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Dormouse Mitigation Strategy

Site Name

Land north of Balcombe Road,
Haywards Heath

Client

Fairfax Ltd

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This report has been prepared by Holly Waters, a Senior Ecologist at The Ecology Co-op, with 5 years' experience. She has a Level 2 bat and Level 1 great crested newt survey licence and has prepared numerous reports for protected species. As an Associate member of the Chartered Institute for Ecology and Environmental Management (CIEEM), she is bound by their code of professional conduct.

About the Reviewer

This report has been reviewed by Kate Priestman, who is a Principal Ecologist with over twenty years' experience. Kate has undertaken extensive survey work and reporting, encompassing a breadth of deliverables, and prepared European Protected Species licences for numerous schemes. As a Full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and a Chartered Environmentalist (CEnv), she is bound by CIEEM's code of professional conduct.



Report Summary

Purpose	The Ecology Co-operation was commissioned by Fairfax Acquisitions Ltd to provide a Dormouse Mitigation Strategy with regards to a proposed development on land north of Balcombe Road, Haywards Heath. This document outlines site-wide mitigation for dormice, which have been confirmed to be present on site. It will be submitted to Mid-Sussex District Council to support a planning application for a residential development.
Context	Previous survey work was undertaken by The Ecology Co-op in 2020, 2022 and 2024, which included presence/absence surveys for dormice in 2020 and 2024. Dormice were confirmed to be present within the habitats on site. Surveys in 2020 identified presence of dormouse within the south-western hedgerow, and 2024 surveys identified presence within the northern boundary hedgerow and the central hedgerow. No live dormice were found during any of the visits.
Dormice mitigation measures	Mitigation to protect dormice throughout the entirety of the phased project includes: • all works are to be conducted under a European Protected Species (EPS) licence from Natural England; • suitably licensed/accredited Ecological Clerk of Works (ECoW) to supervise and advise on all mitigation, including delivery of a Toolbox Talk to site staff; • utilising a Biodiversity Champion among site staff who will report directly to the ECoW immediately should any issues arise; • clear demarcation and fencing of the construction zone, to protect retained habitats. Fencing to have clear warning signage affixed for site personnel; • site housekeeping rules to be followed at all times regarding designated construction areas, noise and ecologically sensitive lighting; • no severance of habitat connectivity within the site and with the wider landscape; • creation of new dormouse habitat through the planting of new hedgerows and installation of dormouse boxes within the retained woodland patches; and • a sensitive lighting scheme during the operational phase for the entire development.
Toolbox talk	Site staff must be briefed, prior to the commencement of construction, on the ecological issues related to the project and the importance of contacting an ecologist in the event that any wildlife is identified within the construction zone.



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1 INTRODUCTION

1.1 Purpose of the Report

The Ecology Co-operation was commissioned by Fairfax Acquisitions Ltd to produce a Dormouse Mitigation Strategy for the proposed development comprising the construction of 125 new dwellings along with their associated hard and soft landscaping on land north of Balcombe Road, Haywards Heath. This document outlines site-wide mitigation for dormice *Muscardinus avellanarius*. It will be submitted to Mid-Sussex District Council as part of a planning application.

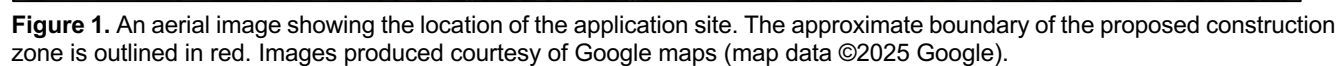
The prescribed mitigation measures described within this document will be issued to relevant works contractors to ensure that they are carried out in full. Implementation of this will be overseen by a suitable ecological consultancy, and the works contractor will be given contact details for an ecologist so that any issues can be resolved promptly.

The works will require a European Protected Species (EPS) licence for dormice to be obtained in order to legally proceed; the licence will be underpinned by a method statement, works schedule and detailed mitigation/compensation measures. As such, given the granting of this licence will require consultation with Natural England on the specifics of the mitigation and compensation required, the measures outlined within this document may be subject to change over time, at the discretion of the project ecologist.

1.2 Background

The site is located at Balcombe Road, Haywards Heath, West Sussex RH16 1XN. The central grid reference for the site is TQ 3264 2586. The location of the site is shown in Figure 1.

The site comprises three fields, two small woodland parcels, hedgerows, a stream and a pond. The proposed development comprises the construction of 125 new dwellings along with their associated hard and soft landscaping. Proposed plans can be found in Figure 2.





2 LEGAL PROTECTION

Legal protection applying to relevant bird, mammal and herpetofauna species is detailed in Appendix 1 of this report. This includes both national and European legislation that protects badgers *Meles meles*, bats, dormice, reptiles, and breeding birds.

3 DORMOUSE IMPACT AVOIDANCE

3.1 Purpose and Conservation Objectives

The majority of suitable dormouse habitat will be retained at the site in the form of two parcels of woodland, and several hedgerows. However, there will be the potential for direct impacts to dormice due to the following:

- loss of species-rich native hedgerow in the south-west corner of the site;
- creation of gaps in the central hedgerow, which could result in habitat fragmentation for this species, restricting the movement of dormice in places, and potentially affecting the ability of the population to grow and spread to surrounding habitats;
- the proposed development would likely result in a significant increase in cats on site, which would result in a significant increase in predation risk to dormice¹; and
- likely temporary impact from noise and vibration during the construction phase and a long-term impact from light pollution during the operational phase.

As such, the aim of this document is to ensure:

- the protection of dormice from potential injury and death while the site is being developed;
- no net loss of local dormouse conservation status, by providing sufficient quality, quantity and connectivity of habitat to accommodate the dormouse population on site;
- that post-construction, the habitats protected and enhanced for dormice will be maintained and managed in perpetuity in the interest of this species.

3.2 Detailed Design and Working Methods

It is important to note that all mitigation listed below will be required to proceed under a European Protected Species (EPS) licence obtained from Natural England. As such, the methods outlined below are not prescriptive, but indicative of the mitigation that will be required.

3.3 Pre-Commencement Mitigation (Whole Site)

A minimum of 10 dormouse nest boxes (see Figure 3) will be installed across all woodland habitat on the site, away from likely disturbance by the public.

¹ Woods *et al* (2003). Predation of wildlife by domestic cats *Felix catus* in Great Britain.



Figure 3. Examples of dormouse nest boxes (left to right: dormouse nest box, standard dormouse nest box, and 2KS Schwegler Common Dormouse Drey). All available from various wildlife equipment stores.

Method Statement and Toolbox Talk

Prior to commencement of any work on site, this Strategy will be issued to the Ecological Clerk of Works (ECoW) attending the site and all contractors. All habitat clearance work will be overseen by a licensed ECoW at all times. It is likely that the method statement produced for the dormouse EPS licence will supersede this one although most of the detail should be similar.

Prior to commencement of habitat clearance works, the ECoW will provide a 'Toolbox Talk' to confirm the process that the habitat clearance will follow, and they will ensure that it is understood that work must **ONLY** proceed under their guidance. This document and all EPS licence documents will be made available to all works contractors to ensure the method is understood.

Demarcation of Construction Zone

The designated construction zone must be demarcated clearly with barrier fencing (such as Heras fencing or similar that conforms to BS 5837:2012 for tree protection) to protect the retained habitats and prevent construction vehicles, site staff, plant and material storage from encroaching into these areas. This must be installed outside of the Root Protection Areas (RPAs). Clear signage must be installed at regular intervals on the fencing, e.g. "Biodiversity Protection Zone – No Access" to remind site staff to keep out of these retained habitats. Note that this fencing and signage will be installed prior to delivery of any machinery, materials or welfare facilities to site and will only be removed with the written agreement of the ECoW following completion of relevant works.

Noise

Noise from ongoing construction activities during the day can cause disturbance to dormice, which are a nocturnal species. During the construction on site, noise and vibration impacts will be mitigated through the use of a temporary noise barrier. The barrier fencing can be fitted with an Acoustic Barrier membrane. Additionally, machinery retrofitted with mufflers and silencing equipment must be used for groundwork. When machinery is not in use, it should be switched off immediately and not left to idle as this will result in unnecessary noise and air pollution. Any materials must further be handled and placed with care to reduce noise and vibration.

Lighting

Given dormice are a nocturnal species, artificial lighting can have a negative impact upon this species, and although works are likely to only take place during the day, night work must be avoided to negate the need for



lighting. If lighting is needed, it must be limited to active working areas only and follow guidance from the Bat Conservation Trust for a sensitive lighting scheme (see Appendix 2).

Communication

A Biodiversity Champion among the main staff will be nominated, who must ensure the entire length of the fencing and acoustic barrier is checked at least once a week. Should any repairs or maintenance of the fencing be required, the Biodiversity Champion will be responsible for reporting this to the ECoW and ensuring this is done as soon as possible to keep the works area clearly demarcated and the retained habitats protected at all times.

Destructive Search

The development cannot avoid removal of a small amount of hedgerow in the south-western corner of the site, along with clearance of vegetation at the new entrance to the south of the site, and removal of areas of the central hedgerow to create access to the eastern field. This could result in direct harm to individual dormice and create a negative effect on the conservation status of this species. It is therefore imperative that during works to any hedgerows, treelines, scrub or woodland, including cutting back/tidying trees, the reasonable avoidance measures outlined below are followed. All reasonable avoidance measures will be supervised by a suitable experienced and licensed ECoW at all times.

Any vegetation to be removed should be meticulously hand searched in small increments, from the outside of the vegetation first. When a section is determined to be clear, it can be cut back slightly, using a hand-held tool only to gain visibility gradually into the centre of the vegetation until a thin strip of vegetation remains that can be checked before being dug out. If dormice are found at any time during this process by the ECoW or a contractor, work must cease immediately and further consultation with Natural England may be required before continuing work. Dormice must not be handled at any time by site staff, and only by the licensed ECoW.

Timing is important to prevent any disturbance to this species. The above ground vegetation that requires removal will firstly be cut to approximately 200mm above ground, using handheld power tools (i.e. a chainsaw) in the winter (November to March) with the stumps and roots removed the following summer (May to September). This is to prevent harm to dormice that are breeding and in torpor.

Once all vegetation has been removed through reasonable avoidance measures, works can begin as planned, with contact details for the acting ecologist passed on to all contractors in the very unlikely event protected species are identified on site.

3.4 Creation of Dormouse Habitat

New species-rich native hedgerows with trees are proposed for planting across the site. This will improve connectivity between existing on-site habitats and those within the wider landscape, while also compensating for any lost habitat as a result of the development, and overall providing new habitat for dormice on site.

3.5 Connectivity

Retention of vital hedgerows has been secured within the proposal, to retain connectivity within the site and to the wider landscape, to prevent any suitable habitat on site becoming isolated. Where possible, severance of hedgerows has been minimised, but where roads have been necessary, vegetation can be managed as such that the canopies either side close rapidly, further reducing any fragmentation of existing habitat. It will be suggested



that canopy connectivity can be retained where gaps of more than 3m are present, such as through the central hedgerow, by installation of specialised dormouse bridges². This is because gaps of more than 3m have been proven to present a significant barrier to dormouse movement³. These bridges will need to be installed immediately after vegetation clearance in that specific area.

Planting of new hedgerow along the south-eastern border will increase the amount of suitable habitat available for dormice and will increase connectivity from the south of the site with the north of the site, and the habitats present in the wider surrounding landscape.

3.6 Post-Construction Measures

3.6.1 Sensitive Lighting Scheme

Bright external lighting can have a detrimental impact upon dormice. An ecologically sensitive scheme that conforms to Bat Conservation Trust guidance must be committed to (see Appendix 2). This will include the following measures:

- dark corridors will be maintained around all woodland parcels and hedgerows to be retained;
- no 'upward pointing' or bare bulb lights will be installed anywhere on the development. The lighting scheme will be designed to minimise light spill onto any retained or created semi-natural habitats;
- no external lights will be installed on new buildings above a height of 2m and all external lights will have shields to prevent light splash beyond horizontal; and
- artificial lighting is to be pointed away from existing and created habitat for dormouse.

3.6.2 Vegetation Management

Where vegetation borders the roads and requires cutting back for safety, it is preferable to cut back the lower limbs while allowing the canopy to remain, so this can bridge and strengthen the gap between habitat parcels and allow dormice to move freely within.

Ensuring the health of trees within the existing and created habitats for dormice will be important, to make sure these habitats remain in optimum condition and provide suitable habitat to sustain a breeding dormouse population. This includes checking for damage from browsing, signs of disease, and encroachment of invasive species, alongside replacement of failed specimens.

Where possible, trees, shrubs, scrub and hedgerows shouldn't be cut until February, so that valuable winter food associated with fruiting shrubs and trees is retained for dormice.

3.7 Timetable for Implementation

As previously mentioned, timing is important to prevent any disturbance to this species. Above ground vegetation should be removed in the winter (November–March) with any stumps and roots removed the following summer (May–September) to prevent harm to dormice that are breeding and in torpor.

² PTES (2024) Dormouse bridges – Available online at: <https://ptes.org/campaigns/dormice/hazel-dormouse-conservation/dormouse-bridges/>

³ Bright, P.W (1998) Behaviour of specialist species in habitat corridors: arboreal dormice avoid corridor gaps.



Table 1 below provides the timetable for management of the site. All construction dates are indicative, and should any delays occur, the following activities in the timetable will also be amended to ensure these occur at a suitable time.

A monitoring survey of the nest boxes installed within the site will be required at the end of the construction phase and three years after the final phase is completed to ensure dormouse populations have not been cut-off from using any of the on-site habitats.

Table 1. Proposed timetable for the development at land north of Balcombe Road.

Action	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Pre-commencement – Whole Site												
Installation of 10 dormouse boxes	X	X	X	X	X	X	X	X	X	X	X	X
Nomination of a Biodiversity Champion	X	X	X	X	X	X	X	X	X	X	X	X
Fencing installation	X	X	X	X	X	X	X	X	X	X	X	X
Site check by the ECoW						X	X					
Vegetation destructive search (above ground)								X	X	X	X	X
Year 1												
Vegetation destructive search (below ground)	X	X	X	X	X	X						
Sign-off site walkover by suitably qualified ecologist							X	X	X			
Checking of fences by the Biodiversity Champion	X	X	X	X	X	X	X	X	X	X	X	X
Construction of new houses and roads							X	X	X	X	X	X
Creation of new hedgerows	X	X	X	X	X	X	X	X	X	X	X	X
Year 2/3												
Construction of new houses and roads	X	X	X	X	X	X	X	X	X	X	X	X
Creation of new hedgerows	X	X	X	X	X	X	X	X	X	X	X	X
Year that construction is complete												
Removal of barrier fencing after construction is completed	X	X	X	X	X	X	X	X	X	X	X	X
Monitoring survey of nest boxes	X	X	X	X	X	X	X	X				
3 years after completion of construction												
Monitoring survey of nest boxes	X	X	X	X	X	X	X	X				

3.8 Responsible Persons

A suitably qualified and licensed ecologist must be instructed to oversee these works.

A Biodiversity Champion among the main work team will be nominated, who must ensure the Heras fencing and acoustic membrane is checked at least once a week. Should any repairs or maintenance of the fence be required,



the Biodiversity Champion will be responsible for reporting this to the ECoW and ensuring this is done as soon as possible to ensure the works area remains clearly demarcated.

All contractors should have a copy of this report, including the proposed locations map, when implementing works relating to the biodiversity enhancement measures. A site inspection should also be undertaken by a suitably qualified ecologist post-construction, to ensure compliance with this report and that all enhancement measures are correctly implemented.

A suitably qualified ecologist will be required to complete the dormouse monitoring surveys of the site three years after the final stage of construction has been completed.

3.9 Monitoring and Remedial Measures

After the construction has begun, a final sign-off check will be completed by a suitably qualified ecologist. This is to ensure the Heras fencing is still *in situ*, and site rules are being followed (e.g. construction activities remaining confined to the construction zone).

A suitably qualified ecologist will be required to complete the dormouse monitoring surveys of the boxes installed across the site at the end of the construction phase and three years after final completion. This will be followed by a closing out report containing the findings, which will be submitted to the Local Planning Authority.

If numbers of dormice on site are not similar to or greater than the surveys carried out in 2024, then management of the site will be readdressed. Suggested improvements could include (but are not restricted to):

- further planting of trees across the site, close to existing trees, hedgerows and woodland, to increase foraging and commuting habitat;
- alterations to management (adaptive management) of the woodland parcels, hedgerows and thorny buffers in collaboration with an ecologist; and
- installation of further nest boxes.

4 CONCLUSION

The measures set out in this document will ensure that the development at land north of Balcombe Road will not result in net loss of local dormouse conservation status, by providing sufficient quality, quantity and connectivity of habitat to accommodate the dormouse population on site in the long-term.

Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op.



APPENDIX 1 – Wildlife Legislation and National Planning Policy

Introduction

The following text is intended for general guidance only and does not constitute comprehensive professional legal advice. It provides a summary of the current legal protection afforded to wildlife in general and certain species. It includes current national planning policy relevant to nature conservation.

The ‘Birds Directive’, ‘Habitats Directive’ and ‘Natura 2000 Sites’

The Council Directive 79/409/EEC on the Conservation of Wild Birds (“the Birds Directive”) sets a framework for the protection of wild birds. Under the Directive, several provisions are made including the designation and protection of ‘Special Protection Areas’ (SPAs) – areas which support important bird populations, and the legal protection of rare or vulnerable species.

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the “Habitats Directive”) directs member states of the EU to take measures to maintain the favourable conservation status of important habitats and species. This requires the designation of a series of sites which contain important populations of species listed on Annex II of the Directive (for example Bechstein’s bat *Myotis bechsteinii*, Barbastelle bat *Barbastella barbastellus* and white-clawed crayfish *Austropotamobius pallipes*). Together with ‘Special Areas of Conservation’ (SACs), SPAs form a network across Europe of protected areas known as the ‘Natura 2000 sites’.

Annex IV lists species in need of more strict protection, these are known as “European Protected Species (EPS)”. All bat species, common dormice *Muscardinus avellana*, otter *Lutra lutra* and great crested newts *Triturus cristatus* are examples of EPS that are regularly encountered during development projects.

The ‘Habitats Regulations’

The Conservation of Habitats and Species Regulations 2017, as amended (the “Habitats Regulations”) is the principle means of transposing the Habitats Directive and the Birds Directive, and updates the Conservation (Natural Habitats, &c.) Regulations 1994 (“the 1994 regulations”) in England and Wales.

‘Natura 2000’ sites, now known as National Site Network sites under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, receive the highest level of protection under the Regulations which requires that any activity within the zone of influence of these sites would be subject to a Habitats Regulations Assessment (HRA) by the competent authority (e.g. planning authority), leading to an Appropriate Assessment (AA) in cases where ‘likely significant effects’ to the conservation objectives are identified.

For European Protected Species, Regulation 41 makes it a criminal offence to:

- deliberately capture, injure or kill any such animal;
- deliberately disturb wild animals of such species;
- deliberately take or destroy their eggs (where relevant);
- damage or destroy a *breeding or resting place* of such an animal;
- possess, control, sell or exchange any live or dead animal or plant, of such species;
- deliberately pick, collect, cut, uproot or destroy a wild plant of such species.

The Habitats Directive and Habitats Regulations provide for the derogation from these prohibitions for specific reasons provided certain conditions are met. An EPS licensing regime allows operations that would otherwise be unlawful acts to be carried out lawfully. Natural England is the licensing Authority and, in order to grant a licence,



ensures that three statutory conditions (sometimes referred to as the ‘three derogation tests’) are met:

- a licence can be granted for the purposes of “preserving public health or safety or for other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment” (Regulation 53 (2) (e);
- a licence can be granted if “there are no satisfactory alternatives” to the proposed action;
- a licence shall not be granted unless the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Wildlife and Countryside Act (1981) as amended

This remains one of the most important pieces of wildlife legislation in the UK. There are various schedules to the Act protecting birds (Schedule 1), other animals including insects (Schedule 5), plants (Schedule 8), and control of invasive non-native species (Schedule 9).

Under the Wildlife and Countryside Act (WCA) 1981, all wild birds (with the exception of those listed on Schedule 2), their eggs and nests are protected by law and it is an offence to:

- take, damage or destroy the nest of any wild bird while it is in use or being built;
- take or destroy the egg of any wild bird;
- disturb any bird listed on Schedule 1, while it is nest building, or at a nest with eggs or young, or disturb the dependant young of any such bird.

Schedule 5 lists all non-avian animals receiving protection to a varied degree. At its strongest, the Act makes it an offence to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturb animals while occupying such places. Examples of species with full protection include all EPS, common reptile species, water vole *Arvicola amphibius*, white-clawed crayfish *Austropotamobius pallipes* and Roman snail *Helix pomatia*. Other species are protected from sale, barter or exchange only, such as white letter hairstreak *Satyrrium w-album*.

The Act makes it an offence to intentionally pick, uproot or destroy any plant or seed, and sell or possess any plant listed on Schedule 8. It is also an offence to intentionally uproot any wild plant not listed on Schedule 8 unless authorised [by the land owner]. Species on Schedules 5 and 8 are reviewed every 5 years when species can be added or removed.

Measures for the prevention of spreading non-native species which may be detrimental to native wildlife is included in the Act, which prohibits the release of animals or planting of plants into the wild of species listed on Schedule 9 (for example, Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandifera*, New Zealand Pygmyweed *Crassula helmsii*).

The Wildlife and Countryside Act 1981 (as amended) also prohibits certain inhumane methods of traps and devices for the capture or killing of wild animals and certain additional methods such as fixed trap, poisoning with gas or smoke, or spot-lighting with vehicles for killing species listed on Schedule 6 of the Act (this includes all bat species, badger, otter, polecat, dormice, hedgehog and red squirrel).

Natural Environment and Rural Communities (NERC) Act (2006)

The NERC Act (2006) created the statutory nature conservation body Natural England, and places a statutory duty on all public bodies, including planning authorities, under Section 40, to take, or promote the taking by others, steps to further the conservation of habitats and species of principal importance for the conservation of biodiversity in England (commonly referred to as the ‘Biodiversity Duty’). This duty extends to all public bodies the biodiversity



duty of Section 74 of the Countryside and Rights of Way (CROW) Act 2000, which placed a duty only on Government and Ministers. Section 41 of the NERC Act lists the habitats and species of principle importance. This includes a wide range of species from mosses, vascular plants, invertebrates through to mammals and birds. It originates from the priority species listed under the UK Biodiversity Action Plan (UK BAP) with some omissions and additions.

Environment Act (2021)

The Environment Act sets a target of halting the decline in species through the inclusion of a legally binding 2030 species abundance target. Aiming to restore natural habitats and enhance biodiversity, the Act requires new developments to improve or create habitats for nature (through mechanisms such as mandatory Biodiversity Net Gain), and tackle deforestation. Going forwards, UK businesses will need to look closely at their supply chains as amongst other measures they will be prohibited from using commodities associated with wide-scale deforestation. Woodland protection measures are also strengthened through the Act.

The Act enables the reform of the Habitats Regulations and further improves protection for nature through the establishment of Local Nature Recovery Strategies that support national Nature Recovery Networks. In addition, the Act provides for the production of Protected Site Strategies and Species Conservation Strategies, aimed at supporting the design and delivery of strategic approaches to deliver better outcomes for nature.

Protection of Badgers Act (1992)

The badger *Meles meles* is afforded specific legal protection in Britain under the Protection of Badgers Act (1992), and Schedule 6 of the Wildlife and Countryside Act 1981 (as amended) (see above).

Under this legislation, it is a criminal offence to:

- intentionally kill, injure, take, possess, or cruelly ill-treat, a badger, or to attempt to do so;
- interfere with a sett, by damaging or destroying it;
- to obstruct access to, or any entrance of, a badger sett; or
- to disturb a badger when it is occupying a sett.

A licence may be obtained from Natural England to permit certain prohibited actions for a number of defined reasons including interference of a sett for the purpose of development, provided that a certain number of conditions are met. Note that licenses are not normally granted for works affecting badgers between the end of November and the start of July.

National Planning Policy Framework

The National Planning Policy Framework (NPPF 2024)⁴ sets out the Government's view on how planners should balance nature conservation with development and helps ensure that Government meets its biodiversity commitments with regard to the operation of the planning system.

Paragraph 192b, states that council plans should “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.”

⁴ HM Government (2024). National Planning Policy Framework. Department for Communities and Local Government. Available online at: https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf



The Office of the Deputy Prime Minister (ODPM) Circular 06/2005, 2005)⁵. In accordance with the NPPF, it is important that developments should contribute to and enhance the natural and local environment by:

- minimising impacts on existing biodiversity and habitats;
- providing net gains in biodiversity and habitats, wherever possible;
- establishing coherent ecological networks that are more resilient to current and future pressures.

UK Post-2010 Biodiversity Framework

The UK Biodiversity Action Plan (UK BAP), first published in 1994, was the UK's response to the commitments of the Rio Convention on Biological Diversity (1992) until 2010, when the UK BAP was replaced by the UK Post-2010 Biodiversity Framework. This framework covers the period 2011 to 2020 and forms the UK government's response to the new strategic plan of the United Nations Convention on Biodiversity (CBD) published in 2010. This promotes a focus on individual countries delivering target for protection for biodiversity through their own strategies.

The most recent biodiversity strategy for England, 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' was published by Defra (2011), and a progress update was provided in July 2013 (Defra 2013).

'Biodiversity 2020' builds on the Natural Environment White Paper for England – 'The Natural Choice', published on 7 June 2011, and sets out the strategic direction for biodiversity policy for the next decade.

Biodiversity 2020 deliberately avoids setting specific targets and actions for local areas and species because the Government believes that local people and organisations are best placed to decide how to implement the strategy in the most appropriate way for their local area or situation.

Birds of Conservation Concern (BoCC)

In 1996, the UK's leading non-governmental bird conservation organisations listed the conservation status of all bird species in the UK against a series of criteria relating to their population size, trends and relative importance to global conservation. The lists, known as the 'Red', 'Amber' and 'Green' lists (in order of decreasing concern) are used to inform key conservation policy and decisions. The lists are reviewed every five years and are a useful reference for determining the current importance of a particular site for birds. The most recent review was undertaken in 2021 (Stanbury et al, 2021), which provides an up to date assessment of the conservation status of birds in the UK.

References

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⁵ HM Government (2005) ODPM Circular 06/05 Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System. Available online at:

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APPENDIX 2 – Reducing Impacts of Artificial Light

Bright external lighting can have a detrimental impact upon foraging and commuting bat flight paths, but more importantly can also cause bats to remain in their roosts for longer. Artificial lighting can also cause significant impacts to other nocturnal species, most notably moths and other nocturnal insects. It can also result in disruption of the circadian rhythms of birds, reducing their fitness.

Guidelines issued by the Bat Conservation Trust⁶ should be referred to when designing the lighting scheme. Note that lighting designs in very sensitive areas should be created with consultation from an ecologist and using up-to-date bat activity data where possible. The guidance contains techniques that can be used on all sites, whether a small domestic project or larger mixed-use, commercial or infrastructure development. This includes the following measures:

Avoid lighting key habitats and features altogether

There is no legal duty requiring any place to be lit. British Standards and other policy documents allow for deviation from their own guidance where there are significant ecological/environmental reasons for doing so. It is acknowledged that in certain situations lighting is critical in maintaining safety, such as some industrial sites with 24-hour operation; however, in the public realm, while lighting can increase the perception of safety and security, measurable benefits can be subjective. Consequently, lighting design should be flexible and be able to fully consider the presence of protected species.

Apply mitigation methods to reduce lighting to agreed limits in other sensitive locations – lighting design considerations

Where bat habitats and features are considered to be of lower importance or sensitivity to illumination, the need to provide lighting may outweigh the needs of bats. Consequently, a balance between a reduced lighting level appropriate to the ecological importance of each feature and species, and the lighting objectives for that area will need to be achieved. The following are techniques which have been successfully used on projects and are often used in combination for best results:

- dark buffers, illuminance limits and zonation;
- sensitive site configuration, whereby the location, orientation and height of newly built structures and hard standing can have a considerable impact on light spill;
- consideration of the design of the light and fittings, whereby the spread of light is minimised ensuring that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Consideration should be given to the height of lighting columns. It should be noted that a lower mounting height is not always better. A lower mounting height can create more light-spill or require more columns. Column height should be carefully considered to balance task and mitigation measures. Consider no lighting solutions where possible such as white lining, good signage, and LED cat's eyes. For example, light only high-risk stretches of roads, such as crossings and junctions, allowing headlights to provide any necessary illumination at other times;
- screening, whereby light spill can be successfully screened through soft landscaping and the installation of walls, fences and bunding;
- glazing treatments, whereby glazing should be restricted or redesigned wherever the ecologist and lighting professional determine there is a likely significant effect upon key bat habitat and features;

⁶ Bat Conservation Trust and Institute for Lighting Professionals (2018) Guidance note 8. Bats and Artificial Lighting.
<https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>



- creation of alternative valuable bat habitat on site, whereby additional or alternative bat flightpaths, commuting habitat or foraging habitat could result in appropriate compensation for any such habitat being lost to the development;
- dimming and part-night lighting. Depending on the pattern of bat activity across the key features identified on site it may be appropriate for an element of on-site lighting to be controlled either diurnally, seasonally or according to human activity. A control management system can be used to dim (typically to 25% or less) or turn off groups of lights when not in use.

Demonstrate compliance with illuminance limits and buffers

- Design and pre-planning phase; it may be necessary to demonstrate that the proposed lighting will comply with any agreed light-limitation or screening measures set as a result of your ecologist's recommendations and evaluation. This is especially likely to be requested if planning permission is required.
- Baseline and post-completion light monitoring surveys; baseline, pre-development lighting surveys may be useful where existing on or off-site lighting is suspected to be acting on key habitats and features and so may prevent the agreed or modelled illuminance limits being achieved.
- Post-construction/operational phase compliance-checking; as a condition of planning, post-completion lighting surveys by a suitably qualified person should be undertaken and a report produced for the local planning authority to confirm compliance. Any form of non-compliance must be clearly reported, and remedial measures outlined. Ongoing monitoring may be necessary, especially for systems with automated lighting/dimming or physical screening solutions.

Lighting Fixture Specifications

The Bat Conservation Trust recommends the following specifications for lighting on developments to prevent disturbance:

- lighting spectra: peak wavelength >550nm
- colour temperature: <2700k (warm)
- reduction in light intensity
- minimal UV emitted
- upward light ratio of 0% and good optical control.

Further reading:

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