

Engine House, Leonardslee Lakes and Gardens, West Sussex

Preliminary Ecological Appraisal and Preliminary Roost Assessment

Report for Leonardslee Lakes and Gardens



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Contents

Executive Summary	3
1 Introduction	6
2 Methodology	11
3 Results and Evaluation	20
4 Recommendations	38
References	52
Appendix 1: Maps	55
Appendix 2: Species List	61
Appendix 4: Photographs	63
Appendix 5: Habitat Condition Assessments	68
Appendix 6: Legislation and Planning Policy	71

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Executive Summary

Temple was commissioned in November 2022 by Leonardslee Lakes and Gardens to carry out a Preliminary Ecological Appraisal (PEA), comprising a UK Habitat Classification survey (UKHabs), protected species assessment, including a Preliminary Roost Assessment (PRA), and ecological evaluation of The Engine House, Leonardslee Lakes and Gardens, Lower Beeding, West Sussex (henceforth referred to as 'the Site'). The PEA and PRA are required to inform an outline planning application for an extension to the existing cafe building to include an accessible WC to the west, and an extension to the terrace to increase the amount of seating available.

The main findings are as follows:

- The Site is located within the grounds of Leonardslee Lakes and Gardens, a 97ha Grade I listed garden, comprising lakes, a vineyard and associated buildings. The Site comprised an existing building in use as a café with associated patio area and small area of grassland. Habitats present are considered of importance within the immediate vicinity of the Site only.
- The Site is not subject to any international or national nature conservation designations, and no international designation located within a 15km radius, or national designations within 2km of the Site. The Site however, falls within the St Leonards watershed Biodiversity Opportunity Area (BOA). The Site sits within an area that is classified as Wood-pasture and Parkland Habitat of Principal Importance (HPI).
- The closest non-statutory designated site is Old Deer Park Local Wildlife Site (LWS), located approximately 100m east of the Site.
- **Bats** – The building on Site was considered to have moderate suitability to support roosting bats. No further surveys are required due to the lack of direct impacts to the roof space. A sensitive lighting strategy to avoid impacts to foraging and commuting bats is recommended.

- **Great crested newt** – Terrestrial habitat suitable for great crested newt was found on Site. No further surveys are required but a precautionary method of works is recommended.
- **Breeding Birds** – There was some limited habitat suitable for breeding birds on Site. Vegetation clearance should be undertaken outside of the breeding season (February to August inclusive). If this is not possible, then a pre-works check should be undertaken up to 48 hours prior to works.
- **Invasive plants** - Rhododendron was found on the Site as a hedge surrounding the building. It is an offence to allow the spread of this species to any off-site habitats and therefore measures to avoid this are provided in Section 4 of this report.
- **Reptiles** – The Site contained habitat with low suitability for sheltering and dispersing reptile species. No further surveys are required but a precautionary method of works is recommended.
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- **Hedgehog** – The Site contained limited suitable habitat for foraging and sheltering hedgehogs. Precautionary measures are recommended.
- **Terrestrial Invertebrates** – There was a low suitability for terrestrial invertebrates on the Site within the small area of managed grass. Due to the small scale of the Site and large amounts of similar habitat in the surrounding area, this will not detrimentally impact local populations of terrestrial invertebrates. Recommendations for enhancements can be found in Section 4 of this report.

Where possible on the basis of information available to date, recommendations to enhance the importance of the Site for biodiversity in accordance with the Environment Act 2021 and national and local planning policies, have been provided. As the proposals are part of a wider set of ongoing developments within the wider Leonardslee estate, it is recommended that an enhancement plan for the whole estate is produced which incorporates the enhancements of each development. This will include a wildlife planting scheme and grassland diversity enrichment to enhance biodiversity for net-gain

as well as dark-sky friendly lighting provision of nesting opportunities and inclusion of log piles where possible.

1 Introduction

BACKGROUND TO COMMISSION

- 1.1 Temple was commissioned by Leonardslee Lakes and Gardens in November 2022 to carry out a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) of The Engine House at Leonardslee Lakes and Gardens, Lower Beeding, West Sussex. The development of the Engine House comprises one of five small developments currently being undertaken within the wider Leonardslee Lakes and Gardens estate. This appraisal considers land within the planning application site boundary (henceforth referred to as 'the Site') as indicated on the proposed estate plan provided by Purcell (2023).
- 1.2 Temple, formerly The Ecology Consultancy, undertook surveys of the buildings within the Leonardslee Lakes and Gardens estate, including Engine House, in 2017 (The Ecology Consultancy, 2018a and 2018b). The survey identified habitats on Site suitable to support bats, but no further surveys were undertaken as there were no proposals to develop the building at the time. Alongside these surveys, Habitat Suitability Index (HSI) Assessments and presence/absence surveys of the adjacent ponds were undertaken for great crested newt. The ponds were considered to have 'below average' suitability for great crested newt and evidence of these species was found during the surveys. The habitats recorded on Site and their suitability to support protected species will be discussed further in this report.

SCOPE OF THE REPORT

- 1.3 The aim of this appraisal is to provide baseline ecological information about the Site. This will be used to identify any likely ecological constraints associated with the proposed development and/or to identify the need for additional survey work to further evaluate any impact that may risk contravention of legislation or policy relating to protected species and nature conservation. Where possible, this report outlines any avoidance, mitigation, compensation and enhancement measures as may be required to ensure compliance with legislation and policy. Although

enhancement measures may be used to achieve a net gain in biodiversity in line with national and local planning policies, this does not comprise a formal Biodiversity Net Gain assessment and no metric calculations have been made.

1.4 This appraisal is based on the following information sources:

- a desk study of the Site and land within a 2km surrounding radius;
- a search for international wildlife sites within a 15km surrounding radius;
- a UK Habitat Classification Survey of the Site to identify and map the habitats present;
- a Species Assessment of the Site to identify features with potential to support legally protected and/or notable species including those defined by Section 41 of the NERC Act 2006 as Species of Principal Importance;
- A Preliminary Roost Assessment (PRA) of one building on Site for roosting bats; and
- an evaluation of the Site's importance for nature conservation.

1.5 This appraisal has been prepared with reference to best practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2017) and as detailed in British Standard 42020:2013 *Biodiversity - Code of Practice for Biodiversity and Development* (BSI, 2013).

1.6 The survey was conducted by Francesca West, MRes BSc (Hons), an experienced ecologist with eight years' experience who is trained and competent in carrying out UK Habitat Classification surveys and protected species assessment. Francesca was assisted by Maisie Worthington BSc (Hons), an experienced ecologist with five years' experience who is trained and competent in carrying out UK Habitat Classification surveys and protected species assessment. The assessment and report were completed by Maddy Thomson BA (Hons), an ecologist with 1.5 years' experience.

- 1.7 A habitat map of the Site is presented in Appendix 1.3 with a botanical species list of plants recorded in Appendix 2. The habitat map reflects areas observed at the time of survey. Photographs of the Site are presented in Appendix 3 and Habitat Condition Assessment forms (in accordance with Panks *et al.*, 2022) are replicated in Appendix 4.

SITE CONTEXT AND STATUS

- 1.8 The Site is approximately 0.03ha in size and is centred on Ordnance Survey National Grid reference TQ 22338 25963. The Site comprised a single storey working café known as the Engine House Café, with outdoor seating area to the north and east and an area of mown grassland covering the south and west. Bordering the south and west of the building was a rhododendron hedge, and within the grassland to the west there was a conifer tree and introduced shrub. A well-used and well-maintained gravel track lay within the Site at the north and east Site boundary.
- 1.9 The Site sits centrally within Leonardslee Lakes and Gardens, a 97ha Grade I Listed landscaped garden with large lakes, a vineyard, recreational facilities and areas of woodland that is open to visitors all year round. Leonardslee Lakes and Gardens comprises a steep sandstone valley and seven man-made lakes interconnected with woodlands, scrub and landscaped woodland gardens adjoining. Areas of Ancient & Semi-Natural Woodland, Ancient Replanted Woodland, Deciduous Woodland and Lowland Heathland are present within the wider Leonardslee Lakes and Gardens Estate. The Gardens are bordered by a busy 'A' road to the west, but the wider landscape stretching from the Estate boundary comprises areas of agricultural land bordered by hedgerows, woodland and residential properties. It lies in a rural area north of Crabtree, Lower Beeding and is within the Horsham District of West Sussex. Haywards Heath sits approximately 10km to the east and Horsham approximately 5km to the north-west.

DEVELOPMENT PROPOSALS

- 1.10 The development proposals for the Site, (Purcell, 2023) include adding a small lightweight extension to the western side of the existing building to house an accessible WC and extending the terrace to the south to increase the amount of seating available. It also includes erecting a gate to define the bin storage area and installing new guarding around the terrace to comply with building regulations.
- 1.11 The proposals will impact small areas of modified grassland and introduced shrub. The WC extension to the building will not touch the existing roof, therefore the existing roof is not expected to be directly impacted by the proposals.

RELEVANT LEGISLATION AND PLANNING POLICY

- 1.12 The following key pieces of nature conservation legislation are relevant to this appraisal. A more detailed description of legislation is provided in Appendix 7:
- The Conservation of Habitats and Species Regulations 2017 (as amended) (commonly referred to as the Habitats Regulations);
 - Wildlife and Countryside Act 1981 (as amended);
 - Natural Environment and Rural Communities Act 2006;
 - Environmental Act 2021;
 - Protection of Badgers Act 1992; and
 - Wild Mammals (Protection) Act 1996.
- 1.13 The National Planning Policy Framework (Department for Levelling Up, Housing and Communities, 2023) and Environment Act 2021 requires local authorities to avoid and minimise impacts on biodiversity and to provide net gains in biodiversity when taking planning decisions. In addition, in England, under Section 40 of the Natural Environment and Rural Communities Act 2006, all public bodies are required to have regard to biodiversity conservation when carrying out their functions.

- 1.14 Other planning policies at the local level of relevance to this development include the Horsham District Local Plan 2021- 2038 and The High Weald Area of Outstanding Natural Beauty (AONB) Management Plan 2019- 2024.

NOMENCLATURE

- 1.15 A botanical species list, including scientific names in accordance with Stace (2019), is provided in Appendix 2. Common names of species, in accordance with the Natural History Museum Species Dictionary (Natural History Museum (2022), are used throughout this report with scientific names given at first mention only for fauna.

2 Methodology

DESK STUDY

2.1 The following data sources were reviewed to provide information on the location of statutory designated sites¹, non-statutory designated sites², legally protected species³, Species and Habitats of Principal Importance⁴, and other notable species⁵ and habitats⁶ that have been recorded within a 2km radius of the Site:

- Sussex Biodiversity Record Centre, the local Biological Records Centre, principally for species records and information on non-statutory sites from within 2km of the wider Leonardslee Lakes and Gardens Estate;
- MAGIC (<http://www.magic.gov.uk/>) - the Government's on-line mapping service; and
- Ordnance Survey mapping and publicly available aerial photography.

2.2 A summary of key records provided by the desk study is presented in Section 3 of this report. All records have been used to inform the assessment of the potential for protected or otherwise notable species to be present at the Site to provide a preliminary view of the Site's ecological importance but these are not presented in full in the report.

¹ **Statutory designations** include Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites (referred to collectively as National Site Network sites in England), National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI) and Local Nature Reserves (LNR).

² **Non-statutory sites** are designated by local authorities (e.g. Sites of Importance for Nature Conservation or Local Wildlife Sites).

³ **Legally protected species** include those listed in Schedules 1, 5 or 8 of the Wildlife and Countryside Act 1981 (as amended); Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended); or in the Protection of Badgers Act 1992.

⁴ **Species/Habitats of Principal Importance** are those defined by Section 41 of the Natural Environment and Rural Communities Act, 2006.

⁵ **Notable species** include Species of Principal Importance under the Natural Environment and Rural Communities Act 2006; Local Biodiversity Action Plan (LBAP) species; Birds of Conservation Concern (Stanbury *et al.* 2021); and/or Red Data Book/nationally notable species (JNCC, undated).

⁶ **Notable habitats** include Habitats of Principal Importance under the Natural Environment and Rural Communities Act, 2006; those included in an LBAP; Ancient Woodland Inventory sites; and Important Hedgerows as defined by the Hedgerow Regulations 1997.

PRELIMINARY ECOLOGICAL APPRAISAL - HABITAT SURVEY

- 2.3 A habitat survey of the Site was carried out on the 1st December 2022 in 8°C, 0/8 oktas cloud cover, Beaufort 2 wind and no rain.
- 2.4 The survey covered the entire Site including boundary features. Habitats were described and mapped following UK Habitat Classification survey methodology (UKHab, 2020). Habitats were marked on a paper base map and subsequently digitised using ESRI ArcGIS software. Habitats were also assessed against descriptions of Habitat of Principal Importance as set out by the JNCC (BRIG, 2008)⁷ where appropriate.
- 2.5 As a formal Biodiversity Net Gain (BNG) assessment is required, UK Habitat Classifications Version 1.1, in use at the time of the survey (UK Habitat Classification Working Group, 2020) has been used for the purposes of calculating the preliminary baseline units. The condition of each of the applicable habitats present on Site has been recorded in line with the Biodiversity Net Gain 3.1 Technical Supplement which was relevant at the time of the survey (Panks *et al.*, 2022) with condition assessment forms presented in Appendix 5. A formal Biodiversity Net Gain assessment and metric calculations will be provided in a separate report.
- 2.6 Records for dominant and notable plants are provided, as are incidental records of birds and other fauna noted during the course of the habitat survey. The latter have been used to justify the potential presence of important ecological features where applicable.
- 2.7 The Site was also surveyed for the presence of invasive plant species as defined by Schedule 9 of the Wildlife and Countryside Act 1981 (as amended); however, detailed mapping of such species is beyond the scope of this commission and locations on the habitat plan are indicative only.

⁷ Collection of data required to confirm that certain habitats (including rivers and ponds) meet criteria for HPI is beyond that obtained during a Phase 1 habitat survey. In these cases, the potential for such habitats to meet relevant criteria is noted but further surveys to confirm this assessment may be recommended.

PROTECTED AND INVASIVE SPECIES ASSESSMENT

- 2.8 The suitability of the Site for legally protected species was assessed on the basis of relevant desk study records⁹ combined with field observations from the habitat survey. The likelihood of the habitat(s) supporting protected and/or notable species was ranked on a scale from 'negligible' to 'present' as described in Table 2.1.
- 2.9 The assessment of habitat suitability for protected or notable species was based on professional judgement drawing on experience of carrying out surveys of a large number of urban and rural sites and best practice survey guidance.

Table 2.1: Protected species assessment

Category	Description
Present	Presence confirmed by the current survey or by recent and/or desk study records.
High	Habitat present provides all of the known key requirements for a given species/species group. Local records are provided by desk study. The Site is within or close to a national or regional stronghold for a particular species. Good quality surrounding habitat and good connectivity.
Moderate	Habitat present provides some of the known key requirements for a given species/species group. Several desk study records and/or the Site are within known national distribution and with suitable surrounding habitat. Factors limiting the likelihood of occurrence may include small habitat area, barriers to movement and disturbance.
Low	Habitat present is of relatively poor quality for a given species/species group. Few or no desk study records. Presence cannot be discounted on the basis of national distribution, nature of surrounding habitats or habitat fragmentation.
Negligible	Habitat is either absent or of very poor quality for a particular species or species group. No desk study records. Surrounding habitat unlikely to support wider populations of a species/species group. Outside or peripheral to the known range of a species.

- 2.10 The findings of this assessment help establish the need for protected species surveys. Surveys may be required where a site is judged to be of suitability for a

⁹ Primarily dependent on the age of the records, distance from the site and types of habitats at the site.

particular species/ species group even if that suitability is deemed to be Low - this is particularly the case where there the risk of contravening the relevant conservation legislation is unknown or cannot be quantified on the basis of the information available. However, in some cases there may be opportunities to ensure compliance with the legislation without further survey through precautionary measures prior to and during construction.

PRELIMINARY ROOST ASSESSMENT – BUILDINGS

- 2.11 The PRA consisted of an external inspection of all features/surfaces of the building and an internal inspection where access allowed. The survey and assessment was undertaken by Francesca West, BSc (Hons) MRes, a senior ecologist with eight years' commercial bat survey experience. Francesca was working as an accredited agent under licence number 2019-41253-CLS-CLS which allowed her to undertake the surveying of bats using artificial light (torches) and endoscopes. Francesca was assisted by Maisie Worthington (BSc Hons), an experienced ecologist with five years' experience.
- 2.12 The aim of the surveys outlined below is to establish the suitability of the building within the Site to support bat roosts. The suitability of structures to support roosting bats, ranging from negligible to the presence of a confirmed roost, is assessed using the findings of the survey and the desk study. The following criteria were used to determine the suitability of the buildings for roosting bats (taken from guidance at the time of the survey Collins, 2016):
- **Negligible** – While presence cannot be absolutely discounted there were no significant visible features that could be used by bats for roosting.
 - **Low** – A structure with one or more potential roost sites that could be used by individual bats opportunistically; however, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by

larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).

- **Moderate** – A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this list are made irrespective of species conservation status, which is established after presence is confirmed).
- **High** – A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
- **Confirmed roost¹⁰** – Evidence indicates a building or other structure is used by bats, for example:
 - bats seen roosting or observed flying from a roost or freely in the habitat;
 - droppings, carcasses and feeding remains indicative of a roost; and
 - bats heard ‘chattering’ inside on a warm day or at dusk.

2.13 The gathered information has been used to inform whether further survey is required in the form of dusk emergence and/or dawn re-entry surveys, in line with current guidelines (Collins, 2023), to fully understand how bats are using the Site and the potential impacts of the proposals on bats, or whether an assessment can be made on the basis of the building inspection alone.

Internal and External Inspections

2.14 The PRA was carried out on 1st December 2022 in weather conditions of 8°C, 2/12 Beaufort scale wind, 0/8 okta cloud cover and no rain.

¹⁰ Adapted from Cowan, A. (2006) Trees and Bats. Guidance Notes 1. Arboricultural Association, Cheltenham

- 2.15 The survey comprised an external inspection of the building, involving a detailed search of all accessible architectural features for bat droppings, urine staining, scratch marks, staining around suitable crevices and feeding remains. Windowpanes and other external surfaces were checked for droppings or other secondary evidence. This included external features, such as soffits and fascias, roof lining, brickwork and window casements. Any features that could potentially provide access into internal areas (such as cavity walls) were noted.
- 2.16 An internal inspection of the building was completed, whereby the surveyor surveyed the interior of the building and roof void in logical progression. All surfaces, including floor areas, were checked for discarded feeding remains and bat droppings. A high-powered torch was shone along the interior of the roof, where appropriate, to look for bats, staining and droppings.
- 2.17 The survey methodology followed best practice guidelines at the time of the survey (Mitchell-Jones 2004; Collins, 2016). This guidance has now been superseded by Reason and Wray, 2023. Equipment used during the building inspection included an extendable ladder, close-focusing binoculars and a high-powered torch.
- 2.18 Finally, the building was inspected for evidence of/potential for breeding and/or roosting birds.

SITE EVALUATION

- 2.19 Where sufficient baseline data are available, the Site's ecological importance has been evaluated broadly following guidance issued by CIEEM (CIEEM, 2018) which ranks the nature conservation importance of a site according to a geographic scale of reference: international, national, regional (South-East- England), county (West Sussex), vice-county or other local authority-wide area (Horsham District Council); and of importance at the zone of influence of the Site only. In evaluating the nature conservation importance of the Site, the following factors were considered: nature conservation designations; species/habitat rarity; naturalness; fragility and

connectivity to other habitats. Where no importance has been assigned this is due to insufficient information.

2.20 An assessment of likely ecological impacts has been undertaken in accordance with CIEEM guidelines (CIEEM, 2018) only where clear evidence is available to substantiate and justify the findings. In the absence of such evidence, the ecological feature is merely identified as a potential constraint to development. Reference is also made to Section 6 of the Bat Mitigation Guidelines (Mitchell-Jones, 2004) and Natural England's standing advice and includes a summary of the scale of impact according to bat roost type and development effect, if known.

2.21 Where ecological constraints to development are identified, further survey requirements and/or mitigation measures that are proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development are described. In addition, in accordance with the Environment Act 2021, National Planning Policy Framework (NPPF) and local/regional planning policies, opportunities to enhance or create benefits for wildlife are provided where this is possible based on the information available to date. These measures may be appropriate for the attainment of net gains in biodiversity, although this assessment does not provide a formal measure of Biodiversity Net Gain. A formal BNG assessment will be undertaken for this Site and included within a subsequent report.

DATA VALIDITY AND LIMITATIONS

2.22 Every effort has been made to provide a comprehensive description of the Site; however, the following limitations apply to this assessment.

- The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the Site. It should not be taken as providing a full and definitive survey of any protected species group. Additional surveys may be recommended if on the basis of the preliminary assessment or during subsequent surveys it is considered reasonably likely that protected species may be present and potentially affected by the proposed development.

- The ecological evaluation is preliminary and may change subject to the findings of further ecological surveys (should these be required).
- Even where data for a particular species group are provided in the desk study, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest, the area may simply be under-recorded.
- Where only four figure grid references are provided for protected species by third parties, the precise location of species records can be difficult to determine and they could potentially be present anywhere within the given 1km x 1km square. Equally, six figure grid references are accurate to the nearest 100m only.
- The UK Habitat Classification survey does not constitute a full botanical survey or provide accurate mapping of invasive plant species.
- The surveys were undertaken at the sub-optimal time of year for plant growth, during the winter months, so it is possible that species that flower earlier in the year may have been missed. However, the data from the habitat survey is sufficient to inform a baseline assessment.
- Bats are highly mobile animals and can move roost sites both within and between years. Where surveys are not spread throughout the bat active season it is possible that roost sites that are used for a limited time only could be missed, and the detection of small numbers of crevice dwelling species from an inspection alone may remain problematic, particularly where droppings accumulate within an inaccessible void such as a cavity wall or above the roof lining. Where visible and undisturbed, however, evidence of bats inside a building is likely to be detectable throughout the year.
- Ecological survey data are typically valid for 12-18 months unless otherwise specified (CIEEM, 2019). Data used to support a bat mitigation licence application to Natural England must be from the most recent survey season; depending on the timing of the application, this may mean from the same or previous year.

- Surveyors were able to look within, but not fully access the roof void within the building so some evidence of roosting bats such as droppings or feeding remains may have been missed. However, surveyors were able to determine the suitability of the void for roosting bats from the external and internal inspection of the building.

2.23 Despite the access limitation, it is considered that this report accurately reflects the habitats present, their biodiversity importance and the likelihood of the Site to support protected and otherwise notable species.

3 Results and Evaluation

DESIGNATED SITES

Statutory designated nature conservation sites

- 3.1 The Site is not subject to any international or national statutory nature conservation designations. No internationally important sites are located within a 15km radius of the Site. No nationally designated sites are located within 2km of the Site.
- 3.2 See Appendix 1, Figure 2 and 3 for international and local designated sites map.

Non-statutory designated nature conservation sites

- 3.3 The Site is included within the Sussex Biodiversity Opportunity Area (BOA) strategy. One non-statutory site designated as a Local Wildlife Sites (LWS) is present within 2km of the Site (Table 3.1). See Appendix 1, Figure 3 for local designated sites map.

Table 3.1: Non-Statutory Designated Site

Site Name	Distance from Site and orientation	Ecological Importance	Qualifying features/Description	Potential constraint
The St Leonards watershed Biodiversity Opportunity Area (BOA)	On site	Local	The St Leonards watershed has been recognised as a Biodiversity Opportunity Area (BOA) as it represents a priority area for the delivery of Biodiversity Action Plan (BAP) targets. It is one of 75 such areas across Sussex. The BOA covers approximately 4057 hectares.	No

Site Name	Distance from Site and orientation	Ecological Importance	Qualifying features/Description	Potential constraint
Old Deer Park LWS	100m east	Local	Old Deer Park is one of the best surviving relicts of St Leonard's Forest. There are ancient parkland trees with a good lichen community, dry and wet heathland, and a bog that contains an assemblage of species no longer found in any other site in West Sussex. The most important area is the southern part of the parkland where the dry and wet heath and bog communities occur. The dry heath consists of a fine area of Heather <i>Calluna vulgaris</i> with Bell Heather <i>Erica cinerea</i> , Heath Bedstraw <i>Galium saxatile</i> , Tormentil <i>Potentilla erecta</i> , Green-ribbed Sedge <i>Carex binervis</i> , Heath-grass <i>Danthonia decumbens</i> and Mat-grass <i>Nardus stricta</i> . At least ten <i>Cladonia</i> species of lichen have been recorded, including one extremely rare species.	No

Habitat inventories and landscape-scale conservation initiatives

Habitats of Principal Importance

- 3.4 There are 56 Habitats of Principal Importance (HPI) located within 2km of the Site (Natural England, 2022), namely Deciduous Woodland, Ancient Woodland, Wood-pasture and Parkland, Traditional Orchard, and Lowland Heathland. The Site sits within an area classified as wood-pasture and parkland HPI (Magic, 2023). There is connectivity with deciduous woodland to the south and west. The Site sits 140m west of lowland heathland and 925m south of traditional orchard. There are over 20 ancient or veteran trees within 2km of the wider Leonardslee Lakes and Gardens Estate.

Ancient woodland

- 3.5 80 areas of woodland within a 2km radius of the Leonardslee Lakes and Gardens estate, appear on the Ancient Woodland Inventory. Under inventory mapping, the Site is classed as ancient woodland, however the habitats on site do not reflect this. There is connectivity to ancient woodland to the south and west, roughly 25m in each direction. See Appendix 1.2 for priority habitat maps.

Data return for bat species

- 3.6 The data search returned 62 records of bats from within the past ten years from at least eight species and two species groups. Of these records, 16 were roosts and the remainder were field records. 13 roosts were recorded within 2km of the Site in the last ten years. Some of which were previously recorded within Leonardslee House, or adjacent buildings such as the Stable Block. There was also one historic record of a hibernation roost from 1992, within the Ice-House associated with Leonardslee House. Two historic mitigation licences were found within a 2km radius of the site. A summary of the results is presented in Tables 3.2 and 3.3.

Table 3.2: Summary of data search results

Species	Distance & Orientation	Date of most recent record	Description
Brown Long-eared Bat	155m west	16/11/2017	The Stable Block, Leonardslee Estate, Building inspection, unspecified roost
Brown Long-eared Bat <i>Plecotus auritus</i>	230m west	16/11/2017	The Manor House, Leonardslee Estate. Building inspection, unspecified roost
Brown Long-eared Bat	230m west	20/06/2019	Leonardslee House & Gardens. One roosting in the building.
Brown Long-eared Bat	230m west	05/09/2019	Leonardslee House & Gardens. One bat emerged from building, unspecified roost
Brown Long-eared Bat	230m west	24/09/2019	Leonardslee House & Gardens. One bat emerged from building, unspecified roost

Soprano Pipistrelle <i>Pipistrellus pygmaeus</i>	230m west	25/09/2019	Leonardslee House & Gardens, one bat emerged from building, unspecified roost
Soprano Pipistrelle	230m west	24/09/2019	Leonardslee House & Gardens, 1 bat emerged from building, unspecified roost
Soprano Pipistrelle	230m west	05/09/2019	Leonardslee House & Gardens, four bats emerged from building, unspecified roost
Common Pipistrelle <i>Pipistrellus pipistrellus</i>	230m west	24/09/2019	Leonardslee House & Gardens, two bats emerged from building, unspecified roost
Common Pipistrelle	230m west	05/09/2019	Leonardslee House & Gardens, two bats emerged from building, unspecified roost
Natterer's Bat <i>Myotis nattereri</i>	240m west	15/02/1992	Ice-house, Leonardslee Gardens, Brighton Road, Lower Beeding. 1 bat present during hibernacula survey
Long-eared Bat species <i>Plecotus sp.</i>	545m southwest	13/03/2020	Maternity Roost
Soprano Pipistrelle	735m south	02/06/2020 - 04/08/2020	Maternity roost, surveyed over a number of dusk/dawns in 2020 plus hand netting in 2019. 2020 peak count of 286 bats.
Common Pipistrelle	1.7km north-east	01/07/2016	Maternity roost

Table 3.3: Bat mitigation licences within 2km of the site boundary

Licence Number	Distance & Orientation	Notes
2019-43870-EPS-MIT	1.5km south-east	Brown long-eared bat, common pipistrelle, soprano pipistrelle, whiskered bat Licence was valid 03/02/2020 to 30/01/2030
EPSM2010-1637	1.7km south-west	Brown long-eared bat, common pipistrelle, soprano pipistrelle. Licence was valid 10/03/2010 to 30/11/2010

UK HABITAT CLASSIFICATION SURVEY

Site character

- 3.7 The Site sits centrally within the Leonardslee Lakes and Gardens estate, comprising a sensitively managed Grade II listed House and garden which consists of buildings, lakes, ancient and semi-natural woodland and ancient replanted woodland. Leonardslee Lakes and Gardens sits within a rural landscape and is open to the public. The gardens are carefully managed and there is a high footfall around the estate, as the gardens are open to visitors year-round. The Site consists of a small building currently used as a café, gravel paths, a paved terrace, mown grass, a pine tree and rhododendron hedge bordering the building.
- 3.8 UK Habitat Classification types are mapped in Appendix 1, Figure 3 and areas are given in Table 3.4 below and an assessment of habitat condition in accordance with the Biodiversity Net Gain 3.1 Technical Supplement which was the relevant metric at the time of the survey (Panks *et al.*, 2022).
- 3.9 A description of dominant and notable species and the composition of each habitat is provided below, with a species list (including all scientific names) provided in Appendix 2. Photographs are located in Appendix 3. The habitat condition forms are presented in full in Appendix 4.

Table 3.4: UK Habitat Classification Areas

UK Habitat Classification	UKHab Secondary codes	Condition	Extent (ha)
g4 Modified Grassland	64 Mown 1160 Introduced shrub 1170 Tree	Poor	0.0135
u1c Artificial, unvegetated, unsealed	N/A	NA	0.01077
u1b Developed land, sealed surface	N/A	NA	0.00516
u1b5 Building	90 Commercial building	NA	0.00469
		Total	341.2

Habitat Description*g4 Modified grassland*

- 3.10 To the south of the Site was a patch of modified grassland, which at the time of survey was mown (secondary code 64) to a sward height of 5-10cm. Species present within the grassland included dominant perennial ryegrass and fescue, abundant buttercup, yarrow and dandelion.

g4 Modified Grassland; 1160 Introduced shrub

- 3.11 A rhododendron hedge was present around the building to the south and west (Appendix 4, Photographs 11-12). Between the rhododendron hedge and the building, species such as common ivy, willow herb, sedge and bramble have been left to grow.

g4 Modified Grassland; 1170 Tree

- 3.12 A Chinese white pine stood to the west of the building within the area of modified grassland.

u1c Artificial, unvegetated, unsealed

- 3.13 Gravel paths to the north and east, adjacent to the paved terrace area.

u1b Developed land, sealed surface

- 3.14 A raised paved terrace area surrounding the small outbuilding to the north and east.

u1b5 Building; 90 Commercial building

- 3.15 A small brick-built structure, currently used as a café. The building was re-built in 2012 and the roof re-laid. A small single-holed bird box was located on the southern façade. Results of the Preliminary Roost Assessment of this building can be found in Table 3.6.

PROTECTED, NOTABLE AND INVASIVE SPECIES ASSESSMENT

- 3.16 The potential for the Site to support protected and/or notable species has been assessed using criteria provided in Table 2.2 and is based on the results of the desk study and observations made during the survey of habitats at the Site. Those legally protected species not referred to in Table 3.5 and 3.6 below have been scoped out as it is considered that the Site does not contain habitats suitable to support them.
- 3.17 Key pieces of statute are summarised in Section 1 and set out in greater detail in Appendix 6.

Table 3.5. Protected, notable and invasive species assessment

Ecological feature	Status ^{11 12}	Likelihood of occurrence	Ecological importance	Potential constraint
Bats: Roosting Foraging/commuting	HR WCA S5	<p>MODERATE (Roosting): A PRA of the building on Site was undertaken alongside the PEA assessment (see Table 3.6 below).</p> <p>No evidence of bats was recorded at the time of the survey, but the building was considered to have Moderate suitability to support roosting bats due to the low number of suitable roosting features present and high-quality adjacent habitats within the locality which make it more likely that bats will roost in the building. Please refer to the PRA table below for full details.</p> <p>LOW (Foraging/ commuting): Habitats on Site are considered to have a low suitability to support foraging bats as they are small in extent and managed extensively compared with habitats immediately adjacent to the Site.</p> <p>There is a moderate potential that roosting bats may occur at Site and a low potential that foraging/ commuting bats may occur at Site, and</p>	Unknown	<p>Roosting: Current proposals are not predicted to disturb features that have suitability to support roosting bats, therefore no further survey is required.</p> <p>Foraging/ commuting: A sensitive lighting strategy is required to avoid disturbance of foraging and commuting bats.</p>

¹¹ The following abbreviations have been used to signify the legislation afforded different species: HR = Conservation of Habitats and Species Regulations 2017 (as amended); WCA S1 = Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); WCA S5 = Schedule 5 of the Wildlife and Countryside Act 1981 (as amended); WCA S9 = Schedule 9 of the Wildlife and Countryside Act 1981 (as amended); PBA = Protection of Badgers Act 1992.

¹² The following abbreviations have been used to signify the policy of conservation assessments applying to notable species: SPI = Species of Principal Importance under the NERC Act 2006; LBAP = Local Biodiversity Action Plan species; BoCC = Birds of Conservation Concern - amber list / red list (Stanbury *et al.*, 2021); and/or RD/NN = red data book/nationally notable species (JNCC, undated).

		as such they are considered further in Section 4 of this report.		
Dormouse	HR WCA S5	<p>Negligible: There are three records of hazel dormice within 2km of the Leonardslee Lakes and Gardens Estate from the last ten years. The closest record is approximately 76m north-west of the Site, within the wider Leonardslee Parks & Gardens.</p> <p>The Site does not have aerial connectivity with the location of the previous records for dormice and there was no suitable dormouse habitat on Site. The woodland nearby could have suitable habitat for dormice.</p> <p>As suitable dormouse habitat is not present on Site and the Site is not connected to the location of recent known records, no further surveys are required at this time. However, due to the proximity of the development to the recent dormouse records and to suitable dormice habitat, dormice should be a consideration for the lighting design of this development and recommendations prescribed to protect foraging and commuting bats will also protect local dormouse habitat.</p>	N/A	Developments could cause disturbance to adjacent habitats through lighting during construction and post-development.
Great crested newt	HR WCA S5	<p>LOW: There are records of great crested newt from the last ten years within 2km of the Leonardslee Lakes and Gardens ownership boundary. The most recent are from 2019, where a maximum abundance count of 13 adults were found at South Lodge Hotel, 700m from Site. There is limited connectivity to this pond as The Long Hill Road is a barrier to dispersal, running between South Lodge Hotel and Engine House.</p>	If present, likely to be at the Site level only due to the small scale of suitable habitats which are unlikely to support large	No further survey required.

		<p>Historically, great crested newt surveys (Habitat Suitability Indices, environmental DNA and presence/absence surveys) of 12 ponds undertaken by The Ecology Consultancy in 2018 (The Ecology Consultancy, 2018a) found a peak count of 1 adult male and a positive eDNA of a pond within the greenhouse of the visitors' centre of Leonardslee Lakes and Gardens. However, since 2018 the pond has been removed. No other ponds within Leonardslee Lakes and Gardens had any evidence of great crested newt. The adjacent waterbodies are unsuitable for great crested newts due to the lack of macrophyte cover, presence of fish and waterfowl, and steep banks.</p> <p>Habitat within the Site boundary does not contain any aquatic habitat, but has suitability for sheltering, foraging and dispersing great crested newt although the habitats on Site are minimal and are managed extensively, so are unlikely to provide key habitat for local great crested newt. According to the Natural England rapid risk calculator, an office is highly unlikely.</p> <p>There is low potential that great crested newt may occur at the Site, and as such they are considered further in this report.</p>	populations of great crested newt and distance to suitable aquatic/breeding habitat.	
Birds: Breeding	WCA Sections 1-8	<p>LOW (Breeding): The Site has low suitability to support breeding and wintering birds. The rhododendron on Site would make low quality nesting habitat due to the species' lack of three-way forks in their branch structure that can support a nest. The building is too well-sealed to allow for nesting within it.</p>	Site level. The small extent of suitable habitat present is unlikely to support large	<p>A pre-works check of the onsite bird-box is required.</p> <p>Developments could cause disturbance to adjacent habitats</p>

Wintering		<p>However, there is low nesting potential on site due to the bird box on the southern façade of the building and tree on Site. The bird box is open-fronted so could be suitable for robins or blackbirds.</p> <p>NEGLIGIBLE (wintering): The habitats on-site have minimal value for wintering birds, and compared with habitats within the immediate vicinity, they are of a much lower quality. As such they are scoped out of this report.</p> <p>There is a low potential that breeding birds may occur on site, therefore they are considered further in Section 4 of this report.</p>	populations of bird species.	through lighting during construction and post-development.
Birds	WCA S1	<p>LOW: The desk study found records of 14 WCA Schedule 1 species within 2km of the Site from the last ten years. This includes four species found within Leonardslee Lakes and Gardens: kingfisher <i>Alcedo atthis</i>, hobby <i>Falco subbuteo</i>, crossbill <i>Loxia curvirostra</i> and firecrest <i>Regulus ignicapilla</i>. There were also two records of birds classed as confidential by the Sussex Ornithological Society (SOS). Schedule 1 birds could include brambling and fieldfare, species which like to use hedgerows and gardens for foraging in winter, or firecrest which are associated with conifers. Suitable habitats for these species were present on Site but they were only minimal and compared with habitats within the immediate vicinity, they were of a much lower quality. The pine tree on Site presented suitable habitat associated with firecrest and crossbills, but there will be no impact on this habitat as the tree is to</p>	If present, Site level importance due to the very limited habitat type and extent. Unlikely to support large flocks and more than a couple of Schedule 1 species.	Developments could cause disturbance to adjacent habitats through lighting during construction and post-development.

		<p>be retained. Local Schedule 1 birds are unlikely to use the on-Site birdbox for breeding.</p> <p>Any disturbance to nearby Schedule 1 birds is not going to be notably increased by the proposed development, due to its small scale, the limited value of the onsite habitat and the continued use of the Site as a hospitality establishment. Although there may be potential foraging habitat loss if the pine tree or hedges were to be removed, there is similar, more expansive, and higher quality habitat within the vicinity which will be less frequently disturbed by human activity, so this will not have a major impact.</p> <p>There is a low potential that Schedule 1 birds will occur at Site, therefore they are considered further in Section 4 in the general recommendations for breeding birds, as this covers Schedule 1 birds too.</p>		
Reptiles	WCA S5	<p>LOW: The desk study found only one reptile record from the last ten years within 2km of the Site. The desk study also recorded several slow-worms 800m south of the Site in 2017. A road runs between this site and Engine House, but it is not frequently used and there is good dispersal habitat between the sites in the form of grassland and woodland edges.</p> <p>The Site contained minimal habitat suitable for sheltering reptile species within the hedgerow, stone path borders and cracks/holes in the building's masonry. These habitats are very small in extent and are already frequently disturbed by the public. The area of grassland is unlikely to be used by foraging,</p>	<p>Site level. Unlikely to be able to support large populations of widespread reptile species.</p>	<p>Precautionary approach recommended.</p>

		<p>sheltering and dispersing reptiles due to the short sward height.</p> <p>There is a low potential that reptiles may occur at Site, and as such they are considered further in Section 4 of this report.</p>		
Invasive plants	WCA S9	<p>Present: The desk study found 11 records of Invasive Non-Native Species (INNS) within 2km of the Site from the last ten years. Some, including montbretia and cherry laurel, could successfully germinate and become established on Site.</p> <p>Rhododendron sp. was present on Site as well as within the immediate vicinity of the wider Leonardslee Parks & Gardens ownership boundary. <i>Rhododendron ponticum</i> is listed under Schedule 9 of the Wildlife and Countryside Act as an Invasive Non-Native Species.</p> <p>Some rhododendron will be removed from the Site to facilitate development and it is assumed that the Rhododendron present on Site is <i>Rhododendron ponticum</i>, therefore precautionary methods are advised.</p> <p>It is likely that invasive species will be disturbed or removed during the works, therefore they are considered further in Section 4 of this report.</p>	N/A	<p>No further survey required.</p> <p>Appropriate measures should be taken to ensure any invasive species are contained during works to avoid spreading beyond the Site and landowner boundary.</p>
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Hedgehog	S41 NERC	<p>LOW: The desk study returned no records of hedgehog within 2km of the Site from the last ten years.</p> <p>The Site contained hedgerow and grassland habitat suitable for foraging, dispersing and sheltering hedgehogs. These are of limited species and are sub-optimal because they are small in extent. The site remains open to the rest of the Leonardslee Lakes and Gardens Estate.</p> <p>Surveys are not considered necessary, but recommendations are detailed in Section 4 of this report.</p>	Likely to be at site level due to the limited size and quality of suitable habitats, as well as access from the site to higher quality nearby habitats.	No constraints
Terrestrial invertebrates	S41 NERC	<p>LOW: The desk study returned a high number of a wide variety of Notable, Red List, Priority and Sussex Rare insect species within 2km of the Site. Three nationally designated invertebrates were present in the desk study within 2km of the Site in the last 10 years: small heath <i>Coenonympha pamphilus</i>, white admiral <i>Limenitis camilla</i> and grey dagger <i>Acronicta psi</i>.</p> <p>The small area of grass on Site provides a low suitability for foraging terrestrial invertebrates.</p>	Site	<p>The proposals are highly unlikely to result in any impacts to nationally scarce/ rare or notable invertebrate assemblages.</p> <p>No further survey or mitigation required.</p>

		<p>Habitats on site are small in extent and have low food source species diversity.</p> <p>Adult small heath butterflies' nectar sources include bramble, ragwort and yarrow which are found in small quantities on site.</p> <p>The construction phase will temporarily impact foraging if the area of grass is tracked over by heavy vehicles, but due to the small scale of the Site, open access to offsite habitats and large amounts of similar habitat in the surrounding area, this will not detrimentally impact local populations of terrestrial invertebrates.</p> <p>The proposals are highly unlikely to result in direct impacts to any rare or designated invertebrate assemblages. Recommendations for enhancements are considered further in Section 4 of this report.</p>		
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Table 3.6 Preliminary Bat Roost Assessment

Building / Structure	Description	Potential Roost Features (PRFs)	Factors influencing suitability for bats	Building suitability	Evaluation
Engine House	<p>A small, square, one storey outbuilding in use as a café, with clay bullnose roof tiles, a pitched roof and brick walls. There was a timber bargeboard on the eastern gable end.</p> <p>The building was re-built in 2012 and the roof was re-laid in 2020 and was well sealed.</p> <p>Internally, the building had a well-sealed void, plasterboard over brick to the north and south, and unlined brick gable ends to the east and west. The rafters, central beam and collar beam roof were of a timber construction. There was no obvious light ingress and no draught recorded.</p> <p>The building was 1.5 m to the apex and 2.5 diameter across. The void space was warm and likely to be warm year-round with the heating below for the cafe. There was a bird box on the southern façade.</p>	<p>A few gaps were present in the brickwork on the eastern elevation.</p> <p>Some lifted tiles were present all over the roof, which was replaced in 2020.</p>	<p>The Site has connectivity to woodland and suitable foraging habitat over the adjacent lakes.</p>	<p>Moderate – for summer roosting bats</p> <p>Low – for hibernating bats</p>	<p>Although there are a low number of potential roost features, the Engine House was considered to have moderate suitability to support summer roosting bats because of the high quality habitats within the wider vicinity. The features found in the Engine House are likely to be used by crevice dwelling bats such as pipistrelle species.</p> <p>The Engine House was considered to have low suitability to support hibernating bats due to its constant use as a hospitality establishment and the consistently high temperatures within the building.</p> <p>Further surveys are not required to determine the building's roost status as the proposed works will not directly impact the roof space.</p> <p>A sensitive lighting strategy should be employed to avoid disturbance of foraging and commuting bats.</p>

NATURE CONSERVATION EVALUATION

- 3.18 The Site is included within the St Leonards Watershed Biodiversity Opportunity Area the Sussex Biodiversity Opportunity Area (BOA) as it represents a priority area for the delivery of Biodiversity Action Plan (BAP) targets. It is one of 75 such areas across Sussex.
- 3.19 The Site is situated approximately 100m west of Old Deer Park Local Wildlife Site (LWS), an area of nature conservation importance. The habitats that comprise the LWS are not found on Site, and the development proposals will not result in a change of land use and are small and discrete in nature, therefore, development proposals will not impact upon the LWS.
- 3.20 The Site, as well as the rest of Leonardslee Lakes and Gardens, is classified as Wood-Pasture and Parkland HPI and is likely to contain relics of the former St. Leonards Forest. Wood-pasture and parkland has a long history of continued management, is rare across Sussex and are mosaic habitats valued for their old trees and the wildlife they support. The Site itself does not contain any of the characteristic habitats of Wood-pasture and parkland (Brig, 2011), therefore any future renovations will not impact upon this habitat. The Site also falls within an area of Ancient Woodland.
- 3.21 The habitats on the Site were suitable for a range of noteworthy species, including Species of Principal Importance and Sussex BAP species, as reported in the desk study or recorded during the survey, as follows:
- Roosting and foraging/commuting bats;
 - Dispersing great crested newts;
 - Breeding and Schedule 1 birds;
 - Slow worm and other widespread species of reptile;
 - Invasive plant species;
 - [REDACTED];

- Foraging, dispersing and sheltering hedgehogs; and
- Terrestrial invertebrates associated with widespread habitats such as small heath butterfly *Coenonympha pamphilus* and wall butterfly *Lasiommata megera*.

3.22 The habitats at the Site and populations of the above species are likely to be of importance within the immediate vicinity of the Site only. It is unlikely that the Site would support rare species, or diverse assemblages or large populations of any noteworthy species because of its small extent and limited species diversity.

3.23 Records for at least eight species of bats, some of which are Species of Principal Importance, were provided in the desk study. Further surveys are not considered necessary because the roof space is not expected to be directly impacted by the proposed works. Recommendations to mitigate impacts on foraging and commuting bats are provided in Section 4.

4 Recommendations

- 4.1 This section summarises the potential impacts on habitats and notable species that may be present at this Site. It also sets out the recommendations for further survey and mitigation where required. The impact assessment is preliminary and further detailed assessment and surveys may be required to assess impacts and design suitable mitigation, where appropriate.

FURTHER SURVEY AND MITIGATION

- 4.2 For each constraint identified as being of importance at greater than the Site level, the mitigation options provided follow the established Mitigation Hierarchy as set out in Section 5.2 of BS42020:2013. This seeks as a preference to avoid impacts then to mitigate unavoidable impacts, and, as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures. The measures set out below will address no net loss of biodiversity, although no formal calculation of losses and gains has been carried out. Features deemed important at the Site level only are considered here only where further survey and/or mitigation is necessary to ensure legal compliance.
- 4.3 In the absence of mitigation, the following key ecological issues have been identified:
- The Site falls within an area of Ancient Woodland – measures must be taken to ensure this habitat is protected during construction works;
 - Habitats suitable for foraging and commuting bats are present – measures should be taken to reduce impacts on bat species on Site post-development;
 - There was no habitat for dormice present on Site, but dormice could be present in nearby habitats. No further surveys are required, but measures recommended to reduce impacts on foraging and commuting bats will also reduce impacts on nearby dormice, if present;
 - Terrestrial habitat for dispersing great crested newts was present – no further surveys are required but should great crested newts be discovered on Site at the time of the works then works should cease immediately;

- Habitats suitable for breeding and Schedule 1 birds were present and may be impacted by the proposals. No further surveys are required but a precautionary approach is recommended for any vegetation removal and works impacting the bird box, including sensitive timings or a pre-works check up to 48 hours prior to works;
- Rhododendron, an invasive species, was present on Site during the survey. This plant will be affected by the works, therefore appropriate site management and waste disposal will be required;
- Low quality habitat suitable for foraging, sheltering and dispersing reptiles was present on Site. Surveys are not necessary, but efforts to dissuade reptiles and amphibians from using these habitats prior to construction should be made;
- [REDACTED]
[REDACTED]
[REDACTED]
- Habitats suitable for terrestrial invertebrates were present – no further survey is required and post-development ecological enhancements of retained habitats should consider these species; and
- A range of measures should be undertaken to satisfy the requirement for ecological enhancement included in planning policy.

STATUTORY AND NON-STATUTORY SITES

4.4 The Site does not lie within any international statutory or non-statutory nature conservation designations. However, the site is included within the Sussex Biodiversity Opportunity Area (BOA) strategy. No significant impacts are envisaged due to the small scale of the proposed development, the limited value of the onsite habitat and the continued use of the Site as a hospitality establishment.

4.4.1 The Site is situated approximately 100m west of Old Deer Park Local Wildlife Site (LWS), an area of nature conservation importance. The habitats that comprise the LWS are not found on Site, and the development proposals will not result in a

change of land use and are small and discrete in nature, therefore, development proposals will not impact upon the LWS.

HABITATS

- 4.5 Working under the principle of 'net-gain' as supported by national planning policy, any habitats removed should be compensated for. Proposals include loss of areas of modified grassland, therefore consideration should be given to the enhancement of existing grassland areas. This could include a designated 'wild' area managed sympathetically for wildlife where management is relaxed to allow for grassland diversity to develop. Consideration should be given to any tree removal and planting. If replacement trees are to be planted, they should be native species that are local to the area, which are more likely to support a range species including birds and invertebrates.

Ancient and broadleaved deciduous woodland

- 4.6 Under inventory mapping, the Site is classed as Ancient Woodland, however the habitats on Site do not reflect this. Developments are likely to impact on existing areas of developed land and modified grassland only, therefore no significant impacts are envisaged. The scale of the proposed development is small, the value of the onsite habitat is limited, and the site will continue its use as a hospitality establishment.
- 4.7 Requirements, in conjunction with tree protection detailed in BSI: 2012, include the erection of Heras fencing around the development footprint boundary to protect habitats and restrict vehicle and pedestrian access; and
- 4.8 Fuels and chemicals should be stored appropriately to minimise the risk of accidental spillage. Sources of best construction practice and environmental management include CIRIA guidance (Connolly and Charles, 2005) and Defra/Environment Agency guidelines (2016). This guidance relates to various pieces of legislation including the Environmental Damage (Prevention and Remediation)

Regulations 2009. This is especially important with the Site location next to two lakes.

Wood-pasture and parkland

- 4.9 The Natural Environment and Rural Communities Act 2006 requires that HPis are regarded as a material consideration in determining planning applications. All HPis are by default also Sussex BAP habitats. It is recommended that all HPis within the site are retained where possible.
- 4.10 The Site is situated with an area designated as 'Wood-Pasture and Parkland' Habitat of Principal Importance. Wood-pasture and parkland are mosaic habitats valued for their trees, especially veteran and ancient trees, and the plants and animals that they support. Grazing animals are fundamental to the existence of this habitat (Brig, 2011).
- 4.11 Specific features of Wood-pasture and Parkland are not present on site and will not be directly or indirectly impacted upon by the development.

BATS

- 4.12 All British species of bat are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). Under this legislation it is an offence to deliberately capture, kill, disturb and damage or destroy a bat roost. Some species of bat are also Species of Principal Importance and Sussex LBAP species.
- 4.13 The Engine House building provides low suitability for roosting bats. However, the development proposals are unlikely to cause direct impacts to the roof space of the building, therefore, no further bat surveys are required.
- 4.14 The proposals are unlikely to impact foraging/commuting bats using the Site, provided sensitive artificial lighting is employed during the construction and operational phase of development.

4.15 A sensitive lighting strategy is recommended, covering construction and post-development with respect to foraging and commuting bats. This could include specifications for downward facing lights or the inclusion of baffles with light spillage kept to a minimum. During the construction phase artificial lighting should only be utilised where necessary for health and safety reasons with lighting only used for the period of time for which it is required (Jones, 2000). It is recommended that a lighting strategy is devised to minimise impacts on the surrounding woodland that includes the following accepted best practice measures (Fure, 2006; Institute of Lighting Engineers, 2009; Institution of Lighting Professionals, 2023):

- The level of artificial lighting should be kept to a minimum;
- Where this does not conflict with health and safety and/or security requirements, the Site should be kept dark during peak bat activity periods (0 to 1.5 hours after sunset and 1.5 hours before sunrise);
- Lighting that is required for security or safety reasons should use a lamp of no greater than 2000 lumens (150 Watts) and should comprise sensor activated lamps;
- LED or low-pressure sodium lights are a preferred option to high pressure sodium or mercury lamps;
- Warm-white (i.e. long wavelength) should be used over blue-white (i.e. short wavelength) lights as the latter have a significant negative impact on bats (Stone, 2013);
- Lighting should be directed to where it is needed with minimal light spillage. This can be achieved by limiting the height of the lighting columns and by using as steep a downward angle as possible and/or a shield or hood that directs the light below the horizontal plane; and
- Artificial lighting should not directly illuminate any habitats of value to commuting/foraging bats such as the grassland and woodland to the west or trees assessed as having suitability for roosting bats.

- 4.16 The High Weald AONB Management Plan (2019) propose that public bodies and others 'follow the Institute for Lighting Professionals guidance; promote information on dark sky-friendly lighting; install outside lighting only when needed and use dark sky-friendly lighting' (objective OQ4).

GREAT CRESTED NEWTS

- 4.17 Great crested newts, their breeding sites, and their resting places are protected by law under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017.
- 4.18 Surveys are not considered necessary at this time as the Site contained a small area of low-quality terrestrial habitat on Site for dispersing great crested newts, with no suitable aquatic habitat recorded on Site or within close proximity. However, should any great crested newts be found during construction works, works should cease immediately and the advice of a suitability qualified ecologist should be sought.

BIRDS

- 4.19 All wild birds and their nests are protected under the Wildlife and Countryside Act (WCA) 1981 (as amended). Some birds, listed Schedule 1 of the WCA have extra legal protection. For these bird species it's also an offence to disturb them while they're nesting, building a nest, in or near a nest that contains their young and disturb their dependent young, either intentionally or by not taking enough care. The Site contains habitat with the potential to support common species of breeding bird and small amounts of Schedule 1 birds.
- 4.20 Where possible any works to The Engine House including impacts on the bird box and tree should take place outside of the main breeding bird season (February-August inclusive). If this is not possible, then a nesting bird check of the building should be carried out by a suitably qualified ecologist no longer than 48 hours prior to works commencing. Any active birds' nests should be left in situ and a suitable buffer established until all the chicks have fledged, or the breeding attempt considered over.

4.21 Due to the proximity of the development to woodland to the west, which is suitable breeding bird habitat, birds should be a consideration for the design of this development and recommendations prescribed to protect foraging and commuting bats will also protect local breeding bird habitat.

REPTILES

4.22 All species of reptile are protected from killing or injury under the Wildlife and Countryside Act 1981 (as amended). Grass snake, adder, common lizard and slow worm are also Species of Principal Importance.

4.23 Surveys are not considered necessary, but if the area of grass is going to be tracked over by heavy machinery during the construction phase, the client is advised to maintain a short sward height to dissuade reptiles and amphibians from using these habitats. Sheltering features should be hand-searched for individual reptiles immediately prior to any habitat removal.

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

[REDACTED]

- any trenches should be covered overnight, or include a means of escape for any animals falling in (such as a ramp);
- any open or exposed pipe work should be capped to prevent animals from gaining access; and
- should any mammal holes be uncovered during site clearance, works should cease immediately, and these should be inspected by a qualified ecologist.

4.26 These control methods will also protect other wild mammals and species of herpetofauna.

SPECIES OF PRINCIPAL IMPORTANCE

Hedgehog

4.27 Hedgehogs are a Species of Principal Importance, making them a material consideration for planning, and as such should be protected as part of the development and habitats enhanced for this species. The Hedgehog is protected under Schedule 6 of the Wildlife and Countryside Act 1981, making it illegal to kill or capture them using certain methods. They are also listed as a Species of Principle Importance in England under the Natural Environment and Rural Communities (NERC) Act 2006 Section 41.

4.28 Precautionary measures set out to protect [REDACTED] above will also protect hedgehogs if present on site.

OTHER PROTECTED SPECIES

Terrestrial Invertebrates

4.29 The small heath butterfly, a UK BAP priority species, was recorded in the data search for Leonardslee Parks & Gardens. Adult small heath butterflies' nectar sources include bramble, ragwort and yarrow which were found in small quantities on Site. These are common plant species in this area, and quantities on site were small.

4.30 The construction phase is likely to result in damage to foraging habitat within the grassland, but due to its low species diversity and the small scale of the Site, as well as the presence of large amounts of similar habitat in the surrounding area of Leonardslee Lakes and Gardens, this will not detrimentally impact local populations of terrestrial invertebrates, including the small heath butterfly.

4.31 Any retained areas of grassland could be improved with a single annual cut to enhance habitat for invertebrates by creating more sheltering and foraging opportunities.

Other protected species

4.32 Works must stop immediately, and advice sought from a suitably qualified ecologist on how to proceed in the unlikely event that any protected species are found during Site clearance or construction.

4.33 All mammals are afforded protection under the Wild Mammals (Protection) Act 1996, which make it an offence to cause unnecessary suffering to wild mammals.

ENVIRONMENTAL BEST PRACTICE

4.34 Best environmental practice measures which should be implemented where appropriate to include:

- Appropriate storage of fuels and chemicals to minimise the risk of accidental spillage. Sources of best construction practice and environmental management include CIRIA guidance (Connolly and Charles, 2005) and various Defra/ Environment Agency guidelines (2016). This guidance relates to various pieces of legislation including the Environmental Damage (Prevention and Remediation) Regulations 2009.
- The protection of retained trees in accordance with *BS 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations*. Where cut wood material is produced on Site from pruning or management, consideration should be given to the retention of the materials on Site for the benefit of biodiversity

to create dead wood piles. If any oak trees require management, these should be checked for signs of oak processionary moth first and if considered to be infected removed from Site and disposed of according to government advice to stop the spread of the disease across Site and beyond the landowner's control.

- All materials should be stored on hardstanding. Where materials cannot be stored on hardstanding, methods for ground protection should be considered and put in place to prevent damage to the root system of any retained trees within the development footprint or wider Leonardslee area. This would also protect against any damage caused by the tracking of heavy machinery during construction works.
- Whilst construction is taking place good site practice must take place to avoid any negative impacts through increased noise, lighting, sound, vibration, dust or particles. Use of spill kits, wheel washing, dust suppression measures etc, appropriate storage of fuels and chemicals to minimise the risk of accidental spillage should be followed.
- Sources of best construction practice include CIRIA guidance (Connolly and Charles, 2005). This guidance relates various pieces of legislation including the Environmental Damage (Prevention and Remediation) Regulations 2009.

INVASIVE SPECIES MANAGEMENT

4.35 *Rhododendron ponticum* is an invasive non-native species. It is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) in England and Wales therefore, it is also an offence to plant or otherwise cause to grow these species in the wild. If this plant is to be affected during works then appropriate site management and waste disposal will be required. Environmental management guidance to prevent the spread of invasive plant species is available on the Government website (Natural England, Defra & Environment Agency, 2016).

4.36 *Rhododendron* sp. was found at the Site during the survey and will likely be disturbed and removed by the proposed works. *Rhododendron ponticum* is present within Leonardslee Lakes and Gardens.

- 4.37 If these species are to be disturbed during Site enhancement works then appropriate Site management and waste disposal will be required. Environmental management guidance to prevent the spread of invasive plant species is available on the Government website (Natural England, Defra & Environment Agency, 2016).
- 4.38 Mechanical methods of control are advised, and these comprise pulling young seedlings and excavating the root mass. Material from the rhododendron or any plant waste containing rhododendron must be chipped/burnt on Site or removed to licensed landfill as controlled waste. Appropriate measures should be taken to ensure areas of rhododendron are contained during works to avoid spreading.
- 4.39 All individuals on site should perform frequent checks for plant material on shoes, vehicle tracks and tyres, and equipment to prevent transfer of invasive plant material across the wider Leonardslee Lakes and Gardens Estate and beyond the ownership boundary.

FURTHER SURVEY REQUIREMENTS

- 4.40 Table 4.1 lists further survey requirements as recommended in the constraints section.

Table 4.1: Further survey requirements

Ecological Feature	Survey Requirement	Number of surveys and seasonal considerations
Birds (breeding and Schedule 1)	Pre-works check	Carried out by a suitably qualified ecologist no longer than 48 hours prior to works commencing (if works take place outside of the main nesting bird season (February-August inclusive))

SUMMARY OF RESIDUAL EFFECTS

- 4.41 Provided that the above is adhered to, with the exception of the pre-works check for birds, all identified impacts to ecological receptors will have been addressed, with no residual impacts.

OPPORTUNITIES FOR ECOLOGICAL ENHANCEMENT

- 4.42 Planning policy at the national and local level and strategic biodiversity partnerships encourage inclusion of ecological enhancements in development projects. Ecological enhancements can also contribute to green infrastructure and ecosystem services such as storm water attenuation and reducing the urban heat island effect. Measures set out below can be used to achieve a net gain in biodiversity. Please note, however, that no formal calculations have been provided in this instance.
- 4.43 As proposals for this Site are part of a wider plan for multiple sites within Leonardslee Lakes and Gardens estate, enhancements should be made as part of an enhancement plan that covers the proposals for each Site within the Leonardslee Lakes and Gardens estate.
- 4.44 The following measures would be suitable for integration into the Site's design.

Dark-sky friendly lighting

- 4.45 The High Weald AONB Management Plan (2019) propose that public bodies and others 'follow the Institute for Lighting Professionals guidance; promote information on dark sky-friendly lighting; install outside lighting only when needed and use dark sky-friendly lighting' (objective OQ4) (High Weald Joint Advisory Committee 2019).
- 4.46 Consideration should be given to a sensitive artificial lighting strategy during construction and post-development with respect to breeding birds, dormice and foraging and commuting bats. This could include specifications for downward facing lights or the inclusion of baffles with light spillage kept to a minimum. During the construction phase artificial lighting should only be utilised where necessary for health and safety reasons with lighting only used for the period of time for which it is required (Jones, 2000).

Wildlife planting

- 4.47 In order to provide enhancements with the aim of a net-gain in biodiversity, further planting in context within the setting of the Site and with wildlife value could be

advantageous within the ownership boundary. Planting opportunities could include potted planters, planted trellis for climbing plant species and the use of hanging baskets. Whichever species are chosen, wildlife planting should include a diversity of native species. The use of nectar-rich and berry producing plants will attract a wider range of insects and birds and will continue to accommodate those already accessing habitats on Site.

4.48 After the construction phase, a relaxed management of the grassland with a single annual cut will enhance the grassland for invertebrates by creating more sheltering and foraging opportunities.

4.49 Good horticultural practice should be utilised, including the use of peat-free composts, green manure, mulches and soil conditioners, native plants with local provenance, and avoidance of the use of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

Provision of nesting & roosting opportunities

4.50 To enhance the site for nesting birds and roosting bats, it is recommended that bird and bat boxes are erected the building on site.

4.51 Woodcrete/woodstone bird and bat boxes (or equivalent sustainable material) are recommended as they are long lasting compared to wooden boxes, insulate occupants from extremes of temperature and condensation and are available in a broad range of designs. This could include the continued placement of the bird box on the building on site, or in another location that will allow for minimal human disturbance.

4.52 A bat box could be placed on the south, south-east or south-west aspect of the onsite tree if it is to be retained. A species-specific bat box should be chosen following the results of the required bat surveys. Bechstein's bat, Barbastelle, Brown long-eared and Noctule bats are primarily woodland species, and all UK BAP priority species.

References

British Standards Institution (BSI) (2013) *Biodiversity. Code of practice for planning and development: 42020*. BSI, London.

British Standards Institution (BSI) (2012) *BS 5837:2012- Trees in relation to design, demolition and construction*. BSI, London.

CIEEM (2021) *Guidance on Ecological Survey and Assessment in the UK During the COVID-19 Outbreak*. Version 4. Published 10 February 2021. Chartered Institute of Ecology and Environmental Management, Winchester, UK.

CIEEM (2019) *Advice Note On the Life Span of Ecology Reports and Surveys*. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal. Version 1.1*. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

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

Collins, J. (ed.) (2023) *Bat Survey Guidelines for Professional Ecologists: Good Practice Guidelines (4th edition)*. The Bat Conservation Trust, London.

Cowan, A. (2006) *Trees and Bats. Guidance Notes 1*. Arboricultural Association, Cheltenham.

Connolly, S. and Charles, P. (2005) *Environmental good practice pocket book*. CIRIA, London.

Cresswell, P., Harris, S. and Jefferies, D.J. (1990) *The History, Distribution, Status and Habitat Requirements of the Badger in Britain*. Nature Conservancy Council, Peterborough, UK.

English Nature (2006) *The Dormouse Conservation Handbook*. 2nd Edition. Natural England. Peterborough.

Environment Agency (2007) *Pollution Prevention Guidelines – Works and maintenance in or near water: PPG5*.
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/290145/pmho1107bnkg-e-e.pdf [accessed 23/02/2023].

- Fure, A. (2006). *Bats and lighting*. The London Naturalist, 85.
- Gent, T. and Gibson, S. (2003) *Herpetofauna Workers Manual*. JNCC, Peterborough.
- GRO (2014) *The GRO Green Roof Code: Green Roof Code of Best Practice for the UK 2014*. Groundwork Sheffield, Sheffield.
- Gunnell, K., Grant, G. and Williams, C. 2012. Landscape and urban design for bats and biodiversity. Bat Conservation Trust
- High Weald Joint Advisory Committee (2019) *The High Weald AONB Management Plan 2019-2024*.
<https://www.highweald.org/downloads/publications/high-weald-aonb-management-plan-documents/2291-high-weald-managment-plan-4th-edition-2019-2024/file.html> [accessed 23/02/2023].
- Horsham District Council (2015) *Horsham District Planning Framework*.
https://www.horsham.gov.uk/_data/assets/pdf_file/0016/60190/Horsham-District-Planning-Framework-November-2015.pdf [accessed 23/02/2023].
- Institution of Lighting Professionals (2023) *Bats and Artificial Lighting in the UK*. Guidance Note 08/23. Institution of Lighting Professionals and Bat Conservation Trust. Warwickshire.
- JNCC (2010) *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit*. England Field Unit, Nature Conservancy Council. Reprinted by Joint Nature Conservation Committee, Peterborough.
- Jones, J. (2000) *Impact of lighting on bats*. Bat Conservation Trust, London.
- Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001) *Great Crested Newt Conservation Handbook*. Froglife, Halesworth.
- MAGIC (2022) *Multi-Agency Geographic Information for the Countryside*.
<http://www.magic.gov.uk/> [accessed 23/02/2023].
- Natural England (2023) *Biodiversity metric 4.0 – Technical Annex 1: Condition Assessment Sheets and Methodology*. Natural England.
- Department for Levelling Up, Housing and Communities (2023) *National Planning Policy Framework*. Department for Levelling Up, Housing and Communities. London.
- Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines*. English Nature, Peterborough.

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

Natural England (2022) *Priority Habitat Inventory*. <https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::priority-habitat-inventory-central-england/about> [accessed 23/02/2023].

Newton, J., Nicholson, B., Saunders, R., Willets, R. and Venables, R. (2011) *Working with wildlife: guidance for the construction industry* (2nd Ed.). CIRIA, London.

Panks, S., White, N., Newsome, A., Nash, M., Potter, J., Heydon, M., Mayhew, E., Alvarez, M., Russell, T., Cashon, C., Goddard, F., Scott, S.J., Heaven, M., Scott, S.H., Treweek, J., Butcher, B., & Stone, D., (2022) *Biodiversity metric 3.1: Auditing and accounting for biodiversity – Technical Supplement*. Natural England.

Purcell (2023) *Leonardslee Lakes & Gardens Pre-Application October 2023*. Purcell Architecture Ltd. London.

Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1. Chartered Institute of Ecology and Environmental Management, Ampfield.

Roper, T.J. (2010) *Badger*. Harper Collins, London.

Stace, C.A. (2019) *New Flora of the British Isles* (4th Ed.). Cambridge University Press, Cambridge.

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Dowse, A., Lindley, P., McCulloch, N., Noble, D., & Win, I. (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114, 723–747 https://britishbirds.co.uk/sites/default/files/BB_Dec21-BoCC5-IUCN2.pdf [accessed 23/02/2023].

Stone, E.L. (2013) *Bats and lighting: Overview of current evidence and mitigation*. University of Bristol.

The Ecology Consultancy (2018a) *Leonardslee Estate, Lower Beeding, West Sussex RH13 6PP Great Crested Newt Survey*. Lewes, UK.

The Ecology Consultancy (2018b) *Leonardslee Estate, Lower Beeding, West Sussex RH13 6PP Preliminary Roost Assessment*. Lewes, UK.

Appendix 1: Maps

Figure 1: Leonardslee Lakes and Gardens Ownership Boundary Context Map

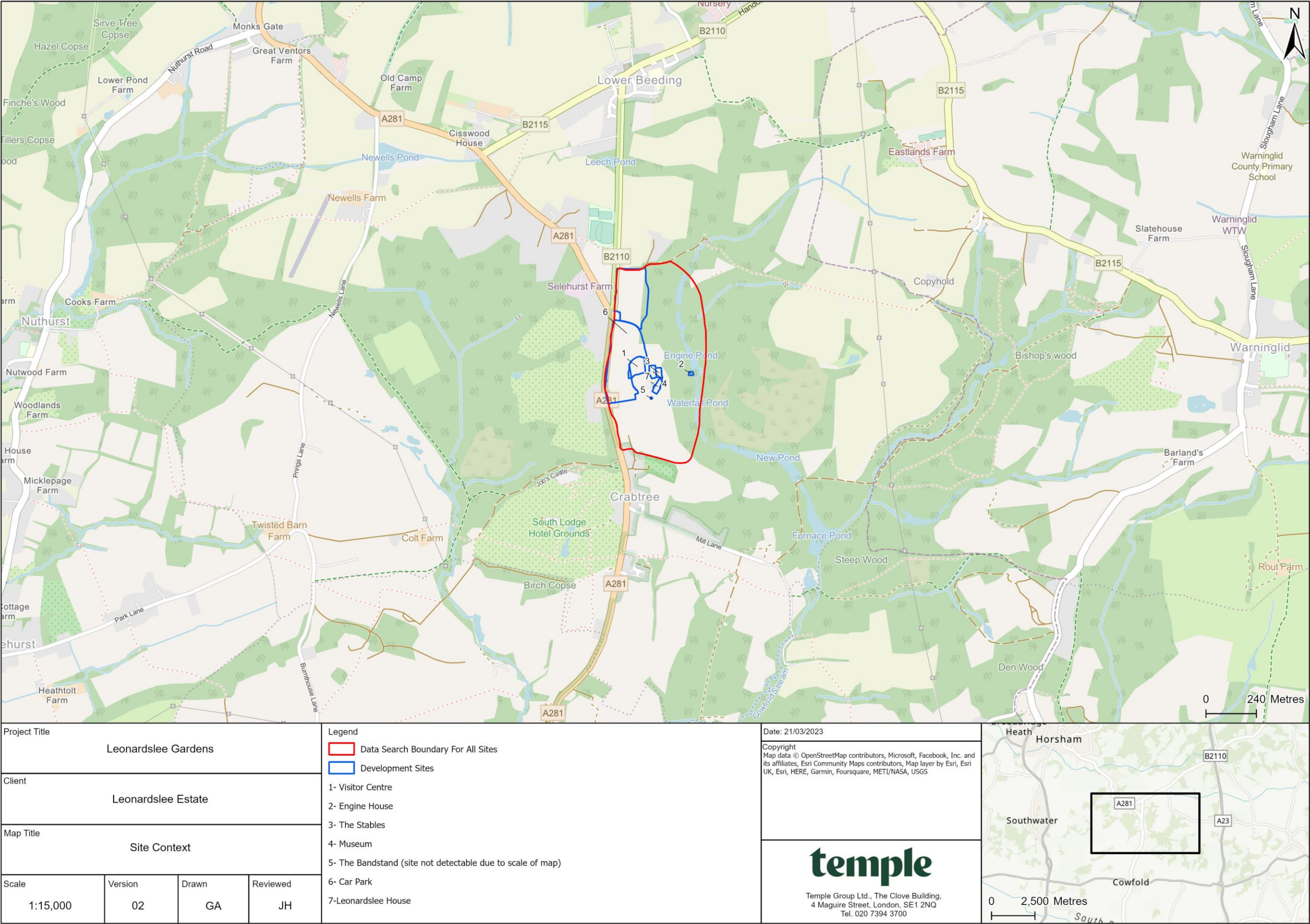


Figure 2: Internationally important designated sites Map

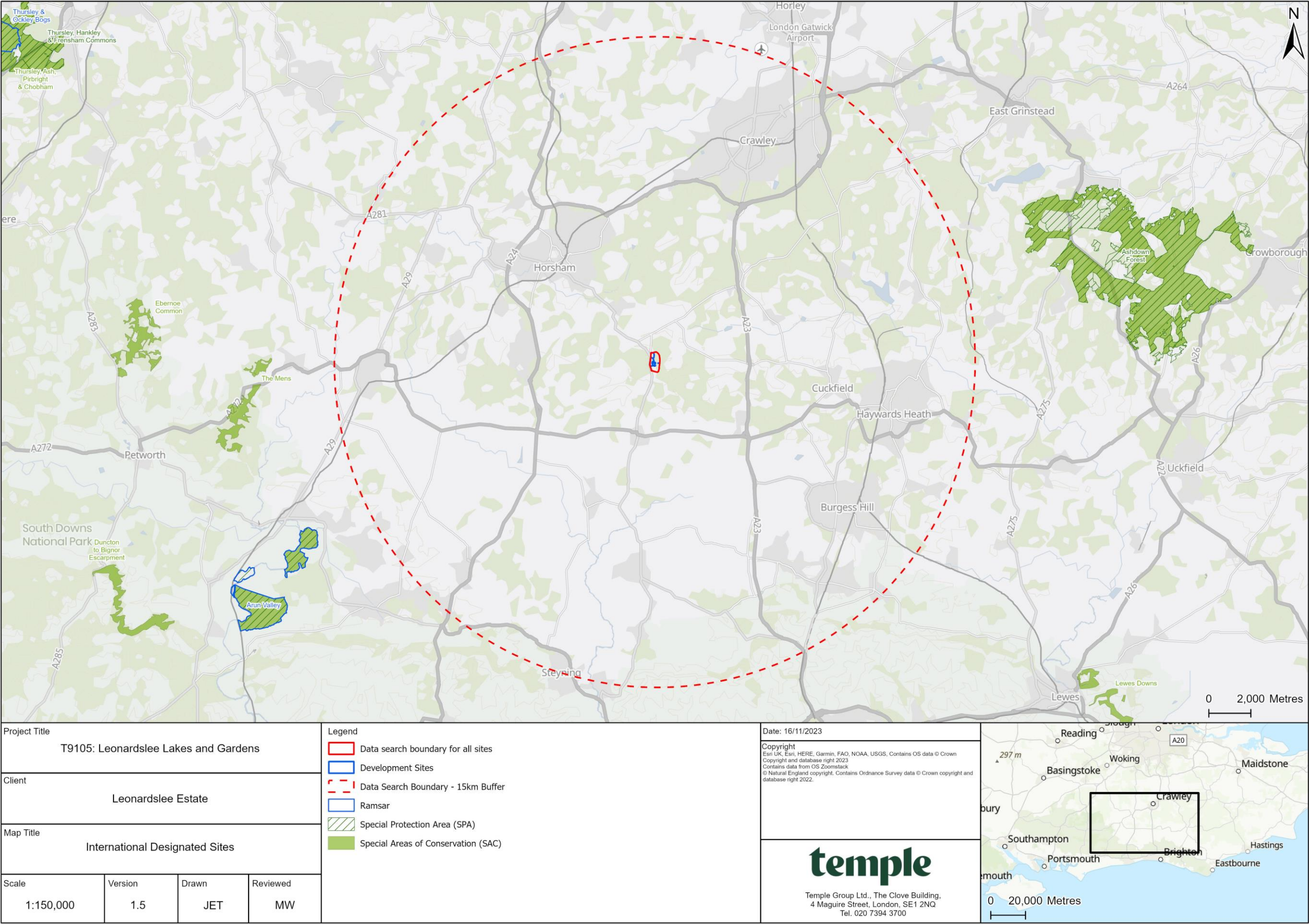


Figure 3: Local designated sites

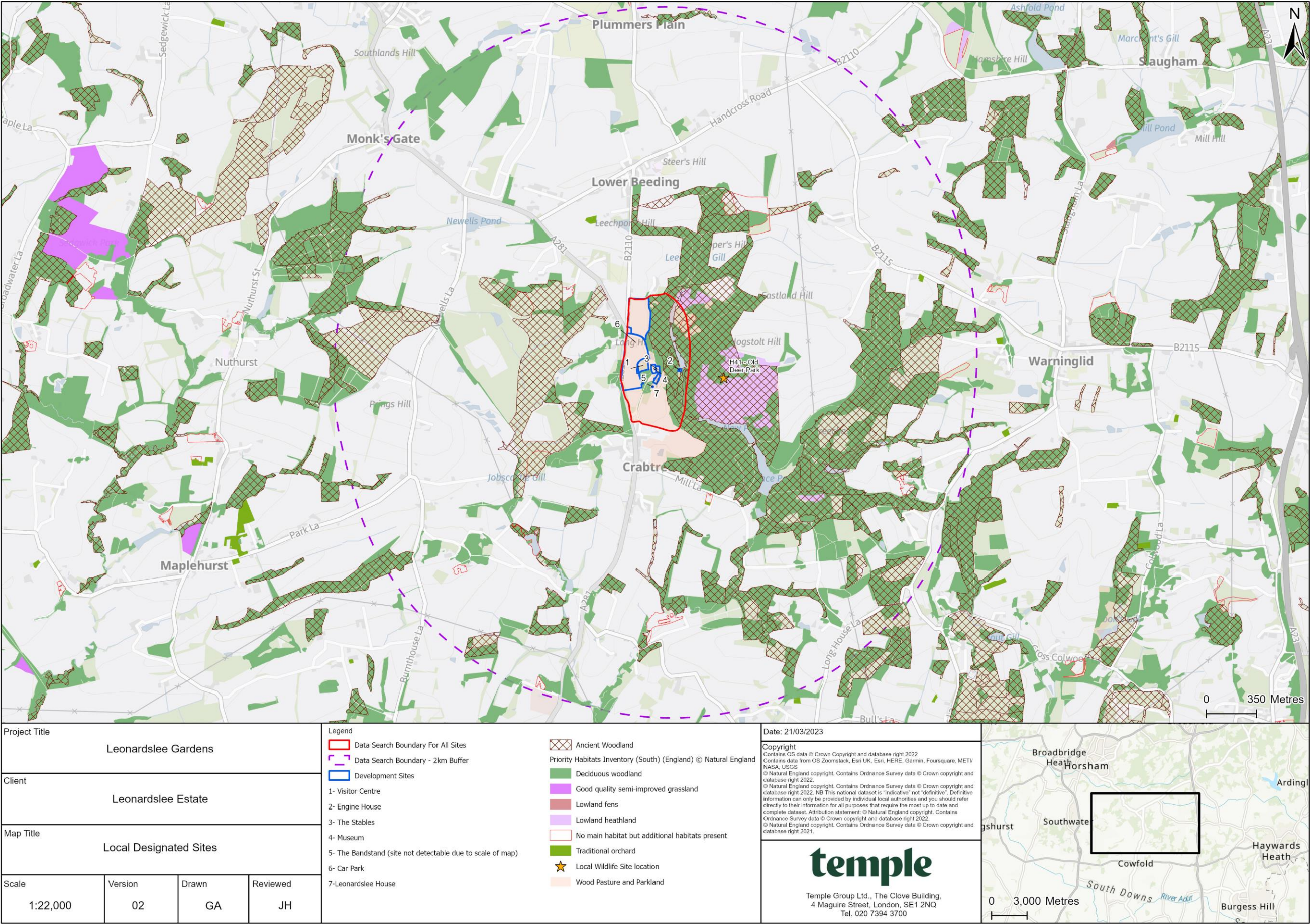


Figure 4: UKHabs Habitat Survey Map

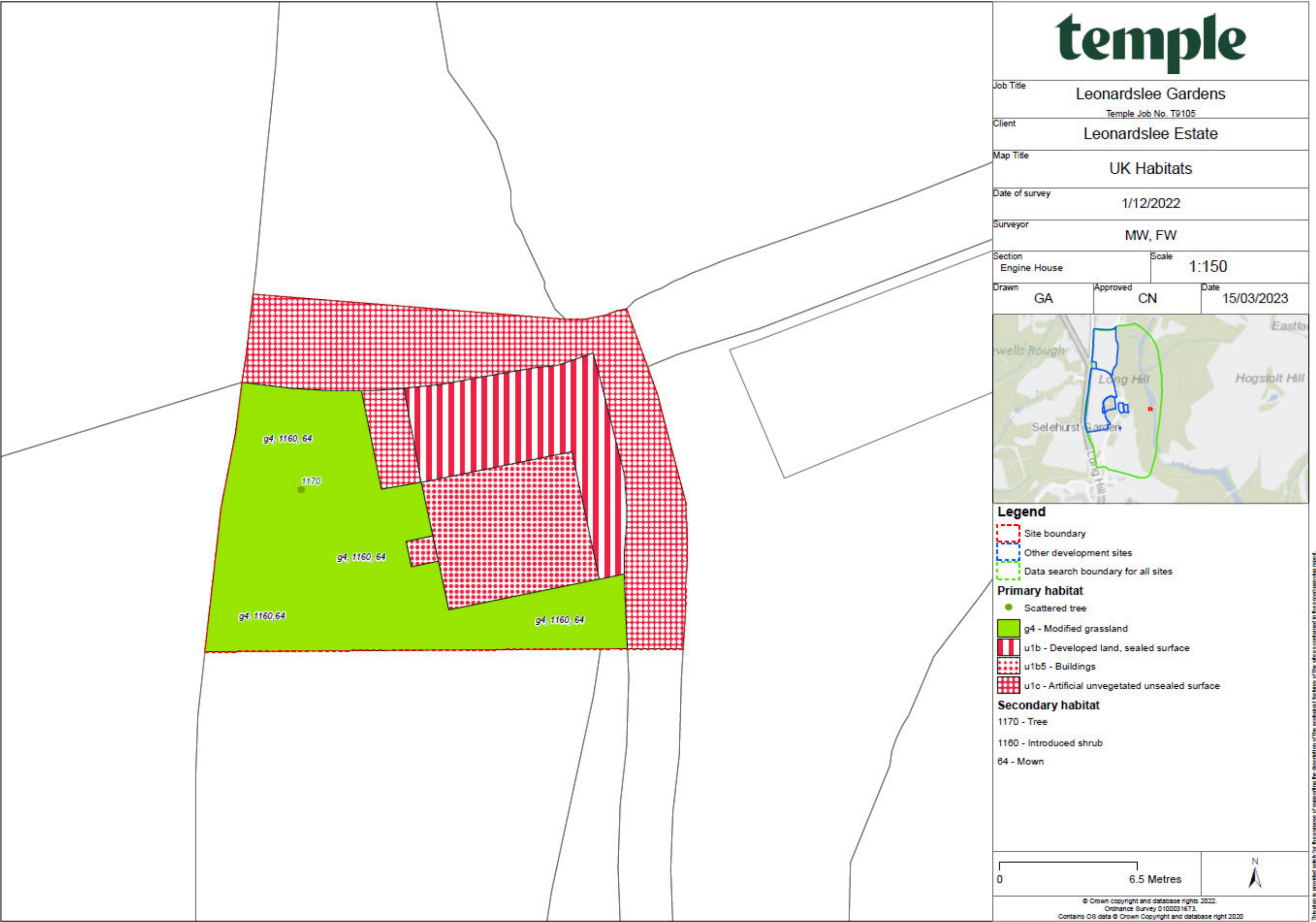
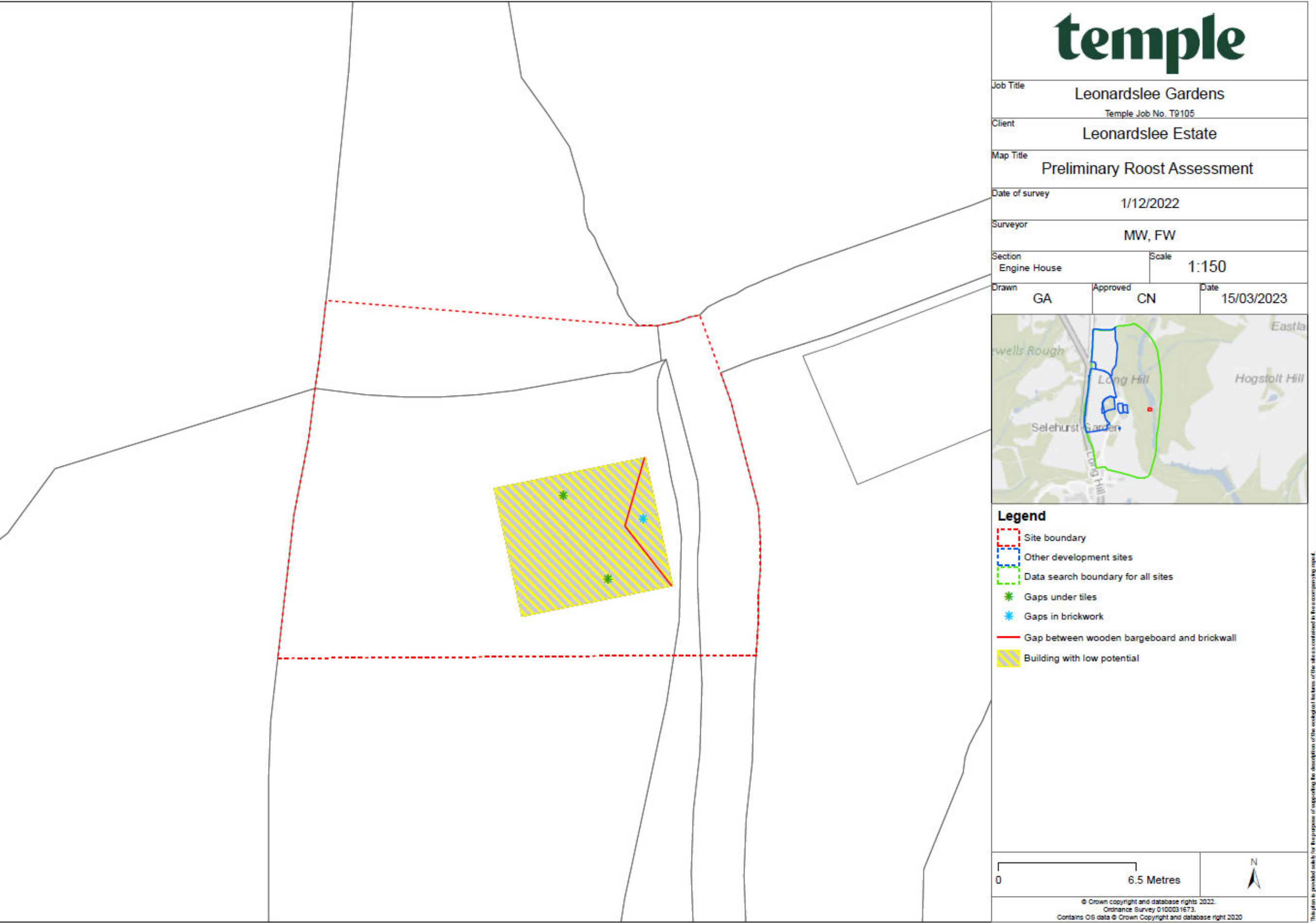


Figure 5: Preliminary Roost Assessment Map



Appendix 2: Species List

Botanical Species List for Engine House, Leonardslee Lakes and Gardens compiled from UK Habs survey carried out on the 1st December 2022.

Scientific nomenclature and common names for vascular plants follow Stace (2019) and Blockeel and Long (1998) for bryophyte species. Please note that this plant species list was generated as part of a UK Habs habitat survey, does not constitute a full botanical survey and should be read in conjunction with the associated results section of this PEA.

Abundance was estimated using the DAFOR scale and additional notes taken as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare, L = locally
c=clumped, e=edge only, g=garden origin, p=planted, y = young, s=seedling or sucker,
t=tree, h=hedgerow, w=water

Scientific Name	Common Name	Abundance	Qualifier
<i>Achillea millefolium</i>	Yarrow	A	g
<i>Arctium</i> sp.	Burdock	O	
<i>Cardamine</i> sp.	Bittercress	O	g
<i>Carex</i> sp.	Sedge	O	
<i>Cirsium vulgare</i>	Spear thistle	O	g
<i>Epilobium</i> sp.	Willow herb	O	
<i>Festuca</i> sp.	Fescue grass	D	g
<i>Hedera helix</i>	Common ivy	O	
<i>Helminthotheca echioides</i>	Bristly oxtongue	O	h
<i>Lolium perenne</i>	Perennial ryegrass	D	g
<i>Pinus armandii</i>	Chinese white pine	R	p, t
<i>Potentilla</i> sp.	Cinquefoil	F	g
<i>Pteridium aquilinum</i>	Bracken	O	e
<i>Ranunculus</i> sp.	Buttercup	A	g, c
<i>Rhododendron</i> sp.	Rhododendron	R	h, p
<i>Rubus fruticosus</i>	Bramble	O	
<i>Senecio</i> sp.	Ragwort	O	g
<i>Sphagnum</i> sp.	Sphagnum moss	A	g, c
<i>Taraxacum officinale</i>	Dandelion	A	g

Appendix 4: Photographs

Photograph 1

Engine House building
viewed from the north



Photograph 2

Northern aspect of the
building showing lifted tiles



Photograph 3

Eastern aspect showing
slight gap between wooden
bargeboard and brick wall



Photograph 4

Eastern aspect showing gaps
in brickwork



Photograph 5

Western aspect of building



Photograph 6

Inside roof cavity



Photograph 7

Interior of building, in use as
a cafe



Photograph 8

Southern aspect of building
and rhododendron hedge



Photograph 9

Southern aspect of building
and rhododendron hedge



Photograph 10
Vegetation between
rhododendron hedge and
southern aspect of building



Appendix 5: Habitat Condition Assessments

Habitat Condition Assessment Proforma 1: Grassland

CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 3.1 - AREA BASED HABITATS														
Date	1 st December 2022					Metric 3.1 survey reference (if condition assessment of this polygon relates to a wider habitat survey)								
Weather conditions	8°C, 0/8 oktas cloud cover, Beaufort 2 wind and no rain													
Surveyor name(s)	Francesca West, Maisie Worthington					Unique polygon reference(s)								
Project / development name	9105 Leonardslee Estate (Engine House)					Metric 3.1 habitat type				Grassland				
Site name or location	Engine House, Leonardslee Lakes and Gardens, West Sussex					Condition assessment required? (y/n)								
Onsite or offsite?	Onsite					Condition sheet used								
Reason for assessment (if not baseline condition survey)														
Limitations (if applicable)														
Habitat description														
G4- Modified Grassland with 64 Mown, 1160 Introduced shrub, 1170 Tree														
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	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	TOTAL
Result	P	F	P	P	P	P	F							5
Photo ref														
Target note ref														

Are any criteria non-negotiable? (Y/N) If Yes are they passed?	Y – C7 – Rhododendron is present	Condition (Good/Moderate/Poor):	Moderate
Suggested enhancement interventions to improve condition score	Sensitive removal of rhododendron is required to increase the condition score to good. This can be replaced with native hedge or scrub such as bramble <i>Rubus sp.</i> or hazel <i>Coryllus avellana</i> . If the height of the grassland is left to grow longer, the condition score could increase to good.		

Appendix 6: Legislation and Planning Policy

Important Notice: This section contains details of legislation applicable in England and Wales only (i.e. not including Scotland, the Isle of Man, Northern Ireland, the Republic of Ireland or the Channel Islands) and is provided for general guidance only. While every effort has been made to represent the current (at the time of writing) situation with respect to the UK's position outside of the EU and to ensure accuracy throughout, this section should not be relied upon as a definitive statement of the law.

Over the past few years, three important bills have been published which are intended to shape how growing pressures on the environment post-Brexit (post-transition period) are tackled. Both the Agriculture Bill and Fisheries Bill gained Royal Assent in November 2020 and are now the Agriculture Act 2020 and Fisheries Act 2020 respectively; and, more recently, the Environment Bill was passed into law in November 2021, becoming the Environment Act 2021. *N.B. as environment policy is a devolved matter, most of this Act applies to England only.*

A LEGISLATION AFFORDED TO SPECIES

The objective of the EC Habitats Directive¹³ is to conserve the various species of plant and animal which are considered rare across Europe. The Directive is transposed into UK law by **The Conservation of Habitats and Species Regulations 2017 (as amended)** and **The 'Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended)**.

Various amendments to the 2017 Regulations in England and Wales have been made through the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. These changes came into effect on the 1 January 2021 following the UK's departure from the EU and the end of the Transition Period. The changes are largely limited to 'operability changes' that will ensure the Regulations can continue to have the same working effect as before.

¹³ Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora

The Wildlife and Countryside Act 1981 (as amended) is a key piece of national legislation which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection obligations of Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Since the passing of the Wildlife & Countryside Act 1981, various amendments have been made, details of which can be found on www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CROW) Act (2000).

As well as delivering long-term targets to reduce waste and improve resource efficiency and improve air and water quality targets, the **Environment Act 2021** aims to halt the decline of nature by 2030, mandates Biodiversity Net Gain for developments in England and amends the Wildlife and Countryside Act 1981 (as amended) to introduce an additional purpose for granting a protected species licence in relation to development which is ‘for reasons of overriding public interest’. The Act also introduces the Office for Environmental Protection (OEP), which will be a new public body intended to hold government and public authorities to account, although the government will be able to issue guidance to the OEP on how it enforces policies and legislation.

Some of the key biodiversity elements in the Act that will have a bearing on species protection in the UK include:

- A strengthened biodiversity duty on Local Planning Authorities;
- Biodiversity net gain to ensure developments, including Nationally Significant Infrastructure Projects (NSIP), deliver at least 10% increase in biodiversity;
- Local Nature Recovery Strategies to support a Nature Recovery Network;
- Duty upon Local Authorities to consult on street tree felling;
- Strengthen woodland protection enforcement measures;
- Conservation Covenants;
- Protected Site Strategies and Species Conservation Strategies to support the design and delivery of strategic approaches to deliver better outcomes for nature;

- Introduces the power for the Habitats Regulations to be amended or ‘refocused’ to ‘to deliver creative public policy thinking that delivers results’.

This section does not provide further detail on the Environment Act 2021 as, at the time of writing (November 2021), the Act, in its final form, has not been published and it remains to be seen how and when the various elements will be enacted at a national and local level.

Other legislative Acts affording protection to wildlife and their habitats include:

- Salmon and Freshwater Fisheries Act 1975;
- Deer Act 1991;
- Protection of Badgers Act 1992;
- Wild Mammals (Protection) Act 1996;
- Countryside and Rights of Way (CROW) Act 2000;
- Natural Environment & Rural Communities (NERC) Act 2006;
- The Eels (England and Wales) Regulations 2009; and
- Environment (Wales) Act 2016.

Species and species groups that are protected or otherwise regulated under the aforementioned legislation, and that are most likely to be affected by development activities, include herpetofauna (amphibians and reptiles), badger, bats, birds, dormouse, invasive species, otter, plants, red squirrel, water vole and white clawed crayfish.

Explanatory notes relating to species protected under The Conservation of Habitats and Species Regulations 2017 (as amended), which includes smooth snake, sand lizard, great crested newt, natterjack toad, all bat species, otter, dormouse and some plant, invertebrate and fish species, are given below. **These should be read in conjunction with the relevant species sections that follow.**

- In the Habitats Directive, the term ‘deliberate’ is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.

- The Conservation of Habitats and Species Regulations 2017 (as amended) does not define the act of 'migration' and therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered where relevant.
- In order to obtain a mitigation licence for species protected under the Conservation of Habitats and Species Regulations 2017 (as amended), the application must demonstrate that it meets all of the following three 'tests': i) the action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment; ii) that there is no satisfactory alternative and iii) that the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

BADGER

Badgers *Meles meles* receive protection under The Protection of Badgers Act 1992 which consolidates the previous Badger Acts of 1973 and 1991 and is amended, in Scotland, by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2011. The Act makes it an offence to:

- Wilfully kill, injure, take, or attempt to kill, injure or take a badger;
- Cruelly ill-treat a badger, including use of tongs and digging;
- Possess or control a dead badger or any part thereof;
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett¹⁴ or any part thereof;
- Intentionally or recklessly disturb¹⁵ a badger when it is occupying a badger sett;

¹⁴ A badger sett is defined in the legislation as "any structure or place which displays signs indicating current use by a badger". This includes seasonally used setts. Natural England (2009) has issued guidance on what is likely to constitute current use of a badger sett: https://webarchive.nationalarchives.gov.uk/20140605121602/http://www.naturalengland.org.uk/Images/WMLG17_tcm6-11815.pdf

¹⁵ For guidance on what constitutes disturbance and other licensing queries, see Natural England (2006 revised 2011) Badgers & Development: A Guide to Best Practice and Licensing (IN75)

- [illegible]

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- <https://webarchive.nationalarchives.gov.uk/20150303064749/http://publications.naturalengland.org.uk/publication/73034>; Natural England (2009) Interpretation of 'Disturbance' in relation to badgers occupying a sett <https://webarchive.nationalarchives.gov.uk/20150303064749/http://publications.naturalengland.org.uk/publication/73034>; and Natural Resources Wales (2018) Badgers – A Guide for Developers <https://cdn.naturalresources.wales/media/684003/badger-fact-sheet-for-developers-english.pdf?mode=pad&rnd=131620320080000000> and Guidance on working close to badger setts without a licence via <https://naturalresourceswales.gov.uk/permits-and-permissions/species-licensing/uk-protected-species-licensing/badger-licences-issued-by-natural-resources-wales-and-the-welsh-government/?lang=en>

Engine House, Leonardslee Lakes and Gardens, Lower Beeding / Preliminary Ecological Appraisal and Preliminary Roost Assessment / Report for Leonardslee Lakes and Gardens Temple

- Deliberate disturbance of bat species as:
 - a) to impair their ability:
 - to survive, breed, or reproduce, or to rear or nurture young; or
 - to hibernate or migrate.
 - b) to affect significantly the local distribution or abundance of the species.
- Damage or destruction of a breeding site or resting place; and
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

Bats are also protected under the Wildlife and Countryside Act 1981 (as amended) in respect to sub-sections 9 (4) (b) and (c) and 9 (5) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance while in their place of shelter (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

How is the legislation pertaining to bats liable to affect development works?

The appropriate licence issued by the relevant countryside agency (e.g. Natural England, Natural Resources Wales) will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Though there is no case law to date, the legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded protection, for example, where it can be proven that the

continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost¹⁷.

BIRDS

All wild birds, their nests and eggs are protected under Sections 1-8 of the Wildlife and Countryside Act 1981 (as amended). A wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Among other things, the legislation makes it an offence to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- Intentionally take or destroy an egg of any wild bird; or
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.

Certain species of bird, for example the barn owl *Tyto alba*, black redstart *Phoenicurus ochrurus*, hobby *Falco subbuteo*, bittern *Botaurus stellaris* and kingfisher *Alcedo atthis* receive additional special protection under Schedule 1 of the Act. This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young.
- Intentional or reckless disturbance of dependent young of such a bird.

How is the legislation pertaining to birds liable to affect development works?

To avoid contravention of the Wildlife and Countryside Act 1981 (as amended), works should be planned to avoid the possibility of killing or injuring any wild bird, or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction is to undertake work outside the main bird nesting season which typically

¹⁷ Garland and Markham (2008) Is important bat foraging and commuting habitat legally protected? Mammal News, No. 150. The Mammal Society, Southampton.

runs from March to August¹⁸. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Those species of bird listed on Schedule 1 are also protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest. It should be noted that there is no threshold under which disturbance is not an offence, that is to say that disturbance need not be 'significant' for an offence to be committed.

While it is possible to obtain a licence to permit some activities that would otherwise constitute an offence, these can only be issued for specific purposes set out in the Act. This includes damage to crops, to preserve public health or safety and to preserve air safety, but does not include development, some land management and recreational activities and damage to property.

DORMOUSE

Dormice *Muscardinus avellanarius* are fully protected under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. dormouse);
- Deliberate disturbance of dormice as:
 - a) to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young; or
 - (ii) to hibernate or migrate.
 - b) to affect significantly the local distribution or abundance of the species.

¹⁸ It should be noted that this is the main breeding period. Breeding activity may occur outside this period (depending on the particular species, geographical location of the site and vagaries of the season in any particular year) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

- Damage or destruction of a breeding site or resting place; or
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

Dormouse are also protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5 in respect to sub-sections 9 (4) (b) and (c) and 9 (5). Under this Act, they are additionally protected from:

- Intentional or reckless disturbance while in their place of shelter (at any level);
- Intentional or reckless obstruction of access to any place of shelter or protection; or
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

How is the legislation pertaining to dormice liable to affect development works?

A mitigation licence issued by the relevant countryside agency (e.g. Natural England and Natural Resources Wales) will be required for works liable to affect dormouse breeding or resting places (N.B. this is usually taken to mean dormouse 'habitat') or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Once evidence of dormouse has been found within a site, all contiguous, suitable habitat should be regarded as supporting dormice. Thus, if clearance of suitable habitat is proposed away from, but contiguous with, an area where a dormouse nest was found, a licence is likely to be required, even if no evidence was found within the specific section to be removed.

HERPETOFAUNA (AMPHIBIANS AND REPTILES)

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita*, great crested newt *Triturus cristatus* and pool frog *Pelophylax lessonae* receive full

protection under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of species listed on Schedule 2;
- Deliberate disturbance of any Schedule 2 species as:
 - to impair their ability:
 - to survive, breed, or reproduce, or to rear or nurture young; and
 - in the case of animals of a hibernating or migratory species, to hibernate or migrate.
 - to affect significantly the local distribution or abundance of the species.
- Deliberate taking or destroying of the eggs of a Schedule 2 species;
- Damage or destruction of a breeding site or resting place; and
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

With the exception of the pool frog, these species are also listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect to sub-sections 9 (4) (b) and (c) and 9 (5). The pool frog is afforded protection in respect of sub-sections 9(4) (b) and (c) for England only. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance while in their place of shelter (at any level);
- Intentional or reckless obstruction of access to any place of shelter or protection; and
- Selling, offering or exposing for sale, possession or transporting for purpose of sale (excluding pool frog).

Other native species of herpetofauna are protected solely under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). Species such as the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis* are listed in respect to sub-section 9 (1) & (5). For these species, it is prohibited to:

- Intentionally kill or injure these species; and

- Sell, offer or expose for sale, possess or transport for purpose of sale these species, or any part thereof.

Common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Lissotriton vulgaris* and palmate newt *L. helveticus* are listed in respect to sub-section 9 (5) only which affords them protection against sale, offering or exposing for sale, possession or transport for the purpose of sale.

How is the legislation pertaining to herpetofauna liable to affect development works?

The appropriate licence issued by the relevant countryside agency (e.g. Natural England, Natural Resources Wales) will be required for works liable to affect the breeding sites or resting places of those amphibian and reptile species protected under The Conservation of Habitats and Species Regulations 2017 (as amended). A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the Wildlife and Countryside Act 1981 (as amended).

INVERTEBRATES

Three species of invertebrate are afforded protection under Schedule 2 of The Conservation of Habitats and Species Regulations 2017 (as amended): the large blue butterfly *Phengaris arion*, Fisher's estuarine moth *Gortyna borelii lunata* and the little whirlpool ramshorn snail *Anisus vorticulus*. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species;
- Deliberate disturbance of Schedule 2 species as:

- a) to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young;
 - (ii) to hibernate or migrate.
- b) to affect significantly the local distribution or abundance of the species.
- Damage or destruction of a breeding site or resting place; and
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

These species, and numerous other invertebrates, including the Norfolk hawker *Aeshna isosceles*, marsh fritillary *Euphydryas aurinia*, purple emperor *Apatura iris*, freshwater pearl mussel *Margaritifera margaritifera* and medicinal leech *Hirudo medicinalis*, are also protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). The degree to which the various invertebrate species are protected by this Act varies widely, ranging from full protection of the animal and its habitat to protection from sale only. Useful summaries of the level of protection afforded individual species can be found at <https://hub.jncc.gov.uk/assets/478f7160-967b-4366-acdf-8941fd33850b>.

For those afforded full protection, it is an offence to:

- Intentionally kill, injure or take (capture) a wild Schedule 5 invertebrate;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection;
- Intentionally or recklessly disturb Schedule 5 invertebrates while they are occupying a structure or place used for shelter or protection; and
- Sell, offer or expose for sale, or have in his possession or transport for the purpose of sale, any live or dead Schedule 5 invertebrate or part thereof.

How is the legislation pertaining to protected invertebrates liable to affect development works?

A mitigation licence issued by the relevant countryside agency (e.g. Natural England, Natural Resources Wales) will be required for works liable to affect invertebrate species protected under The Conservation of Habitats and Species Regulations 2017 (as

amended). A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed and rear young). The licences are to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

There is no provision in law for the issuing of licences to permit the killing, injuring or taking of protected invertebrates, the damage, destruction or obstruction of access to places of shelter or protection, or the disturbance of invertebrates for the purposes of development. In situations where there is potential for impact, it must be shown that all reasonable effort has been made to avoid contravening the legislation, for example, by ensuring adequate surveys and mitigation measures are in place, that the use of alternative sites has been explored and that there has been liaison with the relevant countryside agency (e.g. Natural England or Natural Resources Wales). It will be necessary to carefully plan any development activities in areas with protected invertebrates; this is likely to require appropriate timing of works with measures to ensure minimal loss of habitat.

WILD MAMMALS (PROTECTION) ACT 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This 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.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

NON-NATIVE SPECIES (FAUNA)

Under Section 14(1) of the Wildlife and Countryside Act 1981 (as amended), it is an offence to release, or allow to escape into the wild, any animal that is not ordinarily resident in and is not a regular visitor to Great Britain in a wild state, or is listed on Schedule 9 of the Act. Examples of species included on Schedule 9 are signal crayfish *Pacifastacus leniusculus*, American mink *Neovison vison*, grey squirrel *Sciurus carolinensis* and European pond terrapin *Emys orbicularis*. In the main, Schedule 9 species are those that are already established in the wild, but which continue to pose a threat to the conservation of native biodiversity and habitats, such that further releases should be regulated. The Schedule also includes some native species, such as barn owl *Tyto alba*, to ensure that any releases or re-introduction programmes are undertaken in consultation with the relevant authorities and in accordance with best practice guidelines.

How is the legislation pertaining to non-native faunal species liable to affect development works?

In most cases, development works are unlikely to infringe the legislation. This is because such operations are unlikely to result in the release or escape of non-native faunal species. However, there may be circumstances, particularly where works involve watercourses or water bodies, which have the potential to exacerbate the spread of e.g. signal crayfish or certain fish or amphibian species. If this is deemed a possibility, it will be necessary to ensure appropriate preventative measures are in place prior to and during the works.

PLANTS AND FUNGI

All wild plants are protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence for an 'unauthorised' person to intentionally uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Certain rare species of plant and fungi, for example some species of orchid, red-tipped cudweed *Filago lutescens*, spiked speedwell *Veronica spicata*, holly-leaved naiad *Najas marina*, field cow wheat *Melampyrum arvense* and sandy stilt puffball *Battarraea phalloides*

are also fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) in respect of Section 13. This prohibits any person:

- Intentionally picking, uprooting or destruction of any wild Schedule 8 species; and
- Selling, offering or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or part thereof.

In addition to the legislation outlined above, several plant species, such as slender naiad *Najas flexilis*, fen orchid *Liparis loeselii* and early gentian *Gentianella anglica*, are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2017 (as amended). These are species of European importance. Regulation 45 makes it an offence to:

- Deliberately pick, collect, cut, uproot or destroy a wild Schedule 5 species; and
- Be in possession of, or control, transport, sell or exchange, or offer for sale or exchange any wild live or dead Schedule 5 species or anything derived from such a plant.

How is the legislation pertaining to protected plants liable to affect development works?

A mitigation licence issued by the relevant countryside agency (e.g. Natural England, Natural Resources Wales) will be required for works liable to affect species of plant listed under The Conservation of Habitats and Species Regulations 2017 (as amended). The licence is to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

INVASIVE PLANT SPECIES

Under Section 14 (2) of the Wildlife and Countryside Act 1981 (as amended), it is an offence to plant or otherwise cause to grow in the wild any species of plant listed on Part II of Schedule 9. Schedule 9 plant species include Japanese knotweed *Fallopia japonica*, giant hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera*. In the main, Schedule 9 species are those that are already established in the wild, but which

continue to pose a threat to the conservation of native biodiversity and habitats, such that further releases should be regulated.

How is the legislation pertaining to invasive plants liable to affect development works?

Although it is not an offence to have these plants on your land per se, it is an offence to cause these species to grow in the wild. Therefore, if they are present on site and development activities (for example movement of spoil, disposal of cut waste or vehicular movements) have the potential to cause the further spread of these species to new areas, it will be necessary to ensure appropriate measures are in place to prevent this happening prior to the commencement of works.

As a rule, planting on managed land (private gardens, estates and amenity planting, for example), where it is expected that the spread of the plant will be kept under control, and where the plant will not have an adverse impact, is not regarded as planting in the wild and thus would not constitute an offence. However, where the plant is inadequately managed or contained and is likely to have an adverse effect, it may. Whether or not planting is an offence should therefore be judged on a case by case basis, taking into account the potential impacts on habitats and native flora and fauna, and the existence or extent of management practices to be employed¹⁹.

PLANTS: INJURIOUS WEEDS

Under the Weeds Act 1959 any land owner or occupier may be required prevent the spread of certain 'injurious weeds' such as spear thistle *Cirsium vulgare*, creeping thistle *Cirsium arvense*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, and common ragwort *Senecio jacobaea* onto agricultural land, particularly grazing areas or land which is used to produce conserved forage. It is a criminal offence to fail to comply with a notice requiring such action to be taken. The Ragwort Control Act 2003 establishes a ragwort control code of practice²⁰ as common ragwort is poisonous to horses and other

¹⁹ Defra (2010) Guidance on Section 14 of the Wildlife and Countryside Act, 1981. [\[ARCHIVED CONTENT\]](https://nationalarchives.gov.uk) (nationalarchives.gov.uk)

²⁰ Defra (2004) Code of Practice on How to Prevent the Spread of Ragwort: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69264/pb9840-cop-ragwort.pdf

livestock. This code provides best practice guidelines on how to prevent the spread of this species but is not legally binding.

B EUROPEAN AND NATIONAL LEGISLATION AFFORDED TO SITES AND HABITATS

As for certain species described above, habitats and sites are also protected directly through the Wildlife & Countryside Act 1981 (as amended), The Conservation of Habitats and Species Regulations 2017 (as amended) and The 'Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) through the notification, classification or designation of various protected sites as detailed below.

In addition, The Environment Act 2021 and the Water Framework Directive indirectly afford protection to non-designated habitats through the duties placed on public and private bodies to promote nature conservation and biodiversity, for example, the creation of Local Nature Recovery Strategies (LNRS) and associated Species Conservation and Protected Site strategies, and to reduce or avoid harmful activities. Many of these duties and targets form the basis for national and local planning policy and wider conservation strategies and are not covered in detail here.

STATUTORY SITE DESIGNATIONS: NATIONAL

Nationally important areas of special scientific interest, by reason of their flora, fauna, or geological or physiographical features, are notified by the countryside agencies as statutory **Sites of Special Scientific Interest** (SSSI) under the National Parks and Access to the Countryside Act 1949 and latterly the Wildlife & Countryside Act 1981 (as amended). As well as underpinning other national designations (such as **National Nature Reserves** which are declared by the countryside agencies under the same legislation), the system also provides statutory protection for terrestrial and coastal sites which are important within a European context (formerly referred to as part of the Natura 2000 network and recently amended to the National Site Network in line with the UK's departure from the EU) and globally (such as Wetlands of International Importance) - see subsequent sections for details of these designations. Improved provisions for the protection and

management of SSSI have been introduced by the Countryside and Rights of Way Act 2000.

The Wildlife & Countryside Act 1981 (as amended) also provides for the making of **Limestone Pavement Orders**, which prohibit the disturbance and removal of limestone from such designated areas, and the designation of **Marine Nature Reserves**, for which byelaws must be made to protect them.

STATUTORY SITE DESIGNATIONS: INTERNATIONAL

Special Protection Areas (SPAs), together with **Special Areas of Conservation** (SACs) form the basis of the **National Site Network** (until recently, these were part of the Natura 2000 network whilst the UK was part of the EU). SPAs are identified and classified by the Government under the EC Birds Directive (Council Directive 2009/147/EC (formerly 79/409/EEC)) on the Conservation of Wild Birds) via the mechanisms set out in the Habitats Regulations (as applicable at the time of classification).

SPAs are areas of the most important habitat for rare (listed on Annex I of the Directive) and migratory birds within the European Union. Protection afforded SPAs in terrestrial areas and territorial marine waters out to 12 nautical miles (nm) is given by The Conservation of Habitats & Species Regulations 2017 (as amended). The 'Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) provide a mechanism for the classification and protection of European Marine Sites or EMS (SPAs and SACs) in UK offshore waters (from 12-200 nm).

SACs are identified and designated under the EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) via the mechanisms set out in the Habitats Regulations (as applicable at the time of designation). These are areas which have been identified as best representing the range and variety of habitats and (non-bird) species listed on Annexes I and II to the Directive within the European Union. SACs in terrestrial areas and territorial marine waters out to 12 nautical miles are protected under The Conservation of Habitats & Species Regulations 2017 (as amended). The 'Conservation of Offshore Marine Habitats and Species Regulations 2017

(as amended) provide a mechanism for the designation and protection of European marine sites or EMS (SACs and SPAs) in UK offshore waters (from 12-200 nm).

Ramsar sites are listed under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and wise use, in particular recognizing wetlands as ecosystems that are globally important for biodiversity conservation. Wetlands can include areas of marsh, fen, peatland or water and may be natural or artificial, permanent or temporary. Wetlands may also incorporate riparian and coastal zones adjacent to the wetlands. Ramsar sites are underpinned through prior notification as Sites of Special Scientific Interest (SSSI) and as such receive statutory protection under the Wildlife & Countryside Act 1981 (as amended) with further protection provided by the Countryside and Rights of Way (CROW) Act 2000. Policy statements have been issued by the Government highlighting the special status of Ramsar sites. This effectively extends the level of protection to that afforded to sites in England and Wales which have been designated under the EC Birds and Habitats Directives as part of the Natura 2000 network and now the National Site Network (e.g. SACs and SPAs).

STATUTORY DESIGNATIONS: LOCAL

Under the National Parks and Access to the Countryside Act 1949 **Local Nature Reserves** (LNRs) may be declared by local authorities after consultation with the relevant countryside agency. LNRs are declared for sites holding special wildlife or geological interest at a local level and are managed for nature conservation and provide opportunities for research and education and enjoyment of nature.

STATUTORY PROTECTION OF AQUATIC HABITATS

Water Framework Directive and The Environment Act 2021

Aquatic habitats are also afforded protection under The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017, which transposes the Water Framework Directive 2000/60/EC (The WFD). At its core it aims to prevent deterioration of the water environment and improve water quality by managing water in natural river

basin districts, rather than by administrative boundaries. It looks at ecological, physico-chemical, quantitative and morphological aspects of the water environment and requires that improvements take account of economic aspects, including costs and benefits. Plans to improve the status of water bodies are set out in River Basin Management Plans (RBMPs). The Directive aims for 'good status' of all ground and surface water (rivers, lakes, transitional water and coastal waters) in the EU and the UK. The Environment Agency and Natural Resources Wales are the competent authorities for river basin planning in England and Wales.

Any works which could affect the hydro-morphology, ecology or water quality of any classified waterbody up to 1nm out to sea requires an assessment under the WFD to demonstrate how any adverse impacts will be mitigated and, where possible, the status of the waterbody enhanced in order to achieve the required good status targets. Construction must have no permanent, unmitigated effects which cause any deterioration in the current status of any surface-water or groundwater body. If a WFD assessment shows an activity will either cause a deterioration in the status of a water body or jeopardise a water body achieving good status, it may then be necessary to consider whether it meets the criteria for an Article 4(7) exemption²¹.

The Environment Act also places a new statutory duty on government to produce a plan to reduce discharges from storm overflows, on water companies and the Environment Agency to publish data on storm overflow operation and on water companies to monitor the water quality upstream and downstream of storm overflows and sewage disposal works. The Act also contains a new duty on the water sector to create drainage and sewerage management plans and enables the revocation or variation of permanent abstraction licences where the change is necessary to protect the environment. This is because some older abstraction licences do not take account of fluctuating water availability and may enable too much water to be taken from the environment.

²¹ https://circabc.europa.eu/sd/a/e0352ec3-9f3b-4d91-bdbb-939185be3e89/CIS_Guidance_Article_4_7_FINAL.PDF

NON-STATUTORY DESIGNATIONS

Areas considered to be of local conservation interest may be designated by local authorities as a **Wildlife Site**, under a variety of names such as **Local Wildlife Sites** (LWS), **County Wildlife Sites** (CWS), **Listed Wildlife Sites** (LWS), **Local Nature Conservation Sites** (LNCS), **Sites of Biological Importance** (SBIs), **Sites of Importance for Nature Conservation** (SINCs), or **Sites of Nature Conservation Importance** (SNCIs). The criteria for designation may vary between counties.

Together with the statutory designations, these are defined in Local Plan documents under the Town and Country Planning system and are a material consideration when planning applications are being determined. The level of protection afforded to these sites through local planning policies may vary between counties.

THE HEDGEROW REGULATIONS 1997

The Hedgerow Regulations 1997 are intended to protect 'important' countryside hedgerows from destruction or damage. Under the 'Wildlife and Landscape' criteria of the Regulations, a hedgerow is considered important if (a) it has existed for 30 years or more; and (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

Under the Regulations, it is against the law to remove or destroy important hedgerows without permission from the local planning authority. Hedgerows on or adjacent to common land, village greens, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry and land used for the keeping or breeding of horses, ponies or donkeys are covered by these regulations. Hedgerows *'within or marking the boundary of the curtilage of a dwelling-house'* are not.

C PLANNING POLICY

NATIONAL PLANNING POLICY FRAMEWORK

The National Planning Policy Framework replaced PPS9 and emphasises the need for sustainable development. The Framework specifies the need for protection of designated

sites and priority habitats and priority species (see Section D below). An emphasis is also made for the need for ecological networks via preservation, restoration and re-creation. The protection and recovery of priority species is also listed as a requirement of planning policy. In determining planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from adverse harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

THE NATURAL ENVIRONMENT AND RURAL COMMUNITIES ACT 2006 AND THE BIODIVERSITY DUTY

Section 40 of The Natural Environment and Rural Communities (NERC) Act requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity.' This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

LOCAL PLANS

The Horsham District Council Planning Framework (2015) includes the following nature conservation policies that are relevant to the site proposals:

Policy 31: Green Infrastructure and Biodiversity

"1. Development will be supported where it can demonstrate that it maintains or enhances the existing network of green infrastructure. Proposals that would result in the loss of existing green infrastructure will be resisted unless it can be demonstrated that new opportunities will be provided that mitigates or compensates for this loss, and ensures that the ecosystem services of the area are retained.

2. Development proposals will be required to contribute to the enhancement of existing biodiversity, and should create and manage new habitats where appropriate. The Council will support new development which retains and /or enhances significant features of nature conservation on development sites. The Council will also support development which makes a positive contribution to biodiversity through the creation of green spaces, and linkages between habitats to create local and regional ecological networks.

3. Where felling of protected trees is necessary, replacement planting with a suitable species will be required.

4. a) Particular consideration will be given to the hierarchy of sites and habitats in the district as follows: i. Special Protection Area (SPA) and Special Areas of Conservation (SAC) ii. Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs) iii. Sites of Nature Conservation Importance (SNCIs), Local Nature Reserves (LNRs) and any areas of Ancient woodland, local geodiversity or other irreplaceable habitats not already identified in i & ii above.

b) Where development is anticipated to have a direct or indirect adverse impact on sites or features for biodiversity, development will be refused unless it can be demonstrated that: i. The reason for the development clearly outweighs the need to protect the value of the site; and, ii. That appropriate mitigation and compensation measures are provided.

5. Any development with the potential to impact Arun Valley SPA or the Mens SAC will be subject to a HRA to determine the need for an Appropriate Assessment. In addition, development will be required to be in accordance with the necessary mitigation measures for development set out in the HRA of this plan".

The High Weald AONB Management Plan 2019-2024 (2019) includes the following nature conservation policies that are relevant to the site proposals:

Objective W1

To maintain the existing extent of woodland and particularly ancient woodland.

Rationale: To maintain irreplaceable habitats for biodiversity, to maintain a key component of the cultural landscape, and to maintain contribution to carbon storage.

Indicators of Success: i. No loss of ancient woodland (HWJAC: Ancient Woodland Inventory statistics)

Objective W2

To enhance the ecological quality and functioning of woodland at a landscape scale.

Rationale: To increase the viability of the woodland habitat for wildlife, by identifying and extending the area of appropriately managed woodland (including restoring plantations on ancient woodland) to link and enhance isolated habitats and species populations, providing greater connectivity between woodlands and other important wildlife areas, and helping to facilitate species' response to climate change.

Indicators of Success:

i. Increase in proportion of woodland managed to remove invasive species (Forestry Commission: Woodland Grant data)

ii. Increase in woodland dependent butterflies (Butterfly Conservation: Butterfly count in sample areas)

iii. Length of hedges restored or replanted (HWJAC: multiple sources/sample areas)

Objective W3

To protect the archaeology and historic assets of AONB woodlands.

Rationale: To protect the historic environment of the AONB woodlands.

Indicators of Success: i. Increase in Historic Environment Records (HER) for woodlands (HWJAC: County HERs statistics)

Objective OQ4

To protect and promote the perceptual qualities that people value.

Follow the Institute for Lighting Professionals guidance; promote information on dark sky-friendly lighting; install outside lighting only when needed and use dark sky-friendly lighting.

D BIODIVERSITY ACTION PLANS (BAPs)

Since the publication of the **UK BAP** in 1994, new strategies and frameworks have resulted in the development of biodiversity issues and changes in the terminology used to describe these habitats and species in England. This has been brought about through the replacement of the previous England Biodiversity Strategy with *Biodiversity 2020: A Strategy For England's Wildlife and Ecosystem Services* (2011) and the replacement of the UK BAP itself with the *UK Post-2010 Biodiversity Framework* (2012). All previous UK BAP species and habitats are still of material consideration in the planning process but are now referred to as Habitats and Species of Principal Importance (as described under the NERC Act 2006 above).

The distribution of BAP/priority habitats has been used to identify **Biodiversity Opportunity Areas** at a regional scale through Biodiversity Strategies/Partnerships. They represent a strategic landscape scale approach to habitat creation, restoration or expansion. They represent regional priority areas of opportunity to restore and create key habitats. They are therefore a spatial representation of targets for Habitats of Principal Importance and are areas of opportunity, not constraint.

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