Ecological Impact Assessment at

No. 2 Maesydre

Maesydre
Welshpool
Powys
SY21 7SU

(SJ22595.07160)

By Churton Ecology
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Commissioned by Gwynfor Humphreys
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SUMMARY

Background

Churton Ecology was instructed to carry out an Ecological Impact Assessment at No. 2 Maesydre, Welshpool, Powys SY21 7SU.

The site comprises a two-storey semi-detached dwelling with a single-storey annexe. The proposal is for the two-storey extension of the building to the south-east.

Method of study

A desktop search, daytime building inspection and general protected species walkover of the site and surrounds aimed to establish the presence or absence of roosting bats, breeding birds and other protected species with potential to be negatively affected by the development proposal. All survey activities potentially disturbing to bats were carried out under licence by Mr. Rob Thorne on 07/09/23.

Ecological features

The site supports habitats of low biodiversity value. Bats (foraging) are considered to be an important ecological feature of the site's potential area of influence.

Mitigation and enhancement measures

With mitigation measures in place for bats (appropriate lighting measures) there should be no significant residual adverse effect on protected species.

With enhancements in place (integrating a bat and bird box into the new extension) there would be a demonstrable increase in the biodiversity value of the site.

1 INTRODUCTION

1.1 Background and site description

Churton Ecology was instructed by Mr Gwynfor Humphreys to carry out an Ecological Impact Assessment at No. 2 Maesydre, Maesydre, Welshpool, Powys SY21 7SU (SJ2259507160).

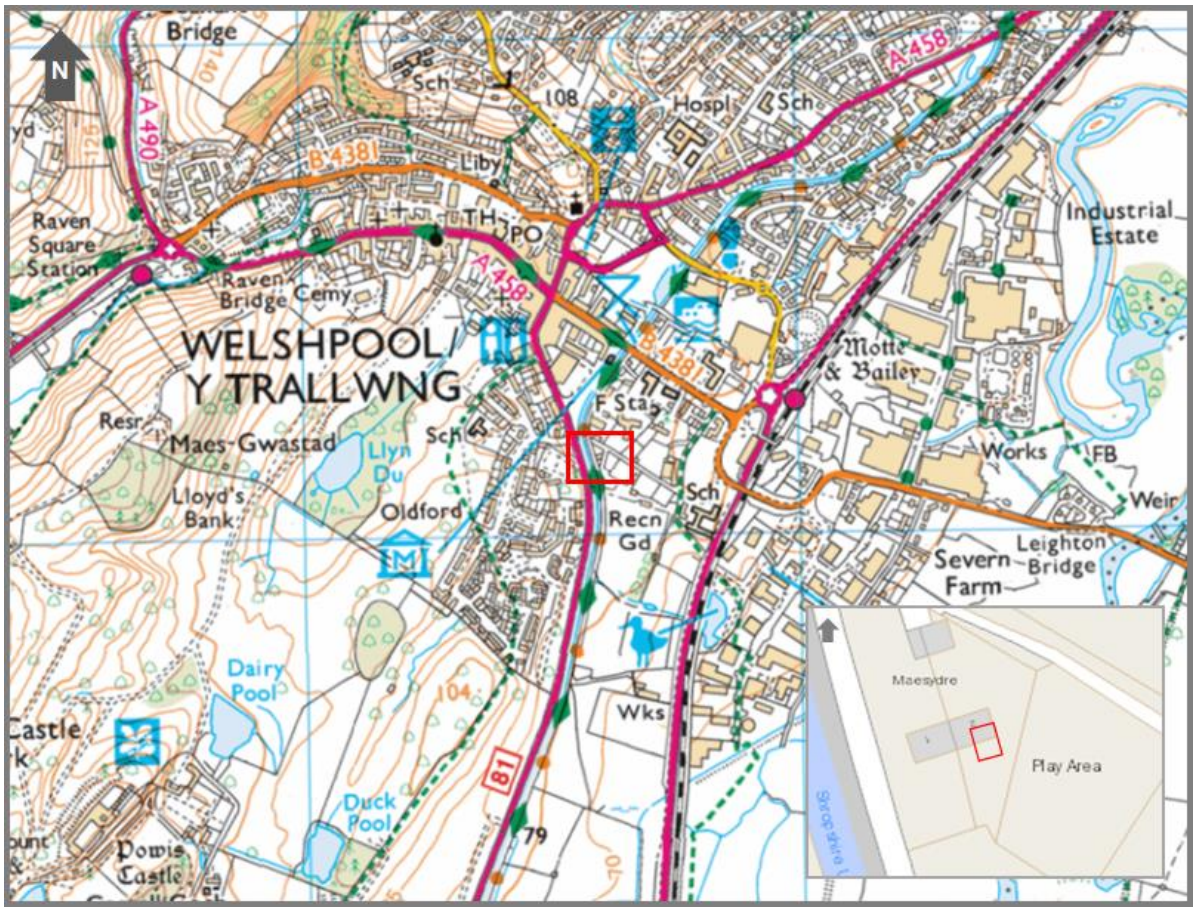

Fig 1: Site location and layout
OS map licence no. 100048619

A desktop search, daytime building inspection and general protected species walkover of the site and surrounds aimed to establish the presence or absence of roosting bats, breeding birds and other protected species with potential to be negatively affected by the development proposal.

The site comprises a two-storey semi-detached dwelling with a single-storey annexe.

1.2 Proposed works

The proposal is for the two-storey extension of the building to the south-east.

2 METHODOLOGY

2.1 Desk study

Sites of international and national conservation significance were sought within 1km of the site. Searches were conducted using the following sources:

- MAGIC maps

OS maps and aerial photographs (Google Earth) were used to identify landscape features of potential ecological interest including hedgerows, tree-lines, ponds, streams, ditches and areas of likely (semi-)natural value.

2.2 Habitat survey

A survey of the site and surrounds was conducted on 07/09/2023 by Mr Rob Thorne (Churton Ecology).

2.3 Protected species survey

2.3.1 Bats

Field survey

A suitably high ladder was used to access all elevated areas with potential to support roosting bats. A roof ladder was available to access the roof structure; however, this equipment was not required.

Searches were conducted using a fibrescope, extraction pooter, mirrors and torches to identify and collect signs indicating past or current bat use, such as the presence or not of live or dead bats, their droppings or urine splats, cobweb-free areas in cracks and crevices, grease stains or smoothed edges within or below potential roosts and/or their access points.

Habitat suitability assessment

A general habitat suitability assessment of the site and surrounds was carried out to determine the likely value of foraging and commuting habitats.

2.3.2 Great Crested Newt

Desktop search

Ponds and other potential breeding habitats were sought within 250m of the site using OS maps and aerial photographs.

2.3.3 Breeding birds

Field survey

Birds seen or heard during the survey were recorded and old nests were attributed to species where possible.

Habitat suitability assessment

Habitats, with potential to support common, priority or Schedule 1 species of nesting bird were identified within the site and the immediate surrounds.

2.3.4 Other protected and priority species

Habitat suitability assessment

Habitats thought suitable to support other protected or priority species potentially relevant to the site location were also sought. Where no suitable habitats exist and/or where no impacts can be reasonably predicted, species can be discounted from further survey, impact assessment and mitigation - in this instance Dormouse, Otter (the house is already occupied and the nearby canal towpath is very popular with walkers), White-clawed Crayfish, Badger, Water Vole and reptiles.

3 RESULTS AND EVALUATION

3.1 Designated sites

Statutory and non-statutory sites

There is one site of international and national conservation significance within 1km of the site. The Montgomery Canal SAC/SSSI is located just 25m to the west of the site. The canal supports the largest and most extensive population of Floating Water-plantain in lowland Britain.

Evaluation and discussion

The site does not support the type of habitat for which Montgomery Canal SAC/SSSI has been designated so there is no intrinsic habitat that links the two sites. As a consequence the proposal will have no direct (physical) adverse effect on any protected or priority species of flora and fauna associated with it.

The scale and type of development proposed is below the threshold for adverse air pollution effects recommended in the JNCC guidance (Guidance on Decision-making Thresholds for Air Pollution – published December 2021). Furthermore, the scale and type of development

proposed is not listed as a potential threat to the integrity of The Montgomery Canal SAC/SSSI under the relevant Impact Risk Zone criteria (Magic Maps). The site is also topographically lower than the canal towpath which should preclude potential construction phase run-off impacts.

Although unlikely, pollution in the construction phase could be damaging to the nearby canal and its associated eco-systems. The impact of this could be significant at the local level (or greater) depending on the nature of the contamination.

It is the engineer/developer's responsibility to be fully conversant with GPP5 and PPG5, the pollution prevention guidelines on works or maintenance in or near water. The developer shall put in place measures to prevent pollution or to deal with any spillages during the construction phase that are compliant with both GPP5 and PPG5. The documents can be downloaded from the Environment Agency website.

Ultimately all other drainage matters will be considered by the relevant planning consultees with appropriate recommendations made and incorporated into the design of the scheme. It is not the remit of this report to consider the effects of pollution on statutory or non-statutory sites for nature conservation, since there is no reasonable likelihood of this occurring with the system of planning control in place.

3.2 Field survey

3.2.1 Building description

The site comprises a two-storey semi-detached dwelling with a single-storey annexe on the east gable. The walls are rendered, cavity-era brick construction and the masonry is intact with no potential for bats to access the wall cavity.

P1: SE (rear) elevation: looking NNW

P2: NE (gable) + NW (front) elevations: looking SW

The roof is lined with bitumen felt and covered with interlocking concrete (Marley) tiles and half-round concrete ridge-tiles. The roof-tiles are flush, tight-fitting and intact with no potential entry points for bats. The ridge-tiles are securely bonded and there is no mortar loss between the joints or along the ridge-bed.

P3: Example of the tightly soffited eaves

P4: Example of the tight-fitting roof and ridge-tiles

The building contains no loft space - this has been converted into a bedroom with a vaulted ceiling. The eaves support tight-fitting timber soffits. The lead flashings associated with the central chimney are tightly formed at the roof abutment with no potential entry points for bats. In summary there is no potential means by which bats or nesting birds can gain entry into the building. The flat-roofed gable annexe is currently under construction and has no potential to support roosting bats.

The building is surrounded by hardstanding and amenity grassland which have negligible biodiversity value.

3.3 Protected species survey

3.3.1 Bats

Field survey

Not a single bat dropping or other field sign was recorded from the building and there is no potential bat or bird access into the building.

Habitat suitability assessment

The site lacks any features that are likely to be of particular interest to anything other than small numbers of foraging (generalist) bat species. The site is located close to the canal which represents a significant foraging resource for bats in the local area.

Evaluation and discussion

The inspection survey was carried out thoroughly and all areas could be accessed and inspected closely and no evidence of a bat roost could be identified in any part of the building. It is therefore the opinion of Churton Ecology that no further bat survey effort, impact assessment or mitigation is required in relation to roosting bats.

The site lacks any features that are likely to be of particular interest to foraging bats. Accordingly the site is not going to be of intrinsic (sustenance) value to local bat populations; however, bats commuting and foraging are still likely to be an important ecological feature of the site's potential area of influence. As a consequence of its canal-side location, the site is in an ideal location for providing ecological enhancements, primarily in relation to bats and nesting birds.

3.3.2 Great Crested Newt

Desktop search

The site is located in the known geographic range for this species and the species is widespread in this part of the county. Given the scale of the development, only ponds within 250m of the site were considered to be potentially relevant to the proposal. No mapped ponds were identified within this area and there was nothing to indicate the potential presence of any unmapped ponds (from aerial photography). The Montgomery Canal is not known to support populations of Great Crested Newt due to its high densities of coarse fish species.

Evaluation and discussion

Great Crested Newt is not considered to be an important ecological feature of the site; therefore, no further survey effort, impact assessment or mitigation is required in relation to it.

3.3.3 Birds

Field survey

No evidence of nesting birds was recorded in any part of the building. A flock of House Sparrows (a UK BAP) were recorded on the access track on the drive in.

Habitat suitability assessment

There is no habitat suitable for cavity nesting bird species such as House Sparrow or Starling and there were no signs of nesting House Martin, despite the suitability of the building's soffited eaves.

Evaluation and discussion

Nesting birds are not considered to be an important ecological feature; therefore, no further survey, impact assessment or mitigation is required in relation to this class of animal.

3.3.4 Other protected and priority species

There is limited potential for other protected or priority species to be negatively affected by the proposed development.

4 POTENTIAL IMPACTS

4.1 General

This section considers the potential impacts (and subsequent effects) which might arise from the development in the absence of avoidance measures and/or mitigation. Wherever possible, the negative ecological impact of a development must be avoided. Any residual effects and their level of significance are further discussed with mitigation and/or enhancements in place.

It is important to note that the purpose of an ecological impact assessment is to consider impacts and effects in relation to species and habitats that have some level of international, national or local conservation significance – broadly speaking rare, uncommon or declining species and habitats. These are variously protected by domestic law and priority species have some limited protection under the provisions of the Environmental (Wales) Act – species and habitats listed on the UK/Local biodiversity/habitat action plan and consequently S7 of the Act.

4.2 Protected species

4.2.1 Bats

Significance of effects prior to mitigation

The development will not result in the deterioration, damage, destruction or obstruction of a bat roost and no bats will be disturbed, captured, injured, killed or transported as a result of the proposal.

Significance of residual effects after mitigation

N/A

Significance of effects after enhancements

The provision of a bat tube, integrated into the new extension, could only have a beneficial effect on local bat populations.

4.2.2 Breeding birds

Significance of effects prior to mitigation

The development will not result in the destruction of bird nesting sites.

Significance of residual effects after mitigation

N/A

Significance of residual effects after enhancement

The development could result in the provision of a single integrated S-brick suitable for species such as Swift, House Sparrow and Starling or a combination of these on 'timeshare'. The impact of this could only have a significant beneficial effect on the local bird population.

4.3 Survey constraints

There were no survey constraints.

4.4 Protected species legislation

<u>Bats</u>

All UK bat species are protected under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and The Wildlife and Countryside Act 1981 (as amended). Essentially this makes it unlawful to; deliberately capture, injure or kill a bat; intentionally or recklessly disturb a bat whilst it occupies a roost or deliberately cause disturbance to (a bat) or significant group of bats; damage or destroy the roosting site of a bat; intentionally or recklessly obstruct access to a bat roost.

Notably, legal protection gives absolute protection to bat roosts and their continued functionality, regardless of deliberate, intentional or reckless action. Legal protection also extends to seasonal roosts which are not always occupied by bats throughout the year.

Disturbance caused through excessive noise or lighting and/or alterations to the landscape could potentially impact on bat roosting, foraging and/or commuting habitats and may have legal implications with regards disturbance and roost deterioration laws. It is therefore the duty of the relevant competent authority to take habitat severance, disturbance and land use change issues and their potential for impact on bat populations into consideration when assessing applications for the relevant consent.

4.5 Personnel

Rob Thorne BA (Hons) MRSB has eighteen years' experience surveying sites for development and conservation purposes, covering Ecological Impact Assessment, botanical and vegetation surveys, and is competent to survey for a wide range of protected and priority species. He holds NE and NRW bat (17yrs) and Great Crested Newt (15yrs) survey and numerous mitigation licences and is a long-time member of The Shropshire Bat Group. He holds, or is accredited to work under, survey licences for Barn Owl, White-clawed Crayfish and Dormouse. He is also an experienced reptile and Otter surveyor having undertaken large scale reptile surveys for Natural England (to inform SSSI designations) and the Wildlife Trusts and targeted Otter surveys of watercourses for The Shropshire Mammal Group (as well as for numerous development proposals). He is also experienced in reptile mitigation, habitat management and trans/re-locations and has carried out long-term studies of several Slow-worm populations.

5 PROPOSED AVOIDANCE MEASURES, MITIGATION AND ENHANCEMENTS

5.1 Avoidance measures and mitigation

5.1.1 Protected species

Bats

No further mitigation is required other than the careful vigilance of contractors during the works period; however, in the event that bats, or evidence of bats, are encountered during any part of the development, then there is a legal requirement for works to cease immediately. Natural Resources Wales must be consulted at the earliest opportunity and further surveys will most likely need to be conducted to meet any subsequent licensing requirements.

If bats are discovered these should be covered by the last object removed (where there is no risk of crushing) and any associated coverings nearby must also be replaced. An estimate of the numbers should be **quickly** ascertained by the contractor before the bats are concealed.

If grounded bats are discovered these should be covered by a cardboard box until the bat worker arrives.

If any external lighting is proposed, then a lighting plan may be requested as a condition of planning consent. Alternatively, a lighting plan can be submitted with the application to reduce the number of conditions attached to the decision notice. The plan submitted must take into account the following guidance and summary recommendations:

- Bat Conservation Trust (2023) *Bats and Artificial Lighting at Night – Institute of Lighting Professionals* Bat Conservation Trust, London
- Bat Conservation Trust (2018) *Bats and artificial lighting in the UK – Bats and the Built Environment Series* Bat Conservation Trust, London
- Bat Conservation Trust (2014) *Interim Guidance: Artificial lighting and wildlife – Recommendations to help minimise the impact of artificial lighting* Bat Conservation, London
- Institute or Lighting Professionals (2011) *Guidance notes for the reduction of obtrusive light* Institute or Lighting Professionals, London

As a matter of best practice, external lighting must be minimised or avoided altogether, particularly where this would illuminate the canal corridor to the west. Where used, lighting must be fixed on the lowest column practical with light spread kept well below the horizontal using cowls, hoods, screens or simply by downward directionality. LED bulbs with a warm white colour spectrum (2700 Kelvins) must be used to reduce the blue light component most disturbing to bats. PIR systems must be set on a short timer (1 minute maximum) and responsive only to larger moving objects.

5.2 Enhancement recommendations

5.2.1 Species

One S-brick could be integrated into the masonry on the new north-east facing side wall (just under the eaves). A Schwegler 1FR bat tube (or similar) could be integrated into the masonry on the new south-east (gable) or south-west (side) elevations.

The locations of these would typically be provided at the Reserved Matters (or a prior to first occupation condition); however, where bat roosting/bird nesting features are to be integrated into the fabric of the building (potentially such as here) it is advisable to include these in the architectural drawings submitted with the application to avoid the need to retro-fit at a later date.

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