



URBAN EDGE  
ENVIRONMENTAL  
CONSULTING

NATURAL PROGRESSION

**Jasmine Lodge, Ilex Close,  
Rye, East Sussex**

**Ecological Impact Assessment**

**March 2023**

# Jasmine Lodge, Ilex Close, Rye, East Sussex

## Ecological Impact Assessment

<b>Client:</b>	East Sussex County Council	
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# Abbreviations

BoCC	Birds of Conservation Concern
CEMP	Construction Environmental Management Plan
CRoW	Countryside and Rights of Way Act 2000
DRV	Designated Road Verge
EcIA	Ecological Impact Assessment
EPS	European Protected Species
GCN	Great crested newt
HPI	Habitats of Principal Importance
HRA	Habitats Regulations Assessment
IEF	Important Ecological Features
LEMP	Landscape and Ecological Management Plan
LGS	Local Geological Site
LWS	Local Wildlife Site
MAGIC	Multi-agency Geographic Information for the Countryside
NERC	Natural Environment and Rural Communities Act 2006
NPPF	National Planning Policy Framework
ODPM	Office of the Deputy Prime Minister
PBA	Protection of Badgers Act 1992
PEA	Preliminary Ecological Appraisal
PPG	Planning Practice Guidance
SAC	Special Area of Conservation
SPA	Special Protection Area
SPI	Species of Principal Importance
SSSI	Site Special Scientific Interest
SxBRC	Sussex Biodiversity Record Centre
WCA	Wildlife and Countryside Act 1981
Zol	Ecological Zone of Influence

## 0 Executive Summary

- 0.1.1 An Ecological Impact Assessment (EcIA) was prepared for the site of a proposed building extension at Jasmine Lodge, Ilex Close, Rye, East Sussex (Grid Reference: TQ 83219 25795).
- 0.1.2 The EcIA process was undertaken with reference to relevant parts of the *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018), and in the context of national planning policy and guidance, local planning policy, UK wildlife and animal welfare legislation.
- 0.1.3 Baseline information was obtained from an ecological survey of the Application Site by professional ecologists during 2022, including an ecology desk study and Preliminary Ecological Appraisal (based on an extended Phase 1 habitat survey). Evaluation of the baseline survey work identified the following Important Ecological Features relevant to the development: Roosting bats (buildings and trees).
- 0.1.4 Due to the anticipated timeframe for the planning application to be determined, and notwithstanding the requirements of paragraph 99 of Office of the Deputy Prime Minister Circular 06/2005 (see section 2.2.11), this EcIA has been carried out in advance of presence/absence surveys for roosting bats. In the absence of survey data, the report assumes a reasonable worst case scenario in relation to the presence of roosting bats in building B1 and tree T1. The survey season starts in May; once results are available the EcIA will be amended.
- 0.1.5 Following assessment of the Proposed Development's impacts during its construction and operation phases, additional mitigation is proposed, including:
- ▶ A Natural England European Protected Species Mitigation Licence will need to be obtained after planning permission is granted and before development commences. The following bullets provide an indicative outline of what is likely to be necessary:
    - Appointment of a licenced Ecological Clerk of Works (ECoW) to oversee mitigation and construction/felling works;
    - Timing the works to building B1 and tree T1 to take place during March/April and/or October/November, i.e. during the period in which bats are least likely to be present;
    - Creation of temporary replacement habitats to provide a safe refuge for any bats which are found and moved during the works;
    - A pre-commencement return-to-roost survey;
    - Provision of information and toolbox talks to guide site operatives;
    - Soft demolition measures during works to the roof of B1, and soft felling measures during works to T1, to ensure any bats found can be captured and safely relocated into the pre-installed bat boxes;

- Specified procedures should bats be encountered during the works;
  - Adjustments to be made to account for nesting birds, if necessary;
  - Commencement of subsequent stages of extension works to B1 and felling of T1 once the soft demolition/felling is complete and B1/T1 are declared bat free;
  - Compensation of habitats lost as a result of development.
- ▶ The use of external lighting will be avoided or reduced to the minimum required for its intended purpose. Where external lighting is to be provided, it should be low-level, directional lighting with minimal spill and glare. Lighting will not be directed towards the replacement roosts in buildings or trees. The measures relating to sensitive lighting can be secured via an appropriately worded planning condition.

0.1.6 Table 0.1 outlines the residual effects following the implementation of additional mitigation measures not already embedded in the design of the Proposed Development and identifies whether these are significant in relation to national and local planning policy. No residual effects that are significant in terms of national and local planning policy are anticipated to occur as a result of the Proposed Development.

0.1.7 Recommendations R3 to R16 as listed in the 2023 PEA continue to apply and should be implemented as part of the scheme.

**Table 0.1: Residual effects**

Feature	Significant residual effects	
	Construction phase	Operation
-		
Roosting bats	Minor negative effect at the Local level (uncertain)	Negligible negative effect at the Local level (uncertain)

# 1 Introduction

## 1.1 Purpose of this Report

- 1.1.1 Urban Edge Environmental Consulting was commissioned by the applicant, East Sussex County Council, to produce an Ecological Impact Assessment (EcIA) Report for the site of a proposed building extension at Jasmine Lodge, Ilex Close, Rye, East Sussex (Grid Reference: TQ 83219 25795). Nicholas Pincombe BA(Hons) MSc CEnv MIEMA MCIEEM is the principal author of this report.
- 1.1.2 This standalone report was commissioned in order to provide a single document containing the ecological baseline and assessment information for the Proposed Development. It identifies features of ecological importance (including legally protected sites and species), specifies mitigation requirements for the Proposed Development, and supports the implementation of national biodiversity strategies and national planning policies for the preservation of biodiversity whilst enabling sustainable development.

## 1.2 Objectives of this Report

- 1.2.1 The objectives of the Ecological Impact Assessment are:
- ▶ To identify and describe all likely significant ecological effects associated with the Proposed Development;
  - ▶ To set out the mitigation measures required to ensure compliance with nature conservation legislation and to address any significant effects;
  - ▶ To identify how mitigation measures will be secured;
  - ▶ To provide an assessment of the significance of any residual effects;
  - ▶ To set out the requirements for post-construction monitoring of likely effects identified;
  - ▶ To identify appropriate enhancement measures.

## 1.3 Site Description

- 1.3.1 The Application Site lies at the north-eastern edge of the village of Northiam in the Rother district of East Sussex. It comprises c.0.27ha of previously developed land, currently dominated by a bungalow that forms a residential care home, amenity grassland, with boundary hedgerows, scattered trees, and a small patch of woodland.
- 1.3.2 The Application Site is bounded to the north, east, south, and west by further residential development with access gained via Ilex close at the north-western corner. The Application Site boundary is outlined in red on Figure 1.1.

- 1.3.3 The wider landscape is characterised by residential development associated with the village of Northiam. Beyond the village lies extensive open countryside comprised of a patchwork of arable land and pasture with a network of hedgerows and drainage ditches with small woodland blocks. A total of 35 ponds lie within 500m of the survey area.

#### **1.4 Proposed Development**

- 1.4.1 Planning consent is being sought for a small, single-storey extension to the eastern aspect of the existing building to provide 2 additional accessible ensuite bedrooms. Proposals are likely to include landscaping to the garden area. Figure 1.2 illustrates the proposed site layout.

#### **1.5 Assessment Status**

- 1.5.1 Due to the anticipated timeframe for the planning application to be determined, and notwithstanding the requirements of paragraph 99 of Office of the Deputy Prime Minister (ODPM) Circular 06/2005 (see section 2.2.11), this EclA has been carried out in advance of presence/absence surveys for roosting bats. In the absence of survey data, the report assumes a reasonable worst case scenario in relation to the presence of roosting bats. The survey season starts in May; once results are available the EclA will be amended.





Figure 1.2: Proposed site plan

## 2 Planning Policy and Legislation

### 2.1 Introduction

2.1.1 This section briefly summaries planning policy, legislation and related issues which are relevant to the Proposed Development. The following text does not constitute legal or planning advice.

### 2.2 National Planning Policy

#### **National Planning Policy Framework**

2.2.1 The National Planning Policy Framework (NPPF; MHCLG, 2021) outlines the Government's commitment to the conservation of wildlife and natural features. Section 15 aims to conserve and enhance the natural environment by avoiding, adequately mitigating or compensating for significant harm to biodiversity, and delivering net gains for biodiversity. The planning system is required to (Paragraph 174):

- ▶ *“Protect and enhance valued landscapes, sites of biodiversity or geological conservation value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- ▶ *“Recognise the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- ▶ *Maintain the character of the undeveloped coast, while improving public access to it where appropriate;*
- ▶ *“Minimise impacts on and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current & future pressures;*
- ▶ *“Prevent new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
- ▶ *“Remediate and mitigate despoiled, degraded, derelict, contaminated and unstable land, where appropriate.”*

2.2.2 The NPPF requires that local plans should: “distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value...; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries” (Paragraph 175). To protect and enhance biodiversity and geodiversity, the NPPF states that planning policies should (Paragraph 179):

- ▶ *“Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*
- ▶ *“Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”*

2.2.3 When determining planning applications, local planning authorities should aim to protect and enhance biodiversity by applying the following principles (Paragraph 180):

- ▶ *“If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- ▶ *“Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- ▶ *“Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees ) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- ▶ *“Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.”*

2.2.4 At Paragraph 181 it is stated that: “the following wildlife sites should be given the same protection as habitats sites:

- ▶ *“Potential Special Protection Areas and possible Special Areas of Conservation;*
- ▶ *“Listed or proposed Ramsar sites; and*
- ▶ *“Sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.”*

2.2.5 At Paragraph 182 it is stated that: “the presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site” [commonly referred to as Habitats Regulations Assessment].

2.2.6 In Paragraph 185 the NPPF states that “planning policies and decisions should ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In so doing they should... limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation”. This applies to protected species that are a material consideration in the planning process including bats and may also apply to other light sensitive species.

2.2.7 The policies within the NPPF (and accompanying guidance) are a material planning consideration.

### **Planning Policy Guidance**

2.2.8 The online Planning Practice Guidance<sup>1</sup> (PPG) accompanies the NPPF and provides detailed guidance on plan making and the determination of planning applications. Its section on the natural environment<sup>2</sup> addresses: agricultural land, soils and brownfield land of environmental value; green infrastructure; biodiversity, geodiversity and ecosystems; and landscape. In relation to biodiversity, it presents details on minimising impacts, delivering net gains, plan making, decision taking, protected sites/species, and irreplaceable habitats including ancient woodland.

2.2.9 The ODPM Circular 06/2005 provides further detailed guidance on the application of the law relating to planning and nature conservation in England. It complements the expression of national planning policy in the NPPF and PPG. The Circular includes guidance on internationally and nationally designated sites, habitats and species outside of designated sites, and protected species. The PPG and Circular 06/2005 are a material planning consideration.

2.2.10 Paragraph 98 of Circular 06/2005 advises that the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should hence “consult Natural England before granting planning permission. They should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They should also advise developers that they must comply with any statutory species’ protection provisions affecting the site concerned...”

2.2.11 Paragraph 99 of Circular 06/2005<sup>2</sup> advises that “it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the Proposed Development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted.”

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<sup>1</sup> Ministry of Housing, Communities and Local Government (2016): *Planning Practice Guidance*. Accessed online [01/03/2023] at: <https://www.gov.uk/government/collections/planning-practice-guidance>

<sup>2</sup> Ministry of Housing, Communities and Local Government (2016): *Planning Practice Guidance: Natural environment*. Accessed online [01/03/2023] at: <https://www.gov.uk/guidance/natural-environment>

2.2.12 In addition, Natural England offers ‘Standing Advice’<sup>3</sup> on protected sites and species which contains information on potentially significant impacts, and provides advice to planners on deciding if there is a reasonable likelihood of protected species being present. It also addresses recommended survey effort, timing and methods with regard to protected species, together with appropriate mitigation measures, in relation to planning applications. The Standing Advice is a material consideration planning decisions. The Chartered Institute of Ecology and Environmental Management (CIEEM) also provide guidance on survey standards and impact assessment techniques (e.g. CIEEM, 2018).

## 2.3 Local Planning Policy

### **Adopted Local Plan**

2.3.1 The Rother Local Plan Core Strategy (2014) guides development and use of land within the district. Policies of relevance to ecology are described below:

#### **Policy EN5: Biodiversity and Green Space**

*Biodiversity, geodiversity and green space will be protected and enhanced, by multi-agency working where appropriate, to:*

- i. *Maintain and develop a district-wide network of green infrastructure where possible linking areas of natural green space;*
- ii. *Protect and enhance the international, national and locally designated sites, having due regard to their status;*
- iii. *Establish a major area of accessible open space at Combe Valley Countryside Park, between Bexhill and Hastings;*
- iv. *Enhance the nature conservation value and multi-functional nature of the Romney Marsh Biodiversity Opportunity Area;*
- v. *Support opportunities for management, restoration and creation of habitats in line with the opportunities identified for the Biodiversity Opportunity Areas (BOAs) and targets set out in the Sussex Biodiversity Action Plan;*
- vi. *Continue to develop the wetland habitat at Bewl Water Reservoir, with compatible recreational uses;*
- vii. *Increase accessibility to the countryside from urban areas, especially in the Hastings and Bexhill fringes;*
- viii. *Ensure that development retains, protects and enhances habitats of ecological interest, including ancient woodland, water features and hedgerows, and provides for appropriate management of these features;*
- ix. *Require developers to integrate biodiversity into development schemes by avoiding adverse impacts from development on biodiversity or habitat, or where wholly*

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<sup>3</sup> Natural England (2016): *Planning and Development: Protected Sites and Species*. Accessed online [01/03/2023] at: <https://www.gov.uk/topic/planning-development/protected-sites-species>

*unavoidable, provide appropriate mitigation against or compensation for any losses. In any event, developers will also be expected to consider and promote opportunities for the creation and/or restoration of habitats appropriate to local context.*

- 2.3.2 The Rother Local Plan Core Strategy (2014) guides development and use of land within the district. Policies of relevance to ecology are described below:

**Policy DEN4: Biodiversity and Green Space**

*Development proposals should support the conservation of biodiversity and multi-functional green spaces in accordance with Core Strategy Policy EN5 and the following criteria, as applicable:*

- (i) *proposals where the principal objective is to conserve or enhance biodiversity or geodiversity will be supported in principle;*
- (ii) *development proposals should seek to conserve and enhance:*
  - a. *The biodiversity value of international, national, regional and local designated sites of biodiversity and geological value, and irreplaceable habitats (including ancient woodland and ancient or veteran trees);*
  - b. *Priority Habitats and Species; and Protected Species, both within and outside designated sites.*

*Depending on the status of habitats and species concerned, this may require locating development on alternative sites that would cause less or no harm, incorporating measures for prevention, mitigation and (in the last resort) compensation.*

- (iii) *in addition to (ii) above, all developments should retain and enhance biodiversity in a manner appropriate to the local context, having particular regard to locally present Priority Habitats and Species, defined 'Biodiversity Opportunity Areas', ecological networks, and further opportunities identified in the Council's Green Infrastructure Study Addendum.*
- (iv) *larger developments of more than 2 hectares or 50 dwellings (whichever is the smaller) should produce a Green Infrastructure masterplan as part of their proposals.*
- (v) *all developments within the strategy area of the Dungeness Complex Sustainable Access and Recreation Management Strategy should have regard to the measures identified in that Strategy.*

**Sussex Biodiversity Action Plan**

- 2.3.3 The Sussex Biodiversity Action Plan<sup>4</sup> sets out guidance to protect and enhance the county's designated sites, ancient woodland, Biodiversity Opportunity Areas, and other green infrastructure. It identifies the following priority habitats and species:

- ▶ Arable field margins
- ▶ Hedgerows

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<sup>4</sup> Sussex Wildlife Trust (undated): *Biodiversity and Planning in Sussex*. Accessed online [01/03/2023] at: <https://dnu7gk7p9afoo.cloudfront.net/Files/swt-planning-guidance-2014.pdf>

- ▶ Lowland calcareous grassland
- ▶ Lowland dry acid grassland
- ▶ Lowland heathland
- ▶ Lowland meadows
- ▶ Purple moor grass and rush pastures
- ▶ Traditional orchards
- ▶ Coastal sand dunes
- ▶ Coastal vegetated shingle
- ▶ Coastal saltmarsh
- ▶ Intertidal mudflats
- ▶ Maritime cliff and slope
- ▶ Farmland birds (including skylark *Alauda arvensis*, linnet *Linaria cannabina*, yellowhammer *Emberiza citrinella*, reed-bunting *E. schoeniclus*, curlew *Numenius arquata*, tree sparrow *Passer montanus*, grey partridge *Perdix perdix*, bullfinch *Pyrrhula pyrrhula*, starling *Sturnus vulgaris*, song thrush *Turdus philomelos* and turtle dove *Streptopelia turtur*).
- ▶ Saline lagoons
- ▶ Wood-pasture and parkland
- ▶ Lowland mixed deciduous woodland
- ▶ Coastal and floodplain grazing marsh
- ▶ Eutrophic standing waters
- ▶ Lowland fens
- ▶ Ponds
- ▶ Reed beds
- ▶ Brown hairstreak *Thecula betulae*

### **Local Wildlife Sites**

- 2.3.4 Local Wildlife Sites (LWS) are areas of land with wildlife value of significance at the district or county scale. LWS support both locally and nationally threatened wildlife, and many sites contain Habitats or Species of Principal Importance (HPI/SPI) listed under section 41 of the Natural Environment and Rural Communities Act 2006 in England. LWS are protected within the local planning system and are a material consideration in the determination of planning applications. A similar system of Local Geological Sites (LGS) operates in relation to features of district/county geological significance.

## **2.4 Legislation**

### **General**

- 2.4.1 The main legislative instruments for ecological protection in England and Wales are the Wildlife and Countryside Act 1981 (WCA; as amended), Countryside and Rights of Way Act 2000 (CRoW; as amended), Natural Environment and Rural Communities Act 2006 (NERC), the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations; as amended) and the Environment Act 2021.
- 2.4.2 WCA 1981 consolidated and amended pre-existing national wildlife legislation in order to implement the Bern Convention and the European Union Wild Birds Directive (Council Directive 2009/147/EC). It complements the Habitats Regulations, offering protection to a wider range of species than the latter. The Act also provided for the designation and protection of nationally important conservation sites of value for their floral, faunal or geological features, termed Sites

- of Special Scientific Interest (SSSI). Schedules of the act list protected species of flora and fauna, as well as invasive species, and detail the possible offences that apply to these species.
- 2.4.3 The CROW Act 2000 amended and strengthened existing wildlife legislation detailed in the WCA. It placed a duty on government departments & the National Assembly for Wales to have regard for biodiversity, provided increased powers for the protection and maintenance of SSSI, and created a right of access to parts of the countryside. The Act contained lists of habitats and species (Section 74) for which conservation measures should be promoted, in accordance with the recommendations of the Convention on Biological Diversity (Rio Earth Summit) 1992.
- 2.4.4 The NERC Act 2006 consolidated and replaced aspects of earlier legislation. Section 40 of the Act places a duty upon all local authorities and public bodies in England and Wales to have regard to the purpose of conserving biodiversity in exercising all of their functions, including by restoring or enhancing habitats and species populations. Sections 41 (England) and 42 (Wales) list Habitats and Species of Principal Importance to the conservation of biodiversity (otherwise known as priority habitats/species as listed in the now superseded UK Biodiversity Action Plan). These lists supersede Section 74 of the CROW Act 2000. These species and habitats are a material consideration in the planning process.
- 2.4.5 The Habitats Regulations 2017 are the principal means by which the European Union Habitats Directive (Council Directive 92/43/EEC) was transposed into English and Welsh law, and place a duty upon the relevant authority of government to identify sites which are of importance to the habitats and species listed in Annexes I and II of the Habitats Directive. Those sites which meet the criteria in Europe are designated as Sites of Community Importance by the European Commission, and subsequently identified as Special Areas of Conservation (SAC) by the European Union member states. Since the UK's departure from the European Union the European Commission no longer has a role in designating SAC in the UK. The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 establish a single stage designation process, where the appropriate authority is the decision maker. The selection and designation of SAC is based on the criteria set out in Annex III of the Habitats Directive insofar as it applies to the UK, and having regard to the advice of the appropriate nature conservation body.
- 2.4.6 The 2019 Amendment Regulations have created a new national site network on land and at sea, including both the inshore and offshore marine areas in the UK. The national site network includes existing SAC, existing Special Protection Areas (SPA) originally designated as a result of Council Directive 2009/147/EC on the Conservation of Wild Birds, and any new SAC and SPA designated under the 2019 Regulations. SAC and SPA in the UK therefore no longer form part of the EU's Natura 2000 ecological network.
- 2.4.7 The Habitats Regulations also provide for the protection of individual species of fauna and flora of European conservation concern listed in Schedules 2 and 5 respectively (European Protected Species (EPS)). Schedule 2 includes species such as otter and great crested newt (GCN) *Triturus cristatus* for which the UK population represents a significant proportion of the total European population. It is an offence to deliberately kill, injure, disturb or trade in these species. Schedule 5 plant species are protected from unlawful destruction, uprooting or trade under the regulations. Under the Habitats Regulations disturbance includes any activity which is likely to: impair the

ability of a EPS to survive, breed, reproduce, or rear/nurture its young; impair the ability of a EPS to migrate or hibernate; or significantly affect the local distribution or abundance of the species.

- 2.4.8 The Environment Act 2021 establishes an Office for Environmental Protection; mandates all new development requiring planning permission to achieve at least 10% net gain for biodiversity; amends the NERC Act duty to conserve biodiversity by explicitly adding a duty to enhance; and requires local authorities to produce local nature recovery strategies.

### **Amphibians**

#### **Great crested newt**

- 2.4.9 GCN is fully protected by the WCA and the Habitats Regulations and is a SPI. The legislation makes it an offence, *inter alia*, to:
- ▶ Intentionally kill, injure or take a GCN (including its eggs).
  - ▶ Possess or control a live or dead GCN, any part of, or anything derived from a GCN.
  - ▶ Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a GCN uses for shelter or protection.
  - ▶ Intentionally or recklessly disturb a GCN while it is occupying a structure or place that it uses for shelter or protection.
- 2.4.10 Other native amphibians also receive varying degrees of legal protection. Natterjack toad *Epidalea calamita* and pool frog *Pelophylax lessonae* are Habitats Regulations schedule 2 species, partially protected under the WCA and are SPI. Common toad *Bufo bufo* is partially protected under the WCA and a SPI. Smooth and palmate newt *Lissotriton vulgaris* and *L. helveticus* are partially protected under the WCA.

### **Birds**

- 2.4.11 All wild birds are protected by the WCA and 49 are SPI. The legislation makes it an offence to intentionally kill, injure or take away any wild bird. It is also an offence to take, damage or destroy the nest of any wild bird while it is in use or being built or to take or destroy the egg of any wild bird. In addition, certain species are listed on Schedule 1 of the WCA (such as kingfisher *Alcedo atthis*). This makes it an additional offence to intentionally or recklessly disturb the adults while they are in and around their nest or intentionally or recklessly disturb their dependent young. Such species are considered to be in greater need of legal protection or of high nature conservation priority.
- 2.4.12 Birds of Conservation Concern ("BoCC4) are included on Red and Amber lists (Eaton et al., 2015). Birds on the Red list are those of highest conservation priority due significant and sustained population decreases and/or range contractions (e.g. house sparrow *Passer domesticus* and starling *Sturnus vulgaris*). Birds on the Amber list are the next most critical group and include species whose population/range have shown moderate declines, or which have recovered to some extent from historical decline, such as dunnock *Prunella modularis*.

### **Invertebrates**

- 2.4.13 Three invertebrate species in the UK are European Protected Species (large blue butterfly *Maculinea arion*, Fisher's estuarine moth *Gortyna borelii* and little ramshorn whirlpool snail *Anisus vorticulus*) and are afforded the same level of protection as bats, GCN, dormouse and otter. In addition around 400 further species are variously protected under the WCA and SPI.

### **Mammals**

#### **Badger**

- 2.4.14 Badgers are listed under Schedule 6 of the WCA which grants them partial protection. This protection is extended by the Protection of Badgers Act 1992 (PBA) which makes it an offence to take, injure or kill a badger, interfere with a sett, sell or possess a live badger, or mark or ring a badger without a licence. Under the Act disturbance is illegal without a licence. Natural England has published guidelines to be adopted when determining whether an activity is 'disturbing' i.e. a licence is required when, for example, using heavy machinery (generally tracked vehicles) within 30m of any entrance to an active sett. Licences are not normally issued during the badger breeding season (December – June inclusive).

#### **Bats**

- 2.4.15 Bats and their roosts are fully protected by protected by the WCA and the Habitats Regulations, and seven species of bats are SPI. The legislation makes it an offence, *inter alia*, to:
- ▶ Intentionally kill, injure or take a bat.
  - ▶ Possess or control a live or dead bat, any part of a bat, or anything derived from a bat.
  - ▶ Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a bat uses for shelter or protection. This is taken to mean all bat roosts whether bats are present or not.
  - ▶ Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection.
  - ▶ Make a false statement in order to obtain a licence for bat work.

#### **Hazel dormouse *Muscardinus avellanarius***

- 2.4.16 Hazel dormouse is fully protected by the WCA and the Habitats Regulations and is a SPI. The legislation makes it an offence, *inter alia*:
- ▶ Intentionally kill, injure or take a hazel dormouse.
  - ▶ Possess or control a live or dead hazel dormouse, any part of, or anything derived from a hazel dormouse.
  - ▶ Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a hazel dormouse uses for shelter or protection.
  - ▶ Intentionally or recklessly disturb a hazel dormouse while it is occupying a structure or place that it uses for shelter or protection.

### **Otter**

- 2.4.17 Otter is fully protected by the WCA and the Habitats Regulations and is a SPI. The legislation makes it an offence, *inter alia*:
- ▶ Intentionally kill, injure or take an otter.
  - ▶ Possess or control a live or dead otter, any part of, or anything derived from an otter.
  - ▶ Intentionally or recklessly damage, destroy or obstruct access to any structure or place that an otter uses for shelter or protection.
  - ▶ Intentionally or recklessly disturb an otter while it is occupying a structure or place that it uses for shelter or protection.

### **Water vole**

- 2.4.18 Water vole is fully protected by the WCA and is a SPI. The legislation makes it an offence, *inter alia*, to:
- ▶ Intentionally kill, injure or take a water vole.
  - ▶ Possess or control a live or dead water vole, any part of, or anything derived from a water vole.
  - ▶ Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a water vole uses for shelter or protection.
  - ▶ Intentionally or recklessly disturb a water vole while it is occupying a structure or place that it uses for shelter or protection.

- 2.4.19 Various other mammals are also SPI, including hedgehog *Erinaceus europaeus*, brown hare *Lepus europaeus* and harvest mouse *Micromys minutus*.

### **Reptiles**

- 2.4.20 The four common species (slow worm *Anguis fragilis*, common lizard *Zootoca vivipara*, adder *Vipera berus* and grass snake *Natrix helvetica*) are partially protected under the WCA and are SPI. They are protected, *inter alia*, against intentional killing and injuring. The handling and translocation of these reptiles does not require a licence.

- 2.4.21 Smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis* are fully protected by the WCA and the Habitats Regulations and are SPI. The legislation affords them the same level of protection as bats, GCN, hazel dormouse and otter.

### **Wild mammals**

- 2.4.22 The Wild Mammals (Protection) Act 1996 (as amended) makes provision for the protection of wild mammals from certain cruel acts, making it an offence for any person to intentionally cause suffering to any wild mammal. In the context of development sites, for example, this may apply to rabbit *Oryctolagus cuniculus* burrows and fox *Vulpes vulpes* dens.

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### ***Native flora***

- 2.4.23 There are nine Habitats Regulations schedule 5 (EPS) plant species native to the UK, while many others are protected under schedule 8 of the WCA. Many more are SPI.

### ***Invasive non-native species***

- 2.4.24 Under the WCA it is an offence to release, or to allow to escape into the wild, any animal which is not ordinarily resident in and is not a regular visitor to Great Britain in a wild state or is listed under Schedule 9 of the Act. Strictly speaking, this makes it an offence to return to the wild any animal listed on Schedule 9, even if inadvertently captured. It is also an offence to plant or otherwise cause to grow in the wild invasive non-native plants listed on Schedule 9. This effectively means that it is an offence to cause the spread of such plants as a result of development operations.

### ***Hedgerows***

- 2.4.25 The Hedgerow Regulations 1997 protect important hedgerows in the countryside by controlling their removal through a system of notification, and by defining criteria under which a hedgerow is classified as "important". The criteria relate to the value of hedgerows from an archaeological, historical, wildlife and landscape perspective.

## 3 Methodology

### 3.1 Consultation

- 3.1.1 Pre-application advice was sought from East Sussex County Council which identified the need for EclA based on the potential for on site habitats to support species, including GCN, breeding birds, bats and reptiles.

### 3.2 Assessment Methodology

- 3.2.1 The EclA has been prepared with reference to the Chartered Institute of Ecology and Environmental Management's (CIEEM; 2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*.

### 3.3 Scope of the Assessment

#### **Ecological Zone of Influence**

- 3.3.1 The ecological zone of influence (Zol) was initially defined as the Site, as described at section 1.3. The Zol has subsequently been refined through a review of the ecological baseline information in the context of the Proposed Development. The Zol is defined as follows:
- ▶ For the majority of ecological features the Zol coincides with the Site, including adjacent land up to 30m from the Site; features within this zone are likely to be directly affected by biophysical changes resulting from construction and operation activities.
  - ▶ Features on adjacent land may be affected by noise, dust, artificial light, hydrological changes or human activity during construction and operation.

#### **Temporal scope**

- 3.3.2 It is expected that site preparation works will commence in February 2024 and construction will be complete by October 2024. The new accommodation will be occupied by October 2024. Impacts on ecological features are assessed in the context of how the baseline conditions within the ecological zone of influence may be liable to change between the survey dates and the timings of construction.

### 3.4 Desk Study

- 3.4.1 A desk-based study was undertaken in 2022<sup>5</sup> to examine published information from within the search area. The following desk study search radii were established:

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<sup>5</sup> Urban Edge Environmental Consulting (2022): *Jasmine Lodge, Ilex Close, Rye, East Sussex: Preliminary Ecological Appraisal Report*.

- ▶ Statutory nature conservation sites of international importance within a 5km radius of the Site; and
  - ▶ Statutory sites of national importance within a 2km radius.
- 3.4.2 The desk-based study was updated in 2023<sup>6</sup> to examine biological records and non-statutory sites from within the following search areas:
- ▶ Species records for bats within a 2km radius; and
  - ▶ Non-statutory sites and other protected/notable species records within a 1km radius.
- 3.4.3 The scope of the desk study reflects the sensitivity and value of potential ecological receptors and enables the requirements of mobile species to be considered (e.g. for breeding, foraging, roosting, shelter, migration and dispersal), while providing contextual information to assist with determining and evaluating the baseline. Ecological features to be considered include designated sites of nature conservation interest, habitats and SPI, protected species and legally controlled species.
- 3.4.4 The information was collected from the following sources:
- ▶ The 'MAGIC' (Multi-agency Geographic Information for the Countryside) website: [www.magic.gov.uk](http://www.magic.gov.uk); and
  - ▶ Sussex Biodiversity Record Centre (SxBRC)

### 3.5 Field Surveys

- 3.5.1 A baseline ecological survey was undertaken to inform and influence the design and layout of development, and form the basis of the EcIA. In summary, the following was undertaken:
- ▶ Preliminary Ecological Appraisal<sup>7</sup> of the Application Site (reported separately).
- 3.5.2 Refer to the survey report for the detailed methods, weather conditions, personnel, limitations and results of each baseline survey.
- 3.5.3 Baseline ecological surveys undertaken to inform the assessment covered the Zol defined above i.e. Application Site (as described at section 1.3), including adjacent land up to 30m from the Site. The survey area took into account the likely extent of development activities and such adjacent land as might foreseeably be affected, directly or indirectly, to provide contextual information and further inform the assessment.

### 3.6 Limitations

- 3.6.1 The following limitations have been factored into the assessment process. All surveys were undertaken in the appropriate season by suitably qualified and licensed surveyors with reference to industry guidance and during suitable weather conditions.

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<sup>6</sup> Urban Edge Environmental Consulting (2023): *Jasmine Lodge, Ilex Close, Rye, East Sussex: Preliminary Ecological Appraisal Report*.

<sup>7</sup> *Ibid.*

- 3.6.2 During the 2022 PEA, there were no difficulties in gaining access to survey the site's habitats and assess protected species suitability. Adjacent habitats were surveyed where appropriate in order to identify constraints falling outside of the Application Site and to place the survey area in its ecological context. However, the adjacent residential gardens surrounding the site could not be surveyed for signs of species such as badger *Meles meles* due to access restrictions. In addition, the off-site ponds could not be assessed for amphibian suitability as they lay on private land. Due to the operational status of the building, no internal access to the building was provided to search for evidence of bats.
- 3.6.3 Due to the anticipated timeframe for the planning application to be determined, and notwithstanding the requirements of paragraph 99 of ODPM Circular 06/2005 (see section 2.2.11), this EcIA has been carried out in advance of presence/absence surveys for roosting bats. In the absence of survey data, the report assumes a reasonable worst case scenario in relation to the presence of roosting bats. The survey season starts in May; once results are available the EcIA will be amended.

### **3.7 Ecological Impact Assessment**

#### ***Important Ecological Features***

- 3.7.1 A first step in EcIA is to determine which ecological features (habitats, species, ecosystems and their functions/processes) are important. Important Ecological Features (IEF) should then be subject to detailed assessment if they are likely to be impacted by the Proposed Development. It is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts such that there is no risk to their viability.
- 3.7.2 Ecological features can be important for a variety of reasons and the rationale used to identify importance is explained below. Importance may relate, for example, to the quality or extent of designated sites or habitats, to habitat/species rarity, to the extent to which they are threatened throughout their range, or to their rate of decline.
- 3.7.3 The importance of an ecological feature should be considered within a defined geographical context. The following frame of reference is used in this case:
- ▶ International and European e.g. SAC, SPA and Ramsar sites;
  - ▶ National (England) e.g. SSSI and National Nature Reserves;
  - ▶ County (East Sussex) e.g. Local Wildlife Sites, Local Nature Reserves, ancient woodlands;
  - ▶ District (Rother) e.g. species rich and/or extensive habitats, or moderate population sizes, or species assemblages of moderate to high diversity; and
  - ▶ Local (Northiam civil parish) e.g. common and widespread species with relatively moderate populations or assemblages of relatively limited diversity; and
  - ▶ Negligible - Habitats or species populations were either:
    - not detected on Site;
    - the potential for them to be present is negligible; or

- the habitat / species is present, but its presence is considered insignificant in relation to the local context of Northiam parish.

### **Impact assessment**

3.7.4 The process of impact assessment involves:

- ▶ Identifying and characterising impacts;
- ▶ Incorporating measures to avoid and mitigate (reduce) the impacts;
- ▶ Assessing the significance of any residual effects after mitigation;
- ▶ Identifying appropriate compensation measures to offset significant residual effects; and
- ▶ Identifying opportunities for ecological enhancement.

3.7.5 It is only necessary to assess and report significant residual effects (those that remain after mitigation measures have been taken into account). However it is good practice for the EclA to make clear both the potential significant effects without mitigation and the residual significant effects following mitigation. This process of assessment without mitigation helps to identify necessary and relevant mitigation measures that are proportionate to the extent, magnitude and duration of anticipated impacts.

3.7.6 The assessment only needs to describe those characteristics of impacts that are relevant to understanding the ecological effect and determining its significance. It should consider, as appropriate: direct, indirect, secondary and cumulative impacts and whether the impacts and their effects are short, medium, long-term, permanent, temporary, reversible, irreversible, positive or negative. The assessment of impacts then takes into account the baseline conditions to describe:

- ▶ How baseline conditions within the Zol will change as a result of the Proposed Development and associated activities; and
- ▶ Cumulative impacts of the Proposed Development and those arising from other developments within the Zol.

### **Characterising and quantifying impacts**

3.7.7 The term 'impact' relates to changes resulting from Proposed Development activities, for example the removal of habitat.

3.7.8 The CIEEM (2018) guidelines state that ecological impacts and effects should be characterised in terms of ecosystem structure and function and reference should be made, as required, to: positive, negative or neutral effects; extent; magnitude; duration; frequency and timing; reversibility; and cumulative effects. The guidelines provide a list of 'aspects of ecological structure and function to consider when predicting impacts and effects' (CIEEM, 2018, Box 17).

3.7.9 For the purposes of this EclA, the duration of impacts is defined as:

- ▶ Short-term – Up to two years i.e. during site preparation and construction (2023-2024);
- ▶ Medium-term – Three to five years (2025-2027);

- ▶ Long-term – Greater than five years.

3.7.10 However, it should be noted that these terms are considered in the assessment relative to each habitat or species affected and their respective successional processes or life-cycles. For example, six weeks for one species may represent a single generation time period, but for another it may be a few weeks in a life lasting several years.

#### **Determining significant effects**

3.7.11 The term 'effect' relates to the outcome of an impact, for example population displacement or decline due to habitat loss.

3.7.12 Following the characterisation of impacts, an assessment of the ecological significance of an effect is made. Applying the principles promoted in the guidelines, significant effects encompass impacts on the structure and function of a defined site, habitat or ecosystem, and/or the conservation status of habitats and species populations at an appropriate geographic scale. However, the scale of significance of an effect may not be the same as the geographic context in which the feature is considered important. For example, an effect on a SPI in England may not have a significant effect on its national population and therefore not be of national significance for that species. Hence the value of the feature that will be significantly affected is used to determine the implications, in terms of legislation and or policy (CIEEM, 2018), and proportionate means of mitigation.

3.7.13 Significance is a concept related to the weight that should be attached to effects when decisions are made. For the purpose of this assessment, 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for IEFs. A significant effect is simply an effect that is sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project. The EclA guidelines (CIEEM, 2018, p41) state that "*a significant effect does not necessarily equate to an effect so severe that consent for the project should be refused planning permission. For example, many projects with significant negative ecological effects can be lawfully permitted following EIA procedures*" – particularly where the mitigation hierarchy has been applied effectively as part of the decision-making process. The assessment of significance is based on professional judgement, guided by independently established significance criteria where available and appropriate (e.g. in relation to atmospheric pollution impacts).

#### **Cumulative effects**

3.7.14 Cumulative effects are assessed with respect to the potential for collectively significant impacts to arise upon IEFs relevant to the Proposed Development. A 1km search area was considered sufficient, taking account of the small size of the Application Site and small scale of Proposed Development. The following project has been identified, in discussion with the client, for consideration of cumulative effects:

- ▶ Policy NOR2: Land south of The Paddock / Goddens Gill, Northiam. Located c.750m south-west of the Application Site and allocated for either c.52 age-restricted dwellings for older people, or c.36 dwellings.

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### **Mitigation**

- 3.7.15 Where significant impacts or effects are predicted, the mitigation hierarchy is taken into account as recommended in the guidelines, which set out a sequential approach of avoiding impacts where possible, applying mitigation measures to minimise unavoidable impacts, and then compensating for any remaining impacts. Once avoidance and mitigation measures, and any necessary compensation measures, have been applied, and opportunities for enhancement are incorporated, residual impacts and effects are then identified. This approach is reflected across UK planning policy at a country level.
- 3.7.16 Where mitigation and/or compensation is proposed, this is proportionate to the geographical scale at which an effect is significant, *"for example, mitigation and compensation for effects on a species population significant at a county scale should ensure no net loss of the population at a county scale. The relative geographical scale at which the effect is significant will have a bearing on the required outcome which must be achieved"* (CIEEM, 2018, p41).
- 3.7.17 In addition to identifying mitigation measures, this section also addresses relevant legal requirements, for example in relation to protected or invasive non-native species.

## 4 Baseline Ecological Conditions

### 4.1 Introduction

4.1.1 This chapter summarises the baseline ecological conditions determined through the course of desk-based and field-based investigations described in Chapter 3. In particular, this section identifies and evaluates those ecological features that lie within the Site’s potential Zol and are relevant in the context of the Proposed Development.

### 4.2 Statutory and Non-statutory Site Designations

4.2.1 There is one nationally important wildlife site within 2km, a Site of Special Scientific Interest (SSSI), and no internationally important wildlife sites. Additionally there are two non-statutory sites of local importance within 1km, one Local Geological Site (LGS) and one Designated Road Verge (DRV). The information provided by SxBRC regarding these sites is presented in Table 4.1, while Figure 4.1 and Figure 4.2 show their locations in relation to the survey area.

**Table 4.1: Nature conservation sites within the desk study search area**

Site name	Location*	Summary description
Northiam SSSI	c.490m south-east	The site is important for the study of the Wadhurst Clay Formation, palaeoenvironments and palaeogeography. It is particularly important for comparison with other sandstone members of the Hastings Beds Group clay formations.
TQ82/08 - Northiam Quarry LGS	c.480m south-west	Disused quarry face about 100m long and about 5m high exposing Northiam Sandstone Member of the Wadhurst Clay Formation. Only a section about 20m wide is well exposed. This is the type locality for the Northiam Sandstone.
Dixter Lane, Northiam DRV	c.685m south-west	No information provided.

\* Approximate distance and bearing from the Application Site.

### 4.3 Priority Habitats

4.3.1 Priority habitats include those listed on local Biodiversity Action Plans and HPI listed under section 41 of the NERC Act. SxBRC returned the following data on priority and other habitats within the desk study search area: Coastal and Floodplain Grazing Marsh, Deciduous Woodland, including

Ancient Woodland and Ghyll Woodland, and Traditional Orchards. None of these are present within the survey area as shown on Figure 4.3.

#### 4.4 Protected, Rare and Notable Species

4.4.1 Biological records were obtained for the search area and are summarised in the 2023 PEA.





#### 4.5 Granted EPS Mitigation Licences

4.5.1 A search of the MAGIC database for granted EPS mitigation licenses within a 2km radius found two licenced sites both of which a licence had been granted on two occasions. Details of these site are presented in Table 4.2.

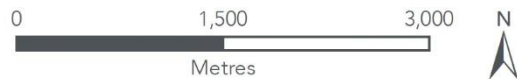
**Table 4.2: Summary of granted EPS mitigation licences within 2km of the site**

Case ref.	Distance from site	Dates valid	Licenced actions
2018-38442-EPS-MIT	c.1.4m south	17/01/2019 -30/04/2024	Damage and destruction of a resting place used by common pipistrelle <i>Pipistrellus pipistrellus</i> and brown long-eared bats <i>Plecotus auritus</i> .
2018-38442-EPS-MIT-1	1.4km south	13/05/2019 -31/10/2024	Damage and destruction of a resting place used by common pipistrelle and brown long-eared bats.
2014-2562-EPS-MIT	c.1.5km south-west	20/08/2014 - 30/07/2017	Damage and destruction of a resting place used by GCN.
EPSM2013-5891	c.1.5km south-west	10/07/2013 - 30/06/2015	Destruction of a resting place used by GCN.

# Jasmine Lodge Ilex Close, Rye East Sussex

-  Site boundary
-  5km site buffer
-  2km site buffer
-  Sites of Special Scientific Interest

**Figure 4.1: Statutory nature conservation sites within the desk study search area**



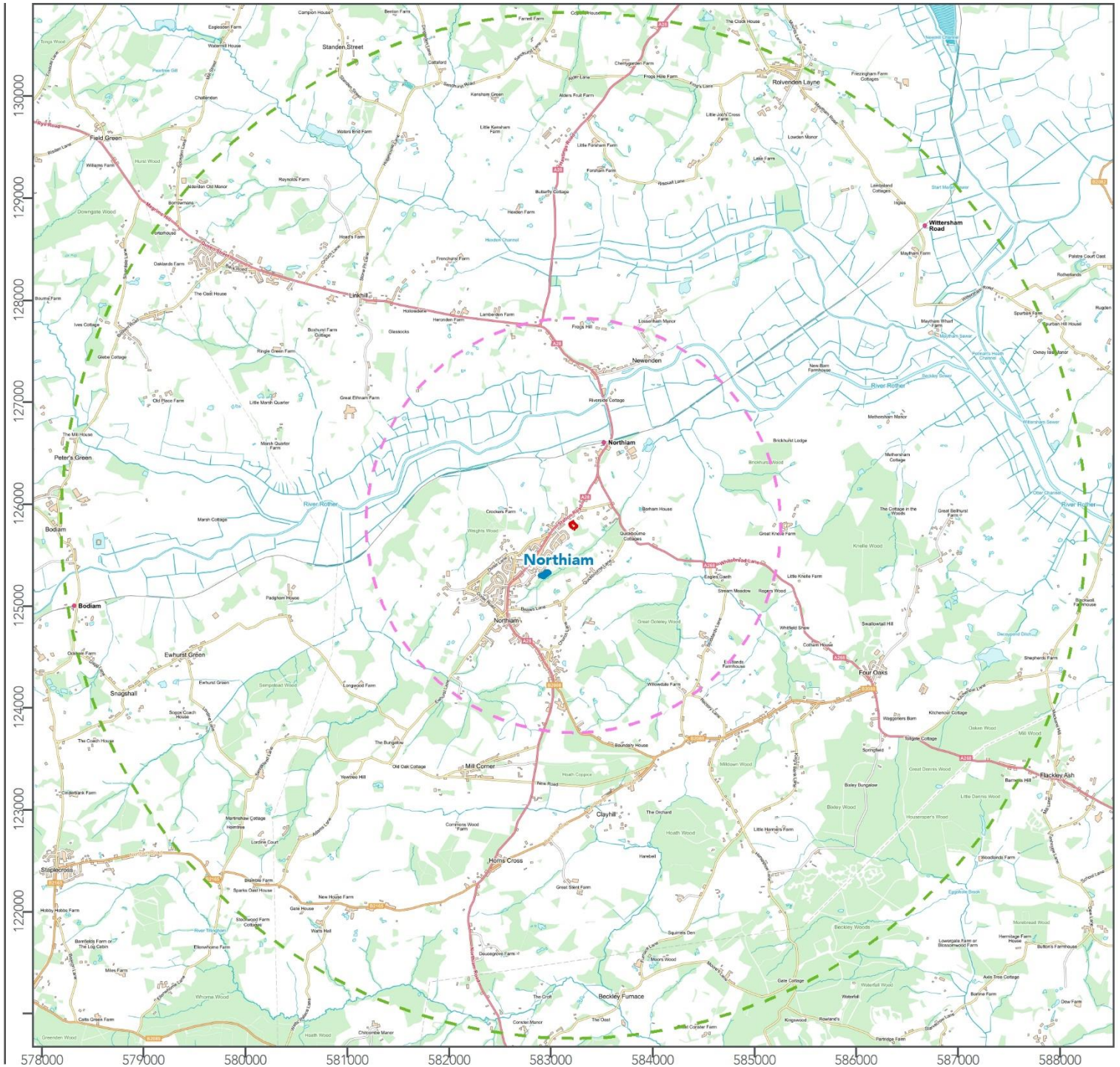
© Crown copyright and database rights 2022  
Ordnance Survey 0100031673

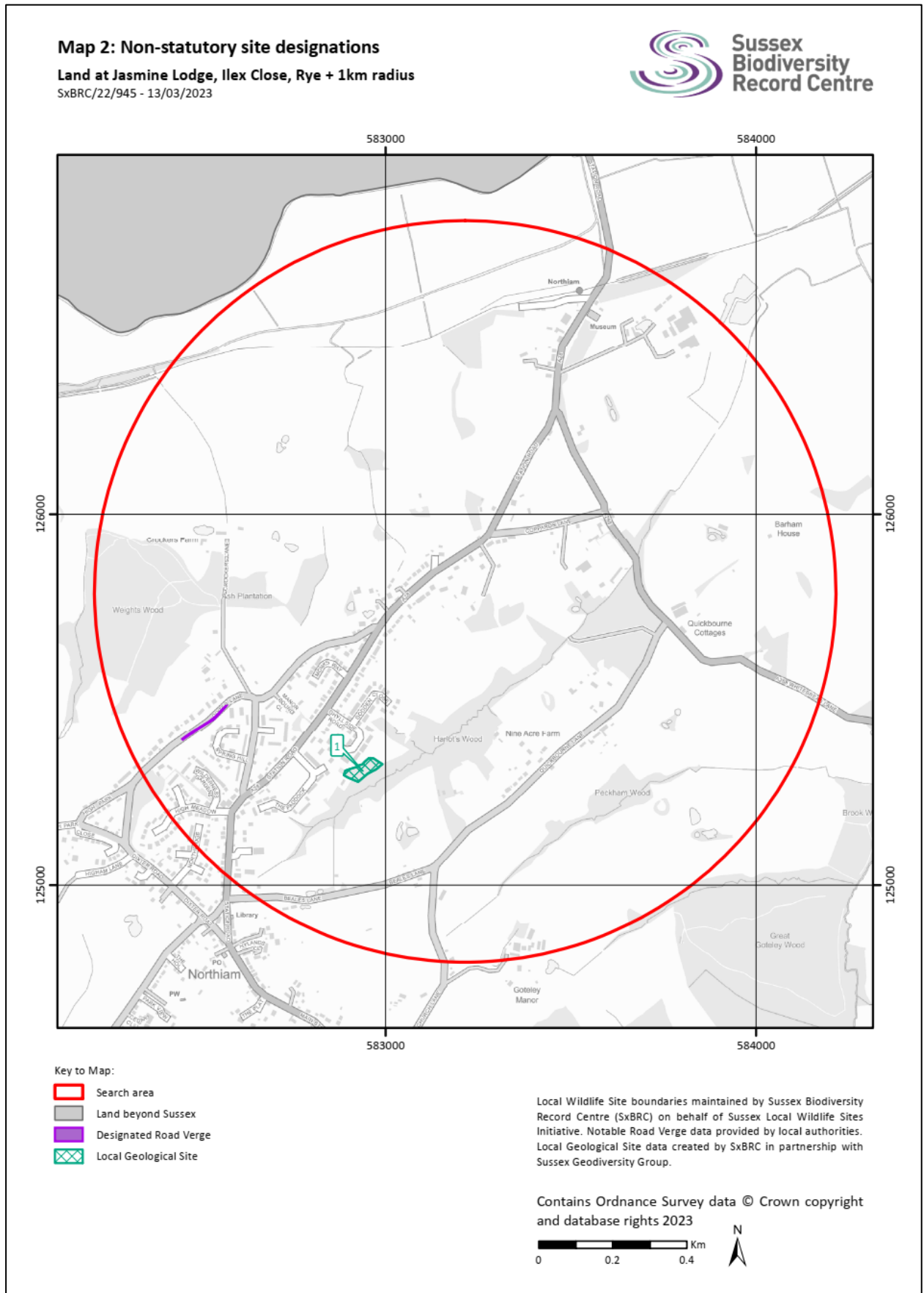
Scale (at A4): 1:55,000      Created by: MT

Date: Mar 2023      Reviewed by: NP

Drawing number:

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**Figure 4.2: Non-statutory nature conservation sites within the desk study search area**

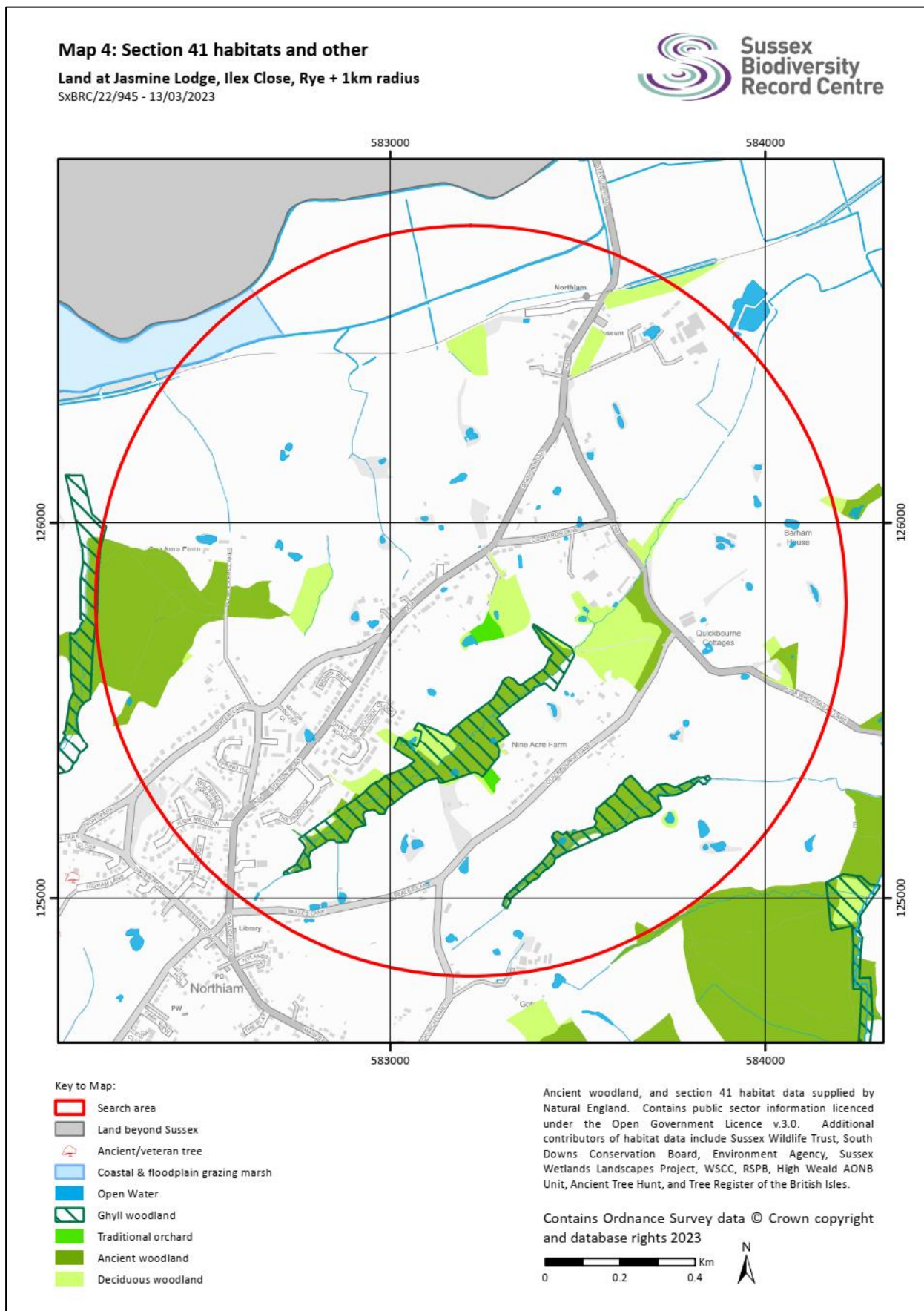


Figure 4.3: Priority Habitats within the desk study search area

#### 4.6 Habitat and Vegetation Communities Evaluation Summary

4.6.1 A summary evaluation of the habitats and vegetation communities present within the Application Site is set out at Table 4.3.

**Table 4.3: Summary of habitat evaluation**

Habitat	Importance	Rationale
Hedgerows	<u>Negligible</u>	Although these hedgerows qualify as Priority Habitat, they are low quality examples, heavily managed and generally species poor. Similar habitats are widely abundant in the local area.
All other habitat	<u>Negligible</u>	These habitats are common and widespread or poor-quality examples, none of which are HPI; refer to PEA for further details.

#### 4.7 Faunal Evaluation Summary

4.7.1 A summary evaluation of the animal populations present or potentially present within the Application Site is set out at Table 4.4.

**Table 4.4: Summary of faunal evaluation**

Species	Importance	Rationale
Great crested newt	<u>Negligible</u>	The Site contains predominantly sub-optimal terrestrial habitat for GCN, comprised mainly of buildings, hardstanding and shortly mown amenity grassland with little structural variation. The Proposed Development results in losses of c.55m <sup>2</sup> of amenity grassland and c.20m <sup>2</sup> of hardstanding. Two ponds are present within 100m, one of which was of average suitability for GCN and the other could not be assessed. However, given the lack of suitable terrestrial and aquatic habitat within the Site, and the presence of better-quality habitats in the surrounding area, it is improbable that GCN would actively seek out sub-optimal habitats within the Application Site. Impacts are avoided via embedded mitigation (section 5).
Breeding birds	<u>Negligible</u>	The Site's boundary hedgerows, scattered trees, and scrub are suitable for nesting birds, while the buildings provide some limited suitability for species such as house sparrow (BoCC5 Red-listed). The Proposed Development results in losses of c.55m <sup>2</sup> of amenity grassland and c.20m <sup>2</sup> of hardstanding. Impacts are avoided via embedded mitigation (section 5).
Roosting bats (buildings)	<u>Local</u> (provisional)	The PEA concluded that building B1 was of <u>moderate suitability</u> for roosting bats based on an external inspection only. Surveys to establish the presence / likely absence of roosting bats in B1 are scheduled to take place during the 2023 season. In the absence of survey results, the following reasonable worst case scenario is assumed in relation B1's potential to support roosting bats: four day

Species	Importance	Rationale
		roosts are present and used by low numbers of common pipistrelle and brown long-eared bats.
Roosting bats (trees)	<u>Local</u> (provisional)	The PEA concluded that the tree at T1 was of <u>high suitability</u> for roosting bats, while trees at T2 and T3 were of <u>moderate suitability</u> . T1 will be removed to facilitate the proposals but T2 and T3 will be retained. Surveys to establish the presence / likely absence of roosting bats in T1 are scheduled to take place during the 2023 season. In the absence of survey results, the following reasonable worst case scenario is assumed in relation T1's potential to support roosting bats: one day roost is present in tree T1 and used by low numbers of common pipistrelle.
Foraging and commuting bats	<u>Negligible</u>	The Proposed Development results in losses of c.55m <sup>2</sup> of amenity grassland and c.20m <sup>2</sup> of hardstanding which are very unlikely to negatively affect foraging or commuting bats.
Reptiles	<u>Negligible</u>	The Site contains predominantly sub-optimal habitat for reptiles, comprised mainly of buildings, hardstanding and shortly mown amenity grassland with little structural variation. The Proposed Development results in losses of c.55m <sup>2</sup> of amenity grassland and c.20m <sup>2</sup> of hardstanding. Areas of suitable habitat are expected to be retained, however if work to remove any scrub, woodland, or hedgerow are required their impacts will be avoided via embedded mitigation (section 5).

#### 4.8 Baseline Evolution in the absence of Proposed Development

4.8.1 Site preparation works will commence in February 2024. It is considered likely that the majority of habitats present at the Site will be in a similar condition in 2024, albeit that minor changes may have occurred such as storm damage to trees. Similarly it is considered likely that, for the majority of species present at the Site, their abundance and distribution in relation to the Site will be in a similar condition when construction starts, albeit that minor changes may have occurred in highly mobile species such as bats and birds.

#### 4.9 Important Ecological Features

4.9.1 Of the designated sites, habitats and species listed in sections 4.2 to 4.7 above, those listed below are evaluated as being IEFs and have the potential to be affected by the Proposed Development:

- ▶ Roosting bats (buildings & trees).

## 5 Embedded Mitigation

### 5.1 Introduction

- 5.1.1 This section summarises the key features that have been incorporated into the proposed development in order to avoid or reduce impacts on features of nature conservation interest.

### 5.2 Hedgerow / Tree Protection

- 5.2.1 British Standard BS 5837:2012 and/or National Joint Utilities Group Guidelines (NJUG, 1995) will be followed at all times during construction when working in close proximity to retained hedgerow or trees, including those within the woodland to the south-east. According to NJUG Guidelines the root protection zone or precautionary area is 4x the circumference of the trunk (circumference is measured around the trunk at a height of 1.5m above ground level). The distance is measured from the centre of the trunk to the nearest part of any excavation or other work. If a separate tree survey is carried out for the proposed development, works will be undertaken in accordance with the recommendations therein.

### 5.3 Non-licenced Methods for Removal of Great Crested Newt Habitat

- 5.3.1 Construction and vegetation clearance works in the areas of scrub, hedgerow, and woodland, if required, and removal of the decaying log / log piles (TN1 / 3,) will be undertaken in accordance with a Non-Licenced Method Statement to reduce the risk of killing / injury to GCN. The Method Statement will specify reasonable avoidance measures to be undertaken during the GCN active season (March to October), such as progressive reduction of vegetation height to displace any reptiles present and backfilling of excavations and raised storage of materials to deter newts from occupying the working area, supervised by a suitably licenced ecologist.

### 5.4 Removal of Nesting Bird Habitat

- 5.4.1 Removal of nesting bird habitats (including vegetation and buildings), where necessary despite the general retention of hedgerows, trees and scrub, will be undertaken outside of the bird nesting season, which runs from 1 March to 31 August. It will therefore be carried out between September and February, but will be planned and implemented in accordance with the mitigation requirements for other species, as other protected species may still be present outside of the bird breeding season. Any construction works undertaken within the bird breeding season where suitable bird breeding habitat exists will require a site check for nesting birds by a suitably qualified ecologist. This will take place no more than two days prior to works commencing. This is to ensure that no disturbance to active bird nests occurs. If a nest is found it must be cordoned off and works adjacent to the nest must be delayed until such time that the chicks have fledged from the nest. This will be supervised by a suitably qualified ecologist.

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## **5.5 Repeat Survey for Badger**

- 5.5.1 Badger's use of the landscape is dynamic and can change rapidly. A repeat badger survey should be undertaken prior to commencement of development works in order to determine if any new badger setts have established at the site. The survey area should include the construction zone plus a 30m buffer to ensure that disturbance to badgers occupying a sett does not occur during the works.

## **5.6 Precautionary Working Methods for Removal of Reptile Habitat**

- 5.6.1 Vegetation clearance works in the areas of scrub, hedgerow, and woodland, if required, and removal of the decaying log / log piles (TN1 / 3) will be undertaken in accordance with a Precautionary Working Method Statement to reduce the risk of killing / injury to reptiles. The Method Statement will specify reasonable avoidance measures including timing restrictions (works to be carried out during the reptile active season, broadly March / April to September / October), progressive reduction of vegetation height to displace any reptiles present, and will be carried out under the supervision of a suitably qualified ecologist. Once vegetation removal is complete, the site will be maintained in unsuitable condition to prevent recolonisation.

## 6 Impact Assessment

### 6.1 Introduction

6.1.1 This section identifies the potential impacts of the Proposed Development before making an assessment of significant effects on each IEF. It goes on to consider cumulative effects before determining residual impact.

### 6.2 Potential Effects

6.2.1 Whilst exact details of the construction methods to be used cannot be determined with certainty at this time, a number of assumptions and parameters have been fixed for the purposes of this assessment and are described in section 1.4.1. Potentially significant effects on important ecology and nature conservation features resulting from the construction and operation phases of the Proposed Development are listed in Table 6.1.

**Table 6.1: Potential significant effects resulting from construction and operation phases of Proposed Development**

Effect	Impact causes/mechanisms
<b>Construction</b>	
Habitat loss/damage	E.g. full/partial demolition of structures, soil stripping or digging necessitating the felling of trees, removal or disturbance of vegetation by heavy plant, materials storage / stockpiling etc.
Killing/injury of animals	E.g. full/partial demolition of structures, digging, vegetation removal, movement of vehicles/heavy plant, and entrapment of animals in trenches, pits or pipes.
Displacement of animals	Visual, noise or vibration-related disturbance from vehicles/heavy plant, digging or piling. Habitat degradation (see above) may also displace resident animals.
<b>Operation</b>	
Displacement of animals	Visual (especially lighting), noise or vibration-related disturbance, habitat degradation (see above).

### 6.3 Effects during the Construction Phase

6.3.1 In Table 6.2 likely significant effects resulting from construction are detailed for each of the IEF identified previously in section 4.9 and the impacts are characterised, where appropriate, in terms of their extent, magnitude, duration, frequency, timing and reversibility. This evaluation takes into account embedded mitigation (as described at section 5). Any necessary additional mitigation is also described.

**Table 6.2: Likely significant effects resulting from construction, considered for each Important Ecological Feature**

<b>IEF: Roosting bats (buildings &amp; trees) (including Species of Principal Importance, European Protected Species &amp; WCA schedule 5 species)</b>
<b>Potential effect:</b>
<ol style="list-style-type: none"> <li>1. Habitat loss/damage</li> <li>2. Killing/injury of animals</li> <li>3. Displacement of animals</li> </ol>
<b>Proposed development activity:</b>
<p>For the purposes of this assessment, and noting the limitations stated at section 3.6, it is assumed that four day roosts are present and used by low numbers of common pipistrelle and brown long-eared bats. Three common pipistrelle day roosts (A, B and C) are assumed to be present beneath roof tiles on the east elevation and will be removed to enable construction of the roof over the proposed easterly extension. One brown long-eared bat day roost (D) is assumed to be present in the roof void which will be modified by construction of the roof over the proposed easterly extension. Additionally, one common pipistrelle day roost (E) is assumed to be present in tree T1 which will be removed.</p>
<b>Characterisation of impact, taking account of embedded mitigation:</b>
<p>Works to the roof of B1 and to fell tree T1 are therefore likely to result in the following short-term impacts unless mitigated, which would constitute an offence under the WCA and the Habitats Regulations:</p> <ul style="list-style-type: none"> <li>▶ <u>Risk of killing, injury or disturbance</u> to <u>low numbers</u> of <u>two common species</u> of bat if present in roosts A, B, C, D and E during the works.</li> </ul> <p>Unless mitigated, works to the roof of B1 and to fell tree T1 will result in the following long-term impacts, which would constitute an offence under the WCA and the Habitats Regulations. The significance of roost loss impacts is predicted for each species with reference to Natural England (2016<sup>8</sup>) taking into account their recorded abundance and frequency within the application site, and rarity in a local context.</p> <ul style="list-style-type: none"> <li>▶ <u>Medium</u> significance impact from the <u>destruction</u> of four summer day roosts (A, B, C and E) used by <u>low numbers</u> of common pipistrelle bats; and</li> <li>▶ <u>Low</u> significance impact from the <u>modification</u> of one summer day roost present in the roof void (D) used by <u>low numbers</u> of brown long-eared bats.</li> </ul> <p>It is currently understood that the extension proposals do not include any works which would significantly affect foraging and commuting habitats either directly (e.g. through habitat loss) or indirectly (e.g. through artificial lighting).</p>

<sup>8</sup> Natural England (2016): *Standing Advice: Bats: surveys and mitigation for development projects*. Accessed online [03/03/2023] at: <https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects>

**IEF: Roosting bats (buildings & trees) (including Species of Principal Importance, European Protected Species & WCA schedule 5 species)****Scale of effect:**

Uncertain but potentially up to a Moderate negative effect at the Local level. The impact (loss of roost features) is irreversible over the medium to long term, however, the effect (loss of available roosting habitat) is capable of mitigation.

**Cumulative effects:**

None – no other approved or potential developments are expected to affect roosting bats at the Application Site.

**Additional mitigation required, including means of securing implementation:**

A mitigation strategy is required to (a) remove or reduce the likelihood of damage to bats or their habitats, and (b) offset the damage caused by development through compensation. Mitigation will be implemented in accordance with an agreed Method Statement which will form part of a Natural England European Protected Species Mitigation Licence. The following bullets provide an indicative outline of what is likely to be necessary:

- ▶ Appointment of a licenced Ecological Clerk of Works (ECoW) to oversee mitigation and construction/felling works;
- ▶ Timing the works to building B1 and tree T1 to take place during March/April and/or October/November, i.e. during the period in which bats are least likely to be present;
- ▶ Creation of temporary replacement habitats to provide a safe refuge for any bats which are found and moved during the works;
- ▶ A pre-commencement return-to-roost survey;
- ▶ Provision of information and toolbox talks to guide site operatives;
- ▶ Soft demolition measures during works to the roof of B1, and soft felling measures during works to T1, to ensure any bats found can be captured and safely relocated into the pre-installed bat boxes;
- ▶ Specified procedures should bats be encountered during the works;
- ▶ Adjustments to be made to account for nesting birds, if necessary;
- ▶ Commencement of subsequent stages of extension works to B1 and felling of T1 once the soft demolition/felling is complete and B1/T1 are declared bat free;
- ▶ Compensation of habitats lost as a result of development.

The use of external lighting will be avoided or reduced to the minimum required for its intended purpose, during the construction phase. Where external lighting is to be provided, it should be low-level, directional lighting with minimal spill and glare. Lighting will not be directed towards the temporary replacement roosts. The measures relating to sensitive lighting can be secured via an appropriately worded planning condition.

Further details of the mitigation strategy, including specification of compensatory habitats, are listed in Appendix A.

**IEF: Roosting bats (buildings & trees) (including Species of Principal Importance, European Protected Species & WCA schedule 5 species)****Significance of residual effect:**

Uncertain but likely capable of being reduced to a Minor negative effect at the Local level.

**6.4 Effects during the Operation Phase**

6.4.1 In Table 6.3 likely significant effects resulting from operation are detailed for each of the IEFs identified previously in section 4.9 and the impacts are characterised, where appropriate, in terms of their extent, magnitude, duration, frequency, timing and reversibility. This evaluation takes into account embedded mitigation (as described at section 5). Any necessary additional mitigation is also described.

**Table 6.3: Likely significant effects resulting from operation, considered for each Important Ecological Feature**

**IEF: Roosting bats (buildings & trees) (including Species of Principal Importance, European Protected Species & WCA schedule 5 species)****Potential effect:**

1. Displacement of animals

**Proposed development activity:**

Additional street / footpath lighting proposals within for the Site for access and health and safety provision.

**Characterisation of impact, taking account of embedded mitigation:**

There is potential for bats roosting within compensatory habitat provided to replace those lost during construction to be displaced by increases in artificial lighting during the operational phase. This is considered to represent a Low to Medium significance impact for common pipistrelle (which is less vulnerable to artificial light), increasing to Medium to High significance impact for brown long-eared bat (which is more vulnerable to artificial light), potentially leading to roost abandonment.

**Scale of effect:**

Uncertain but potentially up to a Moderate negative effect at the Local level.

**Cumulative effects:**

None – no other approved or potential developments are expected to affect roosting bats at the Application Site.

**IEF: Roosting bats (buildings & trees) (including Species of Principal Importance, European Protected Species & WCA schedule 5 species)*****Additional mitigation required, including means of securing implementation:***

The use of external lighting will be avoided or reduced to the minimum required for its intended purpose during operation. Where external lighting is to be provided, it should be low-level, directional lighting with minimal spill and glare. Lighting will not be directed towards the replacement roosts in buildings or trees. The measures relating to sensitive lighting can be secured via an appropriately worded planning condition.

Further details of the mitigation strategy are listed in Appendix A.

***Significance of residual effect:***

Uncertain but likely capable of being reduced to a Negligible negative effect at the Local level.

## 6.5 Summary of Residual Effects

6.5.1 Table 6.4 outlines the residual effects following the implementation of additional mitigation measures not already embedded in the design of the Proposed Development and identifies whether these are significant in relation to national and local planning policy. Within this EcIA, significant residual negative effects are those at the level of moderate, major or substantial; minor and negligible negative effects are not considered to be significant. No residual effects that are significant in terms of national and local planning policy are anticipated to occur as a result of the Proposed Development.

**Table 6.4: Residual effects**

Feature	Significant residual effects	
	Construction phase	Operation
-		
Roosting bats	Minor negative effect at the Local level (uncertain)	Negligible negative effect at the Local level (uncertain)

## 6.6 Monitoring

6.6.1 None of the residual effects assessed by this EcIA were significant, and no specific monitoring is required.

## 6.7 Protection Measures for Other Ecological Features

6.7.1 Recommendations R3 to R13 as listed in the 2023 PEA continue to apply and should be implemented as part of the scheme.

## 6.8 Recommendations for Ecological Enhancement

6.8.1 Recommendations R14 to R16 as listed in the 2023 PEA continue to apply and should be considered for implementation as part of the scheme.

## 7 Summary and Conclusion

- 7.1.1 An EcIA was prepared for the site of a proposed building extension at Jasmine Lodge, Ilex Close, Rye, East Sussex (Grid Reference: TQ 83219 25795).
- 7.1.2 The EcIA process was undertaken with reference to relevant parts of the *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018), and in the context of national planning policy and guidance, local planning policy, UK wildlife and animal welfare legislation.
- 7.1.3 Baseline information was obtained from an ecological survey of the Application Site by professional ecologists during 2022, including an ecology desk study and Preliminary Ecological Appraisal (based on an extended Phase 1 habitat survey). Evaluation of the baseline survey work identified the following IEFs relevant to the development: Roosting bats (buildings and trees).
- 7.1.4 Due to the anticipated timeframe for the planning application to be determined, and notwithstanding the requirements of paragraph 99 of ODPM Circular 06/2005 (see section 2.2.11), this EcIA has been carried out in advance of presence/absence surveys for roosting bats. In the absence of survey data, the report assumes a reasonable worst case scenario in relation to the presence of roosting bats in building B1 and tree T1. The survey season starts in May; once results are available the EcIA will be amended.
- 7.1.5 Following assessment of the Proposed Development's impacts during its construction and operation phases, additional mitigation is proposed, including:
- ▶ A Natural England European Protected Species Mitigation Licence will need to be obtained after planning permission is granted and before development commences. The following bullets provide an indicative outline of what is likely to be necessary:
    - Appointment of a licenced Ecological Clerk of Works (ECoW) to oversee mitigation and construction/felling works;
    - Timing the works to building B1 and tree T1 to take place during March/April and/or October/November, i.e. during the period in which bats are least likely to be present;
    - Creation of temporary replacement habitats to provide a safe refuge for any bats which are found and moved during the works;
    - A pre-commencement return-to-roost survey;
    - Provision of information and toolbox talks to guide site operatives;
    - Soft demolition measures during works to the roof of B1, and soft felling measures during works to T1, to ensure any bats found can be captured and safely relocated into the pre-installed bat boxes;
    - Specified procedures should bats be encountered during the works;

- 
- Adjustments to be made to account for nesting birds, if necessary;
  - Commencement of subsequent stages of extension works to B1 and felling of T1 once the soft demolition/felling is complete and B1/T1 are declared bat free;
  - Compensation of habitats lost as a result of development.
- ▶ The use of external lighting will be avoided or reduced to the minimum required for its intended purpose. Where external lighting is to be provided, it should be low-level, directional lighting with minimal spill and glare. Lighting will not be directed towards the replacement roosts in buildings or trees. The measures relating to sensitive lighting can be secured via an appropriately worded planning condition.
- 7.1.6 Table 6.4 outlines the residual effects following the implementation of additional mitigation measures not already embedded in the design of the Proposed Development and identifies whether these are significant in relation to national and local planning policy. No residual effects that are significant in terms of national and local planning policy are anticipated to occur as a result of the Proposed Development.
- 7.1.7 Recommendations R3 to R16 as listed in the 2023 PEA continue to apply and should be implemented as part of the scheme.

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## Appendix A: Mitigation and Compensation for Roosting Bats

For the purposes of this assessment, and noting the limitations stated at section 3.6, it is assumed that four day roosts are present and used by low numbers of common pipistrelle and brown long-eared bats. Three common pipistrelle day roosts (A, B and C) are assumed to be present beneath roof tiles on the east elevation and will be removed to enable construction of the roof over the proposed easterly extension. One brown long-eared bat day roost (D) is assumed to be present in the roof void which will be modified by construction of the roof over the proposed easterly extension. Additionally, one common pipistrelle day roost (E) is assumed to be present in tree T1 which will be removed.

Extension works to building B1 and felling of tree T1 could result in destruction of a bat roost or present a risk of killing, injury or disturbance if bats are present during the works, which would constitute an offence under the Habitats Regulations and WCA. A mitigation strategy is required to (a) remove or reduce the likelihood of damage to bats or their habitats, and (b) offset the damage caused by development through compensation. The aim is to achieve both the avoidance of harm to individual bats and compensation for loss of suitable habitat or connectivity, thereby ensuring the local conservation status of the species is maintained.

### **European Protected Species Mitigation Licence**

An EPS Mitigation Licence will be obtained from Natural England prior to commencing the works. A mitigation Method Statement will form part of the licence application and will specify precautionary working methods, mitigation and compensation of lost habitats, based on the recommendations outlined below.

### **Risk of killing, injury or disturbance**

Extension works to building B1 and felling of tree T1 will be carried out during March/April and/or October/November. This scheduling of construction activities will reduce the risk that bats are present, while also avoiding the maternity and hibernation periods when they are most vulnerable. The timing restriction should be coupled with ecological supervision (as described below) in order to mitigate the residual risk of bats being present during the work.

An outline of the precautionary working methods to be followed under the licence is given below:

- ▶ **Appointment of Ecological Clerk of Works:** A named Ecological Clerk of Works (ECoW) who is licenced by Natural England will be appointed to oversee operations which could negatively affect bats and other ecological features of value.
- ▶ **Timing of the works:** Extension works to building B1 and felling of tree T1 will be carried out during March/April and/or October/November, i.e. during the period in which bats are least likely to be present.

- ▶ **Creation of temporary replacement habitats:** Prior to any works to the building, four bat boxes will be installed on nearby mature trees which are to be retained. These will provide a safe refuge for any bats which are found and moved during the works; 2no. 2F bat boxes and 2no. 1FF bat boxes (or another manufacturer's equivalent) will be suitable.
- ▶ **Pre-commencement return-to-roost survey:** Prior to any works to the building, a dawn return-to-roost survey will be carried out on the day works are scheduled to commence unless weather conditions are such that bats are very unlikely to be active. This will allow particular attention to be paid by the ECoW to any part of the structure known to contain a bat.
- ▶ **Toolbox talks:** All site operatives will receive a briefing from the ECoW to explain the legal protection for bats, the precautionary methods to be followed, tips on identifying bats, and the procedure to be followed should a bat be found at any stage during the works.
- ▶ **Supervised soft demolition:** Extension works to building B1 and felling of tree T1 will be undertaken using soft demolition techniques, using hand tools only and under the supervision of an ecologist licenced to handle bats. Particular attention will be paid to the recorded roost locations and any other part of the structure known to contain a bat as a result of the pre-commencement survey. If any bats are found during the soft demolition, they will be captured and safely relocated into the pre-installed bat boxes by the supervising ecologist.
- ▶ **Procedure if bats are encountered:** If bats are found within the construction zone during subsequent works, site operatives will be advised to cease activity in its vicinity while advice from the ECoW is sought. The ECoW will then assess the most appropriate course of action which may include capturing the individual(s) and moving it to a pre-installed bat box or holding it for release on site at dusk.
- ▶ **Nesting birds:** As a result of the precautionary timing outlined above, it is possible that the work will be carried out during the nesting bird season which runs from early March to late August. If vegetation clearance or building alteration/demolition is required during the nesting season, a survey for active bird nests will be carried out by the ECoW immediately prior to the works. If an active nest is found, the nest must be cordoned off and works adjacent to this nest must be delayed until such time that the chicks have fledged.
- ▶ **Commencement of construction works:** Once the soft demolition is complete it is likely that no bats will be present within the areas to be affected and renovation works can commence.

It should be noted that the above bullets are indicative and that the mitigation strategy will be finalised following consultation with Natural England prior to an EPSM licence being issued. The licence application will need to be based on survey data from the current or most recent bat survey season.

### **Roost loss – buildings/structures**

The destruction of four summer day roosts (A, B, C and E) used by low numbers of common pipistrelle, and modification of one summer day roost used by low numbers of brown long-eared bats (D), is unavoidable

if the scheme is to proceed as planned. Compensatory measures are required to ensure there is no net loss of roosting habitats and to enable the recorded bat population to persist in the long-term.

The following measures are recommended in order to re-provide equivalent roosting features following construction. General considerations for installation of bat roosts are listed in Box 1 below, while bat box specifications are listed at the end of this document.

It is recommended that the following replacement roosting habitat features are installed at a height of c.4-6m in similar positions to the existing roosts. Further details on the specification of these and alternative systems can be found in Gunnell *et al.*, 2013. The precise number, type and location of features to be installed will be agreed as part of the licence:

- ▶ To replace roosts A, B and C on building B1: install 3no. Habibat Bat Access Tiles located in the positions indicated on Figure A below: provides access for bats to crawl behind the tiles into the batten cavity (for crevice-roosting species);
- ▶ To replace roost D on building B1: install 2no. Habibat Bat Access Tiles with openings in the liner beneath, located in the positions indicated on Figure A below: provides access for bats to crawl behind the tiles into the batten cavity, and then through the opening in the liner into the roof void (for cavity-roosting species);
- ▶ To replace roosts E on tree T1: erect 1no. Schwegler 1FF bat box (or similar) onto to a retained mature in the position indicated on Figure A below: provides a self-contained bat box with a range of roosting zones.




 Compensatory bat box location

Figure A: Indicative locations for compensatory bat roost features

**Box 1: Considerations & key requirements for crevice-dwelling bats (after Gunnell et al., 2013)**

<b>Species</b>	Barbastelle, serotine, Bechstein's, Brandt's, Daubenton's, whiskered, noctule, Leisler's, pipistrelles (common, soprano & Nathusius')
<b>Consideration</b>	<b>Solution</b>
Where in a development	Anywhere that the access is not illuminated by artificial lighting If possible they should be installed facing vegetation features such as mature hedgerows or trees, but with a clear line of flight for bats entering or leaving the roost
Where in a building	Summer maternity roosts in most southerly or westerly aspect for solar heating, or in a location that provides thermal stability Male roosts and winter hibernation roosts on northerly aspect
Height	2m–7m, preferably >4m above ground level
Dimensions	Any size as long as some components of the area are crevices of c.20-30mm wide Total area of >c.1m <sup>2</sup> would be useful for summer maternity roosting Male roosts contain a smaller number of individual bats
Access dimensions	20mm–50mm (w) x 15mm–20mm (h)
Other considerations	Rough interior surface (for grip) Non-toxic and non-corrosive materials Absence of breathable roofing membranes to avoid the risk of entanglement Suitable thermal properties (reducing 24hr fluctuations), providing stability but allowing maximum thermal gain for summer roosts The use of thermal insulation materials for maternity roosts should be carefully considered in relation to other desired properties e.g. energy efficiency

**Artificial lighting**

To minimise the general risk of disturbance to roosting, foraging and commuting bats on and around the site during and after construction, it is recommended that the following lighting precautions are considered during the detailed design stage (ILP/BCT, 2018):

- ▶ Lighting should not be directed towards the replacement roost features, or to adjacent treelines/hedgerows which will be retained.
- ▶ All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used.
- ▶ LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- ▶ A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component.
- ▶ Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
- ▶ Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.

- ▶ The use of specialist bollard or low-level downward directional luminaires to retain darkness above should be considered. However, this often comes at a cost of unacceptable glare, poor illumination efficiency, a high upward light component and poor facial recognition, and their use should only be as directed by the lighting professional.
- ▶ Column heights should be carefully considered to minimise light spill.
- ▶ Only luminaires with an upward light ratio of 0% and with good optical control should be used (refer to ILP guidance for the reduction of obtrusive light).
- ▶ Luminaires should always be mounted on the horizontal, i.e. no upward tilt.
- ▶ Any external security lighting should be set on motion-sensors and short (1min) timers.
- ▶ As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

### **Bat box specifications**



**Schwegler 2F DFP General Purpose Bat Box:**  
Apex roof to mimic tree cavity, suitable for noctule, brown long-eared, Bechstein's and Daubenton's. Internal double front panel creates a crevice suitable for pipistrelles

**Siting and Positioning:**

On a tree-trunk or on buildings

**Cleaning and Inspection:**



**Schwegler 1FF Flat Bat Box:**

Open at bottom so cleaning not required. Varied internal roost surfaces. Suitable for crevice roosters such as pipistrelles, and large enough for use as maternity roost

**Siting & positioning:**

On the tree-trunk or on buildings

**Cleaning and inspection:**

Open at bottom, cleaning not required. Easy to

Easy cleaning and inspection due to removable front panel. If occupied by bats, inspection and cleaning must be carried out by a licensed professional

**Entrance hole:**

Slotted hole

**Occupants:**

Bats

**Material:**

Air-permeable and long lasting SCHWEGLER wood-concrete

**Kit includes:**

Roost box with removable front panel  
Galvanized steel hanger - forestry approved  
Aluminium Nail - forestry approved

**Colour:**

Black

**Dimensions:**

Height: 350mm

Dia.: 165mm

**Weight:**

4kg approx.

inspect due to removable front panel. If occupied by bats, inspection and cleaning must be carried out by a licensed professional

**Entrance hole:**

Width 12-24 mm x Length 21cm

**Occupants:**

Bats

**Material:**

Air-permeable and long lasting SCHWEGLER wood-concrete

**Kit includes:**

Roost box with swing-away front panel  
Galvanized steel hanger - forestry approved  
Aluminium Nail - forestry approved

**Colour:**

Black

**Dimensions:**

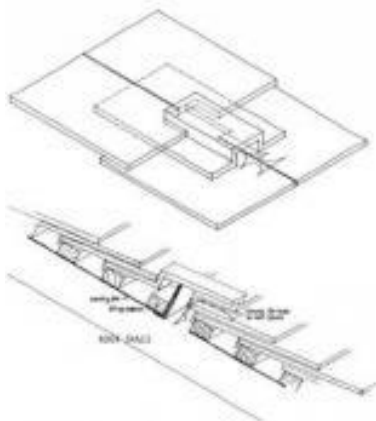
Depth: 140mm

Width: 270mm

Height: 430mm

**Weight:**

10kg approx.



**Habibat Bat Access Tile (available in clay, slate or lead):**

The Habibat Access Tile is a roof tile which has been modified to allow bats either into the batten space (between tiles and liner for pipistrelles) or into the roof void (for brown long-eared bats).

The Habibat Access Tile consists of a vacuum-moulded plastic cowl embedded into the tile. The access cowl is designed to prevent rainwater ingress to the roof but is of correct size and roughened to be suitable for bats.

The 5 piece clay tile set fits on any roof with plain clay tiles to provide access for bats either behind the tiles or into the roof space.

The slate tile consists of a standard sized slate, with a capped vent which allows access into the batten space (between tiles and liner for pipistrelles) or into the roof void (for brown long-eared bats).

Dimensions: (H) 418 x (W) 375 x (D) 80mm

Entrance hole dimensions: (H) 20 x (W) 100mm

Weight: 1.3kg

**Schwegler 1FR/2FR Bat Tube:**

Suitable for building into or mounting onto external walls. Open at bottom so cleaning not required. Can be used individually (1FR) or by connecting two or more 2FR. Suitable for bats that use buildings e.g. pipistrelles or serotine

**Siting & positioning:**

Can be installed on external walls – either flush or beneath a rendered surface in concrete and, during renovation work, under wooden panelling or in building cavities (e.g., slab-type building structures, bridges, etc). If required, it can be painted using standard air-permeable exterior paint. Birds will not occupy this box.

**Cleaning:**

Maintenance-free

**Entrance hole:**

Height: 20mm

Width: 150mm

**Occupants:**

Bats

**Material:**

SCHWEGLER  
wood-concrete

**Kit includes:**

1 x Bat Tube

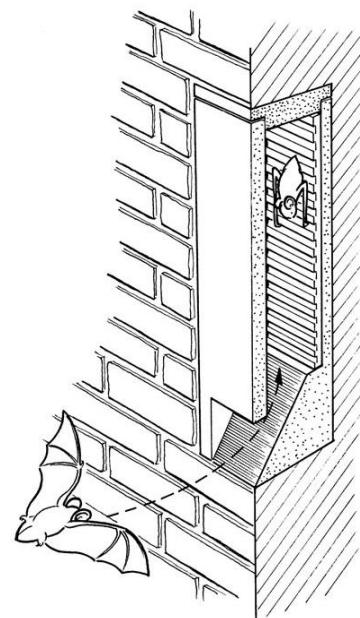
**Colour:**

Grey material, paintable with standard air-permeable wall-paint

**Dimensions:**

Height: 475mm; Width: 200mm; Depth: 125mm

**Weight:** 10kg approx.





**Ibstock Enclosed Bat Box (Type B or C):**

- Designed specifically for pipistrelle bats
- Available in all brick types
- Discrete home for bats
- Various sizes
- Several roosting zones are created inside the box
- Bats are contained within the bat box itself
- Maintenance free with entrance at the base
- Suitable for new build & conservation work
- Bat Box Type B: 215 x 215 or 215 x 290 / Bat Box Type C: 215 x 215 or 215 x 290

## Urban Edge Environmental Consulting Ltd

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