

Mr Tom Cliffe

Oak Mead,
Golly,
Burton Green,
Rossett,
Wrexham,
LL12 0AL

Ecological Appraisal V1

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Produced by



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1 INTRODUCTION

- 1.1 This report has been prepared on behalf of Mr Tom Cliffe and provides the results of a Preliminary Protected Species survey undertaken at Oak Mead, Golly, Burton Green, Rossett, Wrexham, LL12 0AL. The area to be developed is horse pasture and a small portion of a stable.
- 1.2 The proposed development site (hereafter referred to as the Site) is located on the west of the village of Burton Green, approximately 2km due North of Llay town centre. The central OS grid reference is SJ 33885 58530. Habitat within the Site consists of heavily grazed horse pasture with a single small area of bramble scrub. The site is located within a larger field used as horse pasture, of which the habitat is predominantly improved grassland, outside of the site, to the north lies Pulford brook and associated broadleaved trees lining the banks. The site also includes a single booth of a stable building on the eastern extent, this single stable is to be converted into a bike store. Additionally, included within the site boundaries is an access track running north from Town Ditch Lane into the site. The site has no physical boundaries from the rest of the field at this time.
- 1.3 The wider habitat beyond the site to the east and west are arable crop fields, to the north is Pulford Brook which then gives way to arable fields on the far bank. Immediately to the south is a residential home and garden complex with a minor road on the other side.
- 1.4 Development proposals for the Site are for the re-roofing of the stable block, re-purposing of one stable booth into a bike storage area and for the addition of two glamping pods with associated paths parallel with the bank of the brook on the north east extent of the site. Additionally, the development will include the re-surfacing of the existing track with more stone and the planting of the new hedge, native shrubs and small meadow.
- 1.5 This report details the findings of site surveys conducted on the 29th of June 2022 and 24th of November 2022 and a bat activity survey of the site by Wildbanks Conservation on the 23/08/22. The aim of the survey is to identify potential ecological constraints to the proposed development, in particularly to assess the likelihood of legally protected species or other ecological features occurring that might present a material consideration in terms of planning constraints.

2.0 SURVEY METHODOLOGY

Desktop Study

- 2.1 A review of the Multi-Agency Governmental Information for the Countryside (MAGIC) website for existing designated sites, within 1km of the development site boundary was undertaken to identify any existing sites with nature conservation designations.

Walkover Habitat Assessment

- 2.2 The site was surveyed on 24th November 2022 using the standard Phase 1 Habitat Survey methodology (Joint Nature Conservation Committee, 2010). This involved a systematic walk over of the site to classify the habitat types present, marking them on a base map. If required target notes were used to record features or habitats of particular interest, as well as any sightings or evidence of protected or notable species. The Walkover Habitat Assessment was undertaken by Joseph Taylor MSc, ecologist (Accredited Agent on Mick Smith NRW bat license S089440/2), & Tanya Cobb BSc, assistant ecologist, Wildbanks Conservation.

Preliminary Protected Species Survey

- 2.3 Consideration was also given to the potential presence of species protected under the Wildlife and Countryside Act 1981 (as amended), the Protection of Badgers Act 1992 and The Conservation of Habitats and Species Regulations 2010 (as amended). Such species included, but was not limited to badger, bats, reptile, amphibians and bird species. Evidence of any invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) was also recorded where present.

Buildings – Bats - Visual Assessment

- 2.4 The exterior of any buildings was visually assessed for potential access points and evidence of bat activity. Features such as small gaps under barge/soffit/fascia boards, raised or missing roof/ridge tiles or gaps at gable ends, which have the potential for use as access points, were sought. Evidence that bats actively used these potential access points would include staining within the gaps, or bat droppings or urine staining under gaps; a note being made wherever these were present. The presence of cobwebs and / or general detritus within and around potential access points was used as an indicator that bats had not recently used the area to access the building.

Trees - Bats

- 2.5 An assessment of the potential of trees within the proposed development area of the site to support bat roosts was undertaken to enable recommendations with respect to the proposed works. Trees were examined for potential roost features such as cracks, fissures and rot holes that could provide suitable roost sites. Evidence of bat roosting activity in potential roost sites was sought and included staining and/the presence of bat droppings. An initial survey was undertaken from ground level, with the aid of binoculars.
- 2.6 From this survey an assessment can be made on the likelihood of trees to support roosting bats. In line with the Bat Conservation Trust (BCT) Good Practice Guidelines (2012), trees can be classified into one of five categories which range between a known roost, Category 1*, Category 1, Category 2 and Category 3 (where Category 3 has no potential for roosting bats). The basis of this criterion is subjective and based upon the surveyor's experience and judgement.

Activity – Bats

- 2.7 No buildings or trees that would be effected by the development exist, no emergence/return to roost surveys were conducted. An assessment of bat activity within the bounds of the site was undertaken on the 23/08/22 to examine the usage of the site for bats in terms of foraging and commuting. A transect was plotted that gave full coverage of the site with appropriate stopping/listening points, this transect was walked, beginning at sunset and lasting for a total of 2 hours. An Anabat walkabout bat detector was used to detect bats within the vicinity and along with visual cues, data about the bats using the site was recorded.

- 2.8 *Habitat Suitability Assessment*

Any ponds or watercourses present were assessed utilising the modified Great Crested Newt Habitat Suitability Index (Oldham *et al*, 2000). The habitat suitability index provides a means of evaluating habitat quality of any given pond. The Habitat Suitability Index (HSI) is a numerical index between 0 and 1, where 0 indicates unsuitable habitat and 1 represents optimal habitat. The HSI score is then used to score the suitability of the pond on a categorical scale (Table 1). The system is not precise enough to allow the conclusion that a pond with a high score will support Great Crested Newts whilst those with a low score will not. See Appendix 2 for the HSI calculations for each pond.

2.9 Table 1: Habitat Suitability Index scoring

HSI Score	Pond Suitability
< 0.5	Poor
0.5 – 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good
> 0.8	Excellent

Survey Limitations

2.10 The recommended survey period to undertake Phase 1 Habitat Survey is between late April and mid-October, therefore this survey was undertaken outside of the optimal timeframe, however due to the small size of the Site and its very limited habitats, along with a previous visit having been conducted in June 2022, this survey information is deemed to be accurate for the purposes of this report.

3.0 RESULTS

Desktop Study

- 3.1 There are no statutory designated sites within 2km of the site boundary.

Walk-over Habitat Assessment - See Figure 1 – Site Plan (Plates 1-4)

- 3.2 In summary the proposed development site comprised a small parcel of heavily grazed horse pasture, made up of poor semi-improved grassland, with a single stand of bramble *Rubus fruticosus* scrub, a single small hawthorn *Crataegus monogyna* and a single mature Guelder rose *Viburnum opulus* within it. Additionally, a crushed stone access track is included within the site bounds.

3.3 Habitats present on site

B1.4 Poor Semi-improved grassland (Plate 1)

The predominant habitat type on Site comprised poor semi-improved grassland. Dominant grass species comprised perennial rye grass *Lolium perenne*, with the most abundant herb species present including, common dandelion *Taraxacum officinale*, creeping thistle *Cirsium arvense*, Ragwort *Jacobaea vulgaris*, Dock *Rumex spp*, Ribwort plantain *Plantago lanceolata* and nettle *Urtica dioica*. Other herbs were also present but were less dominant, such as: Wild strawberry *Fragaria vesca*, Greater celandine *Chelidonium majus*, Selfheal *Prunella vulgaris*, Garlic mustard *Alliaria petiolata*, Daisy *Bellis perennis*, Scarlett pimpernel *Anagallis arvensis*, Buttercup species *Ranunculus spp* and Foxglove *Digitalis purpurea*.

A2.2 Scattered scrub (Plate 2)

A single small stand of bramble *Rubus fruticosus* scrub was present just to the west of the stable block. The stand has a diameter of approximately 3m.

3.4 Boundaries

See Figure 1. Currently, the site has no physical boundaries to the south or west separating it from the wider field in which it is situated. The northern boundary of the development site is a slow flowing brook known as Pulford Brook (Plate 5).

3.5 Trees

Within the site there are two very small immature trees, one hawthorn *Crataegus monogyna* and one guelder rose *Viburnum opulus* towards the north eastern extent (Plate 6). Outside of the redline boundary on the eastern extent of the track which heads

north-south are two mature pedunculate oak *Quercus robur* and the brook outside the northern boundary of the site has wooded banks consisting of Hazel *Corylus avellana*, Alder *Alnus glutinosa*, Sycamore *Acer pseudoplatanus*, Elder *Sambucus nigra* and Holly *Ilex Aquifolium*.

Hedgerows

- 3.6 There are no hedgerows included within the Site.

3.7 *Invasive Species*

No invasive plants as listed under Schedule 9 of the Wildlife and Countryside Act 1981 were observed at the time of survey within the Site.

Protected Species

3.8 *Buildings – Bats*

A single building exists on site. This building is a small stable block of a wood and corrugated roofing felt sheet construction. The roof has been damaged and lifted away from the walls in multiple places. An internal inspection of the building revealed negligible potential for roosting bats. No evidence of bat use was found within the wooden stables. Potential roosting features were not present. Any gaps within the timber framing were small or open. No fascia boards, soffits, barge boards or loft space was present, all areas of the barn could be inspected.

Trees - Bats

- 3.9 There are no trees within the site boundary that would have features suitable for roosting bats. The two pedunculate oak *Quercus robur* adjacent to the site along the access track are of an age and condition that they could have features suitable for roosting bats. These trees will not be impacted during the development, the access track already exists beneath these trees already. The trees will not be felled or pruned during the works.

Activity Survey – Bats 23/08/22

- 3.10 The bat activity survey was carried out by Jack Halpin, Team Leader Wildbanks Conservation, Accredited Agent NRW bat license S089440/2) During the survey, six species of bat were detected foraging or commuting across the Site, comprising: Common pipistrelle (*Pipistrellus pipistrellus*), Soprano pipistrelle (*Pipistrellus pygmaeus*), Whiskered/Brandt's myotis (*Myotis mystacinus/Myotis brandtii*), Daubenton's myotis

(*Myotis daubentonii*), Noctule (*Nyctalus noctula*) and Brown long eared (*Plecotus auritus*). The survey consisted of a pair of *P.pygmaeus* foraging over the hedge for approximately 10 minutes, irregular foraging and commuting passes from *P.pipistrellus* and *P.auritus*, scattered commuting passes by *M.mystacinus*/*M.brantii* and *M.daubentonii*, and two high commuting passes from *N.noctula*. There was no significant foraging within the site bounds or the wider field.

Badger

- 3.11 No setts were recorded within the development site or evidence of badgers using the Site.

Great Crested Newt

- 3.12 No ponds are present within the development Site, the Site provides negligible terrestrial habitat. Immediately outside of the site boundary there exists suitable foraging habitat in the form of scrub and deciduous woodland along the edge of Pulford brook, just outside the northern Site boundary. Pulford brook provides limited opportunities as a breeding waterbody as there is minimal suitable egg laying media and a moderate rate of flow within a small channel.
- 3.13 Within a 500m radius of the development Site three ponds exist. The GCN status of these ponds is unknown, however the connecting habitat is poor and the poor habitat on Site (ie intensively grassed grassland) indicates a negligible chance of GCN being present within the Site.

Birds

- 3.14 During the survey a number of bird species were recorded which included robin *Erithacus rubecula* and black bird *Turdus merula*. The bramble scrub within the Site boundary provides good potential for nesting birds. This feature is to be retained within the Site plan and not disturbed or damaged during the development. The stable building was surveyed for any signs of nesting birds, no active or disused nests, or large accumulations of faeces/urine were found which would indicate presense of nesting birds.
- 3.15 The development site offers no roosting or nesting potential for barn owls *Tyto alba*, due to the lack of suitable buildings and trees. Negligible foraging habitat for barn owl is presented by the site, mainly due to the heavily grazed nature of the vegetation.

Reptiles

- 3.16 The habitat on site consisted of heavily grazed poor semi-improved grassland and offered little potentially suitable habitat for reptile species.

4.0 DISCUSSION AND RECOMMENDATIONS

- 4.1 The predominant habitat on site is poor semi-improved grassland of low species diversity and a small area of bramble and are determined to be of negligible nature conservation value. The proposed development will result in the loss of a small portion of the wider field and will include the erection of two glamping pods. Habitat improvements include the creation of a small area of species rich meadow as well as a new 15m hedge running NW to SE making up the southern boundary of the site and some scattered native wildlife friendly shrubs.
- 4.2 No species receiving special protection under the Wildlife and Countryside Act 1981, The Conservation of Habitats and Species Regulation 2010 or the Protection of Badgers Act 1992 was recorded during the survey.
- 4.3 Habitat with the potential to support protected species was found, in the form of a small patch of bramble scrub which could be used by nesting birds. In conversation, Mr Cliffe, stated that he planned to retain the bramble as a wildlife feature, in this case no further action will be necessary. If Mr Cliffe were to decide to have the bramble removed then works would either have to be done between September and January outside of the bird breeding season or would require a negative breeding bird survey result before the start of removal works.
- 4.4 The Site is located within a large tract of agricultural land, with low overall ecological value. The Site itself provides similar habitat to that of its surroundings.

Bats

- 4.5 The stable building offers negligible roosting opportunities for bats as its construction and open plan make it prone to severe fluctuations in temperature due to their poor insulative value and offer few utilizable roosting gaps or crevices. The poor condition of the roof further reduces the thermal stability of the building and therefore the suitability for roosting bats.

- 4.6 The bat activity survey carried out identified that no aspect of the Site is used significantly by bats. The tree lined brook had the potential to be a foraging/commuting route for bats but activity during the 2hr survey identified very few numbers of bats passing over the Site as a whole and none in association with the brook. A reasonable range of species was recorded during the survey (n = 5 species) but the number of passes of each was less than 5 apart from soprano pipistrelle that were recorded foraging across the site as a whole for a 10minute period. Indicating that it is not an important site or commuting route and only of low conservation status.
- 4.7 The Lighting Plan for the proposed development shows the location of the Site lights. Four lights are to be installed. These are low level lights (approx 750mm tall bollards) that do not illuminate vertically and are designed to light the ground only. In addition, they are on a timer and will not be on constantly during the night. Their location is also that they would not illuminate any features potentially used by commuting bats, such as the brook. It is considered that the development as it is proposed provides no risk to potential commuting routes along the brook.

Recommendation

No further survey effort is required with regards to bats unless the two *Q. robor* outside of the boundary along the eastern edge of the track require any pruning. If pruning works are required then Wildbanks Conservation should be consulted before works take place and appropriate bat surveys carried out.

To minimise the disturbance to bats, it is recommended that any site lighting installed should be downwards facing and of low lumens, casting no light spill vertically. The position of lighting as indicated within the Lighting Plan must be adhered to.

Great crested newts

- 4.9 The Site provides negligible suitable habitat for GCN. The wider landscape holds 3 ponds within a 500m radius of the Site, which are 319m to the north and 361m to the west, both across a minor road and 237m away to the north east, across an arable field. Connectivity between these ponds and the development site is poor, with habitat present being majority arable agricultural fields, with species poor hedges. The road to the southern site boundary would provide a slight barrier for movement from that direction, as would the brook on the northern boundary, due to its moderate flow rate through a narrow channel. Furthermore, other habitat in closer proximity to the ponds provide higher quality habitat for GCN than the Site does.

- 4.10 It is recommended that no further surveys or effort with regards GCN are required.
- 4.11 The development proposals are to place two glamping pods on the site. The works encompass the creation of minor building foundations in two locations on the Site. The required foundations will either be ground screws or two small concrete strips per glamping pod. Either method will lead to very minimal ground disturbance and will leave the majority of the footprint of the pods as more suitable GCN habitat as resting up or hibernating opportunities will be created between the pads and the surrounding ground.
- 4.12 Although the land that is to be developed is currently unsuitable for GCN (heavily grazed improved grassland) and that it is unlikely that they would be present on Site. The process of constructing the glamping pods may provide new habitats that could encourage GCN in the form of excavations, rubble piles, storage of materials etc. As such the following recommendations are proposed.

Recommendation

If GCN are encountered during the development then all works will stop and a suitably qualified ecologist consulted as to what course of action is required.

Badger

- 4.13 No evidence of use by badger was found on the site. No recommendations are made.

Breeding birds

- 4.14 The proposed development site currently offers limited opportunities for nesting birds in the form of a small isolated patch of bramble scrub and a stable building. If works to the bramble scrub or building are required, these should be either performed outside of the bird breeding season (bird breeding season is February – August inclusive) or should have a breeding bird survey conducted by a qualified ecologist immediately prior to the works.
- 4.15 All bird species are protected whilst on the nest under The Wildlife & Countryside Act 1981 (as amended). As such it is recommended that any site clearance/pruning be undertaken outside the bird breeding season (March – September inclusive). However, if this is not possible any works to the hedges, scrub or trees should be checked by a suitably qualified and experienced ecologist to confirm absence of any breeding birds

prior to the works. Alternatively the areas to be cleared can be covered with appropriate mesh prior to the bird breeding season to deter birds from nesting within the area. This work to be carried out following NRW guidelines.

Invasive species

- 4.16 No evidence of invasive plants listed on Schedule 9 of the Wildlife and Countryside Act 1981 were observed at the time of survey.

5.0 ECOLOGICAL ENHANCEMENT

- 5.1 The proposed development will consist of two small glamping pods and associated improvements for access and landscaping works. The planned development will result in habitats being present of greater value to wildlife than the habitat that currently exist. In summary habitat improvements include a new area of species rich meadow, scattered wildlife friendly shrub planting and a new 15m length of native hedge. In addition 2 bird boxes and 2 bat boxes will be installed. The bird boxes will consist of 1 x 2H Schwegler robin box (or equivalent) and 1 x Vivara pro Seville WoodStone nestbox with 32mm hole (or equivalent). The bat boxes will consist of 2 x 2F Schwegler bat box (or equivalent).
- 5.2 A Net Biodiversity Benefits Plan has been produced and details the ecological enhancement measures and their maintenance over a 5 year period
- Creation of a 115m² area of native meadow.
 - Planting of native wildlife friendly shrub species to act as screen between the pods and within the Site
 - Planting of 15m hedge of native species between the southern site boundary and the existing residential building
 - Erection of 2 bird boxes and 2 bat boxes.

6.0 REFERENCES

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A1 APPENDIX – SITE PHOTOGRAPHS

- A1.1 Plate 1: View west across the site, note heavily grazed pasture with single hawthorn and line of trees at back boundary.



- A1.2 Plate 2: View of the site facing north along the access track. Note the patch of bramble scrub and the stable building.



A1.3 Plate 3: View of the stable block to be retained, note the damage to the roof.



A1.4 Plate 4: The back (Northern aspect) of the stable block.



A1.5 Plate 5: Pulford brook to the North of the site, note the presence of Ramsons (*Allium ursinum*)



A1.6 Plate 6: View of the development site including the small hawthorn and guelder rose.



Figure 1: Site Plan

