



Ben Jones

ECOLOGY

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The report should be read in its entirety. Questions arising from the survey report should be directed to the author of the report who will be pleased to clarify any technical issues raised.

Whilst surveyors make every reasonable effort, Ben Jones Ecology cannot guarantee that all protected species have been identified and survey results are definitive. Many species are cryptic and transitional in habit.

Reports are considered valid for two years for planning purposes, after which time further survey information may be required.

Ben Jones Ecology can provide advice and support for recommendations and planning conditions.

The use of this report or survey data for any form of formal submission to an NGO or other authority implicitly implies acceptance of the terms and conditions.

Table of Contents

1	EXECUTIVE SUMMARY.....	1
1.1	Purpose of the Report	1
1.2	Methodology	1
1.3	Key Impacts and Mitigation Measures.....	1
1.4	Conclusion	1
2	INTRODUCTION	2
2.1	Project Background.....	2
2.2	Purpose of the Report	2
2.3	Site Context and Location	2
3	METHODOLOGY & CONSTRAINTS.....	3
3.1	Desk Study	3
3.2	Field Survey.....	3
3.3	Species Survey.....	3
4	BASELINE ECOLOGICAL CONDITIONS.....	4
4.1	Nearby Features of Importance	4
4.2	Habitats on Site.....	5
4.3	Bats.....	6
4.4	Birds	8
5	DESCRIPTION OF PROPOSED DEVELOPMENT.....	9
6	IMPACTS, ENHANCEMENTS AND MITIGATION	10
6.1	Nearby Features of Importance	10
6.2	Habitats on Site.....	10
6.3	Bats.....	10
6.4	Birds	12
7	CONCLUDING REMARKS.....	13
APPENDIX A	- SURVEYOR DETAILS.....	14
APPENDIX B	- METHODOLOGY	15
APPENDIX C	- POLICY	17
APPENDIX D	- BIBLIOGRAPHY	19

Table of Figures

Figure 4.1. Identifying any designated areas near site, a 1km buffer is shown	4
Figure 4.2. House from southwest	5
Figure 4.3. House from northwest	5
Figure 4.4. Single storey section to be removed	5
Figure 4.5. Small gap beneath raised tile	6
Figure 4.6. Heavy cobwebbing around ridge in western loft	7
Figure 4.7. Clean insulation in western loft	7
Figure 4.8. Clean insulation in eastern loft	7
Figure 4.9. Cobwebbing around timbers in eastern loft	8
Figure 4.10. Lack of eaves suitable for exterior nesting bird species	8
Figure 6.1. Example woodcrete bat box: Schwegler 1FF & Beaumaris Bat Box Midi	11
Figure 6.2. Example integrated bat box	11
Figure 6.3. Bird boxes	12

Table of Tables

Table 3.1. Survey conditions	3
Table A.1. Details of surveyors' experience and licences held	14
Table B.1. Data sources	15
Table B.2. Criteria of ecological values	15

1 Executive Summary

1.1 Purpose of the Report

Ben Jones Ecology was commissioned by DPA Design on behalf of the clients, Ms K Jones, to undertake a preliminary roost assessment of Glyndale to provide supporting information for a planning application for the extension of the house.

The survey report has these principal aims:

- To provide an initial assessment of the ecological value of the site in local context.
- To provide details supporting further surveys that may be required.
- To identify potential ecological constraints relating to the development, and recommend measures to avoid, reduce or manage negative effects, and to provide a net ecological gain.

1.2 Methodology

The appraisal included a desktop study for nearby designated sites and previously recorded protected species and a site visit undertaken at the site, OS grid reference SJ32924525 on 10th November 2023 by Ben Jones.

1.3 Key Impacts and Mitigation Measures

The site comprises a semi-detached dwelling which will be modified with a full height extension on the southwestern side.

There are two loft spaces over the house, both of which were checked for evidence of bats, no evidence was found. One tile on the north-facing roof adjacent to the chimney is slightly raised but inspection with a monocular did not reveal any crevice suitable for bats to roost. As this face of the roof will not be directly affected by the extension as proposed no further surveys are required.

The extension will involve the removal of a small single-storey shallow-pitched section of the house, and then be built over patio and garden of limited ecological value.

Works can continue without any species licence once planning permission has been granted.

1.4 Conclusion

It has been agreed with the client that the biodiversity value of the site will be enhanced post-construction with the inclusion of bat and bird boxes.

The method statements and enhancements provided in sections 6.3 and 6.4 of this report will be followed. Other than those listed above, there are no ecological constraints to the development as currently proposed.

2 Introduction

This report has been compiled by Ben Jones BSc (hons) MSc who has 8 years' experience conducting ecological appraisals.

For full details of surveyors and licences please see Appendix A.

2.1 Project Background

Ben Jones Ecology was commissioned by DPA to conduct a survey to determine the presence of protected species and potential for the damage or destruction of habitats of value. This forms part of the planning application for the extension of Glyndale.

2.2 Purpose of the Report

This report aims to:

- Identify the key ecological constraints to the proposed development relating to priority habitats and species and protected species (HMSO, 1981).
- Inform planning to allow significant ecological effects to be minimised or avoided where possible.
- Allow any necessary mitigation or compensation measures to be developed following the mitigation hierarchy.
- Identify any additional surveys that may be required to inform the assessment.
- Identify the opportunities offered by a project to deliver ecological enhancement (Ministry of Housing, Communities and Local Government, 2021).
- Provide information to assist landowners with avoiding committing legal offences in relation to wildlife (HMSO, 2000)

The development triggers the requirement for a preliminary bat survey as it involves the modification of pre-1960 buildings and structures within 200m of woodland and/or water.

2.3 Site Context and Location

The site is located in open countryside south of Wrexham, OS grid reference SJ32924525. It is set in a rural environment surrounded by scattered dwellings, open farmland and blocks of woodland such as Gyfelia Wood to the north.

3 Methodology & Constraints

Broad methodologies for data collection and interpretation were informed by PEA guidance (CIEEM, 2017). Full details can be found in Appendix B.

3.1 Desk Study

The desk study provides contextual information such as the site's proximity to designated areas and previously granted licences (Natural England, 2018). Previously recorded species in the vicinity are obtained from local records centres (NBN, 2023).

3.2 Field Survey

3.2.1 Date and Survey Conditions

Table 3.1. Survey conditions

Date	Time	Equipment Used	Weather
10/11/2023	10:00	Camera, strong torch, 12x55 monocular	8°C, clear sky, damp underfoot
Comments	One surveyor used: Ben Jones Constraints: None All undated photographs in this document were taken on this date by the author unless otherwise stated.		

3.2.2 Habitats

The habitats on site were assessed for their potential to support protected species and therefore assist in the determination of site value.

The site had not been subject to any form of specific management, maintenance or cleaning and was in a normal state.

3.3 Species Survey

3.3.1 Bats

An assessment of the suitability of site to support roosting bats was conducted following best practice guidance looking for evidence of roosting or potential access points (Collins, J. BCT, 2023). There were no constraints to this methodology.

manually verified.

3.3.2 Birds

An assessment of the suitability of site and its surrounds to support nesting birds was conducted, looking for current/old nests and listening for bird calls. There were no constraints to this methodology.

4 Baseline Ecological Conditions

4.1 Nearby Features of Importance

The map from Natural England presented in Figure 4.1 indicated that the site is not within 1km of any designated areas.

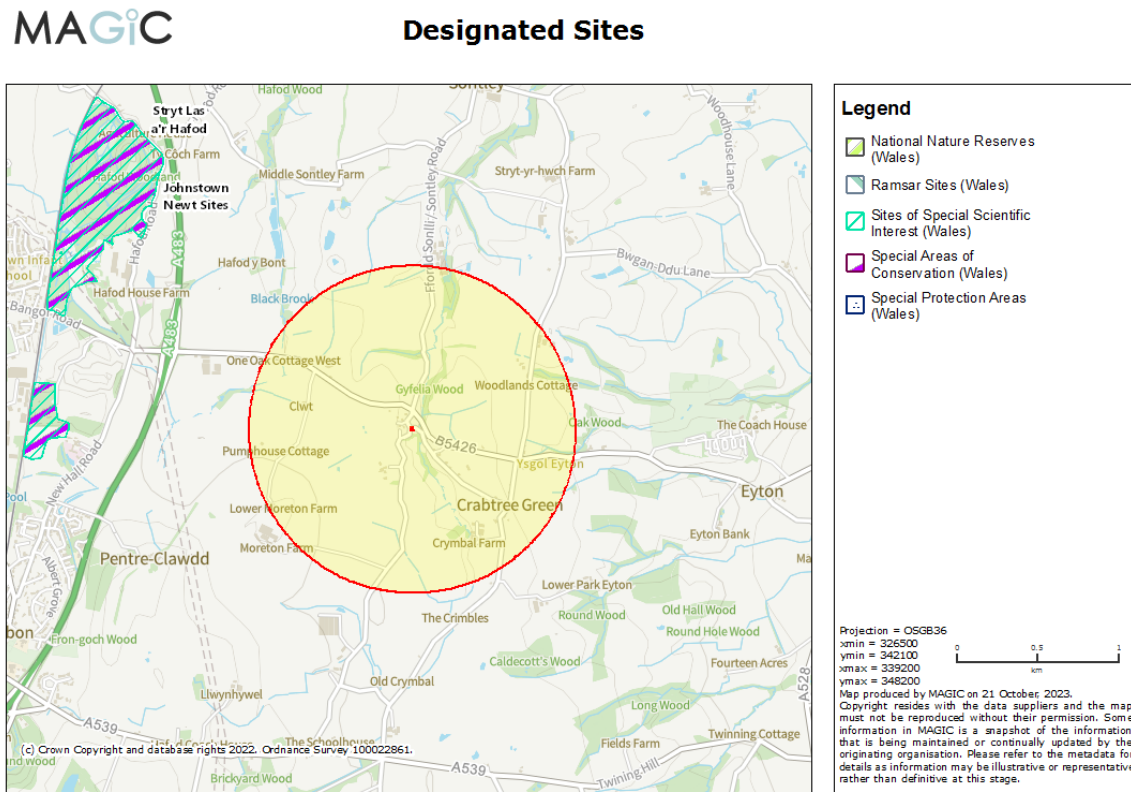


Figure 4.1. Identifying any designated areas near site, a 1km buffer is shown

4.2 Habitats on Site

The site comprises a semi-detached rendered house supporting a slate tile roof lined with a mixture of traditional bitumastic hessian felt and modern breathable membrane. The building is surrounded by ornamental garden to the south and west, the road to the north, and the attached house to the east.



Figure 4.2. House from southwest



Figure 4.3. House from northwest



Figure 4.4. Single storey section to be removed

4.3 Bats

4.3.1 Records

Records of bats within 2km include common pipistrelle (*Pipistrellus pipistrellus*). Records are all over 25 years old and are provided with only a 4-digit grid reference, so specific locations cannot be determined.

Bat species data was provided to the NBN Atlas by NRW Bat Roost Records and The Atlas of Mammals (1993), under OGL and CC-BY Licence respectively.

4.3.2 Field Observations

No evidence of bats was found on site, and there is no anecdotal understanding of bat presence on site. The roof was inspected for potential bat access points and the only feature of potential value was a single slightly raised tile. Inspection with a 12x55 scope did not see any greasing or droppings that would indicate bat presence, and the use of a bright torch revealed that the gap beneath the tile did not extend further into the roof than the single tile itself. The gap is full of moss and detritus, suggesting no animals have gained access beneath in some time.

The single-storey section to be removed had no loft space and was of negligible value for roosting bats.



Figure 4.5. Small gap beneath raised tile

Both loft spaces were checked for evidence of bats and none was found. The ridges had dense cobwebs which are indicative of a lack of bat presence.



Figure 4.6. Heavy cobwebbing around ridge in western loft



Figure 4.7. Clean insulation in western loft



Figure 4.8. Clean insulation in eastern loft



Figure 4.9. Cobwebbing around timbers in eastern loft

4.4 Birds

4.4.1 Records

Records of birds within 2km include common roof-nesting species such as blue tit (*Cyanistes caeruleus*), but records are provided with a low accuracy grid reference meaning specific locations cannot be determined.

Bird species data was provided to the NBN Atlas by Birds (BTO/JNCC/RSPB Partnership) under OGL licence.

4.4.2 Field Observations

No evidence of nesting birds was found on site, and no potential for roof nesting birds was seen. Overhanging eaves are typically where roof-nesting birds gain entry but such features are not present.

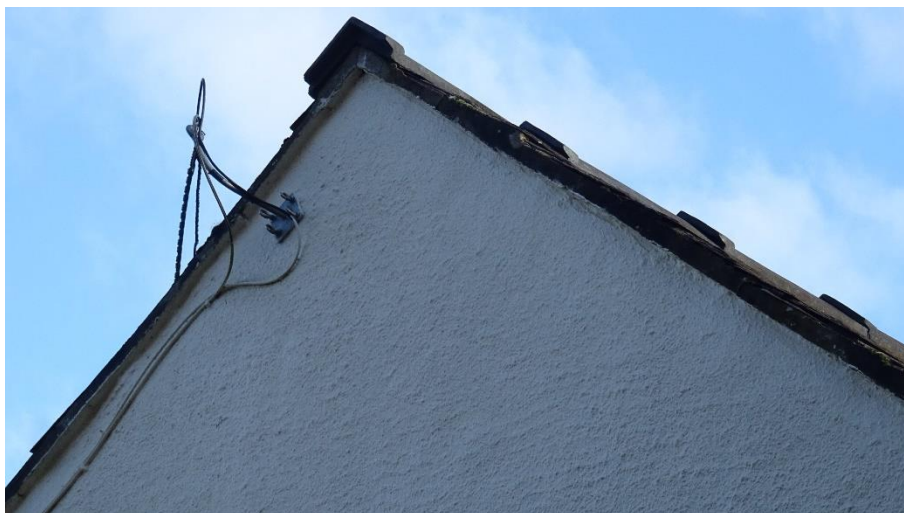


Figure 4.10. Lack of eaves suitable for exterior nesting bird species

5 Description of Proposed Development

The current plans are for a two-storey extension on the southern and western sides of the building, necessitating the removal of the shallow pitch single-storey extension. Specific proposed site plans have not been provided at the time of writing.

6 Impacts, Enhancements and Mitigation

6.1 Nearby Features of Importance

Figure 4.1 shows that there are no designated sites within the zone of influence of this development. No negative impact on sites beyond this area can be expected from a development of this scale.

6.2 Habitats on Site

The development as proposed will not result in the loss of any habitats of principal importance listed in Section 7 of the Environment (Wales) Act (HMSO, 2016), mitigation will therefore be delivered at a species level.

6.3 Bats

6.3.1 Impacts

The only potential roost features for bats identified on site was a single slightly raised tile adjacent to the chimney on the northern roof aspect. This was inspected with a 12x55 scope and revealed to be full of moss and roof detritus and not leaving to a suitable roost feature. No evidence of bats was found inside either loft and no other potential access points were identified.

6.3.2 Mitigation

As the only potential roost feature is highly unlikely to support roosting bats, work can be conducted immediately once planning permission has been granted without the need for further surveys or a licence from Natural Resources Wales.

A Precautionary Working Method Statement will be followed to further negate any risk to bats found in unexpected locations.

Precautionary Working Method Statement

1. The developer and the contractors will be made aware that there is a remote possibility that bats may be found during works and will be advised to work in a way to ensure bats are not harmed during work in areas sensitive to bats. They will be provided with a simple emergency procedure to follow if bats are found at any stage of the work on site. It will be ensured that the method statement is retained on site at all times.
2. If a bat is found at any point during roof works, work will stop immediately, and the ecologist contacted for advice. The need for a licence will be reconsidered.
3. The bat can only be handled by the ecologist or authorised person unless it is in immediate danger. The bat must be carefully placed in a well-ventilated lidded box with a small container (i.e., a plastic bottle lid) with water in it. The container must be kept in a quiet and safe place.
4. Care should be taken to avoid rousing the bat whilst transferring to a suitable location, such as a suitable roost box or alternative roost space that provides a safe, quiet environment with a stable cool temperature and relatively high humidity.

5. If the bat is underweight or injured it will be cared for by an experienced bat carer until such time that it is strong enough to be released into a suitable alternative replacement roost on site.

6.3.3 Enhancements

It is recommended that provision be made for roosting opportunities for bats with the erection of at least one bat box on site. These will be erected at a height of 3-4 m and in a southerly, westerly or easterly facing direction.



Figure 6.1. Example woodcrete bat box: Schwegler 1FF & Beaumaris Bat Box Midi

It may be possible to provide permanent provision for bats with the inclusion of an integrated bat box in the extension. This will be erected at a height of 3-4 m and in a southerly, westerly or easterly facing direction.

Enclosed Bat Box (B and C)

- Designed specifically for the pipistrelle bat
- Available in all brick types
- Discrete home for bats
- Various sizes
- Several roosting zones are created inside the box
- Bats are contained within the bat box itself
- Maintenance free with entrance at the base
- Ideal for new build & conservation work



Bat Box B

Bat Box C

Eco Habitats for Bats	Sizes (mm)	Durability
Bat Box Type A	215 x 65	F2 S2 – Fully Frost Resistant
Bat Box Type B	215 x 215 or 215 x 290	F2 S2 – Fully Frost Resistant

Figure 6.2. Example integrated bat box

6.3.4 Monitoring

Failing boxes or enhancements will be replaced at the cost of the developer if deterioration or damage is noted within five years post-development.

6.4 Birds

6.4.1 Impacts

Work at this site is unlikely to impact any roof nesting birds as there was no potential access points large enough for such species.

6.4.2 Enhancements

It is recommended that a range of woodcrete boxes are erected around the site to provide an enhancement for passerine birds, and styles of boxes similar to the following would be appropriate.

- a. Sparrow Terraces should be erected under the eaves of a building at a minimum height of 3m, in a westerly, northerly or easterly aspect.
- b. 26/32mm hole nest boxes (e.g., Schwegler 1b) should be installed at a minimum height of 3m in a westerly, northerly or easterly aspect.



Figure 6.3. Bird boxes

6.4.3 Monitoring

Failing boxes or enhancements will be replaced at the cost of the developer if deterioration or damage is noted within five years post-development.

7 Concluding Remarks

The survey has focussed on the potential habitats or protected species to be damaged or destroyed as part of this development.

The only potential bat roost feature identified on site was inspected with a 12x55 scope and was not deemed likely to provide suitable roost features for bats as it was full of moss and other roof detritus that would hinder access, and a torch-lit inspection saw that the gap did not extend anywhere besides under the single tile. Further surveys would not be proportionate to the almost negligible scale of potential impacts and so are not being recommended. A simple method statement will be followed, with work stopping and an ecologist contacted if a bat is found during work.

No potential for roof nesting birds was found on site. The site can be enhanced with the inclusion of artificial nest boxes post-development.

The method statements and enhancements provided in sections 6.3 and 6.4 of this report will be followed. Other than those listed above, there are no ecological constraints to the development as currently proposed.

Appendix A – Surveyor Details

Table A.1. Details of surveyors' experience and licences held

Name	Membership of associations/ experience	Licenses
Ben Jones BSc(hons) MSc	Senior Consultant MCIEEM Ben has a degree in Marine and Freshwater biology and a Master's degree in "Managing the Environment". He has 8 years' experience conducting environmental appraisals and phase 2 surveys for bats and newts in England and Wales. As a member of the CIEEM he is bound by professional conduct.	Holder of survey licenses for bats and newts in England and Wales. <u>England:</u> Bats - 2017-29112-CLS-CLS GCN - 2016-25209-CLS-CLS <u>Wales:</u> Bats – S091847/1 GCN – S091242/1
Logan Maggs BSc(hons) (of Barns Ecology)	Senior Consultant Logan has a degree in Conservation and Land Management. He has over 10 years' experience conducting environmental appraisals and phase 2 surveys for bats and newts in England and Wales.	Holder of survey licenses for bats and newts in England and Wales. <u>England:</u> Bats - 2016-24901-CLS-CLS GCN - 2017-29218-CLS-CLS <u>Wales:</u> Bats – S091096/1

Appendix B – Methodology

Desk Study

Table B.1. Data sources

Organisation/Resource	Information Assessed
Freely available online species datasets (NBN Atlas)	Protected/Priority Species records (2km)
MAGIC website	International statutory designations (1km) • Special Protection areas (SPA) • Special Areas of Conservation (SAC) • RAMSAR sites National statutory designations (1km) • Sites of Special Scientific Interest (SSSI) • National Nature Reserves (NNR) EPS Licenses for protected species (2km)

As the development is a small-scale householder application a full data search is not required, a search was conducted on NBN for commercially available records.

A search on Multi Agency Geographic Information for the Countryside (Magic Maps) determined nearby designated areas. The map is presented in Section 4.1.

Field Survey

The level of survey is aimed to identify field signs of or habitats with the potential to support protected species and therefore assist in the determination for detailed phase 2 surveys.

Determination of Ecological Value is based on the general criteria provided by CIEEM (2017).

Table B.2. Criteria of ecological values

Ecological Value	Description and Examples
High	Habitats or features that have high importance for nature conservation, such as statutory designated nature conservation sites of international or national importance or sites maintaining viable populations of species of international or national importance (e.g., Red Data Book species; European protected species).
Medium	Sites designated at a county or district level, e.g., Local Wildlife Site (LWS), ancient woodland site, ecologically 'important' hedgerows or ecological features that are notable within the context of a region, county or district (e.g., a viable area of a Priority Habitat or a site that supports a viable population of a priority species).
Low	Sites of nature conservation value within the context of a parish or neighbourhood, low-grade common habitats, such as arable fields and improved grasslands and sites supporting common, widespread species.

Species Surveys

Bats

Features on site were assessed for potential for bat roosts, foraging and commuting.

An external assessment of all structures on site was undertaken to determine potential roost features (PRF). The potential suitability of the structures assessed was assigned a rating of None, Negligible, Low, Moderate or High in accordance with table 4.1 of Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th edition.

An internal assessment of all structures was undertaken by a suitably licensed surveyor for evidence of roosting bats such as droppings, feeding remains and staining.

Daytime surveys were conducted with the aid of a strong torch and a 12x55 monocular. Bat species may leave little evidence of their presence.

Evidence for the presence of bats includes:

- Holes, cracks and rot holes used as roosts, marked by streaks of urine and faeces.
- Smoothed, darkened edges where bats have rubbed and left natural body oils when entering and exiting a space.
- Faeces under a roof access point, a well-used feeding point or a resting spot.
- Feeding signs such as discarded insect wings under a feeding point.
- Lack of cobwebs around eaves, roof spaces, beams or ceilings where routes are kept clear by bats or presence of droppings in a cobweb.
- Presence of roosting or dead bats in or behind any object.

Birds

Searching for evidence of nesting birds, including barn owls, involved looking for:

- Presence of nests
- Collections of droppings and/or feathers
- Highly distinctive droppings or splats under roosting points.
- Presence of owl pellets/feathers
- Listening for bird song
- Recording bird activity

Appendix C – Policy

The following areas of policy and legislation are of relevance to ecology and provide context to the surveys conducted. Findings presented in this report are in line with the following:

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 – as listed in:

- Schedule 2. European protected species of animals

The Wildlife and Countryside Act (1981) – as listed in:

- Schedule 1. Birds protected by special penalties at all times
- Schedule 5. Protected animals

Countryside and Rights of Way Act (2000)

Environment Act (2021) – Part 6 – Nature and Biodiversity

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

Planning Policy Wales 2002, updated Dec 2018

Section 6.4 – Biodiversity and Ecological Networks

The Nature Recovery Plan for Wales – Setting the course for 2020 and beyond (2015)

Environment Act (Wales) (2016)

Section 7

Wrexham Unitary Development Plan – EC6 Biodiversity Conservation

Bats

All bat species are protected under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 which implements the EC Directive 92/43/EEC in the United Kingdom. It is an offence, with certain exceptions, to:

- Deliberately capture or kill any wild animal of a European Protected Species.
- Deliberately disturb any such animal.
- Damage or destroy a breeding site or resting place of such a wild animal.
- Keep (possess), transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal or plant of a European Protected Species, or any part of, or anything derived from such a wild animal or plant.

A person found guilty of an offence is liable on summary conviction to imprisonment for a term not exceeding six months or to an unlimited fine or to both.

Seven bat species are on the UK Biodiversity Action Plan and are listed as Species of Principal Importance under the provisions of the Natural Environment and Rural Communities (NERC) Act 2006. The National Planning Policy Framework (NPPF) states that to minimise impacts on biodiversity and geodiversity, “*planning policies should... promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations*”.

Birds

Under Section 1 of the Wildlife and Countryside Act 1981 (as amended), birds, their nests and young are all protected from damage, particularly during the breeding season. The Act allows for fines or prison sentences for every bird, egg or nest destroyed. It makes it an offence to:

- Intentionally kill, injure or take any wild bird.
- Take, damage or destroy the nest of any wild bird whilst it is in use or being built.
- Take damage or destroy the egg of any wild bird.
- To have in one's possession or control any wild bird, dead or alive or egg or any part of a wild bird or egg.

Some bird species are included in the UK and local BAPS and are recognised as species of principal importance for nature conservation in accordance with section 41 of the NERC Act 2006. Such species and their habitats receive protection through the provisions of the NPPF.

Appendix D - Bibliography

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