

SURVEY RESULTS, RE PROTECTED SPECIES

Site: Former Fields Farm
Old Wrexham Road
Gresford
Wrexham
LI12 8TY

Client: Mr Andrew Newcombe
C/o Blueprint Architectural Services
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Introduction:

We have been instructed to undertake a follow up species survey with regard to the revised planning application for the demolition of the farm buildings and dwelling and the construction of a new dwelling and free standing garages, Fields Farm, Gresford, to ascertain impact on any locally recorded species. The survey addresses the requirements as set out in the Welsh Assembly Government Technical Advice Note 5, 'Nature Conservation and Planning' to enable an assessment of impacts and mitigation to negate impact as a consideration, material to the determination of planning consent.

A survey was undertaken by a competent ecological surveyor to conform to the planning requirement.

Historical Data:

No records are available for the survey buildings. The previous survey recorded fly through behaviour for Pipistrelle bats within one upper area of the existing barns.

Local records are available for Pipistrelle, Brown Long-eared and Noctule. The general area is also likely to support the following local county recorded species:-

Pipistrelle *Pipistrellus pipistrellus/pygmaeus*
Long-eared *Plecotus Auritus*
Daubenton's *Myotis daubentonii*

Whiskered/Brandt's *Myotis mystacinus/brandtii*
Natterer's *Myotis nattereri*
Noctule *Nyctalus noctula*
Lesser Horseshoe *Rhinolophus hipposideros*

The Noctule bat, though recorded within the county, has only been recorded roosting within trees.

The protected species the Great Crested Newt is recorded locally with the nearest recent record for the species being located approximately 370 m to the south east.

Site Description:

The site is as previously described, located to the west of the Old Wrexham Road, approximately 1.2 km to the north and the outskirts of Wrexham approximately 600 m to the south of the site. The farm buildings are no longer active as a farm and presently are used as storage and workshops. The site is comprised of the main two storey barns and lean-to sheds, free standing Dutch barns and the former farm house. The farm yard is formed by concrete hard standings with an access road to the lane. The immediate habitats are arable fields with hedgerow boundaries.

Farm House

The farm house is sited to the south of the farm buildings, the house forms a 'T' shape on plan with the main gables facing east and west, with an extension to the rear which faces south. The building is constructed in solid brickwork masonry with a rough cast render finish and smooth rendered quoins, with the render finishing tight to the underside of the eaves and verge. The roof structure is formed by a traditional timbered roof with a slate roof finish. The fascias and barge boards are set with an approximate 150 mm hangover with closed soffits.

Outbuildings

The main building is formed by three traditional masonry barns and a pitched portal framed attached shed. The buildings have been erected at different periods. The layout of the buildings can be seen on fig 1.

The first barn runs north to south with its gables and forms the western side of the barns to be retained. This barn is comprised of garaging, stores, and the former dairy to the ground floor and storage areas to the upper floor. The building is constructed in solid brickwork masonry with a rough cast render and a dental brickwork detail at the eaves. The roof structure is formed by a traditional timbered roof with a slate roof finish. This section of the building has no fascias or barge boards, with the gutters set on rise and fall brackets.

The next section of the barn is built off the northern gable of the first barn, this section of the building is a later addition, constructed as the first section of the barn from solid brickwork and a rough cast rendered finish. The roof is traditional in finish but the purlins and rafters are supported of fabricated steel trusses.

The third section of the barn is attached to the eastern elevation of the above section of the barn. This section of the barn runs east to west with its gables and is similar in style and period of build as the first section of the barn. This section of the barn is split into two areas

the western section is open to the underside of the roof structure, but the eastern section has a loft floor accessed by an open stairway, the floor is more akin to a mezzanine deck.

The last section of the barn is formed by a lean-to modern sheeted shed former enclosed cattle shed, but is presently being used as a workshop. This section of the building has masonry walls with a cementitious corrugated roof finish.



Fig 1: Aerial Photograph of the Site

The remaining free standing barns are typical steel clad hay and tractor sheds formed from steel portal frames and clad in a mix of steel and cementitious corrugated sheeting.

Habitats

The abutting land is primarily arable crops, other than a small paddock to the south of the access drive and an area of formal gardens around the house. The Flash is located on the eastern side of the Old Wrexham Road. The section of the Flash nearest to the site is used by a local boating club. The Flash records a varied selection of both native species and migrant species of wild fowl. A single field pond is recorded approximately 150 m to the south west of the site. The pond has a gravel bottom, an absence of aquatic vegetation other than two small areas of Reedmace *Typha latifolia*.

Methodologies:

A day time survey of the site and buildings was undertaken on 05 October 2012 for evidence of use by bats: in the form of droppings and feeding debris from bat activity, structural defects and general areas within the structure that offer potential roosting areas; and general evidence of use by nesting birds. To undertake an assessment of habitat quality and record any evidence of biodiversity action plan species and habitats.

Survey Results:

Farm House

Bat – No evidence of use by bat was identified at the time of survey, the roof structure has limited access for bats due to the render being tight to the underside of soffits, the roof is finished in first quality slate with tight joints and the ridge is complete. The main section of the roof void has been re-roofed circa late 60's and records hessian bitumised roofing felt. The extension has no felt sarking but finished with a lime mortar parging to the underside of the slates. The ridge board and the gable record a covering of cobweb and debris.

Bird – The building is generally tight with limited direct flight access for birds.

Outbuildings

Bat – These building are as previously recorded other than that the slate roofs have now been removed under the current application. The findings of the previous report stand.

Bird – These building are as previously recorded other than that the slate roofs have now been removed under the current application. The nests that have been identified are previous season/historic nest sites.

GCN – The Great Crested Newt is recorded locally, the survey records a field pond to the south of the site. This pond has no historic records for this species however it is deemed suitable to sustain populations of amphibians. The fields between the site and the pond have been retained for arable crops since the first survey. The field boundaries consist of fragmented hedgerow corridors with limited connectivity. The farm yard area does record features that could be used by over wintering amphibians, such as the hard standings, farm yard walling etc.

Habitats/Biodiversity

The immediate abutting habitats are considered to be species poor, and are formed at present from single crop arable fields. The boundary hedgerows are in a reasonable condition however very little headland is present. The habitats which will be impacted by the development consist of the immediate hard standings, which record no merit. No other biodiversity species were identified at the time of survey.

Recommendations:

Bats

The buildings recorded no evidence of use by bats, other than evidence of previous fly through behaviour by Pipistrelle bats and are in general terms considered to have a low potential for use by breeding bats due to the construction detailing.

As a general note, most buildings offer potential for over wintering and single seasonal occupancy for individual bats. This use can be spasmodic during the season and actual presence through emergence survey methodologies cannot be fully confirmed. It is therefore recommended that the following precautionary generic recommendations are undertaken as good working practice during the demolition/construction phase:

1. Ridge tiles or finishers should be removed by hand to ensure that no torpid or hibernating bats are injured during the conversion works.
2. Abutment flashings should be removed with similar care to ensure that no torpid or hibernating bats are injured during the conversion works.
3. Door frames and window frames should be removed with care to ensure that no torpid bats or hibernating bats are injured during the conversion works.
4. Defects to structural masonry should be lowered to prevent torpid bats or hibernating bats being injured during the conversion works.
5. Structural members, lintel bearings, purlins, or wall plates should be removed with care to ensure that no torpid bats or hibernating bats are injured during the conversion works.

If it is found that at any time during the works torpid or hibernating bats are uncovered, the works must cease immediately and further advice should be sought.

Based on the above assumptions and local biodiversity action plans it is therefore recommended that the new buildings should be undertaken in a bat friendly manner. Crevice dwelling bats require a minimum gap to gain access to the inner parts of the building structure.

The stringent requirements of the Building Regulations will remove some of these areas, alternatives should therefore be considered.

The use of traditional roof structures on the newly created buildings will greatly enhance the building for use by crevices dwelling bats and it is recommended that the following construction methods are employed during the works.

It is advised wherever possible that modern type breather membranes are avoided in the preference for the equally approved bitumous slaters felt (BS 8747 5U/F1). If modern type breather membranes are to be used in the roofing works it is imperative that strict adherence to the manufacturer's recommendations is undertaken and that the roofs are counter battened prior to battening. If traditional roofs are to be used the top battens should be set just back of the ridge board to allow bats access to the underside of the ridge tiles and in both types of roof

structure the membranes/sarking should be slit along the ridge line to give access to the underside of the ridge tiles.

Fascias should be set off the wall by 25 mm on counter battens to allow access to the top of the wall plates by bats, similarly if soffits are used then the abutment of the soffit to the wall should leave small gaps for bats to access the void. The gaps should be approximately 15 x 150 mm, both of these types of access points should be positioned away from windows and doors.

Traditional clay/stone ridge tiles are preferred, which are bedded on the ridge line with lime mortars, but not edge pointed. Similarly, second or third quality slates, due to their greater thickness offer greater potential for bats to gain access to the inner roof structure, especially along the abutment of the top slates and the ridge tiles. If this cannot be achieved then lead bat slates should be introduced to compensate for this loss of access.

It is suggested that the introduction of bat bricks would enhance the potential for use by crevice dwelling bats. Bat bricks can be installed on all aspects of the walls, but set just below fascia level. Each elevation offers different climatic conditions which bats utilise during different times of the year.

The design of the building can be enhanced by offering nest potential for birds by the introduction of bird bricks into the masonry and bird boxes. It is recommended that the boxes are fixed on the north and eastern elevations of the buildings.

The introduction of these features would benefit crevice dwelling bats, all *Myotis* species, and both locally recorded *Pipistrellus*. The bird bricks can be a mix of prefabricated concrete boxes and pockets left in the masonry. These need to set from ground level up to the underside of the fascias. The lower pockets would be used by the likes of Coal Tit, the higher would be used by both Blue Tit and Great Tit, Sparrow etc.

Birds

The historic nests recorded are for swallow and sparrow. There was direct flight access to some parts of the barns. The proposed open fronted stabling should offer potential for nesting swallow. To enhance the structure for use, nest starter battens should be fixed on the purlins. These should be small sections of batten placed on the bottom edge of the purlins, approximately 150 x 19 x 19 mm. A roofing batten or similar section timber

It is recommended that sparrow boxes are fixed on the north and eastern elevations of the buildings. The nest boxes should be fixed beneath the eaves/gutters.

As a general note, all wild birds, their nests and their eggs are protected by the Wildlife & Countryside Act 1981. It is an offence (with certain exceptions), to intentionally kill, injure or take any wild bird (this includes chicks); to take, damage or destroy any wild bird's nest while it is in use or being built; and to take or destroy the egg of any wild bird. The definition of a wild bird is 'any bird of a kind which is resident in or a visitor to Great Britain in a wild state'.

The typical nesting season for birds in Britain runs from early-March to early-August, however recent seasonal weather patterns have recorded nesting activity for Thrush in February and third brood nests for Swallow into September. If works are to be undertaken within these

periods, then secondary check surveys should be undertaken immediately prior to undertaking the works, i.e. within 24 hrs to ensure no nests have been built since the survey. Potential nesting areas, deemed clear of activity should be protected to prevent access during the construction phase by birds, where feasible.

Nest Times

- Sparrow - late March through to mid September

Extract from 'A Field Guide to Monitoring Nests – BTO'

Amphibians

It is considered that the proposed development works is so positioned as to be generally isolated from the locally recorded breeding populations and towards the extremities of the natural terrestrial habitats. The potential for there to be a presence of this species on site is very low, however caution must be employed when undertaking any clearance works, i.e. grubbing up of any hard standings or slabs as amphibians may have taken refuge within or beneath these substrates.

- 1) During the removal of the concrete bases, it is recommended that the excavator is sat on the slab and the concrete is pulled back on to the slab, this will allow any amphibians that may have been taking refuge under the slab to be seen. Any amphibians encountered should be moved out side of the working area and placed in a suitable refuge within an adjacent hedgerow.
- 2) When removing walling, the walling should be broken up carefully and the material toothed away from the undisturbed areas, any amphibians encountered should be moved to a suitable refuge.
- 3) Any debris piles should be toothed through carefully with the machine bucket, any amphibians encountered should be moved to a suitable refuge.
- 4) Open excavations left over night should be checked to ensure no amphibians have fallen in and become trapped over night, any amphibians encountered should be moved to a suitable refuge
- 5) Amphibians will take refuge under stored construction materials, pallets, bricks, timber etc. Care should be taken when these materials are cleared on completion of the works and that any amphibians encountered should be moved to a suitable refuge.

If at any time during the construction works Great Crested Newts are encountered, then the works should cease and further advice is to be sought from a suitably experienced field ecologist.

Conclusion:

It is the surveyor's opinion that the proposed demolition and the construction of a new dwelling and ancillary buildings, if carried out in accordance with the recommendations given in this report, will have no long term impact on the favorable conservation status of locally recorded protected species, and in the case of the bats and birds offer greater long term roost and nest potential than that available within the existing buildings.

Tim Hodnett.
October 2012