John Drewett
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Bat Scoping Survey Report:

Old Joiner's Shop, Wrench Green, Hackness, Scarborough, YO13 9AB

Report prepared: 26 January 2016

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1 Executive summary

A bat scoping survey of the Old Joiner's Workshop at Wrench Green was commissioned by Carter Jonas in connection with a planning application to convert and extend the property. A previous bat scoping survey was carried out at the site in 2012 in connection with a earlier planning application.

The current survey was conducted on 18 January 2016 by John Drewett BSc (Hons), MCIEEM. It comprised a daytime examination of the building.

The building was found to be very similar to how it was at the time of the previous survey in 2012. No evidence of bats or other protected species was found at the site during the survey. The surveyor was made aware by a third party that the building had been used by Barn Owls in 2015 and that the building had recently been secured and cleaned. This was confirmed by the agent.

The building is considered to have no significant bat roost potential, so the proposed development is unlikely to adversely impact on bats. However, even where bats have not been found to roost at a property during a survey, there is always the risk that individual bats using the building on a casual basis could be encountered during works. Therefore, precautions have been set out in Chapter 8 which should be followed during the works.

The agent has been in touch with the Hawk & Owl Trust regarding Barn Owls and measures have been agreed to make temporary provision for roosting Barn Owls. Permanent provision needs to be incorporated into the surveyed buildings during conversion. A specification is set out in Chapter 8.

2 The survey site

2.1 Location

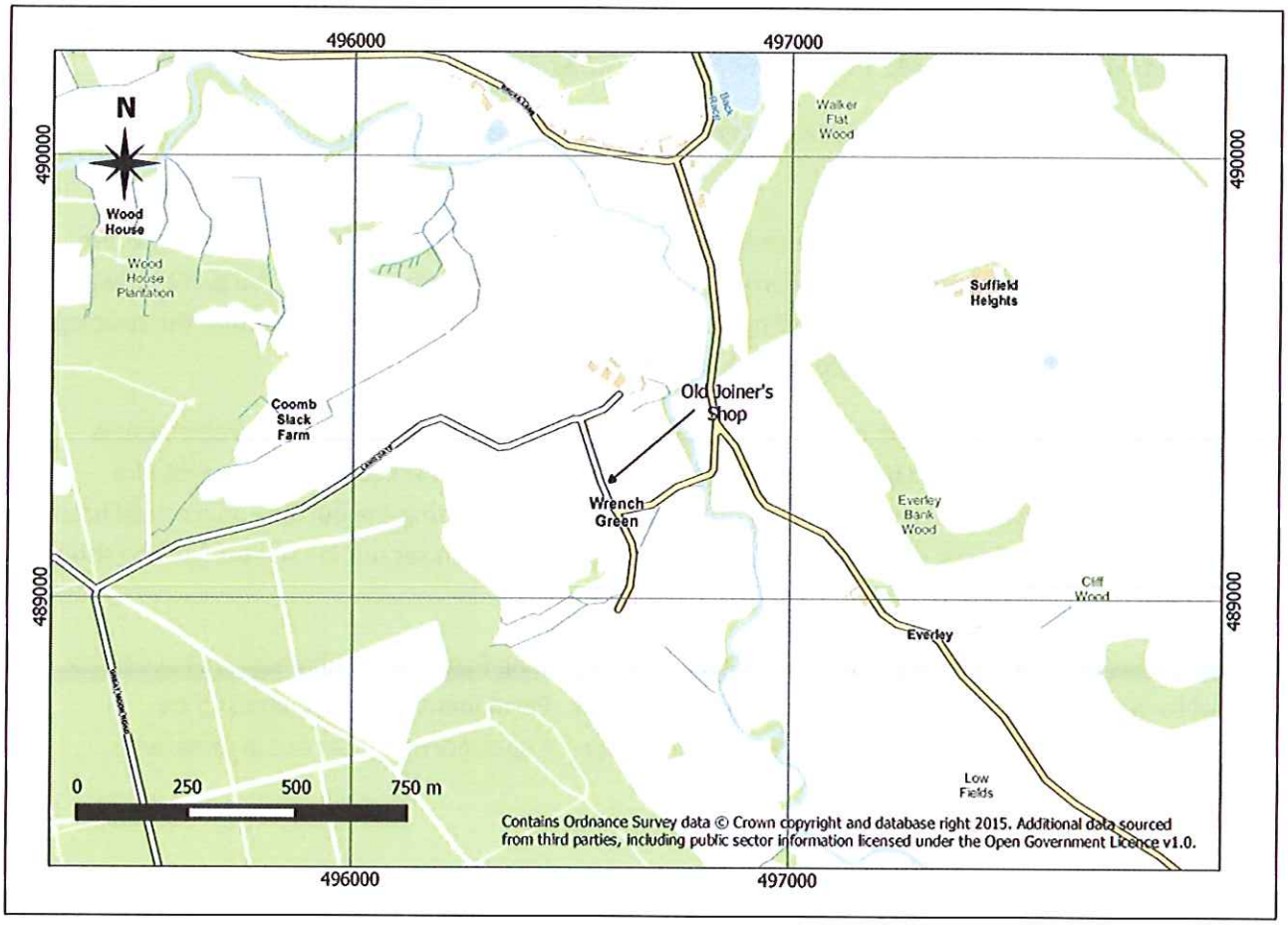

Figure 1: Location map for Old Joiner's Shop, Wrench Green. OS Grid Ref. SE966892

12 FEB 2016

2.2 Site layout

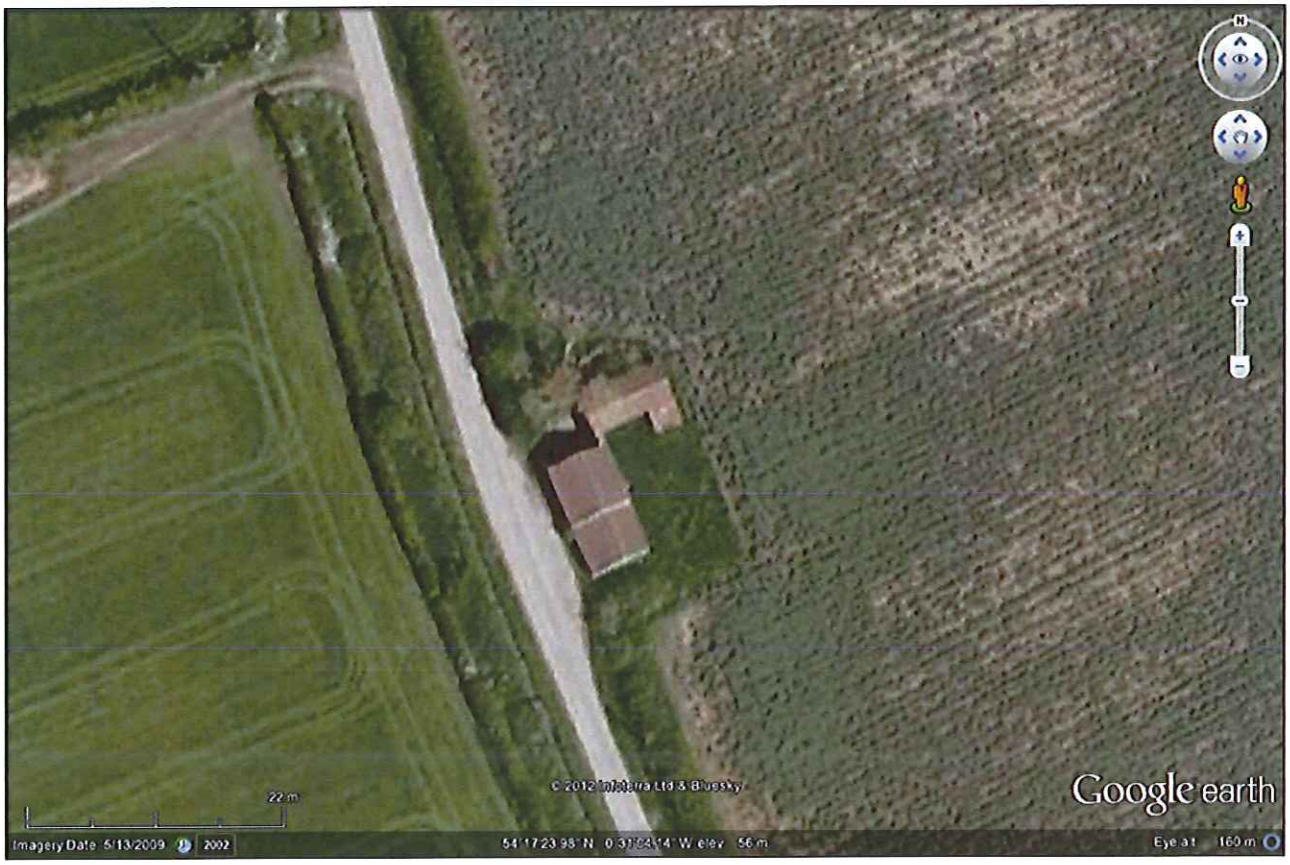

Figure 2: Aerial photograph of survey site

2.3 Surroundings

The surveyed property is in a rural location just south of the hamlet of Wrench Green about 6km west of Scarborough, North Yorkshire. The building is situated on an east facing slope leading down to the River Derwent. There is no light pollution at this location.

2.5km to the south-east are the extensive broadleaved woodlands of the Forge Valley National Nature Reserve, whilst 500m to the west is the large coniferous Wykeham Forest. There are a number of other smaller woods in the vicinity making this a very well wooded part of the North York Moors National Park.

The building borders arable land which largely follows the valley bottom close to the River Derwent which is 200m to the east. The Sea Cut, which takes water from the River Derwent out to sea at Scalby is 1km to the south-east. 1km to the north, at Hackness Hall, is a large lake.

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Figure 3: Aerial view of survey site and surrounding landscape

3 Proposed works

The proposal is for the conversion and extension of the existing buildings to form a two bedroom dwelling. The extension will be constructed at the north-west corner adjoining the existing two buildings.

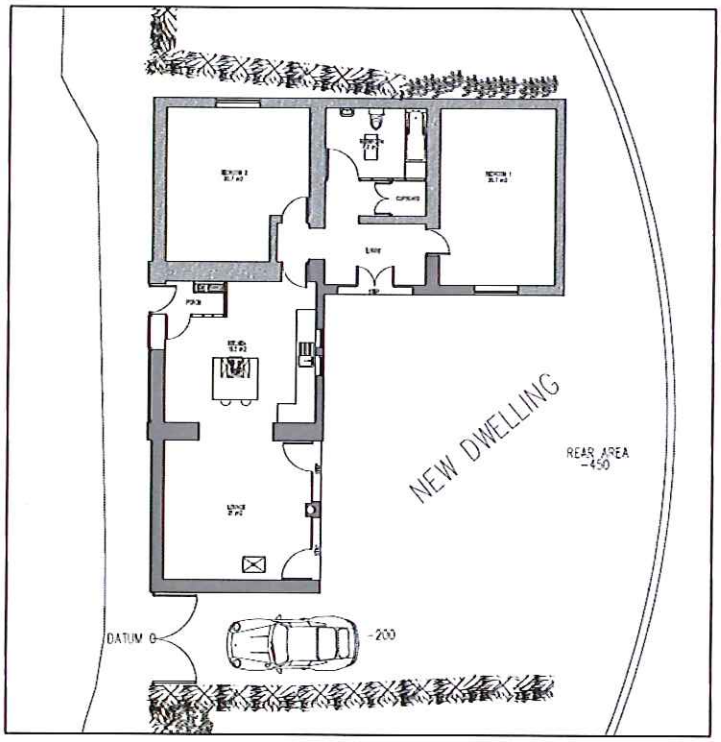

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Figure 4: Proposed plan

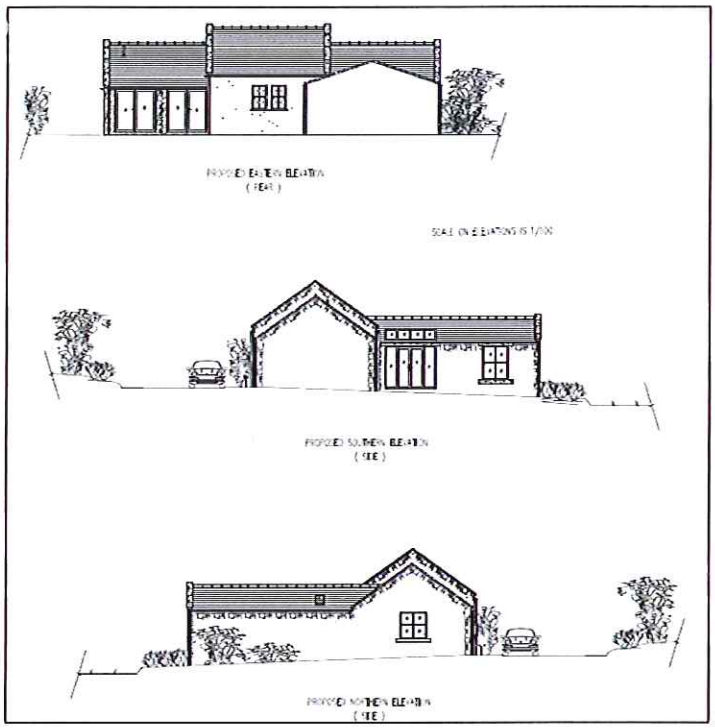

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Figure 5: Proposed elevations

4 Survey methods

4.1 Desk study

- Consulted the Multi-Agency Geographic Information for the Countryside (MAGIC) website at http://magic.defra.gov.uk to check if there are any statutory nature conservation designations relating to the site or nearby.
- Asked North Yorkshire Bat Group for records of bats previously recorded within 2km of the survey site to gather any previous information about bats at the site and to put our findings in the context of existing information.
- Researched the features and habitats of the area through the use of maps and aerial photographs.

4.2 Field work

- Undertook a survey of habitats and landscape features on the site and within 300m
- Examined each building to record its main features especially those that may be suitable for roosting bats or other protected species.
- Carried out a detailed check of the interior and exterior of buildings to look for bat droppings; feeding remains such as moth & butterfly wings; live bats; dead bats; stains and marks on surfaces indicating regular use by bats; urine marks; and areas devoid of cobwebs

4.3 Surveyors working on the project

Name	Natural England licences held	Survey dates
John Drewett BSc (Hons), MCIEEM	WML-CL20 (Bats); WML-CL21 (Bats Low Impact); WML-CL08 (Great Crested Newts)	18 January 2016

4.4 Equipment used

A Clulite 1 million candlepower torch was used to aid the examination of the building.

5 Existing information

5.1 Designated statutory sites

The survey site is located within the North York Moors National Park.

There are no statutory nature conservation designations applicable to the survey site or its immediate surroundings. The nearest designated site is Cockrah Wood Site of Special Scientific Interest, 500m to the south. Originally an oak wood, although largely replanted with conifers, the site retains populations of scarce plants.

5.2 Existing records of protected species

The following records of bats previously recorded within 2km of the site were supplied by North Yorkshire Bat Group. This information has largely been assembled as a result of responding to enquiries from the public about bats. Some recent records have also been supplied by consultants carrying out survey work in connection with proposed developments. It does not, therefore, represent a comprehensive assessment of the local bat fauna.

Species	Site	Grid ref.	Date	Comment
Daubenton's Bat	Lake at Hackness	SE968902	2007	
Brown Long-eared Bat	Hackness	SE968906	02 Oct 2002	
Brown Long-eared Bat	Milestone Cottage, Wrench Green	SE9689	10 Jun 1986	
Brown Long-eared Bat	Hackness	SE968906	17 Aug 1987	
Soprano Pipistrelle	River Derwent, Wrench Green	SE968892	18 Jun 2002	In flight
Soprano Pipistrelle	Wrench bridge	SE968892	18 Jun 2002	In flight
Soprano Pipistrelle	12 Hackness Village	SE965900	2007	Maternity roost
Unknown	River Derwent, Wrench Green	SE968892	18 Jun 2002	In flight

6 Buildings

6.1 Description

The buildings were originally surveyed by John Drewett Ecology for a bat scoping survey on 3 July 2012. The site was revisited on 18 January 2016 and found to be substantially the same as at the previous survey. The description and photographs of the previous survey are reproduced below.

The surveyed property is made up of two buildings that are at right angles to each other and are joined at the corners.

The roadside building is of stone construction with a pantile roof. The more northerly part is rather higher than the southern part. The building is entered through a wooden door on the west side, where there are also large sliding doors. On the east side there are a series of windows with a particularly large window in the southern part. Consequently, the interior of the building is very light.

Part of the roof is unlined, but other parts are boarded with plywood or lined with felt. In both cases the lining is poorly fitting, so any bats roosting behind these sections would be very likely to enter the interior of the building. There are some external deep crevices within the walls, but these are rather open and so are considered unlikely to be used by bats.

The building at right angles to the road is a single storey building with a pantile roof. Part of the roof comes very close to the ground where it has been extended to cover another small section.

Figure 6: Roadside building, west side

Figure 7: Roadside building, east side, south end

Figure 8: Rear building, south side

Figure 9: Interior of roadside building

Figure 10: Underside of roof

Figure 11: Interior roadside building looking east 12 FEB 2016

6.2 Evidence of bats

No evidence of bats was found inside or outside the buildings. The interior floor was very clean and had recently been swept.

6.3 Bat roost potential

The buildings are considered to have very low bat roost potential. The interior of the roadside building is very light due to the large windows. There are few concealed places where bats could roost inside, other than between tiles and felt or boarding. However, where these features exist they are ill-fitting so if bats were present evidence would be expected to also occur inside the building. There are a few deep crevices within the outside walls, but these are limited and rather open, so are considered unlikely to be used by bats. The buildings feel very cold.

6.4 Other protected species

No evidence of other protected species was found during the survey. However, I was made aware that Barn Owls had until recently been using the buildings, but that the building had been cleaned and secured a short while prior to the survey. This has been confirmed with the agent who has been in correspondence with the Hawk & Owl Trust over the matter. It has been agreed between the agent and the Hawk & Owl Trust to erect a suitable box on a nearby tree and allow temporary access into the building for Barn Owls. Mitigation will be incorporated into the converted building (see Section 8).

7 Assessment

7.1 Constraints on survey results

The survey was carried out in winter when it is not possible to undertake bat emergence surveys as bats are hibernating. This can result in roosts in confined spaces that cannot be fully examined being overlooked. In this case the building is considered to be generally unsuitable for roosting bats, so this is not considered to be a constraint in this case.

7.2 Evaluation of survey findings

There are no previous records of bats at the survey site, though three species of bat have been recorded within 2km. This is a well-wooded area and close to the River Derwent, so is likely to support good and diverse bat populations.

Whilst buildings in rural locations such as this are often very attractive to bats, this building has few features that are likely to be suitable for roosting bats. As no evidence of bats was found during the survey it is therefore concluded that the proposed development is unlikely to have an adverse impact on roosting bats.

The building has, until recently, been used as a roost site by Barn Owls. Access for owls was not possible at the time of survey, but temporary access is to be restored until conversion work begins. Mitigation is necessary to enable Barn Owls to continue to use the building in the future.

7.3 Potential impacts in the absence of mitigation

Even where bat roosts are not located during a survey there is always the risk that individual bats may use the site on a casual basis and so be encountered during works. Measures to minimise any risks to such bats arising from the proposed works are detailed in Section 8.

Conversion of the building will make use by Barn Owls impossible in future unless access is provided. Methods to be followed are detailed in Section 8.

8 Mitigation method statement

8.1 Minimizing risk to bats during works

To minimize any risks posed to bats that may be roosting or hibernating in the buildings on a casual basis, care must be taken during building works. In particular:

- When removing or repairing roofs at least remove the ridge tiles and the two rows of tiles at the ridge and along the eaves by hand, carefully checking the underside for the presence of bats.
- Do not slide any tiles down the roof to avoid crushing any bats concealed beneath
- If removing timbers from walls carefully check for the presence of bats around the ends of timbers. Where large timbers cannot be removed easily, cut through the timbers and remove the ends from the wall separately, to avoid the risk of crushing bats.
- When carrying out pointing works check for the presence of bats before pointing up holes. In stone walls bats may well be out of sight within the wall itself, so take extra care in such areas.

- Do not point up holes between November and February. Bats may be concealed deep in the wall at this time and be in hibernation, so will not arouse when disturbed.

8.2 Procedure if bats are found during works

If bats are found during works then work MUST STOP immediately. Seek advice from the ecologist and do not recommence works until it has been certified that it is safe to do so. Unless they are in imminent danger do not handle bats, but gently re-cover them if they have been exposed by the works.

8.3 Temporary provision for Barn Owls

It is understood that measures have been taken to allow Barn Owls to re-access the building and that communications are underway with the Hawk & Owl Trust over the provision and erection of a Barn Owl box on a nearby tree. Barn Owls must not be prevented from accessing the building until after the box is in place. **Should Barn Owls begin to nest in the building the nest must not be disturbed whilst in use or until after the birds have fledged.**

8.4 Permanent provision for Barn Owls

Although correctly designed and positioned nest boxes can provide adequate nesting places for Barn Owls they are, by their nature, temporary. Therefore, nesting provision for Barn Owls must be incorporated into the converted building. Having owls in the roof of a building do not usually cause disturbance or health issues.

Design criteria for the nesting loft:-

- Create an entrance hole at the highest point of the gable end that is at the most undisturbed part of the building. The optimum size for the hole is 130 mm wide x 250 mm high.
- Create a nest chamber inside the roof void approximately $1m^2$ – 400 mm x 2000 mm is ideal.
- The floor of the nest chamber must be at least 540 mm below the bottom of the access hole.
- The interior of the chamber must remain dry during prolonged heavy rain.
- Fit the nest chamber with an internal human access door to permit cleaning out. This should be done every four years or so and not during the nesting season.
- Construction should be substantial and well-insulated from the building interior against heat loss and noise.
- An external landing / exercise platform should be provided directly below the entrance hole.

On completion the Barn Owl provision should be checked by the ecologist before builders finish at the site.

9 Background information and references

9.1 Bats: legislation and policy guidance

The following is a summary and brief interpretation of the legislation relating to bats. You are advised to consult the original legislation and/or a legal professional if you have particular concerns about the legality of a planned operation.

Bats and their roost sites are protected by the Conservation of Habitats and Species Regulations 2010 (as amended) and the Wildlife and Countryside Act, 1981 (as amended). This protection applies at all times, even if the bats are absent at the time that an activity is carried out.

Although many surveys are undertaken because Local Planning Authorities must consider the impact of a development on protected species during their decision making, it should be noted that bats and their roosts are protected, whether or not a survey has been requested, and that ignorance of the presence of bats is no defence against prosecution. Fines of up to £5000 and a six month prison sentence can be imposed for each offence.

Among other things it is an offence to:-

- Deliberately capture (or take), injure or kill a bat
- Deliberately disturb bats where the disturbance is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young or
- Deliberately disturb bats which is likely to impair their ability in the case of hibernating or migratory species, to hibernate or migrate
- Deliberately disturb bats, in particular any disturbance which is likely to affect significantly the local distribution or abundance of the species to which they belong
- Intentionally or recklessly disturb any bat while it is occupying a structure or place which it uses for shelter or protection
- Intentionally or recklessly obstruct access to any structure or place which any bat uses for shelter or protection
- Damage or destroy a breeding site or resting place of any bat

The National Planning Policy Framework 2012 recognises that the planning system should perform an environmental role – contributing to protecting and enhancing our natural, built and historic environment. This should include "moving from a net loss of bio-diversity to achieving net gains for nature". Planning should "promote...recovery of priority species populations". Paragraph 119 states that "if significant harm 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". This section also states that "opportunities to incorporate biodiversity in or around developments should be encouraged". Significantly, paragraph 119 states that "The presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined".

Where it is proposed to carry out works which will have an adverse impact on bats or on a bat roost, a European Protected Species (EPS) licence must first be obtained from Natural England, even if no bats are expected to be present when the work is carried out. Granting of planning permission does not override this requirement.

Bat conservation is also part of the biodiversity action plan process. The Convention on Biological Diversity, signed in Rio de Janeiro in 1992, requires states to develop national strategies and to undertake actions aimed at maintaining or restoring a wide range of biodiversity.

In England & Wales, the Natural Environment and Rural Communities (NERC) Act, 2006 imposes a duty on all public bodies, including local authorities and statutory bodies, in exercising their functions, *"to have due*

regard, as far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity". It notes that *"conserving biodiversity includes restoring or enhancing a population or habitat"*. Local authorities frequently require protected species surveys to be submitted with planning applications so that they can fully take conservation into account in their decision making.

An EPS licence application requires details of the proposed works, the bats which may be affected and the mitigation proposed to maintain the favourable status of bats in the region. The application is usually drawn up on behalf of the client by a specialist ecological consultant. The consultant is required to check that work is proceeding in accordance with the method statement and to also carry out monitoring of the impact on bats for some time after completion of the works – the length of monitoring is dependent on the species, development and expected impact of the development on protected species. Natural England aims to make a decision on licence applications within 30 working days of receipt. There is no guarantee that a licence will be granted and there is no fast track process to obtaining one. Applications can only be made once planning permission has already been obtained (where appropriate).

EPS licences can only be issued if Natural England is satisfied that there is no satisfactory alternative to the development and that the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range.

9.2 Brief summary of bat biology

Bats are the only mammals to have developed powered flight. They are the second largest group of mammals in the world, with almost 1000 different species. In Britain 17 species occur, with the range of species declining towards the north. All British bats feed solely on invertebrates.

British bats live in crevices in trees, caves, buildings, bridges, tunnels and other structures. They are long-lived animals which use roost sites to which they return year after year. In summer females are usually colonial, each species gathering together in warm maternity roosts to give birth to their single young. Males often spend the summer alone or in small groups. Several different roosts may be used over a year, the bats moving between these places depending on time of year, prevailing weather and other conditions.

In winter bats hibernate, a process of long periods of deep torpor punctuated by regular arousals. Their body temperature falls close to the ambient temperature of their chosen hibernaculum and their heart rate and metabolism drop dramatically. In this state they use little energy, allowing them to survive until spring on their fat reserves. They are very sensitive to temperature changes at this time. Changes may cause them to wake, a process which uses considerable energy reserves. Many species hibernate in cool, stable underground sites such as caves and tunnels, although individual bats may be found in almost any small crevice. Summer roosts and hibernation sites for the same bats are normally located in different places.

For more than 50 years bats suffered a major decline. The reasons are many and varied, but include destruction of roost sites, a reduction in insect prey and direct and indirect poisoning from toxic chemicals. As a result of greater protection, some are now doing better, but they are still vulnerable and threatened.

The survival of a colony of bats depends on there being a range of suitable summer roost sites, hibernation sites and feeding areas within a reasonable distance. Deep crevices in which they can roost, woodland, hedgerows and freshwater nearby all help to provide the conditions and food they need. A continuous linked network of good habitat provides ideal conditions. Some species will follow hedgerows and woodland edges and rivers where their food is concentrated whilst others fly higher and largely ignore features on the ground. Almost anywhere, even city centres, will be visited by bats at some time.

Each species of bat is different in the places it roosts, the food it eats, how it hunts and what it requires. That is just one reason why a bat survey must identify the species and numbers of bats present on a site, their roost locations, access points, feeding areas, etc., before determining any mitigation necessary.

9.3 Background on Barn Owl biology

Barn Owls are widely distributed and often cited as the most cosmopolitan of all land birds, occurring in open grasslands, marshes and agricultural land over most of the worlds land mass. The Barn Owl is not endangered worldwide though the sharp decline in barn owl numbers during the last 50 years has afforded it conservation importance in the United Kingdom.

The Barn Owl is classed as an Amber Listed Species by the Royal Society for the Protection of Birds (RSPB). This means that they are of medium conservation concern, showing a moderate decline of 25- 49% in the UK breeding population or range over the previous 25 years.

Further to their amber status the Barn Owl has been classified as a Spec3 (Declining) species with an unfavourable European conservation status.

Barn Owls are largely nocturnal and crepuscular, roosting in buildings and trees. Their main habitat requirement is the presence of rank tussocky grassland containing short-tailed voles, the owl's main prey.

Factors contributing to the barn owls decline are the loss of suitable foraging habitat, frequent disturbance, lack of nesting sites due to loss of farm buildings and derelict buildings, and low numbers of small mammal prey due to loss of marginal habitat through intensive farming. They are also susceptible to secondary poisoning from rodenticides. Studies in Devon have shown that in 1991, 10% of old barns had already been converted, 4% were undergoing conversion and 20% were in a state of advanced decay or had already collapsed.

Research has shown that Barn Owl home ranges usually contain a number of roosting sites, but the loss of just one may result in Barn Owls abandoning the entire area, rather than adopting a new site. Sites may be used for breeding, roosting or may just be visited occasionally. Once established, they usually remain faithful to their sites from one year to the next. Those birds that know their home ranges well are likely to survive and produce most young.

Barn Owls have been found nesting in all months of the year, but most eggs are laid in April and May. Incubation starts as soon as the first egg is laid. An average of 5.8 eggs are laid at intervals of roughly 2.5 days. Incubation takes 31 days and the average fledging period is 62.5 days. Nests are therefore occupied for about 14 weeks.

Sensitivity to disturbance varies greatly. From before egg laying until the brood are about three weeks old the adult birds are likely to be on-site and very sensitive to disturbance. After this period the adults may be off-site during the day and not start food deliveries until shortly after dusk. At this stage it is sometimes possible for building work to be carried out during the day, providing that work finishes and everyone leaves the site well before dusk.

9.4 Legislation relating to Barn Owls

The Barn Owl is protected under Schedule 1 of the Wildlife and Countryside Act 1981. Schedule 1 species are rare breeding species, which are protected by special penalties.

In accordance with Schedule 1 it is an offence to intentionally disturb the birds while they are on, in or near a nesting site containing eggs or young. Near the nest is normally interpreted as *within the same building or just outside*. In the case of a tree nest about 30 metres.

A licence is required from Natural England if the handling of Barn Owls is to be undertaken. Licences cannot be issued for removal of Barn Owls in order to facilitate development.

9.5 References

- Anon (2012) *National Planning Policy Framework,* Department for Communities and Local Government
- Barn Owl Trust (2012) *Barn Owl Conservation Handbook*, Pelagic Publishing, Exeter
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- Hundt L (2012) *Bat Surveys: Good Practice Guidelines, 2nd edition,* Bat Conservation Trust
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- Wray S, Wells D, Long E & Mitchell-Jones A J (2010) *Valuing Bats in Ecological Impact Assessment*, In Practice No. 70, pp. 23-25