



Bat Roost Assessment

BE-1715-01B

Brigate Mill, Windmill Road, North Walsham,
Norfolk, NR28 9LT

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Report title	Bat Roost Assessment
Report reference	BE-1715-01
Revision	B
Site address	Brigate Mill, Windmill Road, North Walsham, Norfolk, NR28 9LT
Grid reference	TG 31046 27702
Report composed by	David Watts MCIEEM
Client	Michael & Karen Coleman
Date	7 th June 2023

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Executive Summary

DWA Ecology have been instructed by Michael and Karen Coleman to undertake a Bat Roost Assessment at Briggate Mill, Windmill Road, North Walsham, Norfolk, NR28 9LT.

The scoping survey identified three buildings on the site. Of these, Building 1 was found to have negligible potential and Building 2 and Building 3 were found to have low potential for roosting bats.

A dusk emergence survey of Building 2 did not identify bats emerging from or re-entering the building. A subsequent survey of Building 3 did not identify bats emerging from or re-entering the building.

Both surveys identified bats commuting and foraging along the boundaries of the site. The development will not impact upon these foraging and commuting routes.

Nesting jackdaws (*Coloeus monedula*) were identified under the eaves of Building 1. Works to this building must avoid the bird nesting season (1st March – 31st August), or only be carried out within this period if it has been established that nesting birds are no longer present.

It is recommended that the ecological value of the site is enhanced through the incorporation of bat and bird boxes into the development proposals.

The habitats adjacent to the site are suitable for other protected and notable species. It is recommended that a precautionary approach to works is adopted to avoid impacts to any other protected and notable species.

1. Introduction

1.1. Instruction

DWA Ecology have been instructed by Michael and Karen Coleman to carry out a Bat Roost Assessment at Brigate Mill, Windmill Road, North Walsham, Norfolk, NR28 9LT, hereafter referred to as 'the site'.

1.2. Aims and Objectives

The purpose of the report is to:

- Determine if bats are present or absent in the building on the site.
- If bats are found to be present, to estimate the size and status of the roost.
- If necessary, to identify the requirement for further surveys, and for mitigation measures including avoidance of ecological impact, compensation and ecological enhancement.

1.3. Legislation and Policy

A summary of legislation and policy affecting bats in the UK can be viewed in *Appendix 3: Legislation and Policy*.

1.4. Site Details

The site consists of a residential property accessed off the south of Windmill Road. The site is bordered by a woodland to the east, south and west. There are three buildings on the site, hereafter referred to as Building 1, Building 2 and Building 3.

1.5. Development Proposals

The development proposals are to renovate Building 1 and Building 2 for residential use. A single story extension will be constructed between Building 2 and Building 3. Skylights will be installed within the roof of Building 3.

2. Methods

2.1. Desk-Based Study

Magic Maps was consulted as to any granted European Protected Species Mitigation Licences (ESMLs) within 6km of the site.

Aerial imagery was assessed using OS maps and Google Earth Pro to give an appraisal of the surrounding land use.

2.2. Bat Scoping Survey

The initial scoping survey was undertaken on 20th April 2023 by David Watts.

The survey was based upon methodologies prescribed by Collins (2016), Mitchell-Jones (2004) and Mitchell-Jones and McLeish (2004). This involved an inspection of the exterior and interior of the building. Any structural features with potential for use by roosting bats were recorded and any suitable access points were identified. Where possible, features were inspected with a Ridgid CA300 endoscope. Any direct evidence of bats, such as scratch marks, oil stains, droppings and feeding remains were also identified.

Taking account of the structural features of the building and the surrounding habitat, the building was assigned a level of roost suitability based upon professional judgement (see table 2.1).

Table 2.1 Bat roost suitability and descriptions

Bat Roost Suitability	Description
Confirmed presence	Bat presence confirmed during the scoping survey
High	Buildings that have many areas suitable for roosting which are obviously suitable for use by a larger number of bats including maternity colonies.
Moderate	Buildings with a smaller number of areas suitable for roosting, but still supporting feature that could be attractive to bats and potentially support maternity colonies.
Low	Buildings with limited roosting opportunities but which could be used on a sporadic or occasional basis by a low number of bats, but which are unsuitable for maternity roosts.
Negligible	Buildings which appear unsuitable for roosting bats due to a clear lack of roosting spaces such as voids and/or absence of suitable access points.

2.3. Other Protected and Notable Species

As the development is mostly confined to the existing building footprint and other hardstanding surfaces, a full Preliminary Ecological Appraisal was not carried out. However, a walkover inspection was undertaken for signs of other protected and notable species, including nesting birds.

2.4. Bat Activity Surveys

The first dusk emergence survey of Building 2 was undertaken on 16th May 2023. The survey commenced approximately 30 minutes before sunset. An earlier than usual start time was selected as conditions on the site were dark due to the adjacent woodland, which may encourage early emergence. Following comments from the local authority, a second dusk emergence survey of Building 3 was carried out on 6th June 2023.

Surveyors were equipped with time expansion bat detectors and infrared/thermal imaging cameras. The building was monitored throughout the duration of the survey for any signs of emerging and/or re-entering bats. Any additional bat activity, such as foraging and commuting bats, was also recorded.

Table 2.2, below, shows a summary of the survey details. Surveyor locations are shown in *Appendix 2: Survey Plan*.

Table 2.2 Bat Activity survey details

Date	Sunset time	Start time	Finish time	Surveyors	Equipment	Weather (start/finish)
16/05/2023	20:46	20:15	22:16	David Watts	Echo Meter Touch 2, Guide Infrared TRACKIR PRO 19 Thermal Imaging Monocular	Dry. Temp. 15°C/9°C. Wind Beaufort 0/0 Cloud Okta 1/6
				Hamish Muirden	Echo Meter Touch 2, Night Fox RED HD Night Vision Goggles, and Illuminator	
06/06/2023	21:13	20:58	22:45	Danny Cotgrove	Echo Meter Touch 2, Night Fox RED HD Night Vision Goggles, and Illuminator	Dry. Temp. 12°C/10°C. Wind Beaufort 2/1 Cloud Okta 8/8
				Keith Cotgrove	Echo Meter Touch 2	

2.5. Qualifications of Surveyors

David Watts is an experienced ecologist who holds a BSc (Hons) Ecology, a PG Cert Biological Recording and is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). David holds Natural England class licences to survey bats (2016-24731-CLS-CLS) and barn owls (*Tyto alba*) (CL29/00320) and has been a named ecologist on 24 bat mitigation licences.

Hamish Muirden holds a BSc Biological Sciences and has six years' experience of ecological surveying, including bat activity surveys.

Danny Cotgrove is an experienced ecologist who holds a Natural England class licence to survey bats (2022-10919-CL18-BAT).

Keith Cotgrove is an experienced bat surveyor, with two years' experience of carrying out bat surveys.

2.6. Constraints

The site survey was constrained by the season in which it took place. Bats occupy different roost types throughout the year, and at the time of the survey, summer roosting bats would not have been present. Scoping surveys can however be carried out at any time of the year.

During the first activity survey the temperature dropped to below 10 °C. However, insect activity was abundant and bat activity was evident throughout the survey.

3. Results

3.1. Desk Based Study

DEFRA (2023) hold records of 23 granted European Protected Species Mitigation Licences (EPSMLs) within 6km of the site. These were to destroy breeding places and resting places of barbastelle (*Barbastella barbastellus*), serotine (*Eptesicus serotinus*), brown long-eared bat (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and Natterer's bat (*Myotis nattereri*). The closest of these was to destroy a resting place of common pipistrelle and brown long-eared bat, approximately 1.7km north of the site.

The surrounding land use is a mixture of agricultural and woodland, with a high level of tree cover. North Walsham and Dilham Canal is located approximately 400m northeast of the site. Overall, terrestrial connectivity within the surrounding area is good, with access between the site and semi-natural habitat.

3.2. Bat Scoping Survey

Building 1 consisted of a three-storey mill, which had previously been converted into residential use but had internally fallen into a state of disrepair. The brickwork on the exterior of the building was good, with no visible gaps. The building had a metal roof. There were large gaps between the brickwork and the metal capping, where nesting jackdaws (*Coloeus monedula*) could be observed. The interior of the building was well-lit by windows on all floors. The interior of the roof had been boarded with plywood and was well-sealed, with no potential access points suitable for bats. Due to the absence of any potential access points for bats, Building 1 was considered to have negligible potential for roosting bats.

Building 2 consisted of a single storey outbuilding with a pitched pantile roof, connected to Building 1 by a smaller pitched roof. The brickwork was painted, with no visible gaps. There were no soffits or fascia boards below the eaves. The ridge tiles appeared well-sealed, although there were numerous gaps under the roof tiles on both aspects which could provide opportunities for cavity roosting bats. Weatherboarding at the gable ends was well-sealed. An inspection of the roof void found it to be approximately 1.2m high. The interior of the roof tiles was lined with straw and the interior of the roof void was highly cluttered with cobwebs. No signs of roosting bats were identified. It was evident that bats weren't using the roof void, however due to the presence of lifted tiles on the exterior of the building, Building 2 was considered to have low potential for roosting bats.

Building 3 consisted of a single storey residential building with a pitched roof. The building was constructed of brick and clad in timber, which was well-sealed. Soffit boxes on all aspects were in good condition, with no visible gaps. There were several gaps under the pantiles on both aspects of the roof. The interior of the building consisted of two rooms. The main living room and bedroom to the north was open to the roof and well-lit inside. To the south was a bathroom, above which was a small roof void. The roof void had breezeblock gables and was lined with bituminous roofing felt, which was well-sealed and with no evidence of bats. It was evident that bats weren't using the roof void, however due to the presence of lifted tiles on the exterior of the building, Building 3 is considered to have low potential for roosting bats.

The garden and immediate surrounding area appeared highly suitable for foraging and commuting bats.

Photographs of the building can be viewed in *Appendix 1: Photographs*. A plan of the buildings can be viewed in *Appendix 2: Survey Plan*. Note that due to the presence of multiple lifted tiles, the entirety of the roofs of Building 2 and Building 3 provide potential roosting habitat; mapping of individual lifted roof tiles is not provided as it is unlikely to be feasible or accurate.

3.3. Bat Activity Surveys

No bats were observed emerging from or re-entering Building 2 during the first activity survey. Bat species, including common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle (*Pipistrellus nathusii*) and noctule (*Nyctalus noctula*) were observed commuting and foraging over the site. The first bat was recorded at 20:52, eight minutes after sunset. Following this, bats could be heard within the woodland to the south of the site and could be viewed commuting along the treeline to the north of the site throughout the survey. With the exception of this, activity within the site boundary was relatively low, confined to several passes to the north of the buildings.

No bats were observed emerging from or re-entering Building 3 during the second activity survey. Bat species, including serotine, common pipistrelle, soprano pipistrelle and noctule were observed commuting and foraging over the site, predominantly along the tree line at the south boundary (with the exception of noctule and serotine, which were audio records only). The first bat was recorded at 21:34, 21 minutes after sunset.

3.4. Other Protected and Notable Species

The woodland adjacent to the site provides suitable habitat for protected and notable species, and it is possible that species such as badger (*Meles meles*) utilise the site. As noted in the Bat Scoping Survey above, jackdaws have been recorded within Building 1. The trees and shrubs on the site also have potential for nesting birds.

Tawny owls (*Strix aluco*) were observed on the site during the activity surveys, as were several common garden bird species.

3.5. Assessment

The survey effort is sufficient to conclude that bats are likely absent from all three buildings on the site.

The site is used by foraging and commuting bats, particularly the woodland to the south and tree line to the north. These habitats will not be impacted by the proposals, and there will be no artificial lighting incorporated into the development.

In the absence of further mitigation, works to Building 1 may impact upon nesting jackdaws. This could be avoided by ensuring that no works are carried out during bird nesting season (1st March – 31st August).

There is a small chance that other protected species such as badgers could be impacted during development works. This could easily be avoided through the adoption of further precautionary measures during development works.

4. Conclusion and Recommendations

4.1. Avoidance of Ecological Impact

It is not anticipated that bats will be impacted by development works, therefore a Natural England EPSML will not be required.

It is recommended that works proceed, subject to the following precautionary measures:

1. Prior to works commencing, the project ecologist will deliver a toolbox talk regarding protected species, their identification and recommended precautionary measures.
2. Works to Building 1 must either avoid the bird nesting season (1st March – 31st August) or be carried out within this period only if a further survey by a suitably qualified ecologist has confirmed that nesting birds are absent.
3. No works are to be carried out to the roof of Building 3. If any works are required to the roof, a further activity survey must be carried out to determine presence/absence of bats. If bats are found to be present, a Natural England EPSML will be required.
4. All hazardous materials (e.g., cement, oil, petrol) on site must be kept in a secured area where they cannot pose any harm to wildlife.
5. If any excavation is required due to the proposals, excavated areas must be fenced off or covered overnight to ensure that wildlife does not fall into excavations resulting in injury or entrapment.
6. If at any point bats or other protected species are found during development works, works must cease, and the project ecologist must be consulted immediately.

4.2. Ecological Enhancement

To ensure that the ecological value of the site is enhanced upon completion of the proposals, it is recommended that bat and bird boxes are incorporated into the development. These should include two bat boxes of type Schwegler 2FN or similar, and one tawny owl box. Note that following initial informal recommendations to the client, the tawny owl box has already been installed on a tree adjacent to the site entrance.

4.3. Lifespan of Report

Bats are highly mobile species and therefore the findings of this report may be subject to change. The findings of this report are considered valid for a period of 12 months (until June 2024).

5. References

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

DEFRA (2023). *Magic Maps* [online]. Available at: >www.magic.defra.gov.uk< [accessed 25th May 2023]

Google Earth Pro (2023). *Google Earth* [online]. Available at: >www.earth.google.com< [accessed 25th May 2023]

Mitchell-Jones, A.J. (2004). *Bat Mitigation Guidelines*. English Nature.

Mitchell-Jones, A.J., McLeish, A.P. (2004). *Bat Workers Manual*. Joint Nature Conservation Committee.

Appendix 1: Photographs



Plate 1: Building 1



Plate 2: Building 1, interior of roof



Plate 3: Building 1, interior of roof



Plate 4: Building 2, south aspect



Plate 5: Building 2, north aspect



Plate 6: Building 2, roof void



Plate 7: Building 3, south and west aspects



Plate 8: Building 3, north aspect



Plate 9: Adjacent woodland



Plate 10: Building 2, still from thermal imaging footage



Plate 10: Building 3, still from infrared footage

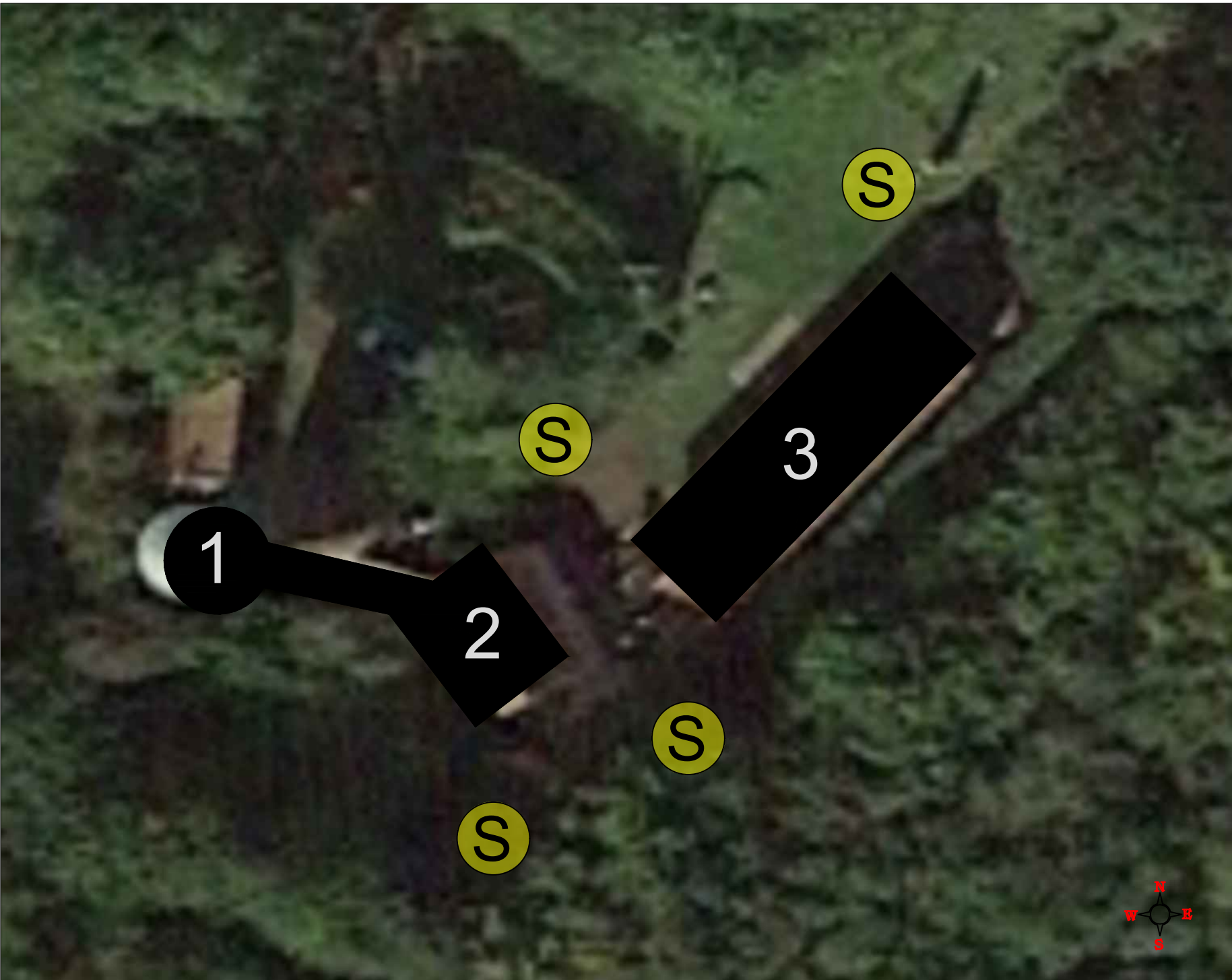
Appendix 2: Survey Plan

Key:

1 Buildings (approximate only, refer to architects plans for more detailed drawings)

S Surveyor locations

Drawing title:	Bat Survey Plan
Project:	Briggate Mill
Drawn by:	David Watts
Date:	07/06/2023
Scale:	1:200 @ A4



Appendix 3: Legislation & Policy

Legislation

All bat species are protected under Schedule II of the Conservation of Habitats and Species Regulations 2017. The Conservation of Habitats and Species Regulations makes it an offence to kill, capture or damage a bat, or to destroy a breeding site or resting place of a bat. Any development which compromises the protection afforded to bats under the regulations will require a European Protected Species License from Natural England.

All British bats are protected under the Wildlife and Countryside Act 1981, extended by the Rights of Way Act (2000), making an offence to deliberately or recklessly:

- Injure, kill or capture a bat.
- Disturb a bat (whether in a roost or not).
- Possess or control any live or dead specimen of a bat.
- Destroy or obstruct access to any structure or place used for protection by a bat species.
- Sell, barter or exchange a bat.

Policy

The UK Biodiversity Action Plan (UKBAP) includes a list of 943 national priority species and 56 habitats of principal importance, with all species and habitats having specific action plans defining the measures required to ensure their conservation. Although the UKBAP has since been superseded by the UK-Post 2010 Biodiversity Framework and a focus on County Biodiversity Plans, it remains a useful point of reference.

Section 41 of the Natural Environment and Rural Communities Act (NERC) 2006 required that any public bodies take into consideration any species and habitats listed in the UKBAP when implementing their duty and exercising any normal functions.

The National Planning Policy Framework (NPPF) states that planning decisions should aim to protect or enhance biodiversity and conservation interests, and where possible any development should aim to increase net gains in biodiversity.