

Ecological Mitigation and Enhancement Plan

Survey site: Atterbury Gardens, Caversham, Reading, RG4 7HW

Client: Hicks Developments LTD

Date: 15/12/2025

Project:

This report is prepared to inform a planning application the Reading Borough Council. The proposal is described as:
The construction of four detached houses.

Planning Application Number:

PL/24/1659

The survey results and recommendation contained within this report are valid for 18 months. An updated site visit may be required if the report is to be used any longer than 18 months after completion.

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Guidelines

This assessment has been designed to meet:

- British Standard 42020 (2013) 'Biodiversity – Code of Practice for Planning and Development'.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

This approach is enshrined in Government planning guidance, for example, paragraph 174 of the National Planning Policy Framework for England.

The desk studies and field surveys undertaken to provide a preliminary ecological appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

In consequence of the scale and intensity of the proposed development, this plan-led report is considered adequate and proportionate. It communicates all relevant information necessary to determine a planning application or support the recommendations for further surveys.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited were commissioned to produce an Ecological Mitigation and Enhancement Management Plan (EMEMP) for the proposed development at Atterbury Gardens, Caversham, Reading, RG4 7HW (hereafter referred to as the site).

The site has previously been subject to the following ecological and arboricultural surveys and reports:

- Preliminary Ecological Appraisal and Roost Assessment (Arbtech Consulting Ltd, October 2024)
- A Biodiversity Net Gain (BNG) Assessment (Arbtech Consulting Ltd, May 2025)
- Construction Environmental Management Plan (CEMP) (Arbtech Consulting Ltd, December 2025)

1.2 Project Description

The planning application pertaining to the site (Reading Borough Council Reference: PL/24/1659) describes the proposed development as: “The construction of four detached houses.”. The approved development plan is provided in **Appendix 1**.

1.3 Site Location

The survey site is centred on National Grid Reference SU 70359 75947 and has an area of approximately 0.16ha. The site comprises of hardstanding, grassland, hedgerow, trees and bare ground. It is surrounded by residential dwellings in all directions. The wider landscape comprises the town of Caversham Heights, pockets of woodland (~350m south-west and ~1.3km west) and agricultural fields. The site has slightly acidic, loamy, and clayey soils. A site location plan is provided in **Appendix 2**.

1.4 Scope of This Report

Following the submission of planning application PL/24/1659, planning permission was conditionally granted. The decision notice details pre-commencement planning conditions that relate to ecology. Specifically, Planning Conditions 21 and 22 which state:

Condition 21: “No development shall commence on site including demolition and any preparatory works until details of biodiversity enhancements, to include two integrated bird, and two integrated bat boxes, tiles, or bricks on each of the new dwellings; and details of native and wildlife friendly landscaping (including gaps at the bases of fences to allow hedgehogs to traverse through the gardens), have been submitted to and approved in writing by the local planning authority.

The biodiversity enhancements shall thereafter be installed in accordance with the approved details prior to occupation of the development and shall be retained and maintained as such at all times thereafter.

REASON: To incorporate biodiversity in and around developments in accordance with paragraph 186 of the NPPF and in accordance with Policy EN12 of the Reading Borough Local Plan 2019

Condition 22: “No development hereby permitted shall commence until a Variegated Yellow Archangel eradication strategy has been submitted to, and approved in writing by, the local planning authority. The strategy shall include details of and timescales for archangel eradication, and, if the archangel has not been eradicated at the time of commencement of works, details of the measures to be put in place to ensure that works do not cause its spread. The eradication strategy shall be carried out in accordance with the approved details unless the local planning authority gives written approval for any variations.

REASON: In order to protect native biodiversity from Variegated Yellow Archangel, which is an invasive weed, in accordance with Policy EN12 of the Reading Borough Local Plan 2019”

In addition to the above, the development is subject to a separate planning condition requiring the submission of a detailed external lighting scheme to control impacts on wildlife and neighbouring amenity. This EMEMP sets out the ecological principles and constraints relevant to lighting design; however, the detailed technical lighting scheme (including drawings, specifications and isolux plans) will be prepared and submitted separately by the applicant’s lighting designer in discharge of the relevant planning condition.

2.0 Ecological Baseline Conditions Relevant to This Report

The baseline ecological conditions of relevance to this report were determined as a result of the previous ecological assessments undertaken at the site including the Preliminary Ecological Appraisal and Roost Assessment (Arbtech Consulting Ltd, 2024), the Biodiversity Net Gain Assessment (Arbtech Consulting Ltd, 2025), and the Construction Environmental Management Plan (Arbtech Consulting Ltd, 2025).

2.1 Value to Protected and/ or Notable Species and Anticipated Impacts

The site is located within an urban residential area and comprises a previously developed plot with areas of hardstanding, amenity grassland and boundary vegetation, including retained trees and hedgerows. The site is surrounded by residential dwellings and associated gardens.

Given the type and extent of habitats recorded and the assessed connectivity between the site and the wider landscape, the site was assessed to provide opportunities for the following protected and/ or notable species and habitats:

- Reptiles and common amphibians;
- Bats;
- Common species of nesting birds;
- Hedgehogs

The site is not considered suitable to support any other protected and/ notable species.

Reptiles and Common Amphibians

The site supports habitat of low suitability for widespread reptiles and common amphibians, primarily associated with boundary hedgerows which may provide limited opportunities for sheltering and commuting. The grassland within the site is considered sub-optimal due to its short sward height and exposed nature, increasing predation risk. The site is located within an urban environment and is poorly connected to wider suitable habitat, meaning any reptiles or amphibians present are likely to be transient rather than part of a significant local population.

Bats

All trees on site were subject to a Ground Level Tree Assessment and were assessed as having no potential to support roosting bats, due to their size, age and condition. No buildings suitable for roosting bats were present at the time of survey. However, the site and surrounding residential gardens provide suitable habitat for foraging and commuting bats, with records confirming bat activity within the wider area. Retained trees and boundary vegetation are therefore considered to have local value for bat activity.

Common Species of Nesting birds

Scattered trees and boundary hedgerows on site provide suitable nesting and foraging habitat for common and widespread species of breeding birds. No evidence of nesting birds was recorded at the time of survey; however, retained vegetation within and adjacent to the site may be used by nesting birds during the breeding season. No habitat suitable for Schedule 1 bird species was identified.

Hedgehogs

The grassland and boundary hedgerows within the site provide limited foraging and commuting opportunities for hedgehogs. Habitat connectivity is constrained by surrounding fencing and urban development; however, a small gap beneath the southern boundary fence may allow limited movement of hedgehogs through the site.

The site is not considered suitable to support any other protected or notable species.

2.2 Scope for Mitigation and Enhancement

Habitats within the site are assessed as being of low ecological suitability, providing limited opportunities for transient reptiles and common amphibians associated with boundary vegetation, and foraging and commuting opportunities for bats, hedgehogs and common species of nesting birds. The site is located within an urban environment and is poorly connected to wider areas of suitable habitat, meaning it does not represent a significant ecological resource for these species in a local or landscape context.

Nonetheless, the retention of boundary features and the implementation of proportionate biodiversity enhancements are considered appropriate to the scale of the development. Targeted enhancement measures will ensure that the development delivers a modest biodiversity benefit and avoids unnecessary impacts on wildlife, in line with planning policy and the findings of the Preliminary Ecological Appraisal.

2.3 Persons Responsible and Lines of Communication

A Development Biodiversity Champion will be appointed for the construction phase of the development. This will be an individual with appropriate authority on site, such as the contractor, site manager or project manager, and will be responsible for ensuring that all ecological measures outlined within the approved EMEMP are implemented. This will include the delivery of a toolbox talk to site operatives prior to the commencement of works.

The Biodiversity Champion will act as the primary point of contact for ecological matters on site and will liaise with the project ecologist and, where required, a suitably qualified Ecological Clerk of Works (ECoW) to ensure that mitigation measures are correctly applied and that impacts to ecological receptors are minimised. The ECoW will provide specialist ecological advice on an on-call basis during ecologically sensitive activities or in the event that unexpected wildlife is encountered.

The Biodiversity Champion will notify the project ecologist and designated ECoW of the commencement of works and provide updates as necessary throughout the construction phase. The project ecologist's contact details are provided on the title page of this report.

The following key personnel are responsible for the management and implementation of works in accordance with the EMEMP:

Steve Hicks

steve.hicks@hicks-woodley.co.uk

0776 869 8252

3.0 Wildlife Enhancement Plan

All biodiversity enhancement measures will be installed prior to first occupation of the dwellings and retained thereafter.

Table 1: Species-specific enhancements

Ecological Enhancement	Specification
Provision of bat boxes	Eight integrated bat boxes will be installed within the external walls of the new dwellings, with two boxes provided per dwelling. The approximate bat box installation location is shown on the plan in Appendix 3. Details of the bat boxes to be installed are as follows: Integrated bat boxes to be integrated into the façade of new buildings - The recommended integrated bat bricks will be constructed of woodcrete/ woodstone. Boxes of this construction are known to require minimal maintenance and have a lifespan of 25 years plus. 8 No. Vivara Pro Woodstone Build In Bat Tube (or similar) (see Figure 1) will be installed into the façade of new buildings. This bat brick type is suitable for integration into a range of building types including brick walls, timber cladding, and stone and are suitable to support a range of species including common pipistrelles <i>Pipistrellus pipistrellus</i> and soprano pipistrelles <i>Pipistrellus pygmaeus</i> which are likely to be present in the local area. - The bat boxes will be positioned high up at eaves level facing a southwest elevation with a clear flight path to and from the entrance, away from artificial light and facing vegetated habitats.



Figure 1. Integrated Vivara Pro Woodstone Build In Bat Tube suitable for a range of crevice dwelling bat species. Source: <https://www.nhbs.com/ib-vl-05-vivara-pro-build-in-woodstone-batbox>.

Recommended management:

The proposed bat boxes are designed to require no management or maintenance. Furthermore, preventing physical disturbance of bat boxes will increase the chances of occupation by roosting bats.

Provision of bird boxes

Eight bird boxes will be installed within the external walls of the new dwellings, with two boxes provided per dwelling. The approximate bird box installation locations are shown on the plan in **Appendix 3**. Details of the bird boxes to be installed are as follows:.

Integrated bird boxes to be integrated into the façade of new buildings

- The recommended bird boxes will be constructed of woodcrete/ woodstone. Boxes of this construction are known to have minimal maintenance and have a lifespan of 25 years plus.
- 8No. Vivara Pro WoodStone House Sparrow Nest Boxes (or similar) (see **Figure 2**) will be installed into the façade of new buildings. This bird box type is designed to provide enhanced nesting opportunities for house sparrow *Passer domesticus*. House sparrows are priority species listed on Section 41 of the NERC Act. However alternative species like tits will also utilise these boxes if sparrows are not present.

- The bird box will be positioned high up under the eaves level facing a northern elevation where they will be sheltered from prevailing wind, rain and strong sunlight.



Figure 2. Vivara Pro WoodStone House Sparrow Nest Box Nest Box (image credit arkwildlife.co.uk).

Recommended Management:

The proposed bird boxes are designed to require no management or maintenance. Furthermore, preventing physical disturbance of bird boxes will increase the chances of occupation by nesting birds.

Provision of Hedgehog House

A single hedgehog house (**Figure 3**) will be installed within the site prior to the completion of the proposed development. The proposed location for the hedgehog house is shown on the plan in **Appendix 3**.



Figure 3. The hedgehog house proposed for the site (image credit <https://www.nhbs.com/hedgehog-house>).

Access points:

Access will be continued to be provided for hedgehogs on the site. This will include the installation of hedgehog access points within the fencing around the site. Indicative hedgehog access point locations are shown on the Wildlife Enhancement Plan in **Appendix 3**. Final locations may be adjusted slightly at installation stage to accommodate fencing layout, while maintaining habitat connectivity across the site.

Gaps in the fencing will be a minimum 15 x 15cm. A hedgehog highway plaque will be installed over these gaps to indicate the reasoning and to prevent these being accidentally being fixed or blocked off, as demonstrated in **figure 4**. This will also include gaps between the closed board fencing between the gardens, which will provide safe movement across the site. Location of suitable gaps are noted in the map in **Appendix 3**. This will also provide movement access for smaller fauna such as reptiles.

	Hedgehog access will be provided within boundary and inter-garden fencing throughout the site. Indicative access point locations are shown in Appendix 3; additional gaps will be incorporated between gardens to maintain connectivity. <i>Figure 4. Hedgehog highway plaque- Source- www.Wildcare.co.uk.</i> Management: The proposed hedgehog house is designed to require no management or maintenance. Furthermore, preventing physical disturbance of the hedgehog house will increase the chances of occupation by hedgehogs. However, it is recommended that the hedgehog house is inspected and cleaned annually for the first five years following installation. Should the hedgehog house be significantly damaged, it will be replaced with a like-for-like model or similar suitable alternative brand. If the hedgehog house is occupied at the time of maintenance and cleaning, it is advised to leave them in situ and re-check for signs of occupation every 2-4 weeks until the house appears unoccupied and appropriate
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	cleaning and repairs can take place without disturbing any nesting animals. Gaps in fences will need to be checked periodically and kept clear.
Hibernaculum creation	One hibernaculum will be created within the north boundary of the site, adjacent to the retained trees (Appendix 3). This will be created using natural materials such as logs, stones, vegetation arisings, and earth to provide additional refugia opportunities for amphibians and reptiles post-development. A specification for the construction of the hibernacula is provided on Figure 5 below. Hibernaculum on free-draining ground Where ground conditions allow, the hibernaculum should be incorporated into a shallow pit. This design is more likely to remain frost-free, and will be less obtrusive and thus unlikely to be subject to interference. Hibernaculum on impermeable ground Where ground conditions are impermeable, then an 'above-ground' or mounded design should be utilised in order to prevent the hibernaculum from flooding. This design should also be used if it is not possible to excavate a pit for any other reason. Figure 5. A schematic representation of a man-made hibernaculum.

Native and Wildlife-Friendly Landscaping	All soft landscaped areas shown on the approved Landscape Plan (Appendix 1) will comprise native and wildlife-friendly species of local provenance, in accordance with this EMEMP and the requirements of Condition 21. The proposed landscaping will prioritise species that provide nectar, pollen, berries and shelter for wildlife, including invertebrates, birds and small mammals. Planting will include a mix of native trees, shrubs and herbaceous species appropriate to the local area, such as hawthorn <i>Crataegus monogyna</i>, blackthorn <i>Prunus spinosa</i>, hazel <i>Corylus avellana</i>, dogwood <i>Cornus sanguinea</i> and native wildflower species within lawn margins and soft landscaping areas.
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4.0 Lighting Strategy

Table 2: Ecological Lighting Principles for Bats and Nocturnal Wildlife

Mitigation	Specification
Protection of Bats and Nocturnal Wildlife - Wildlife Sensitive Lighting Strategy	Overview: No bat roosts are present on site; however, retained trees and boundary vegetation may provide limited foraging and commuting opportunities for bats. Additional lighting could impact behaviour of wildlife and adversely affect potential foraging resources. Any proposed external lighting will be installed in accordance with current guidance issued by the Bat Conservation Trust and Institute of Lighting Professionals: Guidance Note 08/18: Bats and Artificial lighting in the UK (BCT & ILP 2018). External Lighting During the Operational Phase: All external lighting will be installed in accordance with current guidance issued by the Bat Conservation Trust and Institute of Lighting Professionals: <i>Guidance Note 08/23: Bats and Artificial lighting at Night</i> (BCT & ILP 2023). External lighting will be installed in a way as to limit artificial light spill over habitats of value to protected and/ or notable species potentially using the site. Specifically, artificial lighting should be installed to illuminate pedestrian access areas only, whereby light installation is avoided within large areas of natural and semi-natural habitats. External lighting will be installed as to avoid excessive light spill over: • Boundary vegetation / scattered trees • The species-specific habitat enhancements detailed later in this plan

	- Retained habitats on and directly adjacent to the site The following lighting design prescriptions are considered suitable for the type and scale of the proposed development to minimise the impacts of artificial lighting on site on bats and other protected/ notable species. External lighting will be installed in accordance with the below design prescriptions: - Reducing the operating time of lighting and levels of illuminance provided via: Preventing the use of motion sensors where possible to allow lights to be turned off permanently whilst not in use. Where the use of motion sensors is desirable, light sensors should be set to over-run times no longer than 1 minute to prevent unnecessary light spill. - Avoiding light spill via: The use of directional lighting by using luminaires with rear shields and an upwards lighting ratio of zero, i.e. down lights. - Light type: Use of warm white LED lamps only, whereby the Corrected Colour Temperature does not exceed 2700 Kelvin and a brightness of 500 lumens or less. Internal Lighting: Impacts of artificial light spill through windows will be mitigated by fitting internal lighting fixtures in line with recommendations within Guidance Note 08/23 (BCT & ILP 2023). Specifically, in order to limit light spill through windows, internal lighting will be recessed into the ceiling and set back a minimum of 1m from all windows as to limit horizontal light spill. A schematic representation of the effect of these lighting prescriptions is provided on Figure 6 below.
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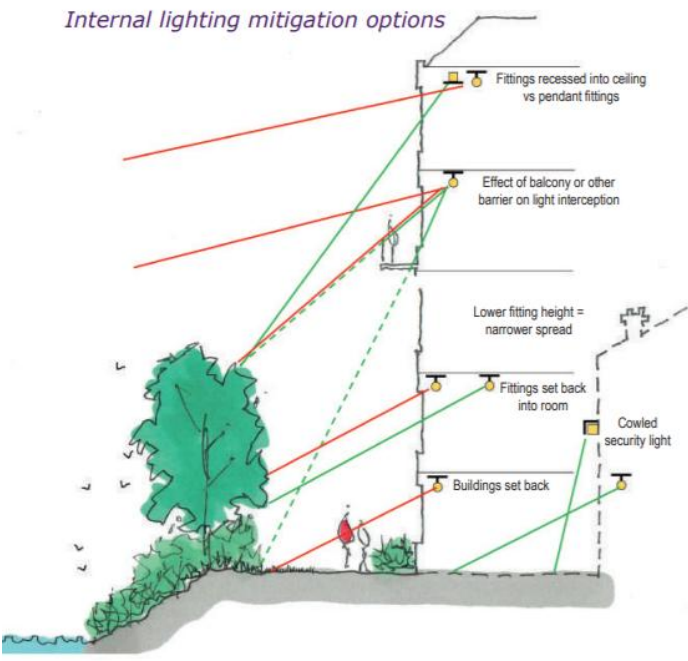


Figure 6. Internal Lighting mitigation options. Image taken from Guidance Note 08/23: Bats and Artificial lighting at Night (BCT & ILP).

5.0 Invasive Species Management

Table 3: Variegated Yellow Archangel Control Measures

Management	Specification
Invasive/non-native Species	Overview: Variegated Yellow Archangel (<i>Lamiastrum galeobdolon</i> subsp. <i>argentatum</i>) is listed on Schedule 9 of the Wildlife and Countryside Act 1981. Although Variegated Yellow Archangel was not recorded during the Preliminary Ecological Appraisal (Arbtech Consulting Ltd, October 2024) and was not identified within the submitted desk study, a precautionary approach is required in response to the planning condition.

	Prior to commencement of development, a targeted walkover check will be undertaken by a suitably qualified ecologist to confirm whether Variegated Yellow Archangel is present within the site. If Variegated Yellow Archangel is identified, the following measures will be implemented: • All affected areas will be clearly demarcated prior to works commencing. • Plants will be removed manually, including all associated root material where practicable. • All plant material will be double-bagged and disposed of at a suitably licensed waste facility. • Soil from affected areas will not be reused elsewhere on site. • Tools, footwear and machinery will be cleaned before leaving the affected area to prevent accidental spread. If Variegated Yellow Archangel is not identified, the following precautionary measures will be implemented to prevent its accidental introduction or spread: • Imported soils and materials will be sourced from reputable suppliers. • Machinery and tools arriving on site will be free from soil and plant material. • Any suspected invasive plant species identified during works will be reported to a suitably qualified ecologist for confirmation. These measures will ensure compliance with the planning condition and prevent the introduction or spread of Variegated Yellow Archangel during development.
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6.0 Post-Development Monitoring and Compliance

Table 4: Biodiversity Enhancement Installation and Compliance Measures

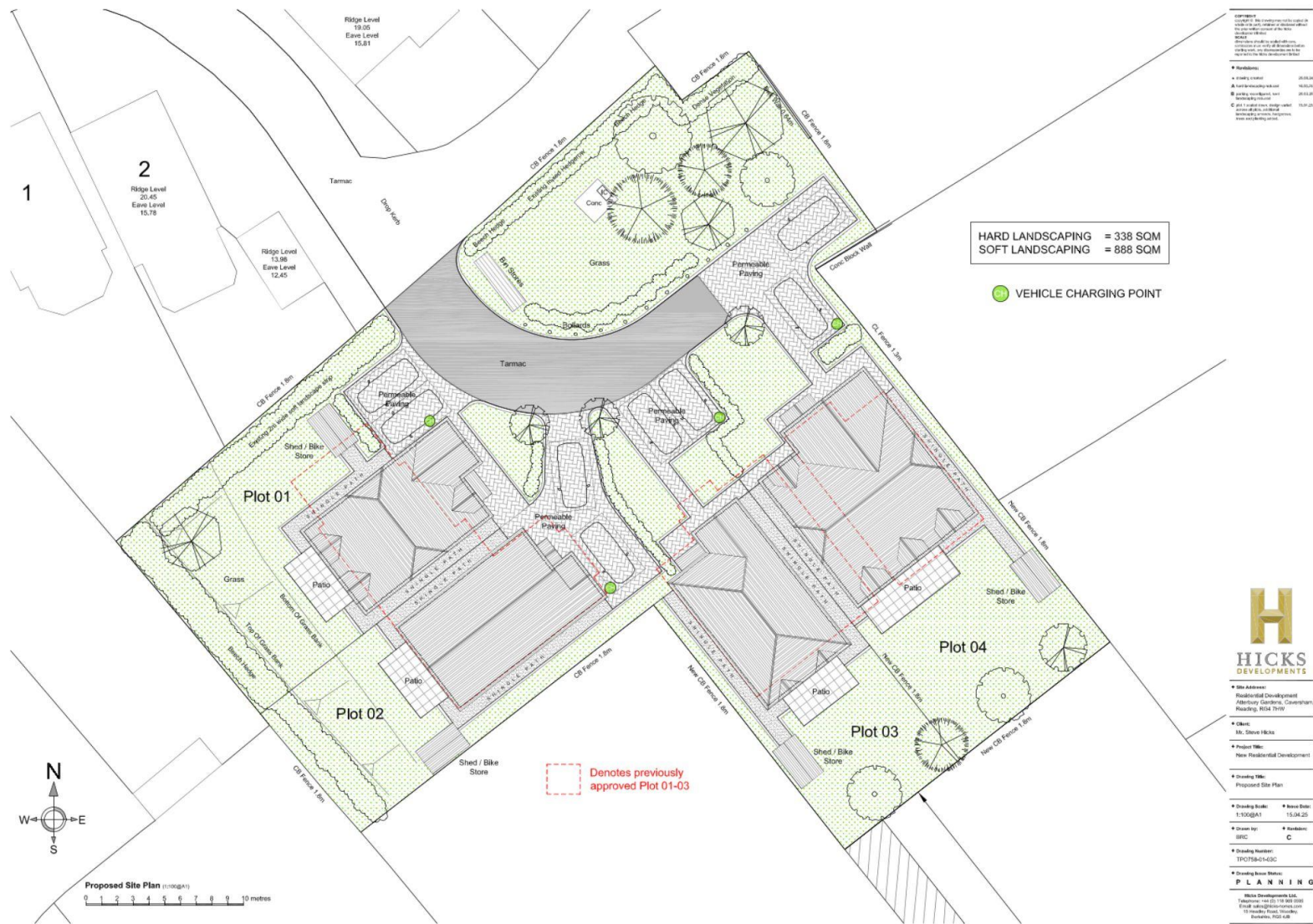
Mitigation	Specification
Post-Development Site Visits	The landscape surrounding the site is characterised by a mosaic of modified grassland, boundary vegetation, areas of dense ruderal growth, and pockets of deciduous woodland. While the deciduous woodland itself provides low suitability for reptiles due to shading and limited basking opportunities, woodland edges, scrub margins, and transitional habitats within the adjacent landscape may offer some limited foraging, refuge, and dispersal opportunities.

	A single post-development site visit will be undertaken by a Suitably Qualified Ecologist (SQE) to confirm that the approved biodiversity enhancement measures have been installed in accordance with the approved details. This visit will be undertaken no more than one year following installation. Where required, a brief report or photographic evidence will be provided to the local planning authority to demonstrate compliance. Should any enhancements be found to be installed incorrectly or incompletely, appropriate remedial measures will be agreed and implemented, with further confirmation provided as necessary.
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7.0 Bibliography

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Appendix 1: Proposed Development and Landscape Plans

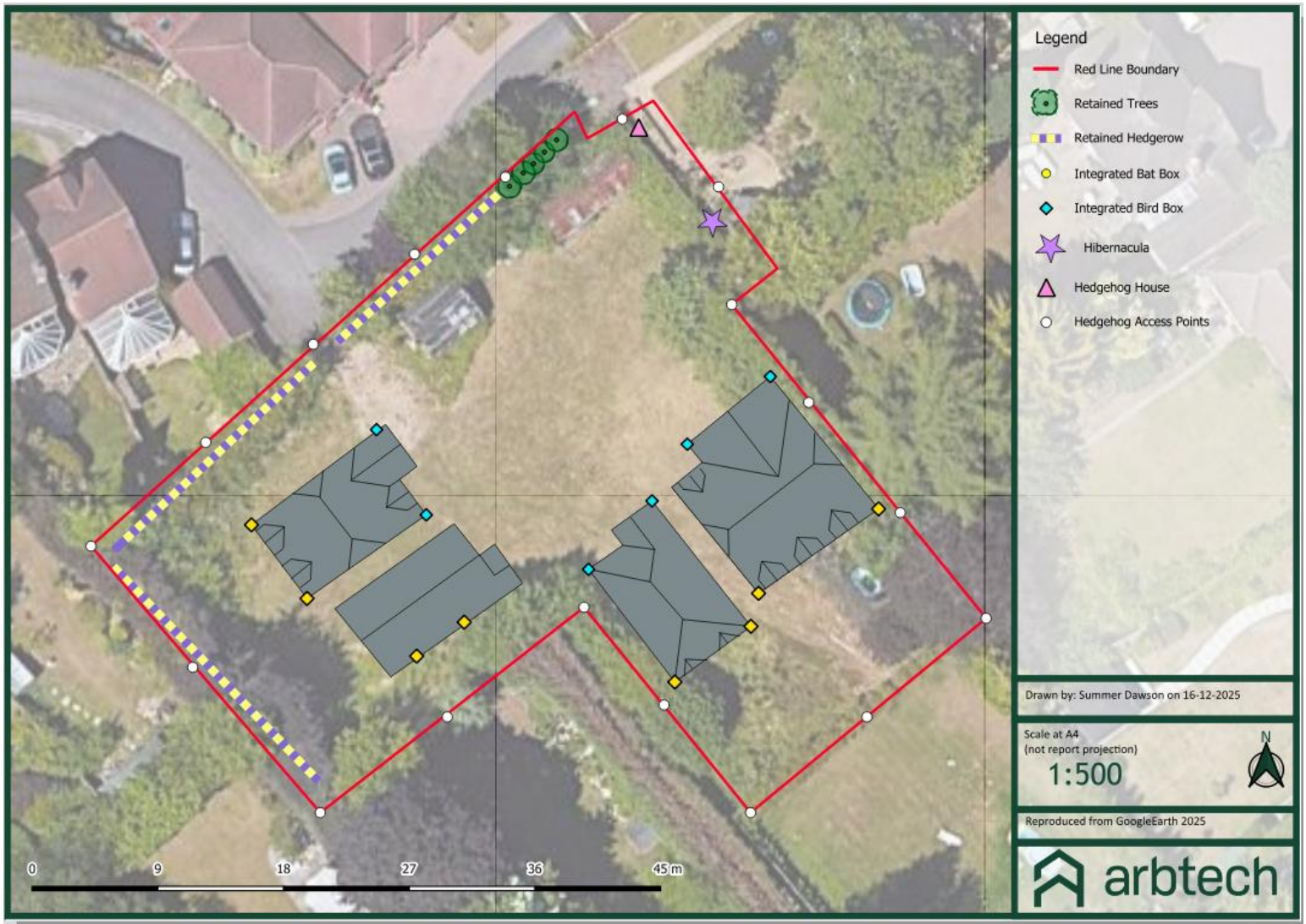


Appendix 2: Site Location Plan



Appendix 3: Proposed Wildlife Enhancement Plan

In the absence of elevation drawings, bat and bird box locations shown on the Wildlife Enhancement Plan are indicative only. All boxes will be installed at eaves level, away from windows and artificial lighting, with final positions confirmed by the project ecologist where necessary to ensure suitability.



Appendix 4: Legislation and Planning Policy

LEGAL PROTECTION

National and European Legislation Afforded to Habitats

International Statutory Designations

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are sites of European importance and are designated under the EC Habitats Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive) and the EC Birds Directive 2009/147/EC on the conservation of wild birds respectively. Both form part of the wider Natura 2000 network across Europe.

Under the Habitats Directive the, Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe in order to conserve the 189 habitats and 788 species (non- bird) identified in Annexes I and II of the Directive (as amended).

SPAs are classified under Article 2 of the EC Birds Directive both for rare bird species (as listed on Annex I) and for important migratory species.

SACs and SPAs up to 12 nautical miles (nm) from the coast are afforded protection in the UK under the Conservation of Habitats and Species Regulations 2010 which consolidate all amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994. In Scotland, the requirements of Habitats Directive are implemented through a combination of the 1994 and the 2010 (reserved matters) Regulations. The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) provide a means for designating and protecting SACs in UK offshore waters (from 12-200 nm).

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and recognises the importance of wetland ecosystems in relation to global biodiversity conservation. The Convention refers to wetlands as “areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres” however they may also include riparian and coastal zones. Ramsar sites are statutorily protected 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 in England and Wales highlighting the special status of Ramsar sites. The Government in England and Wales has issued policy statements which ensure that Ramsar sites are afforded the same protection as areas designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs).

National Statutory Designations

Sites of Special Scientific Interest (SSSI) are designated by nature conservation agencies in order to conserve key flora, fauna, geological or physio-geographical features within the UK. The original designations were under the National Parks and Access to the Countryside Act 1949 but SSSIs were then re-designated under the Wildlife & Countryside Act 1981 (as amended). As well as reinforcing other national designations (including National Nature Reserves), the system also provides statutory protection for terrestrial and coastal sites which are important within the European Natura 2000 network and globally. Further provisions for the protection and management of SSSIs have been introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and the Nature Conservation (Scotland) Act 2004.

Local Statutory Designations

Local authorities in consultation with the relevant nature conservation agency can declare Local Nature Reserves (LNRs) under the National Parks and Access to the Countryside Act 1949. LNRs are designated for flora, fauna or geological interest and are managed locally to retain these features and provide research, education and recreational opportunities.

Non- Statutory Designations

All non-statutorily designated sites are referred to as Local Wildlife Sites (LWS) and can be designated by the local authority for supporting local conservation interest. Combined with statutory designation, these sites are considered within Local Development Frameworks under the Town and Country Planning system and are a material consideration during the determination of planning applications. The protection afforded to these sites varies depending on the local authority involved. Regionally Important Geological Sites (RIGs) are the most important geological and geomorphological areas outside of statutory designations. These sites are also a material consideration during the determination of planning applications.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 are designed to protect 'important' countryside hedgerows. Importance is defined by whether the hedgerow (a) has existed for 30 years or more; or (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 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 without the permission of the local authority. Hedgerows 'within or marking the boundary of the curtilage of a dwelling-house' are excluded.

National and European Legislation Afforded to Species**The Habitats Directive**

The EC Habitats Directive aims to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those species of European importance. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2010 (the Conservation Regulations) and the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended). The following notes are relevant for all species protected under the EC Habitats Directive:

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

The Habitats Regulations do 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.

In order to obtain a European Protected Species Mitigation (EPSM) licence, the application must demonstrate that it meets all of the following three 'tests': 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;

- There is no satisfactory alternative; and
- The action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.
-

The Wildlife and Countryside Act (WCA) 1981 (as amended)

The Wildlife and Countryside Act (WCA) 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection requirements of EC Birds Directive 2009/147/EC on the conservation of wild birds in Great Britain (the birds Directive). The WCA 1981 has been subject to a number of amendments, the most important of which are through the Countryside and Rights of Way (CROW) Act (2000) and Nature Conservation (Scotland) Act 2004.

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

- Deer Act 1991
- Natural Environment & Rural Communities (NERC) Act 2006
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996

Badgers

Badgers *Meles meles* are protected under The Protection of Badgers Act which 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 sett or any part thereof
- Intentionally or recklessly disturb a badger when it is occupying a badger sett
- Intentionally or recklessly cause a dog to enter a badger sett
- Sell or offers for sale, possesses or has under his control, a live badger

Effects on development works:

A development licence will be required from the relevant countryside agency for any development works liable to affect an active badger sett, or to disturb badgers whilst they occupy a sett. Guidance has been issued by the countryside agency's to define what would constitute a licensable activity. It is not possible to obtain a licence to translocate badgers.

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the WCA. Among other things, this makes it an offence to:

- Intentionally (or recklessly in Scotland) kill, injure or take any wild bird
- Intentionally (or recklessly in Scotland) take, damage or destroy (or, in Scotland, otherwise interfere with) the nest of any wild bird while it is in use or being built
- Intentionally take or destroy an egg of any wild bird
- 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.
- Intentionally or recklessly obstruct or prevent any wild bird from using its nest (Scotland only)

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC) and are commonly referred to as "Schedule 1" birds.

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
- In Scotland only, intentional or reckless disturbance whilst lekking
- In Scotland only, intentional or reckless harassment

Effects on development works:

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 in particular is to undertake work outside the main bird nesting season which typically runs from March to August. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Schedule 1 birds are additionally 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.

Herpetofauna (Amphibians and reptiles)

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita*, pool frog *Pelophylax lessonae* and great crested newt *Triturus cristatus* receive full protection under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

With the exception of the pool frog, these species are also listed on Schedule 5 of the WCA and they are additionally protected from:

- Intentional or reckless disturbance (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.

Other native species of herpetofauna are protected solely under Schedule 5, Section 9(1) & (5) of the WCA, i.e. the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*. It is prohibited to:

- Intentionally or recklessly kill or injure these species.

Effects on development works:

A European Protected Species Mitigation (EPSM) Licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect the breeding sites or resting places amphibian and reptile species protected under Habitats Regulations. 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 allow derogation 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 WCA.

Bats

All species are fully protected by Habitats Regulations 2010 as they are listed on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. All bats)
- Deliberate disturbance of bat species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Bats are afforded the following additional protection through the WCA as they are included on Schedule 5:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
-

Effects on development works:

Works which are liable to affect a bat roost or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSM licence. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Dormice

Dormice *Muscardinus avellanarius* are fully protected under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Dormice are also protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

Works which are liable to affect a dormice habitat or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSM licence. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Legislation afforded to Plants

With certain exceptions, all wild plants are protected under the WCA. This makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) 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, for example some species of orchid, are also fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits any person from:

- Intentionally (or recklessly in Scotland) picking, uprooting or destruction of any wild Schedule 8 species (or seed or spore attached to any such wild plant in Scotland only)
- 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 UK legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2010. 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
 - 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.

Effects on development works:

An EPSM licence will be required from the relevant countryside agency for works which are liable to affect species of plants listed on Schedule 5 of the Conservation of Habitats and Species Regulations 2010. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Invasive Species

Part II of Schedule 9 of the WCA lists non-native invasive plant species for which it is a criminal offence in England and Wales to plant or cause to grow in the wild due to their impact on native wildlife. Species included (but not limited to):

- Japanese knotweed *Fallopia japonica*
- Giant hogweed *Heracleum mantegazzianum*
- Himalayan balsam *Impatiens glandulifera*

Effects on development works:

It is not an offence for plants listed in Part II of Schedule 9 of the WCA 1981 to be present on the development site however it is an offence to cause them to spread. Therefore, if any of the species are present on site and construction activities may result in further spread (e.g. earthworks, vehicle movements) then it will be necessary to design and implement appropriate mitigation prior to construction commencing.

Injurious weeds

Under the Weeds Act 1959 any land owner or occupier may be required prevent the spread of certain 'injurious weeds' including (but not limited to):

- Spear thistle *Cirsium vulgare*
- Creeping thistle *Cirsium arvense*
- Curled dock *Rumex crispus*
- Broad-leaved dock *Rumex obtusifolius*
- Common ragwort *Senecio jacobaea*

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 practice as common ragwort is poisonous to horses and other livestock. This code provides best practice guidelines and is not legally binding.

NATIONAL PLANNING POLICY (ENGLAND)

National Planning Policy Framework

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as UK Biodiversity Action Plan priority species) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and 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, 2006, 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 Planning Policy

Reading Borough Local Plan 2019

The Reading Borough Local Plan 2019 provides the statutory planning framework for development within the borough, including policies aimed at protecting, enhancing and integrating biodiversity within new development. A number of policies relating to ecology and nature conservation are relevant to the proposals and are summarised below:

EN12: BIODIVERSITY AND THE GREEN NETWORK

a) The identified Green Network, the key elements of which are shown on the Proposals Map, shall be maintained, protected, consolidated, extended and enhanced. Permission will not be granted for development that negatively affects the sites with identified interest or fragments the overall network. The Green Network comprises:

- Sites with identified biodiversity interest – Local Wildlife Sites, Local Nature Reserves, Biodiversity Opportunity Areas, protected and priority species and their habitats, Priority and Biodiversity Action Plan habitats, and the River Thames and all its tributaries (including the River Kennet and the Kennet & Avon Canal); and*
- Areas with potential for biodiversity value and which stitch the Green Network together – designated Local Green Space and open green spaces, and existing and potential Green Links.*

New development shall demonstrate how the location and type of green space, landscaping and water features provided within a scheme have been arranged such that they maintain or link into the existing Green Network and contribute to its consolidation. Such features should be designed to maximise the opportunities for enhancing this network. All new development should maximise opportunities to create new assets and links into areas where opportunities are as yet unidentified on the Proposals Map.

b) On all sites, development should not result in a net loss of biodiversity and geodiversity, and should provide a net gain for biodiversity wherever possible.

Development should:

- Protect and wherever possible enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable; and*
- Provide new tree planting, wildlife friendly landscaping and ecological enhancements (such as wildlife ponds, bird and bat boxes) wherever practicable.*

In exceptional circumstances where the need for development clearly outweighs the need to protect the value of the site, and it is demonstrated that the impacts cannot be: 1) avoided; 2) mitigated or; 3) compensated for on-site; then new development will provide off-site compensation to ensure that there is “no net loss” of biodiversity. Provision of off-site compensation shall be calculated in accordance with nationally or locally recognised guidance and metrics. It should not replace existing alternative habitats and should be provided prior to development.

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by Natural England will be required for works likely 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 allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficiency/success to be monitored. The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* 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 roost (Garland & Markham, 2008).

There are 17 species of bat breeding in England and Natural England issues licences under Regulation 55 of the Habitats Regulations to allow you to work within the law.

Licences are issued for specific purposes stated in the Regulations, if the following three tests are met:

- The purpose of the work meets one of those listed in the Habitats Regulations (see below);
- That there is no satisfactory alternative;
- That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range

The Habitats Regulations permits licences to be issued for a specific set of purposes including:

1. *include preserving public health or public safety or other imperative reasons of over-riding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;*

2. scientific and educational purposes,

3. ringing or marking

4. conserving wild animals

Development works fall under the first purpose and Natural England issues bat mitigation licences for developments.

EUROPEAN PROTECTED SPECIES POLICIES

In December 2016 Natural England officially introduced the four licensing policies throughout England. The four policies seek to achieve better outcomes for European Protected Species (EPS) and reduce unnecessary costs, delays and uncertainty that can be inherent in the current standard EPS licensing system. The policies are summarised as follows:

- Policy 1; provides greater flexibility in exclusion and relocation activities, where there is investment in habitat provision;
- Policy 2; provides greater flexibility in the location of compensatory habitat;
- Policy 3; provides greater flexibility on exclusion measures where this will allow EPS to use temporary habitat; and,
- Policy 4; provides a reduced survey effort in circumstances where the impacts of development can be confidently predicted.

The four policies have been designed to have a net benefit for EPS by improving populations overall and not just protecting individuals within development sites. Most notably Natural England now recognises that the Habitats Regulations legal framework now applies to 'local populations' of EPS and not individuals/site populations.

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Draft	0.1	Summer Dawson BSc (Hons), Graduate Ecologist	16/12/2025
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