

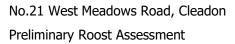
Preliminary Roost Assessment

No.21 West Meadows Road Cleadon Sunderland Mr B. Edge

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Report Name: Preliminary Roost Assessment

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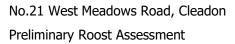
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1 Introduction

1.1 Background

- 1.1.1 FALCO Ecology Ltd. was commissioned by Ben Edge (hereon referred to as the "Client") to undertake a Preliminary Roost Assessment (hereon referred to as "PRA") at No.21 West Meadows Road (hereon referred to as the "surveyed building") on the 7th November 2019.
- 1.1.2 The purpose of this report is to provide a pre-development record of the suitability of the surveyed building to support roosting bats and any evidence of bats roosts. The suitability of the surrounding habitats to support foraging bats is included within this report, along with recommended roost surveys.

1.2 Surveyed Building Location

- 1.2.1 The address of the surveyed building was No.21 West Meadows Road, Cleadon, Sunderland, SR6 7TU which is situated on the southern edge of Cleadon village (Figure 1). The central Ordnance Survey grid reference for the surveyed building was NZ 38557 61596.
- 1.2.2 The adjacent area to the surveyed building was agricultural fields to the east and south and sub-urban residential estates, to the west and north.
- 1.2.3 The surveyed building was within the administrative area of South Tyneside Council.



Figure 1: Surveyed Building Location

Images produced under license from Google Earth Pro.

1.3 Development Proposals

1.3.1 It is proposed to increase the height of the surveyed building which will involve the removal of the current roof. Living space will extend into the new loft void. A single



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storey extension will be added to the rear of the surveyed property. The architectural drawings of the proposed development are shown in Appendix 1.

1.4 Preliminary Roost Assessment and Reporting Objectives

- 1.4.1 The Preliminary Roost Assessment, undertaken by FALCO Ecology, included the following objectives:
 - Establish if the surveyed building has the potential to be used by roosting bats;
 - Record evidence of use by bats;
 - Record locations of Potential Roost Features (hereon referred to as 'PRFs');
 - Provide recommendations for further bat surveys where required; and
 - Obligations for the Client to consider if confirmed bat roost(s) are located.

1.5 Legislation

1.5.1 UK Legislation (specifically related to England) relating to bats are fully documented in Appendix 3; however, in summary all bats and their roosts are protected under UK and European legislation. This legislation makes it an offense to deliberately disturb, damage or destroy a bat roost.



2 Methodology

2.1 Desktop Study

Data Search

- 2.1.1 A data search from following web recourses was used:
 - The Government's Multi-Agency Geographic Information for the Countryside or 'MAGIC' website, which provides details of statutory sites designated for their ecological interest and for local European Protected Species Mitigation (EPSM) Licenses that had been approved;
 - Google Earth Pro was utilised to assess the habitats surrounding the surveyed building for their suitability to support foraging, commuting and roosting bats;
 - North East England Nature Partnership1; and
 - Durham Bat Group website2.

Consultation Data

2.1.2 Consultation data is not included as part of this report. Given the local habitats it is considered that a range of species listed in paragraph 3.1.3 as present in County Durham were present in the local area. Consultation data from the Durham Bat Group will be included within any future EPSM Licence application.

2.2 Preliminary Roost Assessment

2.2.1 The PRA followed the guidance for assessing PRFs as set out within the Bat Conservation Trust Guidelines (Collins 2016) shown in Table 1. The PRA was undertaken by Adrian George on the 8th November 2019 in suitable weather conditions. Surveyed building photos taken during the survey are shown in Appendix 2.

Table 1: Guidelines for Assessing Potential Roost Features

Suitability	Description
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individuals bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitats to be used on a regular basis or by large numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
	A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or 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).

¹ South Tyneside Council are part of this partnership.

² Durham Bat Group covers the South Tyneside Council administrative area.



Suitability	Description
High	A structure or tree with one or more potential roost sites that are obviously used by large 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	A bat or bats observed within the building/tree.

2.3 Surveyor's Experience

Adrian George

2.3.1 Adrian is an experienced ecologist who has undertaken bat surveys on a range of developments including residential properties, small to large scale wind farms, solar farms, power lines and water pipelines. Bat surveys have been undertaken throughout England, Wales and Scotland. Adrian holds a Class 2 Natural England (CL18 2017-32910-CLS-CLS) and a Scottish Natural Heritage bat licence. Adrian is a full member of the Chartered Institute of Ecology & Environmental Management (CIEEM) and a member of the Northumberland Bat Group.

2.4 Limitations

2.4.1 The loft void was only partially surveyed as only a small section was boarded in the southern section of the of the roof void. The northwest section of the roof void was surveyed from a hatch in the wall of the bathroom. The surface of the loft insulation was not fully inspected for bat droppings due to the restricted access.



3 Results

3.1 Desktop Study

Data Search

Statutory Designated Sites

3.1.1 The surveyed building does not lie within a statutory designated site. Boldon Pastures Site of Special Scientific Interest (SSSI) is approximately 410 m west of the surveyed building and is designated for is botanical value. Furthermore, Boldon Flats Local Wildlife Site is ~600m west of the surveyed building and is also designated for its botanical value.

EPSM Licenses

3.1.2 The location of granted EPSM Licenses for bats within 2 km of the surveyed building were all for common pipistrelle (*Pipistrellus pipistrellus*). The closest EPSM Licence was ~675 m north of the surveyed building. A second was situated ~1.8 km north-northwest. Both of these were for the destruction of a resting place for common pipistrelle in 2012 and 2009, respectively (MAGIC 2019).

Local & Regional Status of Species

- 3.1.3 There were 17 bat species recorded in the UK, of which 11 had been recorded in Gateshead and County Durham. Only eight bat species had been recorded breeding within the county. Their abundance within the county is stated on the Durham Bat Group website (Durham Bat Group 2015) and was as follows:
 - Brandt's bat (Myotis brandtii) rare;
 - Whiskered bat (*Myotis mystacinus*) reasonably widespread but localised;
 - Natterer's bat (Myotis nattereri) rare;
 - Daubenton's bat (*Myotis Daubentonii*) very widespread;
 - Noctule (Nyctalus noctula) widespread;
 - Leisler's (Nyctalus leisleri) rare with three records;
 - Serotine (*Eptesicus serotinus*) very rare, two unconfirmed reports;
 - Brown long-eared bat (Plecotus auritus) reasonably widespread but localised;
 - Common pipistrelle common and widespread;
 - Soprano pipistrelle (*Pipistrellus pygmaeus*) common; and
 - Nathusius pipistrelle (*Pipistrellus nathusii*) rare with no maternity roosts known.
- 3.1.4 All the above species, with the exception of Leisler's and Serotine, are listed as a Durham Priority Species (NEENP 2019).

Surrounding Habitats

3.1.5 The surrounding habitats of the surveyed building contained sub-optimal foraging habitats for bats. The adjacent agricultural land consisted of predominantly arable fields. Boldon Flats was pasture land with pools and scrubland and pastural habitats, provided optimal foraging habitats and was ~600 m west of the surveyed building. Furthermore, the Sunderland Academy Pools which were present ~1 km southeast of the surveyed building also provided optimal foraging habitat and there were connective habitats between this site and the surveyed building.



3.2 Preliminary Roost Assessment

Key findings:

The surveyed building had Moderate suitability to support roosting bats.

External Inspection

- 3.2.1 The surveyed building was a cross hipped bungalow with a partial loft conversion with a dorma window on the rear (east) aspect. The roof had interlocking concrete tiles and a wet ridge tile system. A roof valley was present on the inner bend of the front (west) aspect of the roof. A chimney was present in the centre of the southern gable wall. The walls were constructed with an inner and outer skin of red masonry bricks and had cavity wall insulation.
- 3.2.2 The windows and rear door were white Unplasticized Polyvinyl Chloride (uPVC) frames and double/triple glazing. The front door construction was not recorded. No gaps were present around any of the windows or doors. The porch, on the rear aspect, had white uPVC soffits and facias which were all sealed. Wooden soffits and facias which were painted black were present on the rear and front aspect of the surveyed building. The west aspect of the hipped section of the surveyed building had white uPVC soffits and facias. Black uPVC guttering and downpipes were present on the front and rear aspect.
- 3.2.3 A separate garage to the north of the surveyed building was constructed of brick with similar concrete tiles and was in good condition with no visible PRFs.

Internal Inspection

Main Roof Void

- 3.2.4 The internal loft void inspection was restricted within the southern section of main roof void and was from a small area of boarding next to the loft hatch. The roof was constructed using a kingpost with a single ridge beam. Bitumen underlay was present and where visible from the survey point, it was in good condition. Furthermore, no external light was observed within the loft void. The floor of the loft void was covered in standard rockwool/fibreglass roof insulation and were generally clean of debris. No bat droppings were observed within the cob webs or on the top of the loft insulation. A narrow area of roof void was present along the loft conversion walls on the western aspect of the main roof void and was not inspected during the survey.
- 3.2.5 Loft insulation was also used as the wall insulation for rooms within the loft void and no bat droppings were present on them.

Hipped Roof Void

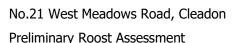
- 3.2.6 The hipped roof void was inspected from the hatch within the bathroom and it was not possible to fully inspect this section of roof void. The roof trusses were a kingpost style with a single ridge beam. The bitumen underlay had two large tears and external light was visible and thus could provide an access point for bats. As with the main roof void, standard roof insulation was present within this section of roof void.
- 3.2.7 No bat droppings were observed within this section of roof void.

Potential Roost Features

- 3.2.8 Potential Roost Features recorded during the survey included:
 - Gap under the lead flashing where the chimney adjoins the roof tiles;
 - Gap under the lead flashing below the dorma window;
 - Missing mortar on the dorma window;



- Gaps under lifted roof tiles;
- Missing mortar within the roof valley;
- Gap behind soffit on rear aspect;
- Gaps in roof mortar on north aspect;
- Gap between the soffit and the wall on north aspect; and
- Lifted ridge tile adjoining the chimney breast.





4 Evaluation

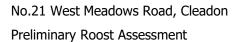
- 4.1.1 The surveyed building was in overall good condition, however, a number of PRFs were present within the roof structure and behind the wooden soffits.
- 4.1.2 No evidence of bats was observed within the loft void and no bat droppings were recorded on the external walls or on the floors at the base of the external walls. It is considered that the two bat species likely to use the surveyed building as a roost location would be common and / or soprano pipistrelle. However, as these species are considered as cavity roosting bats, they had the potential to be present despite the lack of evidence within the roof void.
- 4.1.3 It is considered that the suitability rating of the surveyed building to support roost bats is **Moderate** (Collins 2016) as there are "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".
- 4.1.4 The potential impact of the proposed development on European Protected Species, bats, can not be established until the completion of the recommended roost surveys.



5 Recommendations

5.1 Survey Recommendations

5.1.1 Two roost surveys are recommended which is in-line with the survey effort for moderate suitability buildings as set out in the Bat Conservation Trust Guidelines (Collins 2016). These roost surveys can be undertaken between May and September, inclusive; however, at least one of these surveys would need to be undertaken between May and August. The roost surveys would consist of a dusk (emergence) survey and a dawn (re-entry) survey with a minimum of two weeks between the roost surveys. If bats are recorded roosting within the surveyed building, it is plausible that additional roost surveys are required to categorise the roost, i.e. day roost, transitional roost or maternity roost.





6 References

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Bat Conservation Ireland (2014). Bats in Buildings – Guidance note for: Planners, engineers, architects and developers. Available online from https://www.batconservationireland.org/wp-content/uploads/2013/09/BCIrelandGuidelines_Building.pdf (accessed on 14th October 2019).

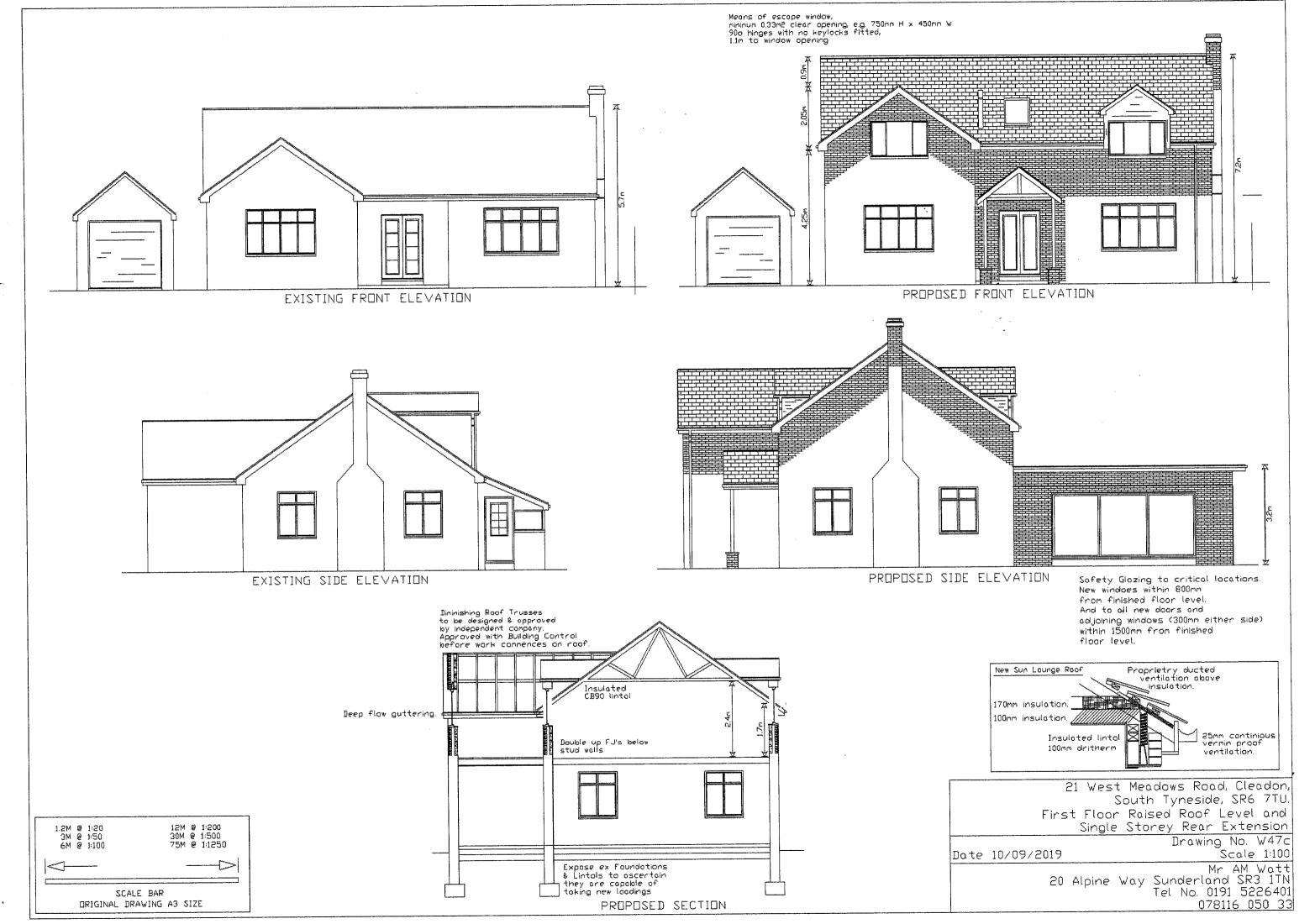
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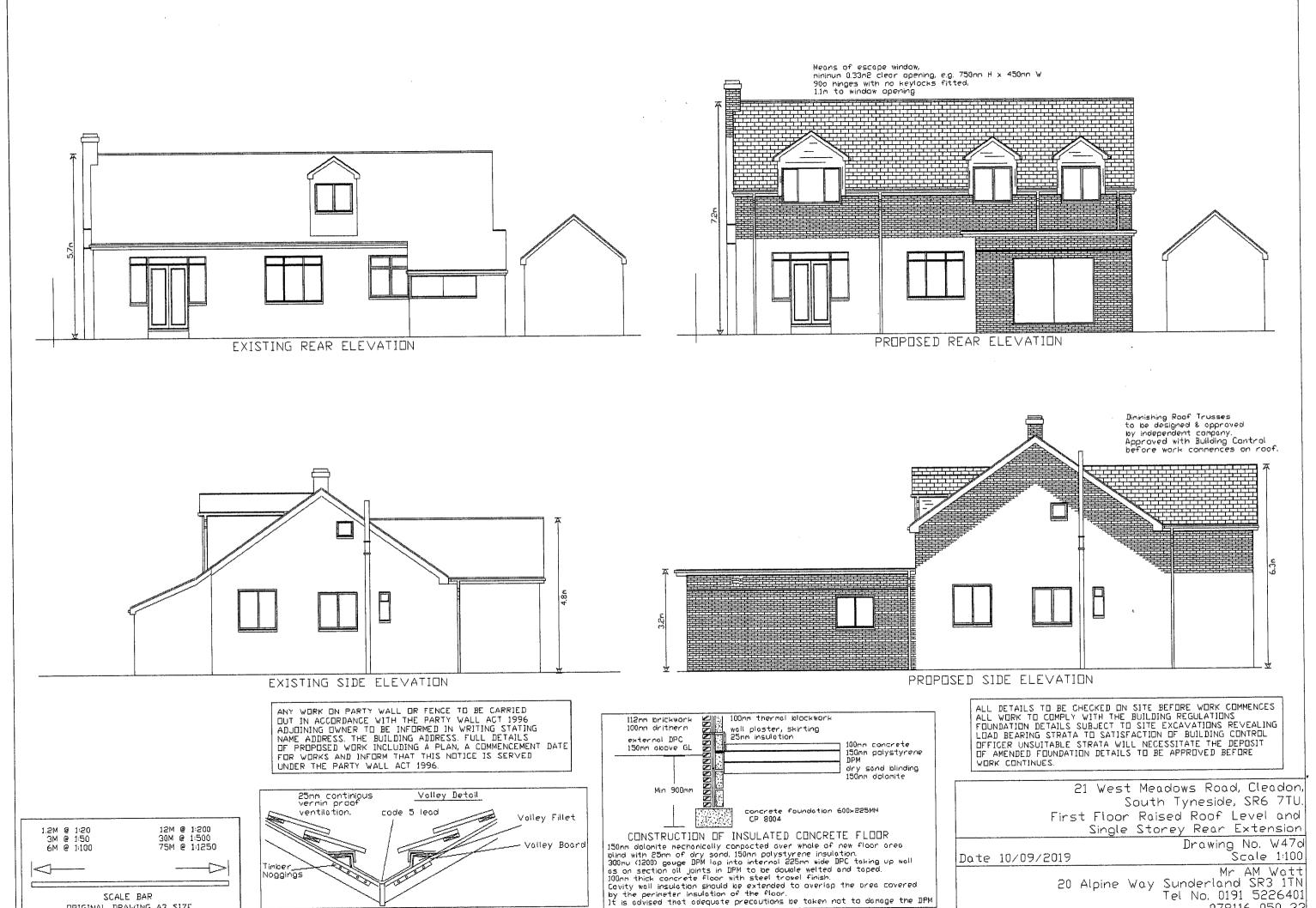
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Appendix 1 – Architectural Drawings





SCALE BAR

DRIGINAL DRAWING AS SIZE

Mr AM Watt 20 Alpine Way Sunderland SR3 1TN Tel No. 0191 5226401 078116 050 33



Appendix 2 – Surveyed Building Photos





Photo 1: Front aspect (west)



Photo 2: Front aspect & garage (northwest)



Photo 3: Rear aspect (east)



Photo 4: Porch on the rear aspect



Photo 5: Southern gable end



Photo 6: Dorma window on rear aspect with PRF – missing mortar.





Photo 7: PRF - Gap under Chimney lead flashing



Photo 8: PRF – gap under Chimney lead flashing



Photo 9: PRF - Gap under raised tile



Photo 10: PRF – gaps in mortar and missing mortar along roof valley on southwest aspect

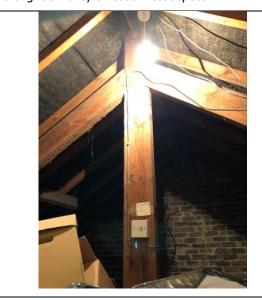


Photo 11a: Loft void (southern end)



Photo 11b: Loft void showing standard loft insulation



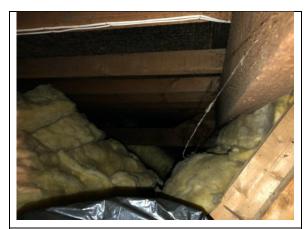


Photo 11c: Loft void along edge of the loft conversion. Not inspected fully.



Photo 12: Loft void showing the wall insulation of the loft conversion



Photo 13: Loft void western aspect

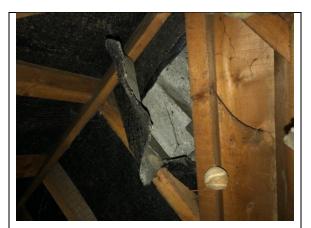


Photo 14: PRF – Large area of torn bitumen felt underlay



Photo 15: PRF - Large area of torn bitumen felt underlay



Appendix 3 – Environmental Legislation & Convention Relating to Bats



Introduction

The UK has ratified a number of Conventions and implemented legislation pertaining to the protection of bats, either independently or as member state of the European Union. These are defined and summarised below.

Lists of threatened, endangered and extinct species are also provided, together with a summary explanation of each.

Bern Convention (1982)

The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) was adopted in Bern, Switzerland in 1979, and was ratified in 1982. Its aims are to protect wild plants and animals and their habitats listed in Appendices 1 and 2 of the Convention, and regulate the exploitation of species listed in Appendix 3. The regulation imposes legal obligations on participating countries to protect more than 1000 animals.

To meet its obligations imposed by the Convention, the European Community adopted the EC Birds Directive (1979) and the EC Habitats Directive (1992 – see below). Since the Lisbon Treaty, in force since 1st December 2009, European legislation has been adopted by the European Union.

The UK Post-2010 Biodiversity Framework

The UK Post-2010 Biodiversity Framework was published in July 2012 and supersedes the Biodiversity Action Plan which lists and prioritises habitats and species and sets national targets to be achieved. The UK Post-2010 Biodiversity Framework includes all the species formally listed under the old UKBAP. The Environmental Departments of all four governments in the UK work together through the Four Countries Biodiversity Group.

The former UKBAP identified 391 'Priority' Species Action Plans (SAPs) and 162 Local Biodiversity Action Plans. Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level), and are usually drawn up by a consortium of local Government organisations and conservation charities.

UKBAP Bat priority species include Barbastrelle Bat, Bechstein's Bat, Soprano Pipistrelle, Noctule, Brown Long-eared Bat, Greater Horseshoe Bat and Lesser Horseshoe Bat.

Bonn Convention

The Convention on the Conservation of Migratory Species of Wild Animals or 'Bonn Convention' was adopted in Bonn, Germany in 1979 and came into force in 1985. Participating states agree to work together to preserve migratory species and their habitats by providing strict protection to species listed in Appendix I of the Convention. It also establishes agreements for the conservation and management of migratory species listed in Appendix II.

In the UK, the requirements of the convention are implemented via the Wildlife & Countryside Act 1981 (as amended), Wildlife (Northern Ireland) Order 1985, Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 and the Countryside and Rights of Way Act 2000 (CRoW)

The UK has currently ratified four legally binding Agreements under the Convention, one of which is the Agreement on the Conservation of Populations of European Bats (EUROBATS).

National Planning Policy Framework (2018)

Following the publication of the first revision of the National Planning Policy Framework (NPPF) in March 2012, Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation (2005) has been withdrawn. However, ODPM 06/2005: Biodiversity and Geological Conservation — Statutory Obligations and their impact within the Planning System (the



guidance document that accompanied PPS9) has not been withdrawn and, where more detailed guidance is required than is given within the NPPF, local planning authorities will continue to rely on ODPM 06/2005. The NPPF has been revised and was published in July 2018 and an update with clarifications was released in February 2019

The purpose of the NPPF is to contribute to the achievement of sustainable development which includes an environmental objective - an environmental objective - to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

This guidance requires local planning authorities (planning policies and planning decisions) to take account of the conservation of protected species when determining planning applications and makes the presence of a protected species a material consideration when assessing a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Furthermore, the NPPF 2018 includes the requirement for developments to *improve biodiversity* including ecological *net gain*. In the case of European Protected Species such as bats, planning policy emphasises that strict statutory provisions apply (including the Conservation of Habitats and Species (Amendment) Regulations 2012), to which a planning authority must have due regard.

Where developments requiring planning permission are likely to impact upon protected species it is necessary that protected species surveys are undertaken and submitted to meet the requirements of paragraph 98 of ODPM Circular 06/2005 which states that:

`The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.'

Species of Principal Importance in England

Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, in implementing their duty under Section 40 of the Natural Environment and rural Communities (NERC) Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal (e.g. planning) functions.

The S41 list includes Barbastrelle Bat, Bechstein's Bat, Soprano Pipistrelle, Noctule, Brown Long-eared Bat, Greater Horseshoe Bat and Lesser Horseshoe Bat.

The Conservation of Habitats and Species Regulations 2017

The Conservation of Habitats and Species Regulations 2017 came into force on 30th November 2017. The Conservation of Habitats and Species Regulations 2017 consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales.

Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I or II of the Habitats Directive respectively) to the European Commission. These sites, if ratified by the European Commission, are then designated as Special Protection Areas (SPAs) within six years. The 2012 amendments include that public bodies help preserve, maintain and re-establish habitats for wild birds.



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The Regulations also make it an offence to deliberately capture, kill, disturb or trade in the animals listed in Schedule 2, which include all horseshoe bats *Rhinolophidae sp.* and all common bats *Vespertilionidae sp.*

Wildlife and Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. This legislation is the chief means by which the 'Bern Convention' and the Birds Directive are implemented in the UK. Since it was first introduced, the Act has been amended several times.

The WCA makes it an offence to:

- deliberately capture, injure or kill a bat;
- intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
- damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
- intentionally or recklessly obstruct access to a bat roost; and
- possess or advertise/exchange/sell a bat (alive or dead) or any part of a bat.