killing, injury and trade.

7.13 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^{o}C or above 18^{o}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.
- 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, contained 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.

Great Crested Newts

7.14 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).

7.15 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.

7.16 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.

7.17 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.

7.18 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.

Invasive Non-Native Species

7.19 Rhododendron *Rhododendron ponticum* and Cherry Laurel *Prunus laurocerasus* were recorded within the northern extent of the site in the woodland edge habitat.

7.20 Rhododendron is an Invasive non-native species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) which means that it is an offence to plant or otherwise cause the species to grow in the wild. Cherry Laurel is also considered an invasive species as it is capable of shading out native species and degrades habitats.

7.21 Measures to remove these species are detailed within the Biodiversity Mitigation and Enhancement Strategy (EPR, 2022). Appropriate biosecurity measures must be in place during works to prevent spread during construction (e.g. contractors have been made aware of the plant and clean tools/boots/equipment after working in affected areas). The CEMP will need to reference the presence of this invasive species, including measures to prevent spread during construction.

8. REFERENCES

Alexander, I., & Cresswell, B. (1990). *Foraging by Nightjars Caprimulgus europaeus from their nesting areas.* IBIS. 132(4). Pp 568-574.

BCT. (2010). *Species Factsheet.* Available at: https://www.bats.org.uk/about-bats/what-are-bats/uk-bats

British Geological Survey (accessed March 2019). *The BGS Lexicon of Named Rock Units – Result Details: Folkestone Formation.* Available from : https://www.bgs.ac.uk/lexicon/lexicon.cfm?pub=FO

Chartered Institute of Ecology and Environmental Management (CIEEM) (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland.* CIEEM, Winchester.

GOV. 2021 (2021). P*lanning Practice Guidance*. Available from: https://www.gov.uk/government/collections/planning-practice-guidance [Access 11/03/2022]

Ecological Planning & Research Ltd. (2023). S*treamside, Harpers Road, Ash: Biodiversity Management and Enhancement Strategy.*

Ecological Planning & Research Ltd. (2023). *Streamside, Harpers Road, Ash: Protected Species Report*

Department for Communities and Local Government (2023). *National Planning Policy Framework.*

Guildford Borough Council. (2019). *Guildford Borough Local Plan 2015-2034.* Adopted April 2019

Guildford Borough Council. (2023). *Guildford Borough Council: The Local Plan: Development Management Policies.* Adopted 22 March 2023

HGBI. (1998). *Evaluating Local Mitigation/Translocation Programmes: Maintaining Best Practice and Lawful Standards*

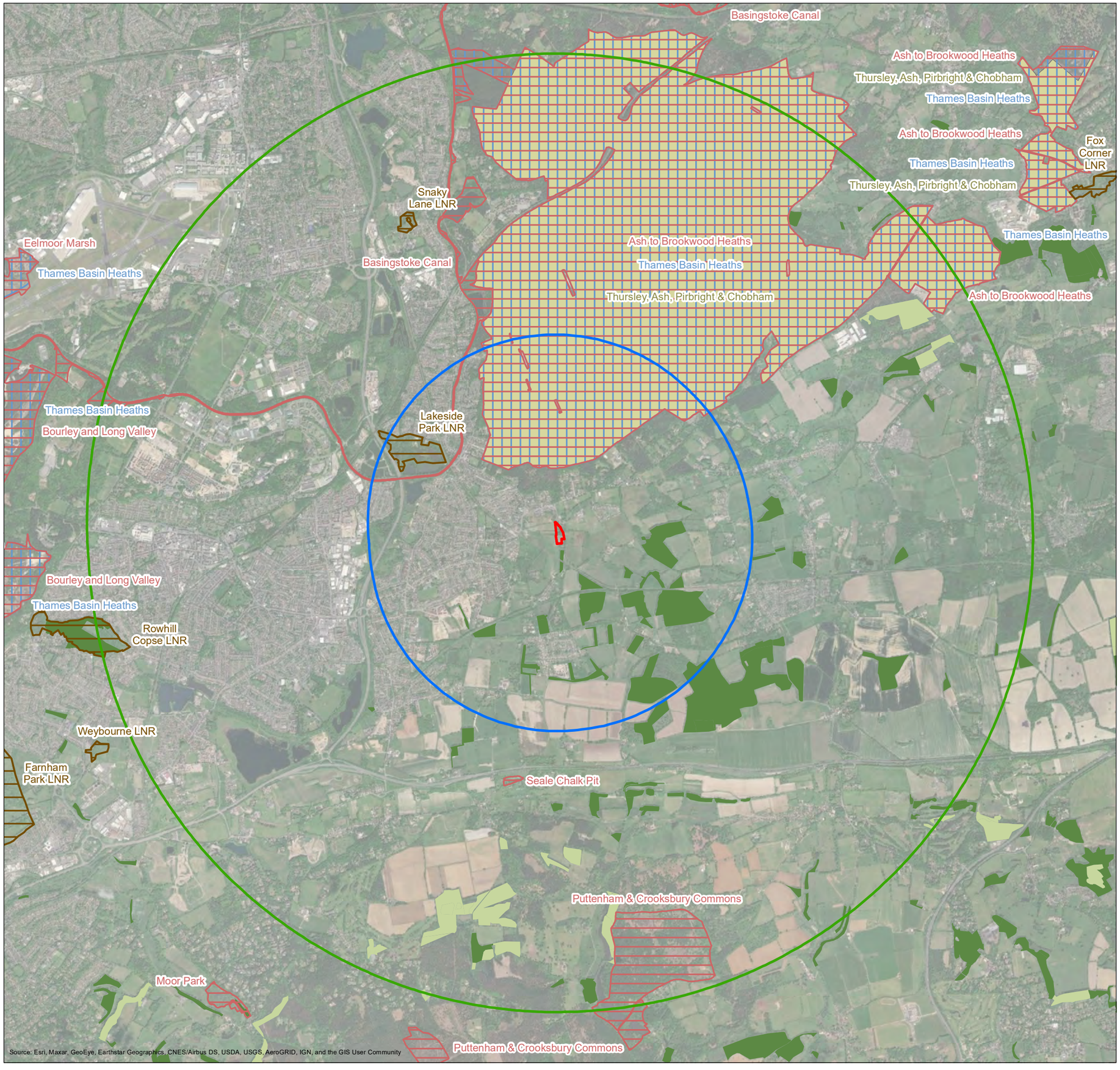
Natural England (accessed October 2019). *National Character Area Profile.* Available from: https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making/national-character-area-profiles

Peach Ecology. (2017). *Streamside and adjacent land, Harpers Road, Ash, GU12 6DB: Ecological Assessment.*

Surrey Biodiversity Information Centre. (2022). *Background Ecological Data Search; Streamside, Harper's Road. Report reference SBIC/21/457*

Zeale, R. K., Davidson-Watts, I,. & Jones, G. (2012). *Home range use and habitat selection by Barbastelle Bats (Barbastella barbastellus): implications for conservation.* Journal of Mammalogy. 93 (4). Pp 1110-1118.

Maps



MAP 1 Site Location & Nature Conservation Designation

KEY

- Site boundary
- 2km linear distance from site boundary
- 5km linear distance from site boundary
- Sites of Special Scientific Interest (SSSI)
- Special Protection Areas (SPA)
- Special Areas of Conservation (SAC)
- Local Nature Reserves (LNR)

Provisional Ancient Woodland Inventory

- Ancient & Semi-Natural Woodland
- Ancient Replanted Woodland

SCALE: 1:40,000 at A3

0 500 1,000 1,500 2,000 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road, Ash

DATE: March 2022

Y:\Streamside, Harpers Road\GIS\E:oiA\Map1_SiteLocation_P1903_1517_140322.mxd

P19/03

MAP 2a Protected & Notable Species

KEY

- Site boundary
- 2km linear distance from site boundary

Amphibians & Reptiles
- Adder
- Common frog
- Common toad
- Common lizard
- Grass snake
- Great crested newt
- Palmate newt
- Slow-worm
- Smooth newt
- Smooth snake

Bats
- Brown Long-eared
- Common Pipistrelle
- Pipistrelle Bat Species
- Serotine

Invertebrates
- Stag Beetle

Mammals
- Eastern Grey Squirrel
- Eurasian Common Shrew
- Roe Deer
- West European Hedgehog
- Record accurate to 1km grid square
- 1km grid

Higher plants - Flowering Plants
- A Flowering Plant
- Bluebell
- Carolina Water-shield
- Himalayan Cotoneaster
- Indian Balsam
- Japanese Knotweed
- Montbretia
- New Zealand Pigmyweed
- Nuttall's Waterweed
- Three-cornered Garlic
- Yellow Archangel

SCALE: 1:16,000 at A3

0 250 500 750 1,000 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road, Ash

DATE: 14 March 2022

Y:\Streamside, Harpers Road\GIS\EcIA\Map2a_SpeciesRecords_P1903_1517_140322.mxd

P19/03

Surrey Biodiversity Information Centre

MAP 2b Protected & Notable Species - Birds

KEY

- Site boundary
- 2km linear distance from site boundary

Birds

- Barn Owl
- Common Reed Bunting
- Cuckoo
- Dunnock
- Eurasian Skylark
- Eurasian Wren
- Goldcrest
- Great Grey Shrike
- Great Tit
- Grey Wagtail
- Hen Harrier
- Hobby
- House Sparrow
- Kestrel
- Mute Swan
- Peregrine
- Pied Wagtail
- Red Kite
- Robin
- Song Thrush
- Starling
- Stock Dove
- Swallow
- Swift
- Tree Pipit
- Treecreeper
- Woodlark
- Record accurate to 1km grid square
- 1km grid

SCALE: 1:17,500 at A3

0 250 500 750 1,000 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road, Ash

DATE: 14 March 2022

Y:\Streamside, Harpers Road\GIS\EcIA\Map2b_SpeciesRecordsBirds_P1903_1517_140322.mxd

P19/03

Surrey Biodiversity Information Centre

MAP 3 Pre Development Habitats

KEY

- Site boundary
- Buildings & Hardstanding (u1b) - 0.1283ha
- Bareground/Fly tipping - 0.0239ha
- Dense Scrub/Scattered Trees (h3h) - 0.0025ha
- Introduced Shrub (u1160) - 0.0567ha
- Lowland Mixed Deciduous Woodland (w1c) - 0.3568ha
- Modified Grassland (g4) - 0.3362ha
- Stream (r2b) - 0.1192km
- Vegetated garden (u1) - 0.3365ha
- Native Hedegrow with trees (h2) - 0.0384km
- Native Hedgerow - Species poor - 0.124km

SCALE: 1:900 at A3

0 10 20 30 40 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 14 March 2023

Y:\Streamside, Harpers Road\GIS\Mitigation Strategy\Map2_HabitatsandFeatures_P1903_2137_140323.mxd

P19/03

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Appendix 1

Site Layout

CDM 2015 Health & Safety Information

This information relates only to 'Significant Hazards' identified on this drawing and is to be read in conjunction with the Designer's Risk Assessment Register.

Northern Site

1no.	2-Bedroom House	Semi-Detached
3no.	3-Bedroom House	Semi-Detached
1no.	4-Bedroom House	Detached
3no.	4-Bedroom House	Detached
Total	**8 Dwellings**	

Streamside Site

2no.	1-Bedroom Flat	Flats
3no.	2-Bedroom House	Semi-Detached
8no.	3-Bedroom House	Semi-Detached
3no.	3-Bedroom House	Detached
Total	**16 Dwellings**	

Key

- Affordable Housing
- Existing Windows
- Bin Storage Positions
- Refuse dragging distances
- Refuse collection point
- Gates
- Pedestrian access

GP	Gate Posts
PRF	Post & Rail Fence
CBF	Close Board Fence
F&RTH	Fire & Refuse Turning Head
CB	Car Barn
X	Blocked Window

Rev	Date	Revision Details	Dr	Ch
K	03.11.23	Draft submission pack	KB	MP
J	26.10.23	Updated to latest comments	GK	AK
I	25.10.23	Updated to latest comments	MP	AK
H	24.10.23	Updated to latest housetypes and highways	MP	AK
G	16.10.23	Housetypes on plot 18 & 19 amended.	AX	AK
F	05.10.23	Housetypes on plot 1 & 2 amended. Layout updated.	AX	AK
E	04.10.23	Updated layout	MP	AK
D	27.09.23	Oakside Cottage details added	MP	AK
C	25.09.23	Layout amended	MP	AK
B	13.09.23	Layout amended	KB	AK
A	04.09.23	Layout amended	KT	AK

London: 76 Great Suffolk Street, London, SE1 0BL
T 0207 928 2773 E london@ecearchitecture.com
Sussex: Brooklyn Chambers, 11 Goring Road, Worthing, West Sussex, BN12 4AP
T 01903 248777 E sussex@ecearchitecture.com
Bristol: Westworks, St. Nicholas House, 31-34 High Street, Bristol, BS1 2AW
T 0117 315 8557 E bristol@ecewestworks.com
ECE Architecture
www.ecearchitecture.com

Client's Name
Bourne Homes

Job Title
Streamside and Land Adjacent, Harpers Road, Ash

Drawing Title
Proposed Site Plan
Streamside

Scale
1:500 @ A1 / 1:1000 @ A3

metres 10 20 30 40 50

Drawn	Checked	Date
KB	AK	16.06.23

Job No	Drawing No	Rev
6502	PL-01	K

Status
PRELIMINARY

CAD Plot date: 3/11/2023 - 10:24:23 6502 ash site layout planning.dwg

Appendix 2
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[1] 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.

[1] 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.

SPECIES PROTECTION

Legally Protected Species

The species listed in the following subsections are protected by law in England. When preparing a planning application, it is essential to determine the presence or likely absence of legally protected species and the extent to which they may be affected by a proposed development. This can best be achieved by undertaking surveys early in the planning process. Avoidance and/or mitigation measures may be required to address any predicted impacts upon protected species and may necessitate a licence. The Government website offers standing advice from Natural England and DEFRA which can be applied to planning applications that affect protected species.

Bats

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.

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

Hazel Dormouse

The Hazel Dormouse *Muscardinus avellanarius* 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 Dormice;
- Intentionally, deliberately or recklessly disturb Dormice in such a way as to be likely to significantly affect the ability of any significant group of Dormice to survive, breed, or rear or nurture their young or the local distribution of or abundance of the species;
- Intentionally or recklessly damage, destroy or obstruct access to places used by Dormice for shelter or protection (whether occupied or not) or intentionally or recklessly disturb a Dormouse whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Dormouse;
- Possess or transport a Dormouse (or any part thereof) unless under licence; and
- Sell or exchange Dormice.

Development proposals affecting the Dormouse require a European Protected Species mitigation licence from Natural England.

Reptiles

All four of the widespread British species of reptile, namely the Common Lizard *Zootoca vivipara,* Slow-Worm *Anguis fragilis*, Grass Snake *Natrix helvetica (*previously *Natrix natrix)* and Adder *Vipera berus*, 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.

Birds

49 species of bird are listed as Species of Principal Importance in England. All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g. game birds), to intentionally kill, injure or take any wild bird and to take, damage or destroy their nests or eggs.

Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) affords extra protection for certain species and applies harsher penalties for offences. Any intentional or reckless disturbance of a Schedule 1 bird, whilst it is nesting or rearing dependent young, constitutes an offence.

Regulation 10 of the Conservation of Habitats and Species Regulations 2017 (as amended) requires appropriate authorities and conservation bodies, in the exercise of their functions, to take such steps that they consider appropriate in order to secure "*the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat (…)*".

European Badger

The Protection of Badgers Act 1992 offers considerable protection to both Badgers and Badger setts. This legislation was enacted to protect the European Badger *Meles meles* 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.

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.

Wild Mammals

All wild mammals are protected against cruelty under the Wild Mammals (Protection) Act 1996, which makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

European Eel

The Eels Regulations 2009 (as amended in 2011) aim to combat the population decline of the European eel *Anguilla anguilla* through protection of migration routes and controls on the numbers of eels allowed to be taken. In order to protect migration routes, any structures which may prevent upstream or downstream migration of eels must be reported to the Environment Agency. Eel passages must be constructed where needed and maintained in a good condition.

Freshwater Fish

The Salmon and Freshwater Fisheries Act 1975 protects freshwater fish, particularly salmon and trout. It prevents the destruction of spawning grounds and the obstruction of migratory passages through the building of weirs, dams etc.

Licences for Development

Licences are required to permit activities prohibited under wildlife legislation, namely the disturbance or capture of protected species or damage to their habitats. Natural England is the licensing authority in England. Licences are only issued for certain purposes, which are set out in the legislation, and only where there is a valid justification. The licences most relevant to development scenarios are discussed below.

European Protected Species Mitigation Licences

A European Protected Species mitigation licence (EPSL) is required from Natural England to undertake any development that is reasonably likely to result in an offence in respect of a European Protected Species protected under Schedule 2 of the Habitats Regulations 2017 (as amended); including *inter alia* all species of bats, Hazel Dormouse, Great Crested Newt and European Otter. Natural England must be satisfied that the following three tests are satisfied before it will issue a licence covering a European Protected Species:

1. The proposal is necessary to preserve public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
2. There is no satisfactory alternative; and
3. The proposal will have no detrimental effect to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Conservation Licences

In the context of development, conservation licences are normally only relevant to mitigation involving the capture of Water Voles or White-Clawed Crayfish. Conservation licences are granted to permit the trapping and translocation of these species on the condition that the development activity is properly planned and executed and thereby contributes to the conservation of the population of the species.

Badger Licences

Licences to disturb Badgers and their setts in respect of development may be issued by Natural England, provided provisions are made to minimise disturbance.

Species of Principal Importance in England

943 species have been identified as being of Principal Importance for the conservation of biodiversity in England under Section 41 (S41) of the NERC Act 2006. The S41 list includes species found in England which have been identified as requiring action under the now superseded UK Biodiversity Action Plan 2007 (plus the Hen Harrier). While many of these species may not be legally protected (some are protected under the legislation described above), there is a clear responsibility on local planning authorities to further their conservation. These species can be a material consideration in development control decisions and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent the net loss of these species, and to enhance their habitats where possible. Additional guidance to developers is typically provided in local level planning policies.

Invasive Non-Native Species

There are a number of species not ordinarily resident in the UK, such as Japanese Knotweed. Those which pose a significant threat, if uncontrolled, to our ecology and economy are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). For an offence to be committed, a species must be released or allowed to escape into the wild. For example, if a plant listed on Schedule 9 is not adequately controlled by a land owner, once they are aware that it is present, and the species is allowed to spread into adjoining areas, then this could constitute an offence.

Japanese Knotweed is also classed as ‘controlled waste’ under the Environment Protection Act 1990 (as amended) and if taken off site it must be disposed of safely at a licensed landfill site. Soil containing rhizome material should also be regarded as contaminated and treated accordingly.

Species Control Orders

A new schedule 9A was inserted into the Wildlife and Countryside Act 1981 (as amended) by Sections 23 to 25 of the Infrastructure Act 2015. This gives environmental authorities (in England the Secretary of State, Environment Agency, Natural England and the Forestry Commission) the power to offer ‘species control agreements’ to landowners in respect of invasive and/or non-native species, such as

Japanese Knotweed. If the landowner does not comply with a species control agreement, or refuses to enter into one, the environmental authority may issue a 'species control order', requiring the owner to eradicate or control the species, or to allow the environmental authority access to carry out these operations themselves.

If the owner does not comply with the species control order, the maximum penalty if convicted is a fine of up to £40,000 and/or imprisonment for up to 51 weeks. The environmental authority can also recover costs for carrying out the necessary work themselves.

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.

Guildford Borough Council: The Local Plan: Development Management Policies

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.

Appendix 3
EcIA Assessment Methodology

Overview

The approach to Ecological Impact Assessment (EcIA) taken in this report takes account of guidance in the Chartered Institute of Ecology and Environmental Management (CIEEM) *'Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland'* (CIEEM, 2018 – updated in 2019). The Preface of the CIEEM EcIA Guidelines states:

"Biodiversity: Code of practice for planning and development published by the British Standards Institute (BS 42020:2013) cites the CIEEM EcIA Guidelines as the acknowledged reference on ecological impact assessment. The Guidelines are consistent with the British Standard on Biodiversity, which provides recommendations on topics such as professional practice, proportionality, pre-application discussions, ecological surveys, adequacy of ecological information, reporting and monitoring."

In accordance with the above guidance, EPR takes the following step-wise approach to EcIA:

- Prediction of the activities associated with a proposed scheme that are likely to generate biophysical changes which may lead to significant effects (either positive or negative) upon Important Ecological Features (IEFs);
- Identification of the likely Zone of Influence (ZoI) of those activities;
- Scoping to select the ecological features (habitats, species, ecosystems and their functions/processes) that are likely to fall within the predicted ZoIs and be affected by the activities;
- Evaluation of IEFs likely to be affected – both negatively and positively;
- Identification of likely impacts (positive and negative) on IEFs, together with an assessment of the geographic level at which effects are likely to be significant;
- Application of the mitigation hierarchy - refinement of the proposed scheme to incorporate impact avoidance and/or mitigation measures for negative effects on IEFs, and enhancements in order to deliver net gains;
- Assessment of the significance of residual effects and identification of any policy drivers for additional mitigation or compensation in the event of residual significant negative effects; and
- Advice on conformance with policy and legislation.

Ecological Evaluation Method

The evaluation method used in this EcIA uses the following geographic scale of importance for ecological features:

- International/European;
- National;
- Regional;
- County (or Metropolitan or Local Authority-wide area);

- Local; and
- Within the Zone of Influence.

With this in mind, features taken forward for detailed impact assessment are those which:

- Are evaluated as being of at least 'Local' ecological importance, or have the potential to be so; and
- Are likely to be affected, positively or negatively, by the proposals.

Ecological features deemed to be of less than 'Local' importance are considered throughout the EcIA process in the context of the national planning policy requirement for 'Biodiversity Net Gain'. The implications for those features that are protected by legislation are also discussed separately at the end of the EcIA report.

Ecological Importance is judged with reference to the following factors:

- Statutory requirements and policy objectives (e.g. site designations or the country lists of habitats and species of principle importance for the conservation of biodiversity); and
- Biodiversity value (e.g. diversity, rarity, scarcity, function within ecosystem, population trends).

Impact Assessment Method

The ecological features selected to be included in the assessment are those which both meet the importance threshold and are likely to be affected by the proposed scheme.

The first stage of the assessment is to determine the potential impacts upon each important ecological feature, with reference to the likely biophysical changes arising from the proposals. Impacts can be characterised according to their extent, magnitude, duration, timing, frequency, reversibility, and whether they are positive or negative.

The likelihood of cumulative impacts with other planned or consented projects is also taken into account at this stage.

An assessment is then made of whether the effect(s) of an impact upon an important ecological feature is likely to be considered 'significant' in EcIA terms.

Significant Effects

The EcIA Guidelines state that:

"Significance is a concept related to the weight that should be attached to effects when decisions are made. For the purpose of EcIA, 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general……in broad terms, significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution)." [our emphasis]

Put simply, an effect is considered significant if it is likely to change the structure and function of defined sites and ecosystems or the conservation status of habitats and species.

Professional judgement about significance is informed by conservation objectives for the affected feature, where available (for example conservation objectives set by Natural England for European designated sites, or in habitat and species action plans). The **'**conservation status' (habitats and species) or the degree to which a feature is exhibiting 'integrity' in terms of structure, function and condition (defined sites or ecosystems) is also considered. The predicted effect of natural and man-made trends in the absence of development is also taken into account in determining the conservation status or integrity of a feature and in considering whether otherwise insignificant effects may contribute to a significant cumulative effect.

The CIEEM Guidelines state:

"The evaluation of significant effects should always be based on the best available scientific evidence. If sufficient information is not available further survey or additional research may be required. In cases of reasonable doubt, where it is not possible to robustly justify a conclusion of no significant effect, a significant effect should be assumed. Where uncertainty exists, it must be acknowledged in the EcIA."

Opportunities for Biodiversity Net Gain

EPR will advise the applicant's team about how a scheme may be refined, in accordance with the mitigation hierarchy, to achieve net gains in biodiversity. Once the biodiversity measures are agreed, EPR will assess any residual effects and advise on the degree of compliance with national and local policy and nature conservation legislation. This process may evolve with the design of the development. In some instances, it may not be possible to avoid all the significant adverse effects or to deliver biodiversity net gain within the development site. In that case, EPR will advise of any opportunities to contribute to wider (offsite) biodiversity strategies which would deliver the appropriate mitigation, compensation and/or enhancement.

The final agreed measures will be set out clearly, so that the LPA can readily understand what planning conditions or legal agreements are required to achieve the necessary level of policy and legal compliance.

Appendix 4
Survey Methodology

The ecological appraisal was completed in order to inform the masterplanning process and establish the appropriate scope of an Ecological Impact Assessment (EcIA) in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for the Ecological Impact Assessment in the UK and Ireland (2018 – updated in 2019). CIEEM's 2017 Guidelines for Preliminary Ecological Appraisal were also taken into account.

DESK STUDY METHODOLOGY

A desk study was carried out in order to gather and refer to existing biodiversity and contextual information with respect to the zone of influence and the wider area. This involved interrogation of internet resources, including the Multi-agency Geographic Information for the Countryside (MAGIC) and National Biodiversity Network (NBN), aerial photos, current Ordnance Survey maps and historical maps.

A request was made to Surrey Biodiversity Information Centre for any existing biological records in their database. The local records search and other desktop research was over a 2km radius for nationally and locally important features and European Protected Species and sites of European significance.

FIELDWORK METHODOLOGY

The field survey was completed by Natalie Compton and Ben Kite on 20 January 2022. The core of the Site and immediately surrounding land was walked recording habitats and features of potential value to wildlife and any evidence of, or potential for, protected or notable species or habitats, in accordance with the methods described below.

Land Use, Habitat Types, Vegetation Communities and Flora

Within the study area the land use, habitat types and landscape features (such as hedgerows and veteran trees) were described and mapped. For each main habitat type the dominant vegetation communities were recorded, along with any notable or indicator plant species, (including invasive species such as Japanese Knotweed where present). A preliminary evaluation of the structure, quality and likely management of each habitat or feature was also carried out.

The survey method used to record this information was based on UK Habitat Classification Methodology (UK Hab Working Group, 2018). Botanical nomenclature in this report follows Stace (2019).

Fauna

The potential for habitats and features to support protected or notable species, or species of principal importance for the purpose of conserving biodiversity, were recorded, as were any signs encountered. The following is a summary of the approach taken for this Ecological Appraisal.

Badgers

Consideration was given to the presence of habitat potentially suitable for supporting Badgers, including woodland and grassland. Potential evidence of the presence of Badgers was looked out for and noted, including earthworks that might be Badger setts, and signs such as dung pits, mammal pathways through ground vegetation and under fences, and hairs on fences.

Bats

Bats use buildings and trees for roosting and breeding and, where present, a preliminary assessment of the potential for these features to support bats was undertaken during the survey. Potential may include gaps beneath roof or hanging tiles, in soffits, or beneath the end of ridge tiles, but also under the edge of felt on flat roofs. In trees potential roosting features include woodpecker holes, splits in branches and peeling bark.

Preliminary evidence was obtained through noting any staining around potential roost entrances, and looking for bat droppings, for example on window sills. A preliminary evaluation was also undertaken of potential bat foraging habitat in the area, including woodland, pasture, hedges and watercourses.

Dormouse

The type and quality of habitat with the potential to be suitable for supporting Dormice, such as woodland and hedgerows, was considered during the survey. In particular the presence of Oak, Hazel and berry-bearing shrubs was noted, and the connectivity of habitat recorded.

Water Voles

The presence and quality of watercourses with the potential to support Water Voles was recorded during the survey. Potential evidence of Water Voles, including burrows in the tops and vertical face of riverbanks, and feeding evidence was recorded where appropriate.

European Otter

Where watercourses are present, a preliminary evaluation of the quality of the riparian habitat for potentially supporting Otters was made. A preliminary search was made for signs of Otters, including spraints which are often left in prominent places on river banks, such as logs and bare patches of ground.

Birds

Any birds seen whilst carrying out the survey were recorded, and the type and quality of habitats available for birds was considered, including vegetation suitable for nesting, and habitat with the potential to support valued species, including breeding and wintering birds.

Amphibians

Consideration was given to the presence of habitat potentially suitable for supporting amphibians, including water bodies (ponds, ditches), woodland, scrub and rough grassland, and features such as log piles that might provide hibernation areas. Where appropriate, effort to gather direct evidence of amphibians was undertaken by making a preliminary search for eggs by examining vegetation within reach of the margins of water bodies, and for resting animals on land by looking under potential refuges, such as stones, wood and rubbish near to water bodies.

Reptiles

The presence and quality of habitat considered potentially suitable for supporting reptiles was recorded. This included areas providing basking and foraging areas, hibernation and breeding sites, such as rough grassland and scrub, banks, burrows, rubble piles, compost heaps, hedgebanks and water bodies.

Invertebrates

Readily identifiable invertebrates seen during the survey were recorded, and habitats and features likely to support noteworthy groups and species were noted, for example herb-rich grasslands, areas of bare ground and deadwood habitats, including woodland and veteran trees.

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 Compton BSc (Hons) ACIEEM and Ben Kite 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 partially-used Outlier sett was recorded within the north-west corner of the Site with two entrance holes. A third 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 A5.1**).

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.

MAP A5.1 Update Badger Survey Results 2022 (Confidential)

KEY

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

SCALE: 1:1,000 at A3

0 10 20 30 40 50 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: 14 March 2022

Y:\Streamside, Harpers Road\GIS\EcIA\MapA5.1_UpdateBadgerSurveyResults 2022_P1903_1517_140322.mxd

P19/03

Appendix 6

Information to inform the Appropriate Assessment of effects on the Thames Basin Heaths SPA and Thursley, Ash, Pirbright and Chobham SAC

INTRODUCTION

The Proposed Development is within 5km of the Thames Basin Heaths (TBH) SPA and Thursley, Ash, Pirbright and Chobham SAC. These International Sites are designated for nature conservation under the Conservation of Habitats and Species Regulations 2017 (as amended).

The following provides detailed information to enable the competent authority (Guildford Borough Council), to carry out the HRA as required by the Conservation of Habitats and Species Regulations 2017 (as amended).

LEGISLATIVE AND POLICY CONTEXT

Legislation

The TBH SPA was originally designated as an SPA under the European Bird's Directive (79/409/EEC) (now amended as Directive 2009/147/EC) due to the presence of three rare species of bird listed on Annex 1 of the Bird's Directive that nest either on or close to the ground, and which are consequently vulnerable to increases in recreational pressure such as dog walking. These birds are the Dartford Warbler *Sylvia undata*, Woodlark *Lullula arborea* and Nightjar.

European Council Directive 92/43/EEC *on the conservation of natural habitats and of wild fauna and flora* (the 'Habitats Directive') subsequently drew SPAs created by the earlier Bird's Directive in the Europe-wide network of protected areas called Natura 2000, and provided them with specific protection from plans or projects that would have adverse implications for their integrity.

The Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations'), transpose the requirements of the Habitats Directive into domestic UK legislation. Regulation 63 of the Habitats Regulations states:

> *"(1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which—*
>
> *(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and*
>
> *(b) is not directly connected with or necessary to the management of that site, **must make an appropriate assessment** of the implications of the plan or project for that site in view of that site's conservation objectives.*
>
> *(2) A person applying for any such consent, permission or other authorisation must provide such information as the competent authority may reasonably require for the purposes of the assessment or to enable it to determine whether an appropriate assessment is required.*

(3) The competent authority must for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time as the authority specifies.

(4) It must also, if it considers it appropriate, take the opinion of the general public, and if it does so, it must take such steps for that purpose as it considers appropriate.

(5) In the light of the conclusions of the assessment, and subject to regulation 64, ***the competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site*** *or the European offshore marine site (as the case may be).*

(6) In considering whether a plan or project will adversely affect the integrity of the site, the competent authority must have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which it proposes that the consent, permission or other authorisation should be given…. "

How to Approach the HRA Process and Comply with the Habitats Regulations

Guidance published by the European Commission entitled *'Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites'* (EC, 2001) provides clarification on meeting the correct stepwise approach to HRA that is required by the Habitats Directive.

The process is split into the following distinct stages that are undertaken in sequence:

1. Screening the need for an Appropriate Assessment;
2. The **Appropriate Assessment**;
3. The Assessment of Alternative Solutions; and
4. Assessment where no alternative solutions exist and where adverse impacts remain (also known as the test for ''Imperative Reasons of Overriding Public Interest'' or IROPI).

Stages 1-3 above are clearly reflected in the extract of Regulation 63 of the Habitats Regulations provided above. Stage 4 (IROPI) is covered by Regulation 64, which has not been provided as it does not apply to the proposals.

Each of the above HRA stages determines the requirement for the next one in the sequence to be carried out. For example, if it is concluded at the Screening stage (1) that the plan or project is unlikely to generate significant adverse effects upon the European site in question, either alone or in combination with other plans and projects, there is no need to proceed to the Appropriate Assessment stage (2), and so on.

Other guidance taken into account includes:

- The European Commission's '*Managing Natura 2000'* document (2018 that provides guidance on some of the key concepts enshrined in Article 6 of the Habitats Directive;

- The *'Communication from the Commission on the Precautionary Principle'* (2000) which provides guidance on the correct application of the precautionary principle, stating that it **should be applied with proportionality and should not aim at zero risk**;

- Circular 06/05 'Biodiversity and Geological Conservation – Statutory Obligations and Their Impact Within the Planning System';

- 'Planning for the Protection of European Sites' (DCLG, 2006); and

- PINS NOTE 05/2018 *'Consideration of avoidance and reduction measures in Habitats Regulations Assessment: People over Wind, Peter Sweetman v Coillte Teoranta'* (Planning Inspectorate 9 May 2018).

The 'Dilly Lane' (2009) and 'People over Wind' (April 2018) Judgments

Up until recently, case law from the UK High Court judgment of J Sullivan in Hart DC v Secretary of State for Communities and Local Government (2008), at which EPR provided the ecological evidence, had led to the established approach in practice that impact avoidance and mitigation measures such as Suitable Alternative Natural Greenspace (SANG), where underpinned by an adequate strategic evidence base to demonstrate their efficacy, could enable the conclusion under Regulation 63(1)(a) above, that the proposals were 'not likely to have a significant effect' on the European Site concerned 'either alone or in combination with other plans and projects'.

The established approach derived from the Dilly Lane Case meant that where impact avoidance and mitigation measures (such as SANG) were put forward as integral parts of a plan or project, **and** where the competent authority was also satisfied that those measures would be effective, deliverable and could be secured, then there was no need for an AA to be carried out and the proposals could be consented.

This approach was based on the presumption that the information available pertaining to the efficacy of the proposed impact avoidance and mitigation measures could, if sufficiently robust, be considered to represent the '**objective information**' referred to by the Court of Justice of the European Union (CJEU) in the Waddenzee case (C-127/02)(discussed below) as being required in order for a competent authority to conclude that a plan or project was not likely to have a significant effect on a European site, either alone or in combination with other plans and projects, at the Screening Stage (1) of HRA.

In April 2018 however, in case C-323/17 of the CJEU (referred to as *'People over Wind')*(the 'PoW judgment'), the CJEU concluded that it was not appropriate to take account of *"…measures intended to avoid or reduce the harmful effects of the plan or project…"* at the Screening stage of the HRA process, and that the efficacy of such measures in preventing an adverse effect on the integrity of a European Site should instead be established as part of an Appropriate Assessment (HRA Stage 2).

In practice, this means that the efficacy of impact avoidance and mitigation measures such as SANG and Strategic Access Management and Monitoring (SAMM) must now be considered and tested through the medium of an AA in order to comply with the judgement of the CJEU.

Although there appear to be some inconsistences between the *People over Wind* judgment and previous CJEU case law, until such time as the CJEU may provide further clarification, it is necessary to consider the efficacy of impact avoidance and mitigation measures such as SANG and Strategic Access Management and Monitoring (SAMM) through the medium of an AA in order to ensure compliance with the findings of the judgment.

The Waddenzee Judgement

The CJEU Waddenzee Case (C-127/02) established a number of important points in relation to the correct interpretation of Article 6(3) of the Habitats Directive in particular, and the way in which each

stage of the HRA process should be approached. This clarification has been helpfully outlined in the otherwise rather long-in-the-tooth Government Circular 06/05 ''Biodiversity and Geological Conservation''.

In particular, one of the key messages from the CJEU in the Waddenzee case was that, where a plan or project has the potential to affect a Natura 2000 site, an AA is necessary:

> *''….if it cannot be excluded, on the basis of **objective information**, that it will have a significant effect on that site, either alone or in combination with other plans and projects''*
>
> [Paragraph 13 of Circular 06/05 or paragraph 44 of the Waddenzee Judgment]

The CJEU expanded upon the above by saying that:

> *''…where such a plan or project has an effect on that site* [the European site] *but is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on the site concerned.''*
>
> [Paragraph 47 of the Waddenzee Judgement]

Further to the above, the CJEU clarified that, once an AA has been triggered, except in the circumstances outlined in Article 6(4) of the Directive (circumstances of IROPI which do not in my view apply to the Appeal proposals), a plan or project can only be authorised where it will not have an adverse effect on the integrity of the Natura 2000 site, and that:

> *''That is the case where no **reasonable** scientific doubt remains as to the absence of such effects''.*
>
> [Paragraph 21 of Circular 06/05, or paragraph 59 of the Waddenzee Judgement]

The Supreme Court Judgment in Kennedy v Cordia Services LLP (2016)

Although not directly related to HRA, in the above judgment, the UK Supreme Court helpfully provided an overview of what it considered constituted reliable 'scientific evidence' for the purposes of decision making. In summary, the criteria outlined by the Supreme Court were that, in order to be reliable, scientific evidence should be:

- Part of a recognised body of science or experience which is suitably acknowledged as being useful;
- Sufficiently developed to be treated as reliable;
- Approved / endorsed by a substantial body of academic writing; and
- Not the subject of novel or relatively recent academic research.

The above criteria are helpful in determining whether the requirements stemming from the Waddenzee case, for a requisite level of confidence at part of an AA can be met. These should be considered alongside the guidance cited above in the *Communication from the Commission on the Precautionary Principle* (2000).

POLICY CONTEXT AND RELATED GUIDANCE

In addition to the legislative landscape described above, National, Regional and Local planning policy pertaining both to European Sites generally and the TBH SPA specifically are well developed.

National Policy

At the National Level, Section 15 of the NPPF is relevant, in particular paragraph 177, which was introduced as part of the February 2019 Technical Update to the NPPF, and makes it clear that the presumption in favour of sustainable development does not apply where a project is likely to have a significant effect on a 'Habitats Site' (which includes the TBH SPA), either alone or in combination with other plans and projects, **unless an AA can conclude that the plan or project will not adversely affect the integrity of that site**.

Regional Policy

At the Regional Level, **saved Policy NRM6** of the South East Plan Regional Spatial Strategy (RSS) is relevant. This policy outlines the strategic-level requirements for development to provide impact avoidance and mitigation measures to protect the TBH SPA. These requirements were collated following the submission of a substantial body of evidence (including numerous submissions from Natural England) to the Examination in Public (EiP) of the RSS, which was subsequently examined by the South East Plan Assessor (Burley, 2007) and distilled into recommendations that were included in the policy. In respect of the Appeal proposals, it requires that a combination of SANG and SAMM is provided (discussed below), unless alternative measures are agreed with Natural England.

Local Policy

The Guildford Borough Council Local Plan 2015-2034 includes the following policies of relevance.

Policy P5: Thames Basin Heaths Special Protection Area

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. 59 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.

Guidance Documents

Natural England's Guidelines for the Creation of Suitable Alternative Natural Green Space (SANG) (2021)

Natural England has produced a set of evidence-based guidelines to assist in the creation of functional SANGs to provide an attractive recreational alternative to the SPA. These guidelines were originally released in July 2007 and a revised version dated August 2021 is also available. The Guidelines are based primarily on a study undertaken on behalf of Natural England (Liley et *al*., 2005) into the features that attract people to open spaces in the Thames Basin Heaths area.

The Thames Basin Heaths Joint Strategic Partnership Board's (JSPB) Endorsed Thames Basin Heaths SPA Delivery Framework (2009)

Following the EiP of the South East Plan RSS, the key principles underpinning the effective avoidance of recreational impacts on the Thames Basin Heaths SPA were agreed by the 11 Local Authorities affected by the need to protect the TBH SPA and by Hampshire and Surrey County Councils (collectively referred to as the Joint Strategic Partnership Board – JSPB – who are also advised by Natural England and others), and incorporated into a Delivery Framework that was designed to inform the development of local planning policy and ensure the protection of the SPA. The principles that the Delivery Framework sets out are addressed in this document.

Additionally, the local-level planning policies designed to ensure protection of the SPA that have emerged within each of the 11 affected Local Authorities in pursuance of the principles established in the Delivery Framework are also important from the perspective of addressing the potential for 'in combination' impacts on the SPA resulting from the cumulation of development across the whole Thames Basin region. These are therefore considered further below.

Guildford Borough Council's Thames Basin Heaths SPA Avoidance Strategy Supplementary Planning Document (SPD)(July 2017 – Factually updated October 2021)

This document outlines GBC's proposed approach to protecting the TBH SPA from the adverse effects of development coming forward within the Borough. In particular, it outlines the Council's own strategic approach to the provision of impact avoidance and mitigation measures for developers unable to provide their own 'bespoke' measures and sets out the tariff for contributions that developer would be expected to make towards these measures.

APPROPRIATE ASSESSMENT

The Position Moving Forward

Taken together, saved policy NRM6 of the South East Plan RSS, the JSPB's Endorsed Thames Basin Heaths SPA Delivery Framework (2009) and policy P5 of the Local Plan are clear that successfully avoiding the impacts of increased recreational pressure from residential development upon the TBH SPA requires development to provide two main component parts ('prongs') of the strategic impact avoidance and mitigation strategy, as follows:

- Provision of Suitable Alternative Natural Greenspace (SANG) that is sufficient in both area and quality (see below); and

- A full contribution toward the Strategic Access Management and Monitoring (SAMM) Strategy currently being implemented across the TBH SPA.

In short, the function of SANG is to act as an attractive alternative destination for both existing and future recreational visitors who might otherwise go to the SPA, whereas SAMM seeks to both monitor and address (e.g. through car park closures/reductions, wardening, footpath re-routing etc) the impacts of those who do actually visit the SPA.

There is an extensive 'strategic-level' evidence base that already exists and which underpins both the role and the efficacy of SANG and SAMM, and this is outlined further below.

For the Proposed Development, notwithstanding the fact that GBC's nearby strategic SANG is understood to have run out of capacity, there is no reason why full contributions towards the SPA-wide SAMM Strategy cannot be made in accordance with the contributions tariff outlined in GBC's TBH Avoidance Strategy SPD (2021).

In terms of SANG – both saved Regional Policy NRM6 and Policy P5, and the JSPB's Endorsed TBH SPA Delivery Framework (2009) are clear that SANG must be provided for development on the basis that 8ha of SANG should be provided for every 1000 new residents, calculated on the basis that average household occupancy should be assumed to be 2.4 people per dwelling, unless robust local evidence demonstrates otherwise.

In order to provide SANG in accordance with the requirements of the above policies, three alternative options have been identified for securing capacity in nearby large areas of privately provided 'bespoke' SANG, being delivered nearby in conjunction with other large development proposals that do not require the whole capacity of those SANG areas.

The approximate locations and extents of the three privately provided SANG are shown on **Map A6.1**, as follows:

- **Bewley SANG** – This area is approximately 24ha in size, meaning that it has capacity for in the region of 1,250 new dwellings. This SANG is already delivered and publicly accessible. It is understood that it is being managed on behalf of Bewley by the Land Trust and that there may be limited spare capacity in this area of SANG currently.
- **Gleeson SANG** – Planning consent for this SANG was secured at Appeal (App Refs APP/Y3615/W/17/3173617 and APP/R3650/W/17/3173615). From information contained within the Appeal Decision Notice, it is understood that this SANG area is approximately 17.7ha in size, meaning that it has total capacity for in the region of 922 new dwellings. The Appeal Decision notice reveals that 254 dwellings that were consented alongside the SANG are already relying upon it and thus will need to be discounted from its available capacity.
- **Bellway SANG** – EPR were appointed to be the ecological advisor to Bellway Homes in relation to this SANG, following initial objections made by Natural England to their adjacent residential development proposal (App no: 18/P/01950), which was initially submitted without SANG. The SANG proposal is at present known as the 'White Lane SANG' and is in the region of 9.22ha in size (meaning that it has total capacity for in the region of 480 new dwellings in total). Bellway's related adjacent development proposal is for 59 dwellings, which consequently must be discounted from the total SANG capacity. The planning application for this SANG was granted in January 2020 (Ref: 19/P/00425).

The proposals are for 24 new dwellings, but 1 existing dwelling will also be demolished, meaning that sufficient SANG capacity is required to accommodate a net increase of 23 dwellings as a result of the Proposed Development. **This requires 0.44ha of SANG**.

In order for the Proposed Development to rely upon any of the above SANG areas, it will be necessary for the Applicant to sign a legal agreement with the relevant SANG provider, securing the requisite capacity of SANG for the number of dwellings that are proposed, and for confirmation to be received that the SANG in question does have sufficient surplus capacity to accommodate the proposals.

Means by which the above can be secured are detailed below, however, in order to pass an AA, it must also be demonstrated that the above SANG, should they be relied upon, would function effectively to prevent any net increase in recreational pressure resulting specifically from the Appeal proposals, albeit in combination with other plans and projects.

The below examines the likely efficacy of each of the above 3 SANG options in relation to preventing adverse effects on the integrity of the TBH SPA from arising, specifically in relation to the potential effects of the Proposed Development.

Conceptual Impact Assessment Model

In carrying out an assessment of the potential effects of a development proposal on a European Site, the 'source-pathway-receptor' concept provides a useful model for framing and objectively evaluating

the mechanisms through which potential effects may occur. This method has been employed in this assessment. **Table A6.1** below sets out the parts of the model and how they relate to each other.

Table A6.1: Conceptual Impact Assessment Model

Source	Pathway	Receptor
Elements of the development proposals that are likely to generate or contribute towards certain environmental effects	Changes in environmental conditions caused by aspects of the development proposals that have the potential to affect an identified impact receptor	The interest features / conservation objectives of the European Site concerned, and the environmental conditions required to support them

During the assessment process, information has been gathered relating to each part of the conceptual assessment model. Consideration of this information will then allow the competent authority to determine whether or not a potentially viable impact pathway exists between the development proposals and the TBH SPA.

Defining the Impact Source and Pathway

Planning permission is sought for 24 dwellings, although as explained above, 1 existing dwelling will be demolished, resulting in an overall net increase of 23 dwellings. In the absence of impact avoidance and mitigation measures, this would introduce new residents into the area who may choose to pursue recreational activity, such as dog walking, within the SPA.

The TBH Delivery Framework (JSPB, 2009) suggests using an average household occupancy rate of 2.4 people per dwelling to calculate the likely number of new residents introduced by a development. This figure is also used in Policy NRM6 of the South East Plan RSS, and Policy P5 of the Emerging Local Plan, both of which have already been subject to AA.

On this basis, the proposal for a net increase of 23 dwellings could be expected to introduce in the region of 55 additional new residents, generating a requirement for **0.44ha ha of SANG** (based on the SANG provision rate of 8ha per 1,000 new residents within 5km of the TBH SPA).

The Annex 1 birds associated with the TBH SPA are particularly vulnerable to disturbance by dogs. In 2019 the South-East of England, 21% of households are estimated to own a dog at a rate of 1.4 dogs per household (PFMA, Pet Population Report 2019. This equates to approximately 5 of the proposed new households and around 7 dogs in total. In 2021 it is estimated that 27% of household within the UK have dogs although specific regional data was not available.

The original English Nature Draft Thames Basin Heaths Delivery Framework (2006) reviewed the results of various studies to consider the likely roaming distance of cats kept as pets at residential properties, to determine the potential for them to predate Annex 1 birds. This review showed that the majority of cats roam no further than 400m and this evidence consequently formed part of the basis for the 400m zone around the TBH SPA within which there is a presumption against additional residential development. As the proposals are beyond this distance (the proposals are around 580m from the SPA) cat predation from the proposals will not contribute towards impacts on the SPA.

Given the modest nature of the Appeal proposals (i.e. a net increase in 21 dwellings), there is no prospect for them, when considered alone, to have a likely significant effect on the TBH SPA, nor to adversely affects its integrity.

However, the Application proposals themselves sit within a larger allocated site within the emerging Guildford Local Plan under proposed **Policy A31.** This is for a total of 1,750 new dwellings, which itself sits within more extensive proposals for development coming forward as part of the Local Plan. When this development is considered collectively, the potential for a likely significant effect on the TBH SPA to occur as a result of the Appeal proposals acting in combination with other development cannot be ruled out in the absence of impact avoidance measures.

The HRA of the emerging GBC Local Plan (AECOM 2016, 2017, 2018, 2019) specifically considered the proposed allocation under **Policy A31** and notes that, due to the relatively close proximity of this proposed allocated site to the TBH SPA, care must be taken not to align new footpaths or Green Infrastructure in such a way as to facilitate or encourage additional walkers to reach the TBH SPA. The Appeal proposals do not provide any new footpath route to the TBH SPA – the newly proposed footpath heading northwards from the Appeal proposals instead intersects with existing footpath 356, which is aligned in an east-west direction, and will help convey residents to Ash town centre.

The Impact Receptor

As outlined above, the TBH SPA was designated as a SPA in March 2005 for its internationally important populations of three bird species, Dartford Warbler, Woodlark and Nightjar, that are listed in Annex 1 of European Directive 79/409/EEC (the 'Birds Directive') (now codified by Directive 2009/147/EC). These birds nest either on or close to the ground and are consequently vulnerable to disturbance from recreational activity (such as dog walking) with resultant breeding failure.

Research into the effects of urban development and recreational pressure on the populations of Annex 1 birds, including Liley & Clarke (2002), Murison (2002) and Underhill-Day (2005a) raised concerns that they were being adversely affected by increases in human disturbance.

Ash to Brookwood Heaths Site of Special Scientific Interest (SSSI) is the nearest component part of the TBH SPA to the Appeal proposals and is located approximately 580m to the north (see **Map A6.2**). The SSSI Unit that lies closest to the Appeal proposals is Unit 20.

The condition of SSSI unit 20 was last assessed by Natural England on 11 January 2021, when it was considered to be in '**Favourable'** condition.

The NE surveyor who carried out the condition assessment noted that extensive cattle grazing was in the process of creating additional habitat structure, and that there was ongoing control of Bracken as part of site management. The condition assessment also contains the following observation:

"The unit has significant areas of habitat suitable for populations of all 3 SPA birds and the site as a whole supports Nationally significant populations".

In view of the above, it is likely that the sensitivities of this part of the TBH SPA to the effects of the Appeal proposals in combination with other plans and projects are limited to increases in recreational pressure from new residents, in particular dog walkers.

Assessment of Impact Avoidance and Mitigation Measures

The Strategic Evidence Base

As explained, the proposals will make a full contribution towards the SPA-wide SAMM project that is being administered by NE, in accordance with the tariff guidance provided by GBC in their 2017 TBH SPA Avoidance Strategy SPD (Factually updated in 2021).

The SAMM Strategy sets out a mechanism, funded by contributions from development, for the pan-SPA monitoring of changes in recreational pressure so that measures can be implemented to address any unforeseen or localised increases in recreational pressure that may otherwise contribute towards an effect upon the qualifying features of the SPA. It also provides for extensive wardening and 'on-SPA' interventions such as the closure of car parks and re-routing of visitor pressure.

In addition to a full SAMM contribution, the proposals will make provision for 0.40ha of SANG in one of the abovementioned privately provided 'bespoke' SANG areas.

There is now a significant and still burgeoning body of strategic evidence underpinning the efficacy of both SAMM and SANG as impact avoidance measures, that has been the subject of rigorous scrutiny on multiple occasions in the past, as summarised below:

- The original English Nature (now Natural England) TBH Draft Delivery Plan (2006), which informed the development of the (now mainly revoked) South East Plan RSS included a comprehensive review of evidence pertaining to the impacts of recreational pressure on the TBH SPA, in particular SPA-wide visitor surveys and evidence of visitor interception potential;

- The South East Plan RSS, including Saved Policy NRM6, were subject to an Appropriate Assessment (Scott Wilson and Levitt Therivel, 2006), and both the RSS itself and its AA were then subject to significant scrutiny in terms of the likely effectiveness of the proposed SANG and SAMM provisions, by the South East Plan Assessor (Burley, 2007a, b and c) before being adopted;

- The key principles of NRM6 were taken forward by a group of the 11 Local Authorities affected by the need to protect the TBH SPA called the 'Joint Strategic Partnership Board' (JSPB) (which also included advisory members such as NE), and after an earlier abortive attempt to produce guidance, the agreed key principles were enshrined in the Endorsed TBH SPA Delivery Framework (2009);

- The 'quality' attributes that a SANG must deliver in order to function as an attractive alternative to the SPA were the subject of a research study (Liley *et al*, 2005b), which was then subsequently distilled into Natural England's *Guidelines for the Creation of Suitable Accessible Natural Greenspace (SANG) (2021);*

- The key principles underlying SAMM and SANG, and their efficacy in relation to proposed allocation Policy A29 in which the Appeal Proposals sit, have been subject to Appropriate Assessment as part of the ongoing parallel development process of the emerging Guildford Local Plan (AECOM 2016, 2017, 2018, 2019). In each case it has been concluded that the impact avoidance measures proposed are adequate, and Natural England was consulted when this conclusion was reached;

- In terms of the functioning of effective SANG as an impact avoidance measure, a study was carried out by the JSPB into the effectiveness of SANG in June 2015. Whilst the results of this study have not yet been released, Natural England reported upon the results to the External Partnerships Select Committee of Surrey Heath Borough Council on 15 September 2015. During this meeting Natural England shared results of a study which indicated that the SANG approach was 'working well' in providing mitigation against recreational impacts on the Thames Basin Heaths, with large strategic SANG areas in particular, well visited.

In addition to the strategic evidence base outlined above, EPR has also collected significant bespoke visitor and resident survey data that shows that, broadly, SANG as a strategy is functioning as intended to divert recreational pressure away from the TBH SPA. For example, EPR has now collected 5 years of visitor monitoring data on Langley Mead SANG, which is the first component part of a suite of SANG areas being delivered in conjunction with the South of the M4 Strategic Development Location (SDL) SANG suite in Wokingham. This data shows that the SANG is working broadly as was predicted by pre-determination visitor pattern analysis, with in the region of 54,000 visits per annum being made to that SANG.

In addition to this, EPR completed a commission from NE to carry out the 2018 visitor survey monitoring across the whole TBH SPA, and to compare the results against previous visitor monitoring work carried out in 2005,2012/2013 and 2018. In summary, the visitor monitoring has shown that there has been a statistically significant decline in visitation of the TBH SPA between 2005 and 2018, despite around a 12.9% increase in housing within the 5 km SPA catchment.

The Evidence Underpinning the Specific Impact Avoidance Strategy of the Appeal Proposals Themselves

Notwithstanding the fact that the strategic evidence base underpinning SANG as a broad concept is now well advanced and developed and is showing that the concept is working, it is necessary to briefly examine the 3 SANG options that are available to the Appeal proposals, to confirm that they would in fact address the specific impacts of the Appeal proposals.

In the Dilly lane High Court Case, Mr Justice Sullivan explained the way in which SANG is intended to work in order to secure 'no net increase' in visitation on the TBH SPA. At paragraph 63 of his judgment, he states:

> *"The purpose of the SANGS was not to lessen the increase in visitor pressure, but to avoid it altogether by drawing some existing users away from the Heath to compensate for those new residents who might use it on occasion".*

In view of the above, it is necessary to confirm that newly proposed areas of SANG are sufficiently well located to enable them to draw in at least as many existing recreational visitors to the TBH SPA (from existing houses), as new residents generated by new housing that might decide to visit the TBH SPA regardless of any SANG provision.

To enable this to be investigated, a catchment analysis of the 3 SANG options was undertaken in 2019 to explore their potential for impact avoidance. It is understood that additional residences would have been built since which would increase the number of dwellings within the proposed SANG catchment.

The JSPB Endorsed TBH SPA Delivery Framework (2009) states, at paragraph 5.11, that, based on research carried out by NE for the original 2006 draft Delivery Plan:

- SANG of 2-12ha will have a catchment of 2km;
- SANG of 12-20ha will have a catchment of 4km; and
- SANG of 20ha will have a catchment of 5km.

The above catchments are also outlined on page 4 of the GBC TBH SPA Avoidance Strategy SPD, which additionally notes that SANG that does not have a car park associated with it will have a catchment limited to 400m (this is the walking catchment often associated with SANG).

On the above basis, to evaluate the visitor interception potential of each SANG area:

- **Map A6.2** shows the extent of the different SANG catchments for each of the differently sized SANG areas, in relation to the Appeal proposals and the TBH SPA, with the location of postcodes from Royal Mail's Postcode dataset (each postcode contains metadata which enables the number of residential delivery points i.e. existing dwellings associated with that postcode to be identified;
- **Map A6.3** shows only the Gleeson SANG catchments with the above data;
- **Map A6.4** shows only the Bewley SANG catchments with the above data; and
- **Map A6.5** shows only the Bellway SANG catchments with the above data.

The above catchment analysis maps have been used to calculate the number of existing residential delivery points (i.e. existing dwellings) within the catchments of each of the SANG areas. This data is presented in **Table A6.2** below:

Table A6.2: Summary of Catchment Analysis Data

SANG	Catchment	Number of Postcodes	Number of Residential Delivery Points
Gleeson SANG	400m (walking)	11	88
	4km (driving)	2,077	31,799
Bewley SANG	400m (walking)	35	594
	5km (driving)	2,263	36,249
Bellway SANG	400m (walking)	25	264
	2km (driving)	391	6,299

Importantly, it should be noted that the Proposed Development is located within the driving catchments for all 3 SANG area options.

Despite being undertaken in 2019, as can be seen from the data above in **Table A6.2**, the number of existing dwellings located within each of the above SANG catchments vastly exceeds the number of new dwellings that would be attributed to any of the new SANG areas individually given their assessed SANG capacity, and far outweighs the entire 1,750 dwellings proposed for allocation A31 in the

emerging Local Plan. The number of existing dwellings that fall within the above SANG catchments is an order of magnitude higher than the number of new dwellings that might be attributed to these three SANG areas (based on the approximate SANG sizes, only around 2,652 dwellings in total could be assigned to these three SANG areas as currently envisaged, so the potential to draw existing visitors to the TBH SPA from existing dwellings within these SANG catchments significantly outweighs the likely increase in visitation resulting from new development – particularly given that the new development (and the whole of Allocation A31) it itself located within the SANG catchments.

The propensity for the residents of both new and existing dwellings to visit the TBH SPA does vary slightly from location to location depending on factors such as proximity to the SPA. No specific resident survey data is available for the area of Allocation A31 as far as is known, as surveys have not been carried out, however, it is important to note that the SANG catchments all cover those residential areas located closest to the nearest part of the TBH SPA to the appeal proposals, meaning that they are well placed to act as an alternative destination for those dwellings generating higher proportionate contributions toward existing visitation, as well as those further afield who will be less likely to visit or may visit less often.

The size of the area covered by the A31 allocation is not so significant that, based on EPR's experience, it is expected that the percentage of households that visit the SPA or their frequency of visitation to vary significantly across the whole A29 allocation area and its immediate context – for example, residents surveys carried out by EPR across the South of the M4 Strategic Development Location (SDL) in Wokingham showed that the percentage of households in that area visiting the SPA declined on average by about 1.33% per km as one went further from the SPA. Given that the SANG catchments cover all new and existing development from immediately adjacent to the TBHSPA in this area to several kilometres from it, the variance in propensity to visit the SPA will not affect the interception potential of the SANG to a sufficient degree to compromise the confidence that can be had in the prospects of 'no net increase' in visitation from being achieved.

In Combination Effects

In terms of the potential for the proposals to act 'in combination' with other plans and projects, in addition to the purpose of SANG being to secure 'no net increase' in visitation of the SPA from the proposals to which they relate (such that the Appeal proposals will not contribute toward any cumulative effect on the SPA), all Local Planning Authorities around the SPA have also adopted, or are in the process of adopting, policies to ensure that development coming forward within their areas will similarly not contribute toward increases in recreational pressure

In pursuance of the principles of impact avoidance agreed between the 11 affected Local Authorities and set out in the JSPB's Delivery Framework (2009), each District or Borough has since carried out a Habitats Regulations Assessment of its own Local Planning Policy, and introduced policies of their own to complement saved Policy NRM6 of the South East Plan, to ensure that development in their area does not contribute towards additional recreational pressure on the SPA. The implementation of all of these policies will ensure that the prospect for an 'in combination' effect on the SPA is avoided. **Table A6.3** below summarises these policies.

Table A6.3: Local Level Planning Policy Addressing the Potential for Recreational Impacts on the Thames Basin Heaths SPA (NB: This table does not include reference to SPDs covering developer contributions that may relate to the protection of the TBH SPA, or relevant parts of any CIL charging schedule).

Local Authority	Relevant Local Policy or Policies
Bracknell Forest Borough Council	Core Strategy **Policy CS14** (2008) Thames Basin Heaths Special Protection Area Avoidance and Mitigation Supplementary Planning Document (2018)
Elmbridge Borough Council	Core Strategy **Policy CS13** (2011) Development Management Plan **Policy DM21** (2015)
Guildford Borough Council	The Local Plan: Strategy and Sites (2015 - 2034) **Policy P5**(2019) Thames Basin Heaths Special Protection Area Avoidance Strategy SPD (2017)
Hart District Council	Hart Local Plan (strategy and Sites) 2032 **Policy NBE3** (2020)
Royal Borough of Windsor and Maidenhead	Thames Basin Heaths SPA SPD (2010) **Policy NR4** (Thames Basin Heaths Special Protection Area) of the Borough Local Plan 2013-2033 (2022)
Runnymede Borough Council	**Policy EE10** of the Runnymede 2030 Local Plan (2020)
Rushmoor Borough Council	Policy NE2 of the Rushmoor Local Plan 2014 – 2032 (2019)
Surrey Heath Borough Council	Policy CP14B (European Sites) of the Adopted Core Strategy and Development Management Policies Document (2012) Thames Basin Heaths Special Protection Area Avoidance Strategy SPD (2012)
Waverley Borough Council	Thames Basin Heaths SPA Avoidance Strategy (Review) (2016) Waverley New Local Plan Part 1 Policy NE3: Thames Basin Heaths Special Protection Area (2018)
Woking Borough Council	Adopted Core Strategy Policy CS8 – Thames Basin Heaths Special Protection Area (2012) Thames Basin Heaths SPA Avoidance Strategy 2010-2015
Wokingham Borough Council	Core Strategy Policy CP8 (2010) Managing Delivery of Development DPD Policy SAL05 (2012) Various SPDs

Appropriate Assessment: Summary and Conclusion

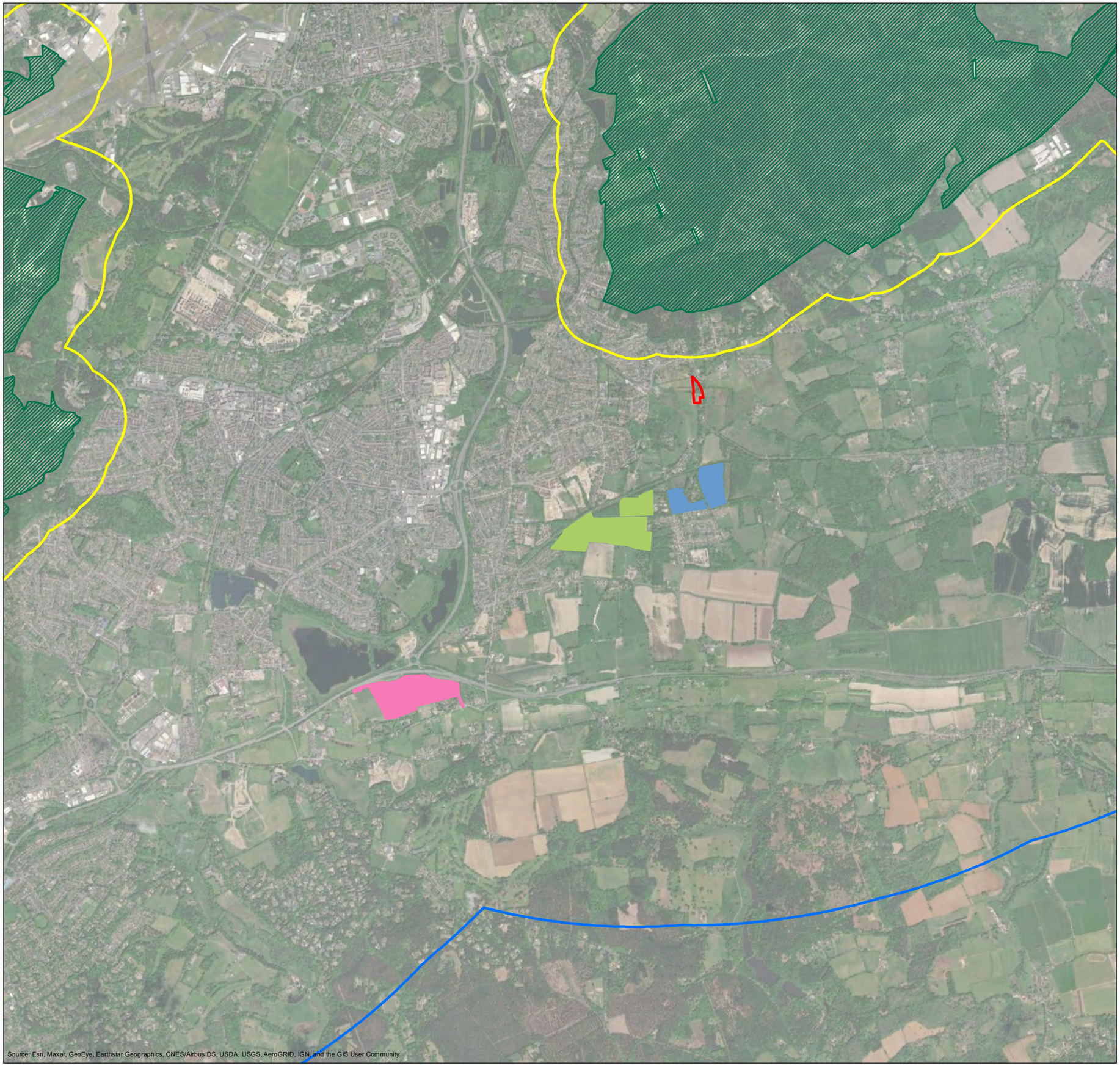
When considered in the absence of impact avoidance and mitigation measures as required by the PoW judgment, the Proposed Development is not likely to have a significant effect on the TBH SPA when considered alone, but could do so when considered in combination with other plans and projects – specifically but not exclusively the remainder of the 1,750 proposed dwellings that form part of Policy A29 of the Local Plan. Impact avoidance and mitigation measures are required to address this

possibility, meaning that an Appropriate Assessment should therefore be carried out to consider their efficacy.

Subject to a full payment of SAMM contributions in line with the tariff set out in GBC's 2017 TBH Avoidance Strategy (Factually updated in 2021), and the securing of at least 0.44ha of SANG capacity in one of the three nearby privately provided SANG areas, the Proposed Development will not contribute towards an adverse effect on the integrity of the TBH SPA, and an Appropriate Assessment can therefore be passed.

The evidence base underpinning the efficacy of the proposed impact avoidance and mitigation measures outlined is considered extensive, and meets the criteria outlined above in terms of the level of confidence that is required in order for an Appropriate Assessment to be passed.

The potential for in combination effects has also been addressed as, in addition to the proposed SANG and SAMM ensuring that the Appeal proposals will not themselves contribute toward any 'in combination impact' on the TBH SPA with other plans and projects, both GBC and all 11 other Local Planning Authorities around the TBH SPA have taken steps to put in places policies to ensure that all residential development coming forward in the vicinity of the TBH SPA provides adequate impact avoidance and mitigation measures.



MAP A6.1 SANG Locations

KEY

- Site boundary
- Thames Basin Heaths SPA
- 400m linear distance to Thames Basin Heaths
- 5km linear distance to Thames Basin Heaths
- Bewley SANG
- Gleeson SANG
- Bellway SANG

SCALE: 1:33,000 at A3

0 500 1,000 1,500 2,000 Metres

N

EPR

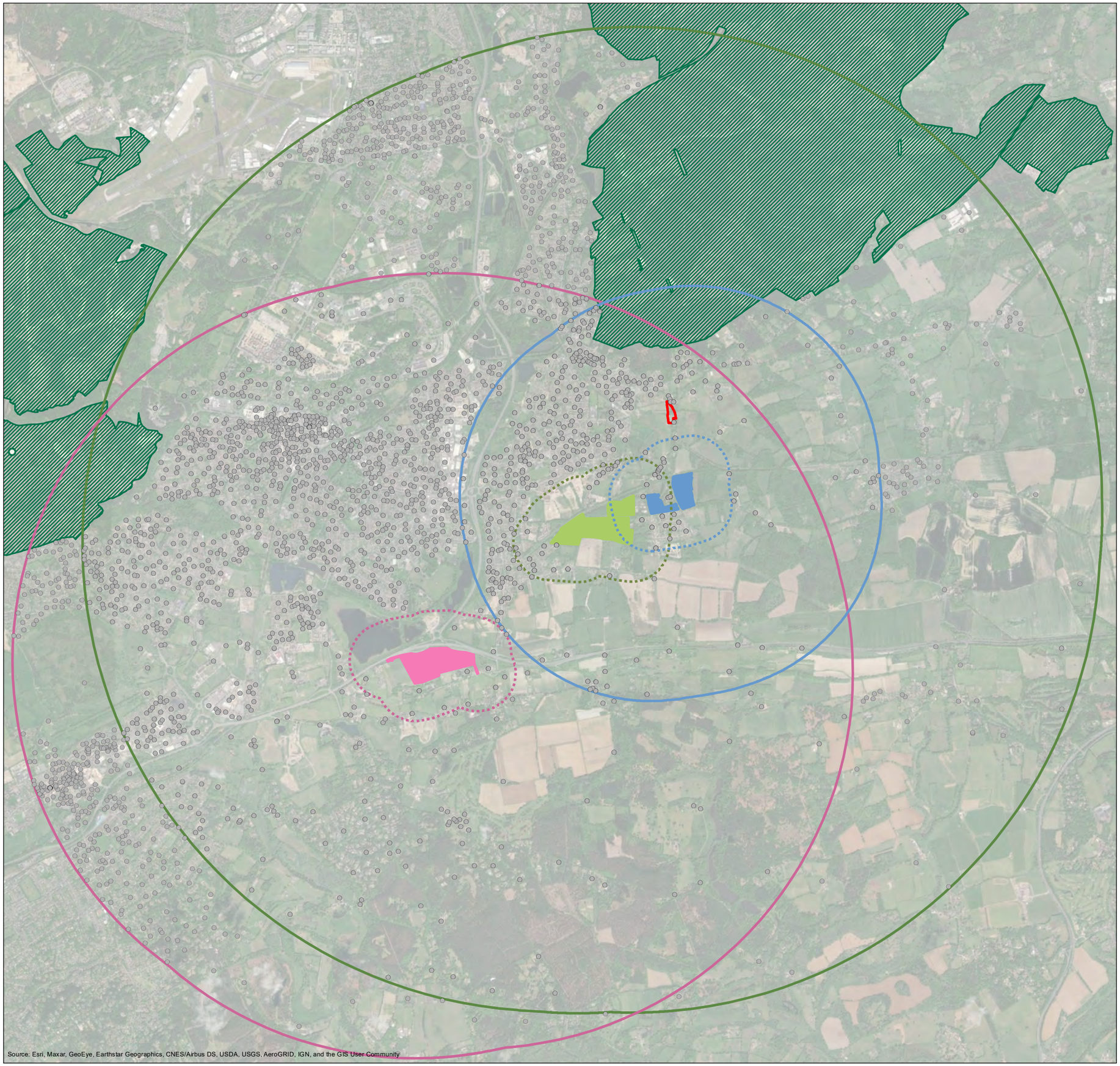
CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: March 2022

Y:\Streamside, Harpers Road\GIS\A1\MapA_SANGLocations_P1903_1517_030322.mxd

P19/03



MAP A6.2 SANG Catchments

KEY

- Site boundary
- Thames Basin Heaths SPA
- Gleeson SANG
- Gleeson SANG 400m walking catchment
- Gleeson SANG 4km driving catchment
- Bewley SANG
- Bewley SANG 400m walking catchment
- Bewley SANG 5km driving catchment
- Bellway SANG
- Bellway SANG 400m walking catchment
- Bellway SANG 2km driving catchment
- Postcode

SCALE: 1:40,000 at A3

0 500 1,000 1,500 2,000 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: March 2022

Y:\Streamside, Harpers Road\GIS\AA\MapB_SANGCatchments_P1903_1517_030321.mxd

P19/03

MAP A6.3 Gleeson SANG Catchments

KEY

- Site Boundary
- Thames Basin Heaths SPA
- Gleeson SANG
- Gleeson SANG 400m walking catchment
- Gleeson SANG 4km driving catchment
- Postcode

SCALE: 1:40,000 at A3

0 500 1,000 1,500 2,000 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: March 2022

Y:\Streamside, Harpers Road\GIS\AI\MapB1_GleesonSANGCatchments_P1903_1517_030322.mxd

P19/03

MAP A6.4 Bewley SANG Catchments

KEY

- Site Boundary
- Thames Basin Heaths SPA
- Bewley SANG
- Bewley SANG 400m walking catchment
- Bewley SANG 5km driving catchment
- Postcode

SCALE: 1:40,000 at A3

0 500 1,000 1,500 2,000 Metres

N

EPR

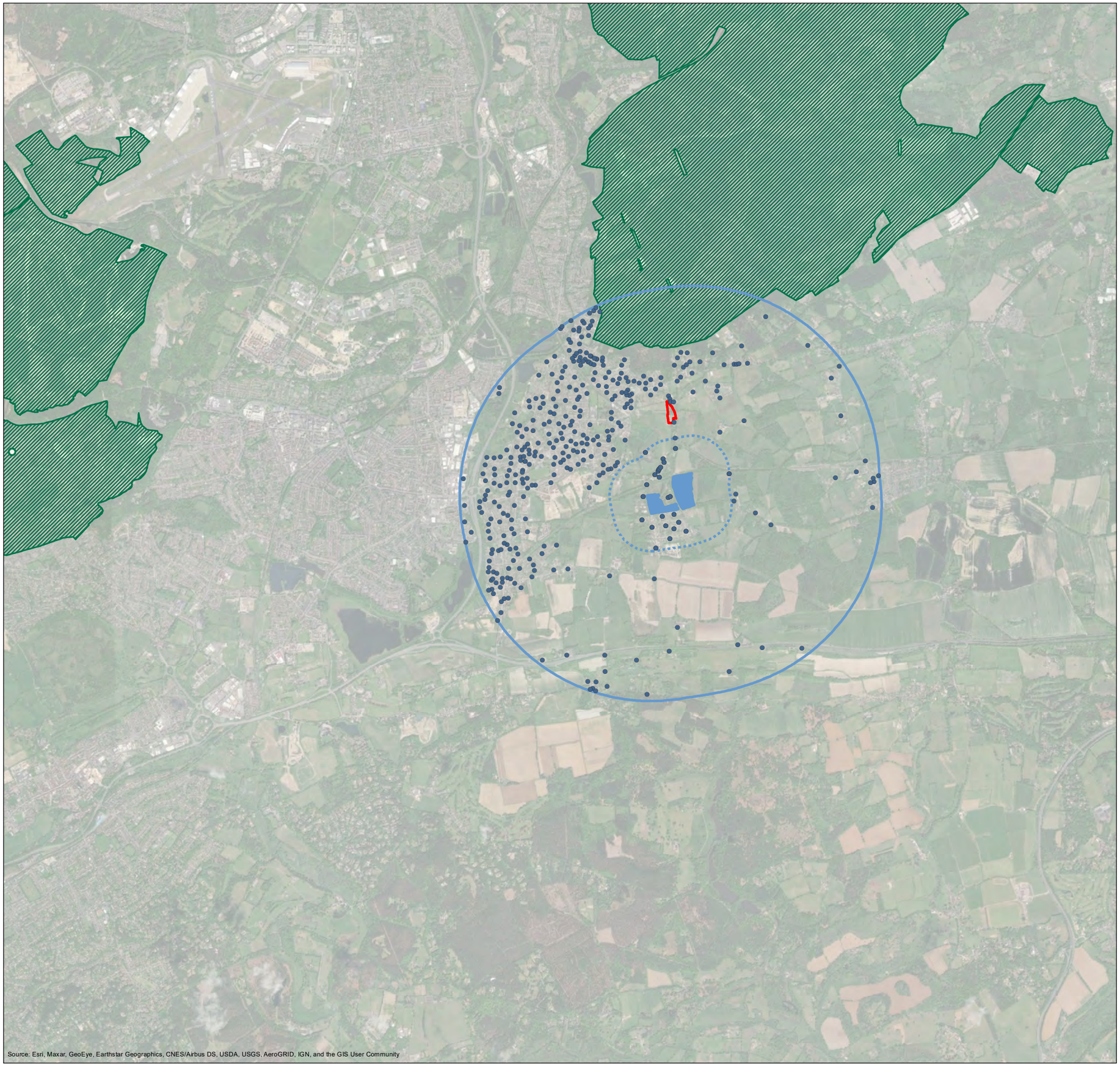
CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: March 2022

Y:\Streamside, Harpers Road\GIS\AA\Map\B2_BewleySANGCatchments_P1903_1517_030322.mxd

P19/03



MAP A6.5 Bellway SANG Catchments

KEY

- Site boundary
- Thames Basin Heaths SPA
- Bellway SANG
- Bellway SANG 400m walking catchment
- Bellway SANG 2km driving catchment
- Postcodes

SCALE: 1:40,000 at A3

0 500 1,000 1,500 2,000 Metres

N

EPR

CLIENT: Bourne Homes Ltd

PROJECT: Streamside, Harpers Road

DATE: March 2022

Y:\Streamside, Harpers Road\GIS\A1\Map\B3_BellwaySANGCatchments_P1903_1517_030322.mxd

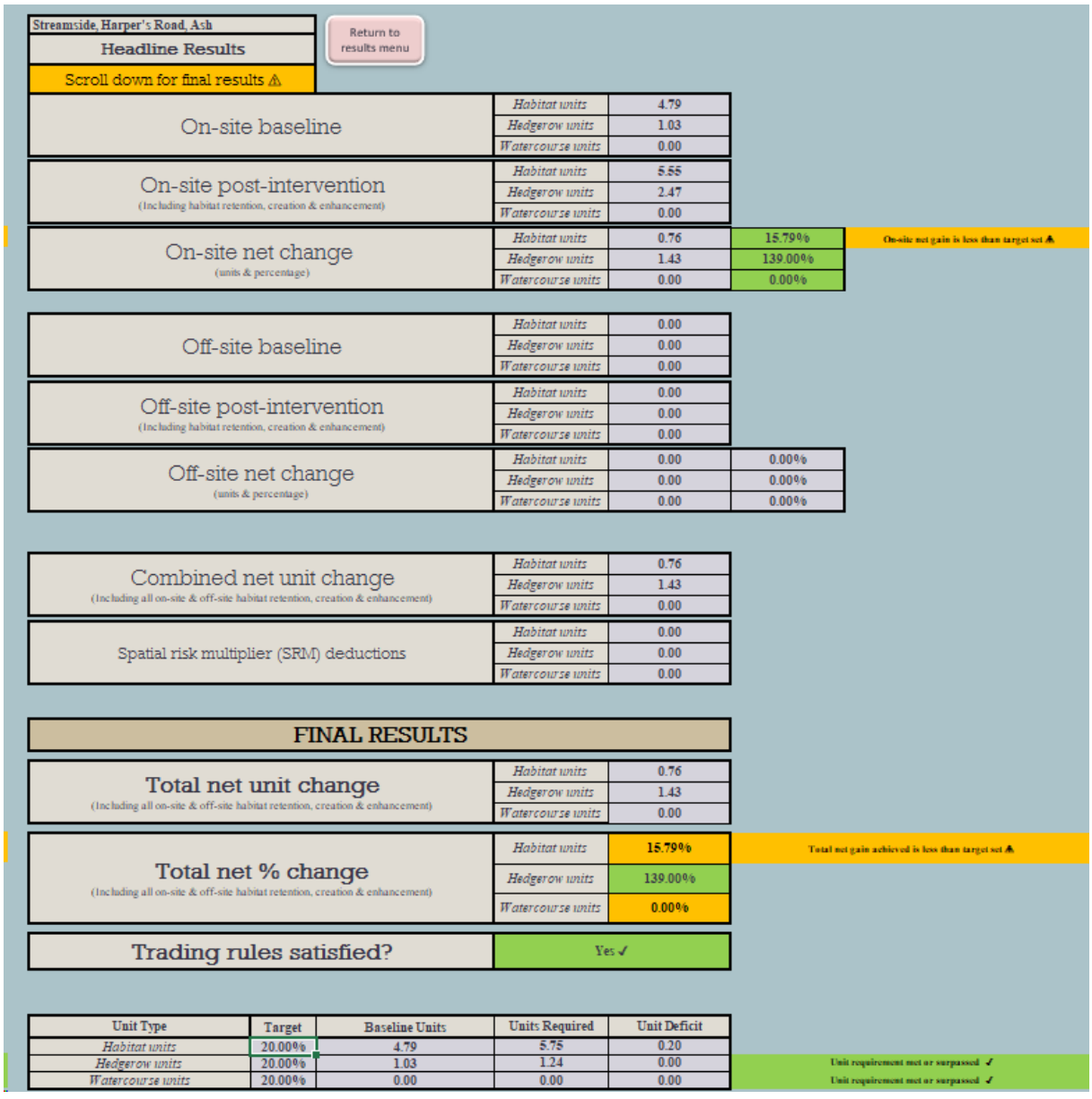
P19/03

Appendix 7

Biodiversity Metric 4.0 and Condition Assessment

BIODIVERSITY METRIC 4.0 RESULTS

A summary of the Headline results taken from the Biodiversity Metric 4.0 for Streamside, Ash.



Streamside, Harper's Road, Ash

Return to results menu

Headline Results

Scroll down for final results ⚠

On-site baseline	*Habitat units*	4.79		
	Hedgerow units	1.03		
	Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	5.55		
	Hedgerow units	2.47		
	Watercourse units	0.00		
On-site net change (units & percentage)	*Habitat units*	0.76	15.79%	On-site net gain is less than target set ⚠
	Hedgerow units	1.43	139.00%	
	Watercourse units	0.00	0.00%	
Off-site baseline	*Habitat units*	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site net change (units & percentage)	*Habitat units*	0.00	0.00%	
	Hedgerow units	0.00	0.00%	
	Watercourse units	0.00	0.00%	
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.76		
	Hedgerow units	1.43		
	Watercourse units	0.00		
Spatial risk multiplier (SRM) deductions	*Habitat units*	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		

FINAL RESULTS

Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.76	
	Hedgerow units	1.43	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	15.79%	Total net gain achieved is less than target set ⚠
	Hedgerow units	139.00%	
	Watercourse units	0.00%	
Trading rules satisfied?	Yes ✓		

Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	20.00%	4.79	5.75	0.20	
Hedgerow units	20.00%	1.03	1.24	0.00	Unit requirement met or surpassed ✓
Watercourse units	20.00%	0.00	0.00	0.00	Unit requirement met or surpassed ✓

Site Baseline

Project Name: Streamside, Harper's Road, Ash Map Reference:

A-1 On-Site Habitat Baseline

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

Area habitat summary	
Total Net Unit Change	0.76
Total Net % Change	15.70%
Trading Rules Satisfied	Yes ✓

	Existing area habitats			Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Ecological baseline	Retention category biodiversity value					
Ref	Broad Habitat	Habitat Type	Area (hectares)	Distinctiveness	Condition	Strategic significance		Total habitat units	Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area habitat lost	Units lost
1	Urban	Developed land; sealed surface	0.1283	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00	0	0	0.00	0.00	0.13	0.00
2	Heathland and shrub	Mixed scrub	0.0025	Medium	Poor	Location ecologically desirable but not in local strategy	Same broad habitat or a higher distinctiveness habitat required (2)	0.01	0	0	0.00	0.00	0.00	0.01
3	Urban	Introduced shrub	0.0567	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.11	0	0	0.00	0.00	0.06	0.11
4	Woodland and forest	Lowland mixed deciduous woodland	0.3568	High	Poor	Location ecologically desirable but not in local strategy	Same habitat required =	2.35	0	0.3075	0.00	2.03	0.05	0.33
5	Grassland	Modified grassland	0.3362	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.67	0	0	0.00	0.00	0.34	0.67
6	Urban	Vegetated garden	0.3365	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.67	0	0	0.00	0.00	0.34	0.67
7	Urban	Bare ground	0.0239	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.05	0	0	0.00	0.00	0.02	0.05
8	Individual trees	Urban tree	0.0765	Medium	Good	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required (2)	0.92	0.0765	0	0.92	0.00	0.00	0.00
9														
10														
11														
12														
13														
		Total habitat area	1.32					4.79	0.08	0.31	0.92	2.03	0.93	1.84
		Site Area (Excluding area of Individual trees and Green walls)	1.24											

Total area lost (excluding area of Individual trees and Green walls)	0.93

roject Name: Streamside, Harper's Road, Ash Map Reference

B-1 On-Site Hedge Baseline

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

Hedgerow summary	
Total Net Unit Change	1.43
Total Net % Change	139.00%
Trading Rules Satisfied	Yes ✓

	Existing hedgerow habitats			Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Ecological baseline	Retention category biodiversity value					
Baseline ref	Hedge number	Hedgerow type	Length (km)	Distinctiveness	Condition	Strategic significance		Total hedgerow units	Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost
1	1	Species-rich native hedgerow with trees	0.0384	High	Good	Location ecologically desirable but not in local strategy	Like for like or better	0.76	0.0384	0	0.76	0.00	0.00	0.00
2	2	Native hedgerow	0.1232	Low	Poor	Location ecologically desirable but not in local strategy	Same distinctiveness band or better	0.27	0	0.1232	0.00	0.27	0.00	0.00
3														
4														
5														
6														
7														
			0.16					1.03	0.04	0.12	0.76	0.27	0.00	0.00

Site Habitat Creation

Project Name: Streamside, Harper's Road, Ash Map Reference:

A-2 On-Site Habitat Creation

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

Area habitat summary	
Total Net Unit Change	0.76
Total Net % Change	15.79%
Trading Rules Satisfied	Yes ✓
Area Check (excluding individual trees and green walls)	Area Acceptable ✓

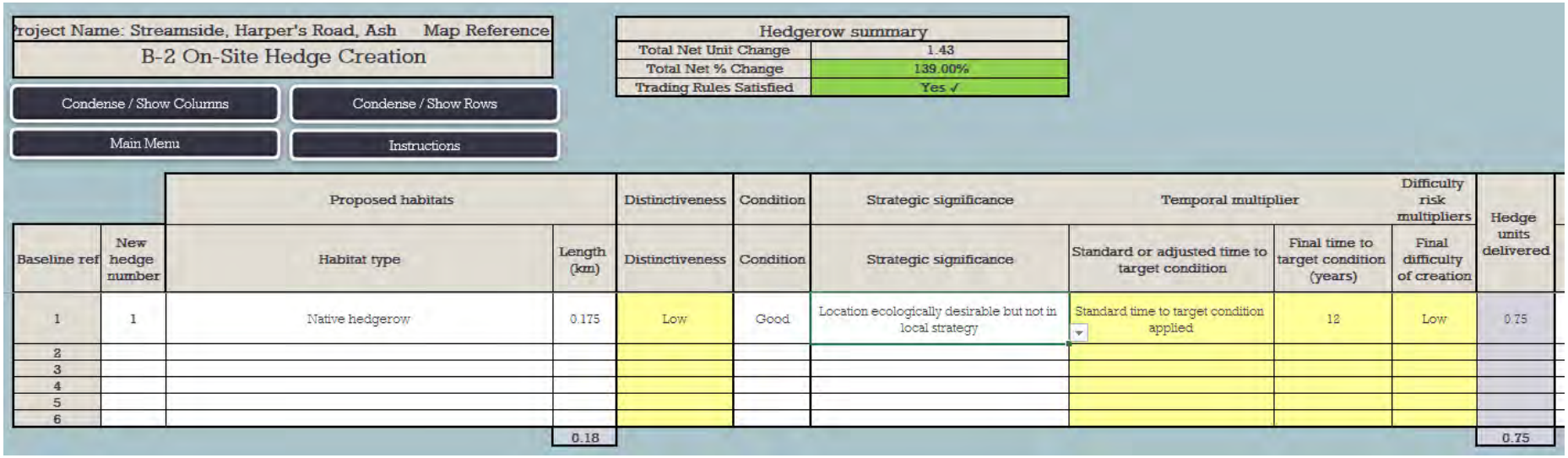
Note; Habitat selected has a time to target condition greater than 30 years. Non standard agreement

Post development/ post intervention habitats

Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness	Condition	Strategic significance	Temporal multiplier		Difficulty	Habitat units delivered
			Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition (years)	Final difficulty of creation	
Urban	Developed land; sealed surface	0.4632	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00
Urban	Vegetated garden	0.2611	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.50
Individual trees	Urban tree	0.1059	Medium	Moderate	Location ecologically desirable but not in local strategy	Standard time to target condition applied	27	Low	0.36
Grassland	Other lowland acid grassland	0.0423	Medium	Moderate	Location ecologically desirable but not in local strategy	Standard time to target condition applied	10	Low	0.26
Heathland and shrub	Mixed scrub	0.1063	Medium	Moderate	Location ecologically desirable but not in local strategy	Standard time to target condition applied	5	Low	0.78
Lakes	Temporary lakes ponds and pools (H3170)	0.0022	High	Moderate	Location ecologically desirable but not in local strategy	Standard time to target condition applied	3	Medium	0.02
Woodland and forest	Other woodland; broadleaved	0.0592	Medium	Good	Location ecologically desirable but not in local strategy	Standard time to target condition applied	30+	Low	0.25
	Total habitat area	1.04							2.17

Site Area (Excluding area of Individual trees and Green walls)	0.93

M² to hectares conversion tool:	Select a unit	Hectares	M²



Project Name: Streamside, Harper's Road, Ash Map Reference

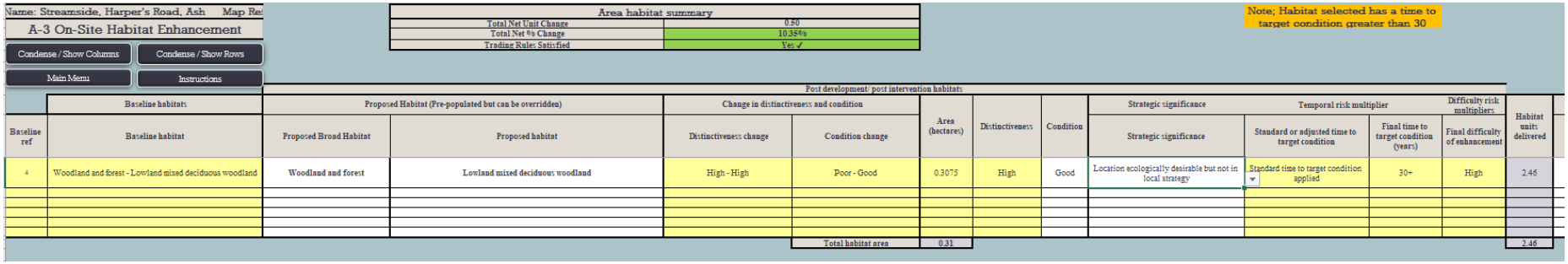
B-2 On-Site Hedge Creation

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

Hedgerow summary	
Total Net Unit Change	1.43
Total Net % Change	139.00%
Trading Rules Satisfied	Yes ✓

		Proposed habitats		Distinctiveness	Condition	Strategic significance	Temporal multiplier		Difficulty risk multipliers	Hedge units delivered
Baseline ref	New hedge number	Habitat type	Length (km)	Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition (years)	Final difficulty of creation	
1	1	Native hedgerow	0.175	Low	Good	Location ecologically desirable but not in local strategy	Standard time to target condition applied	12	Low	0.75
2										
3										
4										
5										
6										
			0.18							0.75

Habitat Enhancement



Name: Streamside, Harper's Road, Ash Map Ref

A-3 On-Site Habitat Enhancement

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

Area habitat summary	
Total Net Unit Change	0.50
Total Net % Change	10.35%
Trading Rules Satisfied	Yes ✓

Note; Habitat selected has a time to target condition greater than 30

						Post development/ post intervention habitats							
	Baseline habitats	Proposed Habitat (Pre-populated but can be overridden)		Change in distinctiveness and condition		Area (hectares)	Distinctiveness	Condition	Strategic significance	Temporal risk multiplier		Difficulty risk multipliers	Habitat units delivered
Baseline ref	Baseline habitat	Proposed Broad Habitat	Proposed habitat	Distinctiveness change	Condition change				Strategic significance	Standard or adjusted time to target condition	Final time to target condition (years)	Final difficulty of enhancement	
4	Woodland and forest - Lowland mixed deciduous woodland	Woodland and forest	Lowland mixed deciduous woodland	High - High	Poor - Good	0.3075	High	Good	Location ecologically desirable but not in local strategy	Standard time to target condition applied	30+	High	2.46
					Total habitat area	0.31							2.46

ame: Streamside, Harper's Road, Ash Map R

B-3 On-Site Hedge Enhancement

Condense / Show Columns | Condense / Show Rows

Main Menu | Instructions

Hedgerow summary	
Total Net Unit Change	1.43
Total Net % Change	139.08%
Trading Rule: Satisfied	Yes ✓

	Baseline Habitats		Post development/ post intervention habitats										
			Change in distinctiveness and condition			Distinctiveness	Condition	Strategic significance	Temporal multiplier		Difficulty risk multipliers		
Baseline ref	Baseline habitat	Proposed (Pre-populated but can be overridden)	Distinctiveness movement	Condition movement	Length (km)	Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition (years)	Final difficulty of enhancement	Hedge units delivered
2	Native hedgerow	Species-rich native hedgerow	Low - Medium	Lower Distinctiveness Habitat - Moderate	0.1232	Medium	Moderate	Location ecologically desirable but not in local strategy	Standard time to target condition applied	5	Low	0.95
					0.12							0.95

CONDITION ASSESSMENT PROFORMAS

CONDITION ASSESSMENT PROFORMA – DENSE SCRUB			
Date	20/01/2022	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	-
Weather conditions	Dry, sunny, clear sky		
Surveyor name(s)	Natalie Compton	Unique polygon reference(s)	-
Project / development name	Streamside	Metric 4.0 habitat type	Mixed Scrub
Site name or location	Harper's Road, Ash	Condition assessment required? (y/n)	Y
Onsite or offsite?	Onsite	Condition sheet used	Y – 'Scrub' Condition Sheet

Habitat description

An area of dense scrub and scattered trees was recorded along the southern bank of the stream that passes through the Site. Species recorded within this habitat type included Garden Privet, Hazel, Ash and *Mahonia* Sp.

Allocate pass 'P' or fail 'F'. Allocate 'NA' to any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria.
For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	G	K	L	M	**TOTAL**
Result	F	F	P	F	F	-	-	-	-	-	-	-	-	n/a

Are any criteria non-negotiable? (Y/N) If Yes are they passed?	n/a	Condition (Good/Moderate/Poor):	Poor
Additional Comments	Did not contain 3 woody species, lacked age range (no seedlings/young shrubs), there is an absence of INNs, scrub lacks a well-developed edge and no clearings recorded within the scrub. Passed 1 out of 5 criteria (Poor condition).		

CONDITION ASSESSMENT PROFORMA LOWLAND MIXED DECIDUOUS WOODLAND

Date	20/01/2022	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	-
Weather conditions	Dry, sunny, clear sky		
Surveyor name(s)	Natalie Compton	Unique polygon reference(s)	-
Project / development name	Streamside	Metric 4.0 habitat type	Lowland Mixed deciduous woodland
Site name or location	Harper's Road, Ash	Condition assessment required? (y/n)	Y
Onsite or offsite?	Onsite	Condition sheet used	Y – 'Woodland' Condition Sheet

Habitat description

The woodland itself is largely dominated by mature Oak and Ash, with elements of understorey comprising of Hazel, Elm, Holly, wild privet, Hawthorn, Field Maple and Yew, with climbers such as Honeysuckle and Ivy. The ground flora includes Nettle, Woundwort, Bramble, Wood Avens, lesser celandine, ground ivy, greater stitchwort and Herb-Robert. A small number of Ancient Woodland Vascular Plant species (AWVPs) were noted including Holly, Wood Sedge, Bluebell and Bush Vetch, mainly around the boundaries of the Site.

Allocate pass 'P' or fail 'F'. Allocate 'NA' to any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria.
For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	G	K	L	M	**TOTAL**
Result	2	3	1	3	2	3	1	3	3	1	1	1	1	25

Are any criteria non-negotiable? (Y/N) If Yes are they passed?	n/a	Condition (Good/Moderate/Poor):	Poor
Additional Comments	Two age classes recorded (dominated by large oak and lots of holly), no evidence of browsing. Rhododendron and Cherry Laurel recorded within the woodland. Woodland regeneration is limited with limited ground flora although some ancient woodland indicators present. No veteran trees recorded and no deadwood recorded.		

CONDITION ASSESSMENT PROFORMA - MODIFIED GRASSLAND

Date	20/01/2022	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	-
Weather conditions	Dry, sunny, clear sky		
Surveyor name(s)	Natalie Compton	Unique polygon reference(s)	-
Project / development name	Streamside	Metric 4.0 habitat type	Modified Grassland
Site name or location	Harper's Road, Ash	Condition assessment required? (y/n)	Y
Onsite or offsite?	Onsite	Condition sheet used	Y – 'Grassland Low' Condition Sheet

Habitat description

The central clearing within the northern extent of the Site is dominated by Perennial Ryegrass and includes species which are indicative of disturbance, such as Cleavers and Common Nettle. Its peripheries are bordered with scrub and occasional trees.

Allocate pass 'P' or fail 'F'. Allocate 'NA' to any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria.
For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	G	K	L	M	**TOTAL**
Result	F	F	P	F	F	P	F							

Are any criteria non-negotiable? (Y/N) If Yes are they passed?	n/a	Condition (Good/Moderate/Poor):	Poor
Additional Comments	Limited number of species per m2 (3-4 species). Sward is regularly mown. Some scattered scrub at periphery (bracken). No bare ground recorded and no INNs were recorded. Undesirable species recorded within sward (dock, nettle, thistle, clover)		

CONDITION ASSESSMENT PROFORMA - RUDERAL

Date	20/01/2022	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	-
Weather conditions	Dry, sunny, clear sky		
Surveyor name(s)	Natalie Compton	Unique polygon reference(s)	-
Project / development name	Streamside	Metric 4.0 habitat type	Sparsely Vegetated land – Ruderal/Ephemeral
Site name or location	Harper's Road, Ash	Condition assessment required? (y/n)	Y
Onsite or offsite?	Onsite	Condition sheet used	Y – 'Urban' Condition Sheet

Habitat description

Tall ruderal vegetation was recorded along the south of the Site. Dominated by nettle and cleavers with occasional bramble.

Allocate pass 'P' or fail 'F'. Allocate 'NA' to any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria.
For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	G	K	L	M	**TOTAL**
Result	F	F	P											

Are any criteria non-negotiable? (Y/N) If Yes are they passed?	n/a	Condition (Good/Moderate/Poor):	Poor
Suggested enhancement interventions to improve condition score	Vegetation fairly uniform, lacking diversity. No INNS recorded.		

CONDITION ASSESSMENT PROFORMA - HEDGEROW – NATIVE SPECIES RICH WITH TREES

Date	20/01/2022	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	-
Weather conditions	Dry, sunny, clear sky		
Surveyor name(s)	Natalie Compton	Unique polygon reference(s)	-
Project / development name	Streamside	Metric 4.0 habitat type	Native Species Rich Hedgerow with trees
Site name or location	Harper's Road, Ash	Condition assessment required? (y/n)	Y
Onsite or offsite?	Onsite	Condition sheet used	Y – 'Hedgerow' Condition Sheet

Habitat description

The hedgerow recorded along the north-west boundary of the Site was dominated by pedunculate Oak, Ash, Holly and young Elm. This hedgerow is considered to be an old hedgerow of high ecological value, which is supported by the presence of Bluebell within the ground flora.

Allocate pass 'P' or fail 'F'. Allocate 'NA' to any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria.
For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	G	K	L	M	**TOTAL**
Result	P	P	P	P	F	F	P	P						

Are any criteria non-negotiable? (Y/N) If Yes are they passed?	n/a	Condition (Good/Moderate/Poor):	Good
Additional Comments	Hedgerow >1.5m in height and width with limited gaps. No invasive or undesirable species recorded and hedge is not managed		

CONDITION ASSESSMENT PROFORMA - HEDGEROW – NATIVE SPECIES POOR

Date	20/01/2022	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	-
Weather conditions	Dry, sunny, clear sky		
Surveyor name(s)	Natalie Compton	Unique polygon reference(s)	-
Project / development name	Streamside	Metric 4.0 habitat type	Native Hedgerow
Site name or location	Harper's Road, Ash	Condition assessment required? (y/n)	Y
Onsite or offsite?	Onsite	Condition sheet used	Y – 'Hedgerow' Condition Sheet

Habitat description

The hedgerow that connects to the central woodland is gappy and consists mostly of young trees including Oak and Ash. The hedgerow to the south of the site is hawthorn and blackthorn and heavily managed.

Allocate pass 'P' or fail 'F'. Allocate 'NA' to any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria.
For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	A	B	C	D	E	F	G	H	I	G	K	L	M	**TOTAL**
Result	F	F	P	P	F	P	F							

Are any criteria non-negotiable? (Y/N) If Yes are they passed?	n/a	Condition (Good/Moderate/Poor):	Poor (Fails both attritubes in group A)
Additional Comments	Hedgerow managed, lacks in height and width with limited species diversity.		