



BiOME
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**2 Llanbrook
Clunton
Shropshire**

Bat Survey Report

MR JOHN CHATTAWAY

VERSION 2

Final

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Contents

1.	Introduction	1
1.1.	Site Description	1
1.2.	Development Proposal	2
2.	Legislative Background	3
3.	Methodologies	4
3.1.	Desk Study	4
3.2.	Preliminary Roost Assessment	4
3.3.	Emergence/Re-entry Surveys	5
3.4.	Limitations	6
4.	Results	7
4.1.	Desk Study	7
4.2.	Preliminary Roost Assessment	8
4.3.	Emergence/Re-entry Surveys	9
4.4.	Other Species	11
5.	Conclusions and Required Actions	12
5.1.	Designated Sites	12
5.2.	General Mitigation	12
5.3.	Bats – Roosts	12
5.3.1.	Results Summary	12
5.3.2.	Impacts	13
5.3.3.	Natural England Licencing	13
5.3.4.	Timing of Works	13
5.3.5.	Supervision of Works	13
5.3.6.	Compensation	14
5.4.	Bats - Lighting	15
5.5.	Nesting Birds	16
5.6.	Opportunities for Enhancement	16

1. Introduction

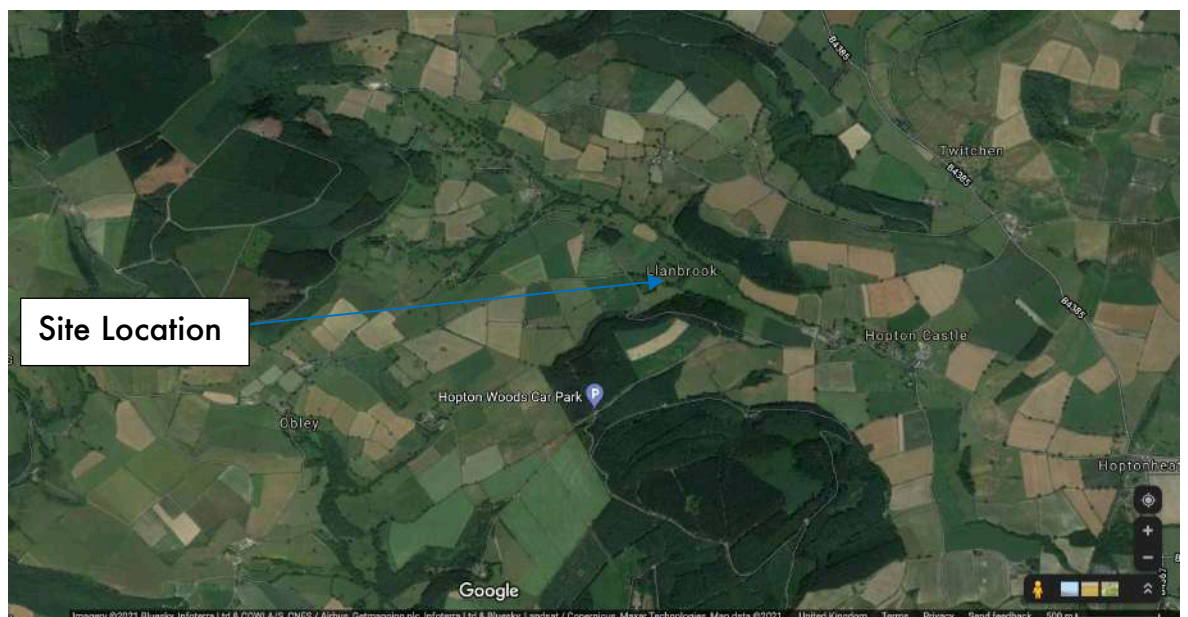
BiOME Consulting Ltd was commissioned by Mr John Chattaway in March 2021 to undertake a Preliminary Roost Assessment (PRA) survey and subsequent emergence/re-entry surveys of 2 Llanbrook, Clunton, Shropshire (*'the site'*) (**Figure 1**). The site is centred on National Grid Reference SO 35213 78521.

1.1. Site Description

2 Llanbrook is a detached one and a half storey cottage that is sited in isolated position on its own down a private track to the northeast of the lane that runs between Hopton Castle and Obley. The topography of this area is distinctive with steeply sloping plantation-covered hills interspersed with isolated dwellings and hill farms which lead down to valleys with streams and meadows. The small named settlement of Llanbrook is group of dispersed dwellings that includes this property.

The two-bedroom dwelling has been previously extended to the side and rear. To the north of the garden are trees and hedgerows and the ground slopes away towards the northeast.

Figure 1. Site location



1.2. Development Proposal

A side extension, adjoining the eastern elevation of the existing property is proposed, to provide an extra bedroom on the lower level.

Photograph 1. 2 Llanbrook, eastern elevation (i.e. the direct impact area)



2. Legislative Background

All British bat species are fully protected at national and European levels, through their inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended)¹ and in Schedule 2 of the Conservation of Habitat and Species Regulations 2010². Under this legislation, it is an offence to deliberately kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or resting place used for shelter or protection by a bat or disturb an animal while it is occupying a structure or place which it uses for that purpose.

Four species of bat, Greater Horseshoe Bat *Rhinolophus ferrumequinum*, Lesser Horseshoe Bat *R. hipposideros*, Bechstein's Bat *Myotis bechsteinii* and Western Barbastelle *Barbastella barbastellus*, are included on Annex II of the Habitats Directive³, which requires the designation of Special Areas of Conservation to ensure the maintenance of favourable conservation status (and these are therefore generally considered as perhaps the most important UK species). Seven bat species are listed as Section 41⁴ priority species; Barbastelle, Bechstein's Bat, Noctule *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Greater Horseshoe Bat and Lesser Horseshoe Bat.

1 The Wildlife and Countryside Act 1981 (as amended)

2 The Conservation of Habitats and Species Regulations 2010

3 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

4 Of the Natural Environment and Rural Communities Act 2006

3. Methodologies

3.1. Desk Study

Details in relation to internationally designated sites within 10km and nationally designated sites with 2km were obtained from www.magic.gov.uk. A search was also completed for any European Protected Species (EPS) development licences in relation to bats granted within 2km of the site.

3.2. Preliminary Roost Assessment

A PRA survey was completed on 19 March 2021 by Martyn Owen in line with appropriate survey guidance⁵.

Martyn is an experienced and qualified ecologist, and full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Martyn holds a Natural England licence to survey bats (2015-1974-CLS-CLS) which derogates the law with regard to disturbance of these species.

The survey involved a systematic search of the exterior of the building to be impacted by the proposals to identify potential or actual bat access points and roosting sites, and to locate any evidence of bats such as live or dead specimens, bat droppings, urine splashes, fur-oil staining and/or squeaking noises. It should be noted that sometimes bats leave no visible sign of their presence on the outside of a building (and even when they do wet weather can wash away evidence).

The external inspection also included the examination of the ground, particularly beneath any potential bat access points, for example any windowsills, window panes, walls, hanging tiles, weatherboarding, eaves, soffit boxes, fascias, lead flashing, gaps under felt, and under tiles/slates.

The inspection of buildings and built structures for evidence of bats, which can be conducted at all times of year was facilitated by the use of scaffolding erected on the building, a high-powered torch, endoscope and small dental mirrors to inspect

⁵ Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn.). The Bat Conservation Trust, London

accessible crevices considered likely to support bats. Weather conditions on the day of the survey were appropriate for undertaking ecological fieldwork (sunny and dry).

The potential suitability of the buildings for roosting bats was assessed in line with relevant guidelines⁵ and allocated to one of the categories detailed within **Table 1**.

Table 1. Guidelines for assessing the potential suitability of proposed development sites for bats

Suitability	Description of Roosting Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure/tree with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Moderate	A structure/tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure/tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Confirmed Roost	Roosting bat/s or definitive evidence of roosting bats (i.e. accumulations of droppings) present.

The site was also checked for evidence of nesting birds including nests, pellets, feathers, droppings, and live and/or dead specimens, as well as the potential for protected/controlled species.

3.3. Emergence/Re-entry Surveys

Following the identification of features with the potential to support roosting bats and confirmation of bat presence, nocturnal bat surveys were completed (**Table 2**).

Surveys were managed Richard Moores with assistance from Martyn Owen MCIEEM (NE bat licence number: 2016-19747-CLS-CLS) all of whom are experienced nocturnal bat surveyors.

Two nocturnal surveys were completed. To ensure coverage of all potential bat access points into the areas to the building to be impacted directly and indirectly (via disturbance), the survey was completed by a single surveyor.

The surveyor was equipped with an electronic bat detector (EM Touch Pro 2 and Peersonic) and sound files were analysed with appropriate bat analysis software (Kaleidoscope) once the surveys were completed, if necessary. Infra-red cameras were used during each survey.

The nocturnal bat surveys were undertaken in weather conditions considered appropriate for surveys of this kind (Table 2).

Table 2. Nocturnal bat activity survey information

Date	Surveyors	Sunset/ rise	Time		Cloud (octets)	Wind (Beaufort/ Direction)	Temp (°C)	Precip.
			Start	Finish				
04/06/2021	MO	21:27	21:12	23:27	2-1	0 - 1 / W	13- 12	Nil
21/07/2021	MO	05:13	03:30	05:28	Nil	0	15- 16	Nil

3.4. Limitations

The findings presented in this study represent those at the time of survey and reporting, and data collected from available sources. Ecological surveys are limited by factors which affect the presence of plants and animals, such as the time of year, migration patterns and behaviour.

No internal building inspection was completed due to health and safety considerations. However, a suite of emergence/re-entry surveys has been completed; the results of the surveys are therefore considered to be an accurate reflection of the status of roosting bats in areas to be impacted.

4. Results

4.1. Desk Study

There are two internationally designated sites and one nationally designated site within the relevant search areas; details are provided within **Table 3**.

Table 3. Designated site details

Site	Approx. distance from site centre/direction	Description
Internationally Designated Sites (1 km)		
River Clun Special Area of Conservation (SAC)	4.60km/ESE	Annex II species present as a qualifying feature, but not a primary reason for site selection: <u>1029 Freshwater Pearl Mussel <i>Margaritifera margaritifera</i></u>
Downton Gorge SAC	9.35km/ESE	Annex I habitats that are a primary reason for selection of this site: <u>9180 Tilio-Acerion forests of slopes, screes and ravines</u> * Priority feature Downton Gorge is an example of <i>Tilio-Acerion</i> forests in a narrow ravine with a distinctive microclimate and a variety of slopes and aspects. Both Small-leaved Lime <i>Tilia cordata</i> and Large-leaved Lime <i>T. platyphyllos</i> occur, together with Ash <i>Fraxinus excelsior</i> and Elm <i>Ulmus</i> spp. The ground flora includes Wood Fescue <i>Festuca altissima</i> and Violet Helleborine <i>Epipactis purpurata</i> . The gorge cliffs are rich in ferns, reflecting the humidity of the site, with a wide range of species recorded.

Site	Approx. distance from site centre/direction	Description
Nationally Designated Sites (2km)		
Clunton Coppice Site of Special Scientific Interest (SSSI)	1.90km/N	A remnant of the oak coppice which was formerly abundant in this part of Shropshire. Like most of the broadleaved, semi-natural woods remaining in this area, Clunton Coppice is situated on a steep slope and has an acid, comparatively infertile soil. The wood is dominated by Sessile Oak <i>Quercus petraea</i> , with well scattered Birch <i>Betula</i> spp. and, locally, Hazel <i>Corylus avellana</i> . Other tree species present are Holly <i>Ilex aquifolium</i> and Rowan <i>Sorbus aucuparia</i> . The ground flora consists of species which are characteristic of acidic soils, such as Wavy Hair-Grass <i>Deschampsia flexuosa</i> , Creeping Soft-grass <i>Holcus mollis</i> , Greater Woodrush <i>Luzula sylvatica</i> , Bilberry <i>Vaccinium myrtillus</i> , Heather <i>Calluna vulgaris</i> , Hard Fern <i>Blechnum spicant</i> , Common Cow-wheat <i>Melampyrum pratense</i> and Bracken <i>Pteridium aquilinum</i> . A notable species, the Oak Fern <i>Gymnocarpium dryopteris</i> , which is scarce in Shropshire also occurs. The western mosses <i>Dicranum majus</i> and <i>Rhytidiadelphus loreus</i> are present in some abundance.

No details of EPS development licences granted within 2km of the site were available.

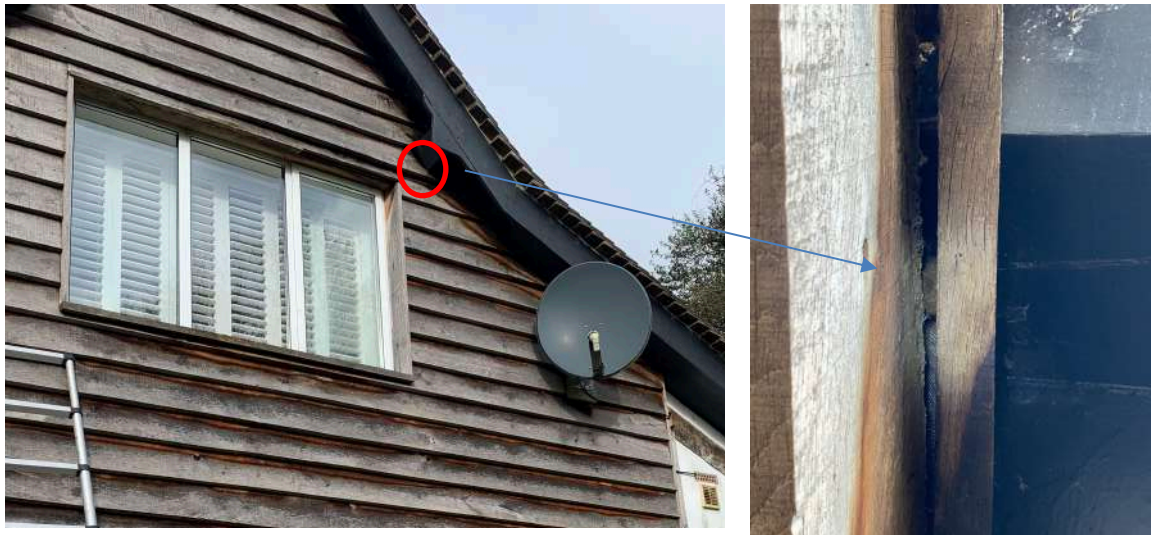
4.2. Preliminary Roost Assessment

The section of the house (**Photograph 1**) to be impacted was clad with wood over rendered stone walls. Two uPVC windows were present. The roof was covered with clay tiles with facias present.

Inspections of the areas to be impacted was completed to the first-floor window level. A single pipistrelle sp. was found roosting behind cladding (**Roost Location 1, Photograph 2**). Various other areas of lifted cladding were also present.

Due to the presence of a **CONFIRMED ROOST (Table 1)**, emergence/re-entry surveys were completed.

Photograph 2. Pipistrelle sp. ; Roost location 1



4.3. Emergence/Re-entry Surveys

Following the identification of a roosting bat and the presence of other features with the potential to support roosting bats, two nocturnal bat surveys were completed. As results were consistent across these surveys and the level of bat activity was consistent with the species/roosts identified a third survey was not deemed necessary

4 June 2021 (Dusk)

Prior to the survey the roost location identified during the PRA was inspected and no bats were present.

A single Soprano Pipistrelle emerged from a roost (at 21:36) at the eaves on the southern elevation (**Roost Location 2, Photograph 3**).

Following emergence, this Soprano Pipistrelle were regularly logged foraging in the area and was joined by two others from 21:49 onwards. A Noctule was logged high over the survey area at 22:01.

Photograph 3. Soprano Pipistrelle; Roost location 2



23 July 2021 (Dawn)

A Soprano Pipistrelle entered a roost at the apex of the eastern gable at 04:49. This bat was logged regularly prior to roosting.

No other bats were logged.

Photograph 4. Soprano Pipistrelle; Roost location 3



4.4. Other Species

No evidence of nesting birds was noted in areas to be impacted, although potentially suitable features were noted.

5. Conclusions and Required Actions

5.1. Designated Sites

No adverse impacts are predicted likely to occur to any statutory site due to the proposed renovations and no further works in relation to designated sites are deemed necessary.

5.2. General Mitigation

Standard pollution control measures should be implemented during construction to protect habitats on/adjacent to the site.

5.3. Bats – Roosts

5.3.1. Results Summary

Table 4 summarises the results of the bat surveys completed in relation to the redevelopment of 2 Llanbrook. The likely roost type based on the surveys completed is included below, along with an assessment of roost value⁶.

It is considered highly likely that the bat identified during the PRA was the same as logged during the emergence/re-entry surveys (i.e. a Soprano Pipistrelle).

Table 4. Bat survey results summary

Species	Maximum Number Recorded Roosting	Likely Roost Type (Maximum Value)	Roost Value	Impacted by Development?
Soprano Pipistrelle	1 (3 locations)	Day Roost	Local	Yes

No works that may disturb roosting bats, or prevent access to a potential bat roost should be completed until a mitigation licence is obtained.

⁶ Wray, S., Wells, D., Long, E., Mitchell-Jones, T., (2010). *Valuing Bats in Ecological Impact Assessment*.

5.3.2. Impacts

The proposed works will result in the loss of the Roost Locations 1 and 3 and disturbance of Roost Location 2.

5.3.3. Natural England Licencing

The confirmation of roosting bats within the barn means that a licence from Natural England will be required to enable the proposed works to proceed lawfully. Given the identified roosts are of low conservation status, the site can be registered under the Bat Mitigation Class Licence (BMCL) scheme through a Registered Consultant (RC). Following submission of appropriate forms, the application takes up to ten working days to be assessed by Natural England.

5.3.4. Timing of Works

There are no restrictions with regards to when (e.g. certain months of the year) works can take place, although it would be best practice to avoid low winter temperatures (<8 °C) when bats may be in torpor (pipistrelles can use the same roosts year-round). A BMCL can only be obtained a maximum of four months prior to the start of works to the area of the roost and the licence covers a maximum timeframe of six months (i.e. works to destroy/modify the roost must be completed in six months, NOTE that the project must be completed within this six-month window). All permissions are required to have been obtained before the site can be registered under the BMCL scheme.

5.3.5. Supervision of Works

Works in the areas of the roosts will need to be supervised by an RC (or accredited agent). Prior to works commencing, the RC would provide a 'toolbox talk' to those contractors on site in which details of e.g. best working practices and what to do in the event of discovering a bat would be discussed.

During supervised works to the area of the roost the RC would capture any bats that do not fly away and move them to a temporary bat box (erected on a nearby tree/structure prior to works commencing, **Figure 2**).

These works (when capture/handling and exclusion of bats is possible) should ideally take place in conditions suitable for bats to be active (spring-autumn

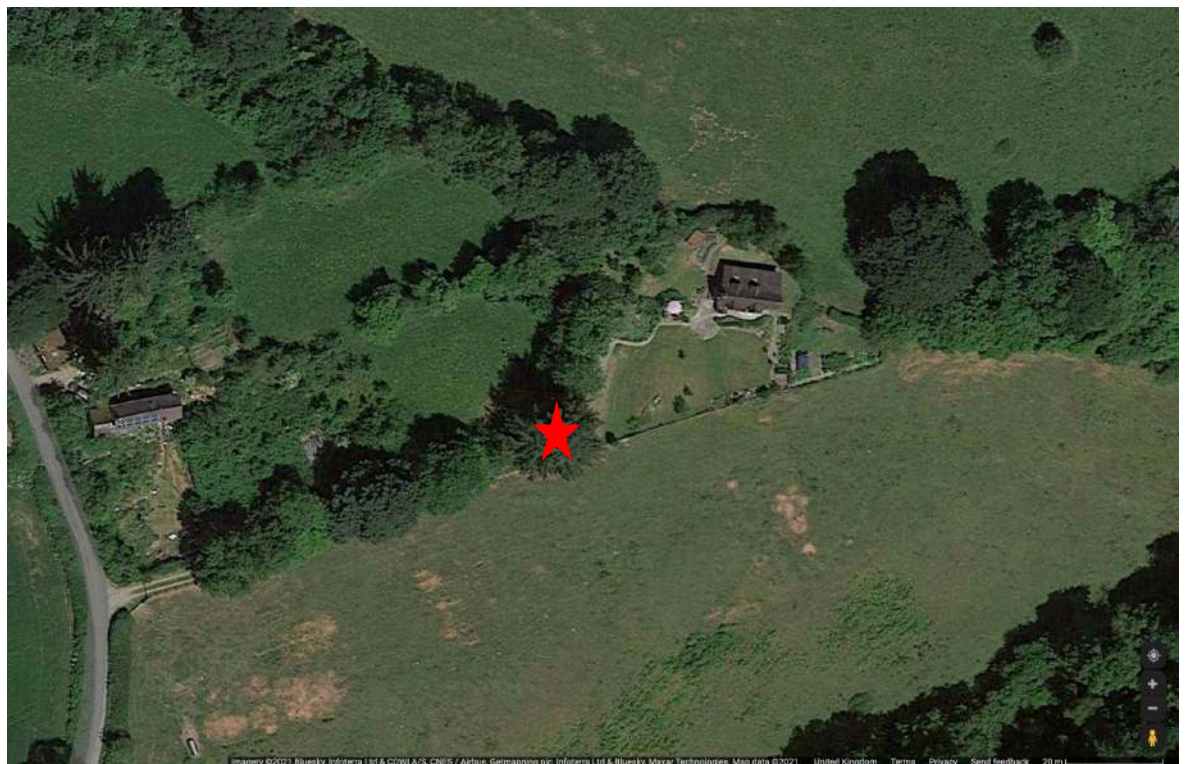
inclusive). However, works can also be undertaken in the winter as long as weather conditions allow (sunset temperature of at least 8°C on preceding 2+ days).

5.3.6. Compensation

Although there is no requirement for any compensatory roosting features to be installed under the BMCL scheme (favourable conservation status is maintained without any compensation), there may be a requirement in the conditions set out by the Local Planning Authority.

Should this be the case, it is recommended a [1FF Schwegler](#) bat box with built-in wooden rear panel is installed on a nearby tree.

Figure 2. Proposed bat box location



5.4. Bats - Lighting

Habitats with the potential to support foraging and/or commuting bats around the site periphery were present.

To minimise impacts to bats during construction, works during the period between 15 minutes before sunset and 15 minutes after sunrise should be avoided/minimised so far as practicably possible. If temporary lighting is necessary, it should be directed to where it is needed, and light spillage avoided.

To ensure that impacts commuting/foraging bats from permanent lighting are minimised so far as practicably possible, lighting should be directed to where it is needed and light spillage avoided. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvres and shields to direct the light to the intended area only.

The height of lighting columns in general should be as short as is possible as light at a low level reduces any ecological impact. However, there are cases where a taller column will enable light to be directed downwards at a more acute angle and thereby reducing horizontal spill. For access lighting this can take the form of low-level lighting that is as directional as possible and below 3 lux at ground level.

Light levels should be as low as possible and if lighting is not needed, it should be avoided.

Many security lights are fitted with movement sensors which, if well installed and aimed, will reduce the amount of time a light is on each night. This is more easily achieved in a system where the light unit and the movement sensor are able to be separately aimed. If the light is fitted with a timer this should be adjusted to the minimum to reduce the amount of 'lit time'. The light should be aimed to illuminate only the immediate area required by using as sharp a downward angle as possible. A shield or hood can be used to control or restrict the area to be lit. Avoid illuminating at a wider angle as this will be more disturbing to foraging and commuting bats and other wildlife.

5.5. Nesting Birds

The active nests of wild bird species (with certain exceptions) are legally protected from deliberate disturbance or destruction. In the apparently unlikely event that a bird nest is encountered works must cease and the advice of a SQE sought.

5.6. Opportunities for Enhancement

The National Planning Policy Framework (NPPF) sets out national planning policies for the protection of biodiversity (and geological) conservation through the planning system. A key principle of NPPF is that, '*Opportunities to incorporate biodiversity in and around developments should be encouraged*'. Taking the requirements of NPPF into account, opportunities should be sought where possible for nature conservation enhancement at this site.

Opportunities also exist to enhance the site for bat and bird species through the incorporation of bat/bird boxes into built structures or on trees. S41 priority species could potentially benefit from the provision of appropriate boxes. Such measures would therefore be beneficial to nature conservation and show compliance with the latest policy guidance.