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Wrexham
LL14 4LG

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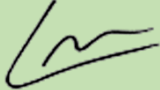
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The report should be read in its entirety.

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 the surveyors make every reasonable effort, Greenscape Environmental Ltd 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 one year for planning purposes, after which time further survey information may be required.

Greenscape Environmental Ltd 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.



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1 Executive Summary

1.1 Purpose of the Report

Greenscape Environmental Ltd was commissioned by Sara Moysan to undertake a preliminary ecological appraisal of Aberoer – Issa to provide supporting information for a planning application for a small extension, re-roofing and insulation of the current property.

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, and a site visit undertaken at the site, OS grid reference SJ28464933 on 10th November 2021 by Ben Jones and Rebecca Wilson.

1.3 Key Impacts and Mitigation Measures

The desktop study included a search for nearby designated sites and previously recorded protected species. It was considered that the site could provide potential habitat for bat and bird species and these should be the main focus of the ecological appraisal.

The site comprises a two-storey bungalow. The south elevation of the building will have a ~1m extension built, and the roof is to be replaced and insulated as there is no insulation currently present. The site is of negligible roost potential for bats due to vaulted ceilings and only shallow crevices beneath three raised tiles. As such further surveys would be disproportionate to the scale of the development. The client has agreed to install an integrated bat box in the new extension wall to provide bat roost features in perpetuity.

There are no bodies of water within 250m.

Works on the extension and roof can continue without a 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 work will be conducted at a suitable time of year to minimise potential impacts. There are no other ecological constraints to the development as currently proposed.

Table 1.1. Timing of Works

Action	Timing	Justification
Roof removal	Between September and April	Bats are least likely to be using the building at this time



2 Introduction

This report has been compiled by R. Wilson BSc(hons) MSc PhD. It has been reviewed in line with Greenscape's Quality Management System.

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

2.1 Project Background

Greenscape Environmental Ltd was commissioned by Sara Moysan 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 re-roofing and insulating at Aberoer-Issa.

2.2 Purpose of the Report

This report aims to:

- Identify the key ecological constraints to the proposed development.
- 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 under NPPF Section 15.

The Local Planning Authority have requested further information regarding bats and nesting birds because of the removal of the roof prior to re-insulation.

2.3 Site Context and Location

The site is located in open countryside 4km to the west of Wrexham, OS grid reference SJ28464933. It is set in a rural environment surrounded by open farmland. There is moderate connectivity to areas of woodland and surrounding countryside via treelines, lanes and hedgerows. There are trees lining a brook 120m north of site, and a larger area of woodland 650m northwest. The surrounds provide potential foraging, resting, and commuting opportunities for bats and nesting birds.



3 Methodology

Broad methodologies for data collection and interpretation were informed by guidance outlined in CIEEM (2017) – Guidelines for Preliminary Ecological Appraisals. 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 known records of protected or notable species.

3.2 Field Survey

3.2.1 Date and Survey Conditions

Table 3.1. Survey conditions

Date	Time	Equipment Used	Weather
10/11/2021	10:00	Camera and strong torch	Overcast, dry underfoot, 11°C
Comments	Two surveyors used: Ben Jones and Rebecca Wilson		

3.2.2 Habitats

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 of site value.

3.3 Species Survey

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

Features on site were assessed for potential for nesting birds.

3.4 Constraints of the Survey

All areas were accessible for this survey. It was conducted at a sub-optimal time of year for the assessment of bat activity, but this was not considered a constraint because evidence of bats can be seen year-round. No other specific constraints have been identified.

The internal search revealed that the buildings had not been subjected to any form of specific cleaning and was in a natural redundant state.



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.

MAGiC

Aberoer-Issa

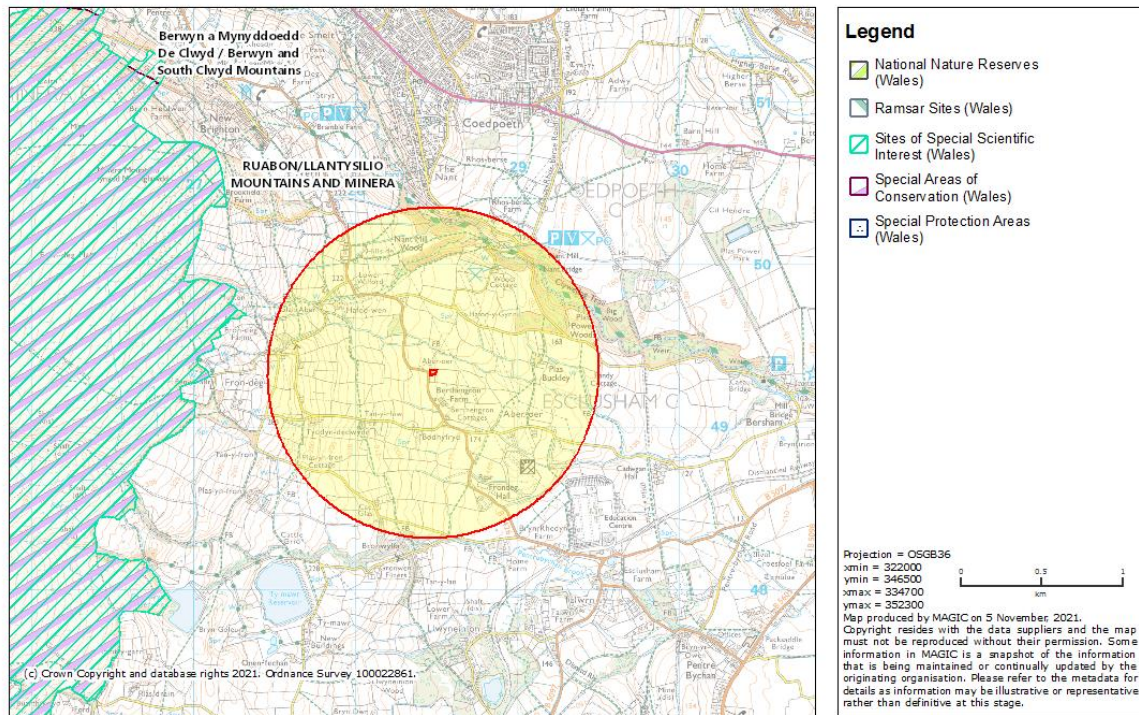


Figure 4.1. Identifying any designated areas near site, a 1km buffer is shown



4.2 Habitats on Site

The site comprises a two-storey cottage with rendered exterior and unlined slate tile roof. The property has vaulted ceilings with no roof void between the plasterboard and the tiles.



Figure 4.2. Slate tile roof at the west of the property



Figure 4.3. East of the property

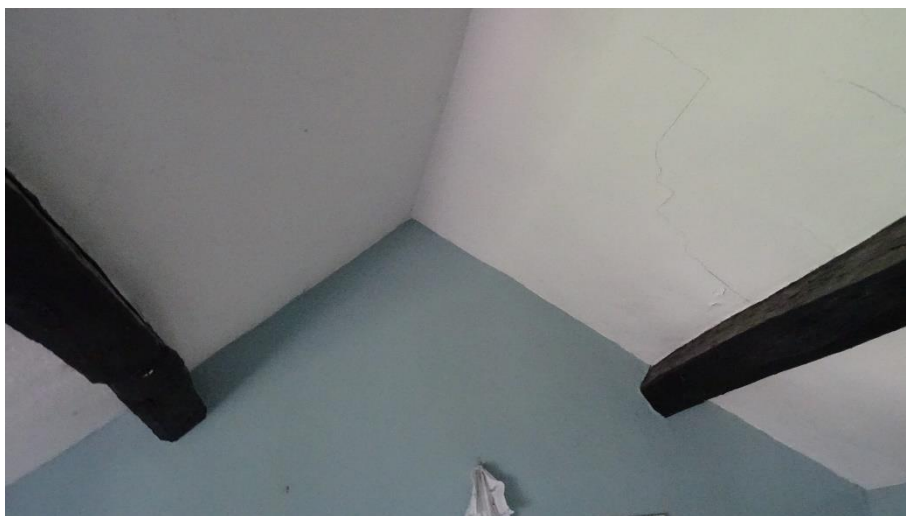


Figure 4.4. Vaulted ceilings



4.3 Bats

4.3.1 Records

Records of bats within 2km include common pipistrelle (*Pipistrellus pipistrellus*) from 2003 2km north of site and lesser horseshoe bat (*Rhinolophus hipposideros*) 900m north of site most recently in 2000.

Bat species data was provided to the NBN Atlas by Cofnod (records provided by OGL).

4.3.2 Field Observations

The site had limited features for bats and no evidence was seen during the site visit. There are no internal loft spaces as all upper floors have vaulted ceilings. Three notable gaps were seen in the external roof faces, all of which were near the ridge. These were examined closely with optical zoom technology, and the crevice did not extend deep under the tiles and so do not provide good roost habitat.



Figure 4.5. Example gap under ridge

Some areas of render were damaged, but these areas did not extend to suitable bat roost crevices. There are two chimneys, one is sealed and lined, and the other open, with no evidence of bats either within the chimney or on the floor beneath.



Figure 4.6. Crack in external render



Figure 4.7. Floor beneath chimney



Figure 4.8. Chimney

4.4 Birds

4.4.1 Records

Records of birds within 2km include common passerine species including blue tit (*Cyanistes caeruleus*), robin (*Erithacus rubecula*) and house sparrow (*Passer domesticus*). All bird records are provided with low accuracy grid references so specific locations cannot be determined.

Bird species data was provided to the NBN Atlas by Welsh Government Tir Cynnal and Tir Gofal Monitoring and Evaluation Programme (Licence OGL).

4.4.2 Field Observations

No evidence of nesting birds was seen in the house. Common passerine species were seen in the vicinity such as robin and sparrows.



5 Description of Proposed Development

The current plans are for an extension to the south elevation of the property to bring the wall in line with the chimney breast, and to reroof and insulate, as there is currently no insulation.

At the time of writing no official plans have been drawn up, however the image below shows a rough guideline of the footprint of the proposed extension.



Figure 5.1. Proposed footprint of the extension



6 Impacts, Enhancements and Mitigation

6.1 Nearby Features of Importance

Figure 4.1 shows that there are no designated areas within 1km of the development, therefore no impact is expected and no further consideration required.

6.2 Habitats on Site

As the site is not comprised of any habitats of principal importance listed in Section 41 of the NERC Act (2006), mitigation will be delivered at a species level.

6.3 Bats

6.3.1 Impacts

There is negligible roost potential in the building. The presence of vaulted ceilings means there is no loft spaces and gaps under tiles were blocked by mortar only a short distance in, meaning they did not provide a suitable crevice. The extension will not have a negative impact on bats as no potential for roosting bats was found. It is understood that work to reroof the building is likely to commence between September and the end of April which is when bats are least likely to use buildings. This, coupled with the lack of roost potential, suggests that no negative impact on any local bats is likely.

6.3.2 Enhancements

The client has agreed to erect a free standing woodcrete bat box in nearby trees to the south. 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



Moysan

The client has also agreed to install permanent provision for roosting bats with the inclusion of an integral bat box in the extension wall on the southern side. This will be erected alongside the current stench pipe in the new wall at a minimum height of 3m. The extension will be rendered to match the rest of the building, and these boxes are suitable for render cover providing the access crack is left open.

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 integral bat box



Figure 6.3. Location for integral box once extension built

6.3.3 Monitoring

Any enhancements erected for bats will be monitored. 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 have any negative impact on any local birds as there is no nesting potential on site.

6.4.2 Enhancements

- 1) The client is keen to enhance the site post-development with the erection of bird boxes, and a selection of the following would be appropriate.
 - i) Sparrow Terraces should be erected under the eaves of a building at a minimum height of 3m, on a westerly, northerly or easterly aspect.
 - ii) 26mm hole nest boxes should be installed at a minimum height of 3m, in a westerly, northerly or easterly aspect.
 - iii) Robin boxes should be installed inside vegetation such as a hedge or shrub, ideally at a height of over 2m.



Cedarwood Sparrow Terrace



Schwegler 1b Bird Box



Schwegler 2H Robin Box

Figure 6.4. Bird boxes

6.4.3 Monitoring

Any enhancements erected for birds will be monitored. 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 building does not offer any roost value for bats as the potential features seen did not extend to a suitable crevice. No habitat for nesting birds was seen. The work will go ahead during winter when transitory bats are least likely to be using the building. The client is keen to enhance the site with the erection of integrated bat boxes and free-standing bat and bird boxes in trees and on external walls around site.

The development can proceed without the loss of habitat of significant value, and without the loss of the favourable conservation status of any protected species. As there is no evidence of protected species within and around the development site, there is no requirement to address the three tests under Regulation 55 of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

The enhancement suggestions provided in sections 6.3.2 and 6.4.2 of this report will be followed and works will be done at a suitable time of year. 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	Lead Consultant Ben has a degree in Marine and Freshwater biology and a Master's degree in "Managing the Environment". He has 6 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 - 2017-29112-CLS-CLS GCN - 2016-25209-CLS-CLS <u>Wales:</u> Bats – S088669-2 GCN – S087992-1
Logan Maggs BSc(hons)	Lead 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 – S086874/1 Newts - 79665:OTH:SA:2018
Rebecca Wilson BSc(hons) MSc PhD	Rebecca has a PhD in bioenergy crop cultivation and has been assisting with ecological surveys in 2021	



Appendix B – Methodology

Desk Study

Table B.1. Data sources

Organisation/Resource	Information Assessed
Freely available online species datasets (NBN Atlas)	Protected/UK BAP 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)

The National Biodiversity Network (NBN) Atlas was checked to identify the protected species that have formally been recorded in the area. This was considered proportionate to the size and potential impacts of the development. 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

An assessment of habitats was conducted broadly following the JNCC Handbook for Phase 1 Surveys 2010.

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 IEEM (IEEM 2006).

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 on the county BAP or a site that supports a viable population of a county BAP 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

Methodology used is in accordance with recommendations by BCT, Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd edition, Collins (2016).

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 low to high in accordance with table 4.1 of Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd edition, Collins (2016).

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)

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

Chartered Institute of Ecology and Environmental Management (CIEEM), (2006). *EcIA Guidance (Terrestrial, Freshwater and Coastal 2006)*.

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Natural England – *Nature on the Map, Magic Maps*. Copyright Natural England, containing Ordnance Survey data, crown copyright and database right 2018:
<http://magic.defra.gov.uk/magicmap.aspx>

Natural Environment and Rural Communities Act 2006:
<http://www.legislation.gov.uk/ukpga/2006/16/contents>

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