



ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE



PRELIMINARY ECOLOGICAL APPRAISAL

YEW TREE FARM

Project name: Yew Tree Farm, Rossett, LL12 0HT

Grid Reference: SJ35235679

Date: 08/08/2024

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Requested by: Roger Parry and Partners

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1 INTRODUCTION

1.1 BACKGROUND TO DEVELOPMENT

Planning permission is being sought for the construction of two agricultural storage buildings at Yew Tree Farm, Rossett.

Arbor Vitae were commissioned by Roger Parry and Partners to undertake a Preliminary Ecological Appraisal in order to assess the impact of the development on habitats and protected species.

1.2 SCOPE OF SURVEY

The survey is primarily designed to:

- Identify and record habitats and important ecological features on site;
- Evaluate the potential of the proposed development site to provide opportunities for protected species;
- Determine any likely impact which the development and landscape proposals may have on these.
- Identify opportunities for the enhancement of habitats and biodiversity features on site.

1.3 KEY PRINCIPLES

All ecological surveys conducted by Arbor Vitae Environment Ltd are underpinned by the following key principles, as outlined by CIEEM (2018):

Avoidance - Seek options that avoid harm to ecological features (for example, by locating on an alternative site).

Mitigation - Adverse effects should be avoided or minimized through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed – for example, through a condition or planning obligation.

Compensation - Where there are significant residual adverse ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures.

Enhancements - Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.

2 SITE DESCRIPTION

2.1 LOCATION, LANDSCAPE, AND BACKGROUND

Yew Tree Farm is located just west of the A483 between Rossett and Llay in Wrexham. The land surrounding the farm is dominated by arable land and agricultural modified grassland. The farm consists of a range of modern agricultural buildings, with neighbouring properties to the east and north.

Plans for the site include the construction of two storage buildings, to be built on an area which has historically been used as a storage area for silage bales.

3 SURVEY METHODOLOGY

3.1 DESK STUDY

An initial desk study was composed to gain background information regarding any protected species or designations within the area. The main sources of information were MagicMap, Data Map Wales and NBN Atlas.

3.2 SITE SURVEY

A site visit was made on 16/07/2024. The survey was carried out in accordance with CIEEM (2017) best practice guidelines. The objective of the survey was to find and record any signs of use by protected species and to note the habitat features present.

An assessment of the available habitats both on and adjacent to the site led to consideration of the potential of the site for the following protected species:

- [REDACTED]
- Bats
- Breeding birds
- Great Crested Newt
- Otter

The survey methodology was tailored to evaluate the area for these species in the following ways:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



Bats

The site was assessed in terms of its suitability to support bat species. Hedgerow habitat and nearby potential habitat were assessed and recorded and potential impacts from the proposals considered.

Breeding birds

The site was assessed in terms of its suitability to support breeding bird populations. Hedgerow habitat and nearby potential habitat were assessed and recorded.

Great crested newt

A desk study and a ground search were conducted to search for any areas of open water within 250 metres. Waterbodies were then assessed based on the Habitat Suitability Index for great crested newts (Oldham et al., 2000 and ARG UK, 2010).

Otter

Any water courses within the area and appropriate terrestrial land were searched for the following field signs:

- Spraint,
- Footprints,
- Feeding remains.

3.3 PERSONNEL

The survey was carried out by Phillipa Stirling MSc ACIEEM: Ecologist. Natural Resources Wales bat licence number: S094220-1 and GCN licence number: S090921/1.

3.4 CONSTRAINTS

The storage buildings were in place at the time of the survey. The assessment is therefore retrospective, based on available photos of the site and aerial imagery.

4 SURVEY RESULTS

4.1 DESK STUDY

The desk study found that within 1km of the site there were the following designations:

Name	Designation	Distance from site
Marford Quarry	SSSI	710m
Marford Wood	Restored Ancient Woodland Site	800m
Chwarel Singret	SSSI	920m
The search included Ramsar, SSSI, SAC, SPA, LWS, NNR and LNR. ¹		

Results from the desk study revealed that within a 1km radius of the proposed development site the following protected species have been recorded:

Species	Distance	Protection
Mammals		
Otter	0.4km	European Protected Species, Wildlife and Countryside Act 1981.
[REDACTED]	[REDACTED]	[REDACTED]
Common pipistrelle	0.3km	European Protected Species, Wildlife and Countryside Act 1981.
Daubenton's		
Birds		
Kingfisher	0.3-1km	Schedule 1- Wildlife and Countryside Act 1981.
Kestrel		
Brambling		
Redwing		
Fieldfare		
Amphibians		
Great crested newt	0.7km	European Protected Species, Wildlife and Countryside Act 1981.

4.2 HABITATS ON SITE

All habitats are classified using JNCC's Phase 1 Habitat Survey Handbook (JNCC, 2010).

Bare earth

The site, prior to works starting on site, appears to have been bare ground. An area used for storing silage bales, the land was subject to regular disturbance and clearing with farm machinery. Aerial imagery indicates that the site was bare earth, with bales and machinery clearly seen in the area.

¹ SSSI: Site of Special Scientific Interest, SAC: Special Area of Conservation, SPA: Special Protection Area, LWS: Local Wildlife Site NNR: National Nature Reserve, LNR: Local Nature Reserve.

The existing access track from the main road and through the farmyard will be used for the new storage buildings. This is existing hardstanding, and no changes are planned.

4.3 ADJACENT HABITATS

Land to the west and south of the buildings is dominated by arable fields, in crop at the time of the survey.

Land to the north and east is farmyard and water/slurry storage.

4.4 PROTECTED SPECIES

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Bats

The site does not provide any suitable roosting opportunities for bats either now, or previously. There are limited linear landscape features present around the site, and the open areas of arable land are expansive. Task and security lighting at the farmyard is likely to reduce the site's suitability for foraging/commuting.

Breeding birds

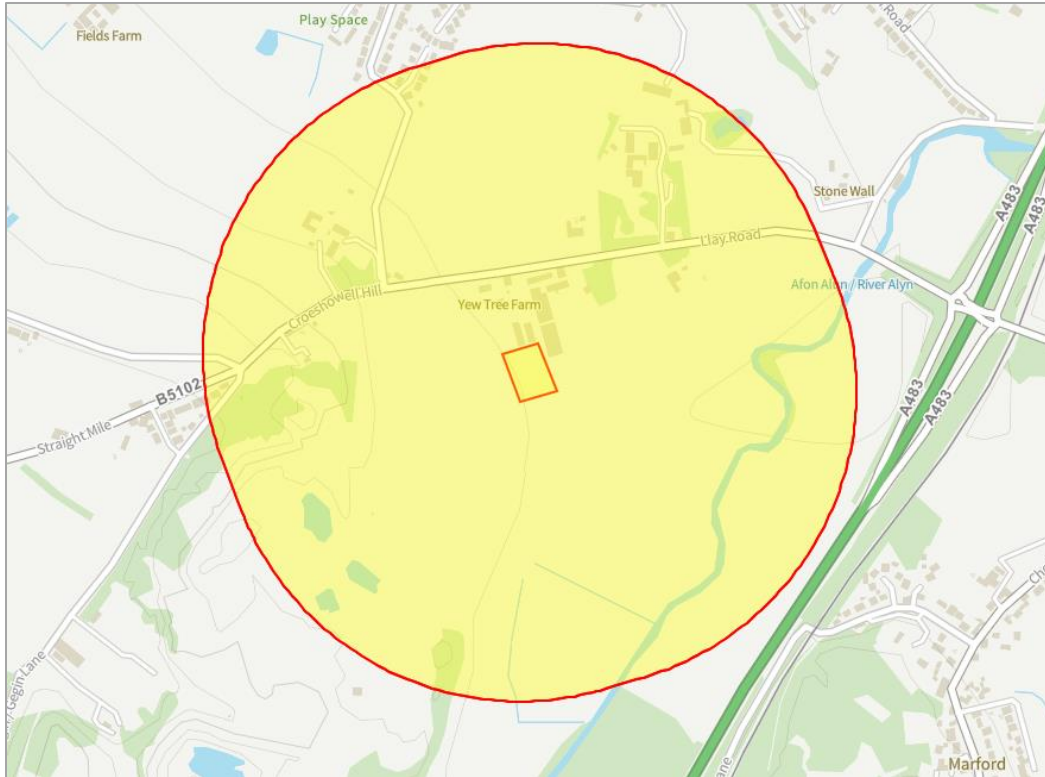
The site does not appear to have provided any suitable habitat for breeding birds.

Great Crested Newt

No ponds were identified within 250m of the proposed development site. A total of four ponds were identified within 500m of the site, of these three are within an active quarry and were therefore discounted from the assessment. The fourth pond sits at 450m distance from the site and is separated by the main road and the existing farmyard, both features presenting a significant barrier to terrestrial dispersal.

There are two records of GCN from around 700m south of the site, recorded in 2005. The record relates to a single male GCN surveyed during a torchlight survey, appearing to be at the now active quarry workings.

Furthermore, the site itself provides bare ground alone, and is regularly subject to ground disturbance. The site does not provide any suitable terrestrial habitat opportunities for GCN or other amphibians. No further survey work regarding GCN was undertaken.



Otter

The River Alyn lies around 400m south east of the site, confined within a narrow corridor and bordered by native broadleaved trees including alder, oak, and ash. Otter has been recorded at 400m from the site, alongside the River Alyn, but the record dates to 1998. Other records of otter exist from the opposite side of the A483, in the Marford Quarry North Wales Wildlife Trust Nature Reserve.

The A483 was built in the late 1980's and it is likely that this major road introduced a terrestrial barrier to the local landscape. This could account for the earlier records of otter, and then nothing until 2020.

In any case, the site in question does not provide suitable terrestrial or aquatic opportunities for otter and the land between the site and the river is dominated by arable land, which is intensively managed year-round. No evidence of otter was found up to 100m from the site.

5 POTENTIAL ECOLOGICAL IMPACT

5.1 HABITAT ASSESSMENT

The construction of the storage sheds onto existing bare ground does not appear to have had any impact upon any habitat of ecological significance. The area was former

storage/yard, used in an agricultural capacity. The surrounding land is dominated by arable land, and there is no evidence of any adverse impact from the actions.

5.2 PROTECTED SPECIES ASSESSMENT

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Bats

The plans will not have had any direct impact upon bats, or indirect. The sheds are used for the storage of bales and there does not appear to be any lighting installed at the site. There were/are no habitats at the site which are suitable for use by roosting bats but the new sheds may provide a covered foraging area for any bats which may be present locally.

Breeding birds

It is unlikely that the construction of sheds at this site had any impact upon breeding birds as there was previously no suitable habitat which may been used for nesting purposes.

Great crested newt

Studies have demonstrated that 95% of all summer refuges of GCN fall within 63m of their summer breeding pond (Jehle, 2000). Subsequent studies also found that capture rates of GCN were at their highest within 50m of a breeding site with a significant reduction in capture rates beyond 100m (Cresswell and Whitworth, 2004).

There are no suitable ponds within 250m of the site, or suitable ponds within 500m of the site which are not separated by major terrestrial barriers. The yard area has been maintained as bare earth historically and therefore provides no suitable habitat for GCN.

Otter

The site does not provide any suitable habitat for otter, and the sheds are unlikely to have had any impact upon this species. If otter are still present along the stretch of River Alyn to the south east, activity in the farmyard 400m away is very unlikely to have any impact upon this species.

6 AVOIDANCE, MITIGATION AND ENHANCEMENT

6.1 HABITAT MITIGATION

The loss of a large area of bare ground does not necessarily require mitigation although ecological enhancement measures will be adopted.

6.2 PROTECTED SPECIES MITIGATION

As the buildings are already in place, it is not appropriate to suggest any avoidance measures, however, we do include a set of measures to be put in place should the installation of lighting become necessary:

- Security lighting will be set on motion sensors with short timers (<1 minute) and will be LED with a passive infrared trigger.
- External lights will be hooded and directed toward the ground to reduce upward light spill.
- A warm white spectrum will be adopted throughout the scheme to reduce blue light component (<2700Kelvin).

6.3 ECOLOGICAL ENHANCEMENT

In order to provide a net benefit for biodiversity, the following is recommended:

- The south and west boundary of the new sheds/yard will be planted with a native, species-rich hedgerow, to provide approximately 200m of new hedge habitat. The hedges will include the following species: hawthorn, hazel, holly, elder, field maple, wild privet, oak, Guelder rose, and dog rose.
- Two Woodcrete bat boxes will be installed onto the west facing elevation of the buildings, at least 3m from ground level. No lighting will be installed within 10m of the boxes.
- Two Woodcrete open-fronted nest boxes will be installed onto the north facing elevation of Building 2, at least 2.5m from ground level.

7 SUMMARY

Planning permission is being sought for the construction of two agricultural storage buildings at Yew Tree Farm, Rossett. Arbor Vitae were commissioned by Roger Parry and Partners to undertake a Preliminary Ecological Appraisal in order to assess the impact of the development on habitats and protected species.

The construction of the storage sheds onto existing bare ground does not appear to have had any impact upon any habitat of ecological significance. The area was former storage/yard, used in an agricultural capacity. The surrounding land is dominated by arable land, and there is no evidence of any adverse impact from the actions.

The loss of a large area of bare ground does not necessarily require mitigation although ecological enhancement measures will be adopted.

[REDACTED]

The plans will not have had any direct impact upon bats, or indirect. The sheds are used for the storage of bales and there does not appear to be any lighting installed at the site. There were/are no habitats at the site which are suitable for use by roosting bats but the new sheds may provide a covered foraging area for any bats which may be present locally.

It is unlikely that the construction of sheds at this site had any impact upon breeding birds as there was previously no suitable habitat which may been used for nesting purposes.

There are no suitable ponds within 250m of the site, or suitable ponds within 500m of the site which are not separated by major terrestrial barriers. The yard area has been maintained as bare earth historically and therefore provides no suitable habitat for GCN.

The site does not provide any suitable habitat for otter, and the sheds are unlikely to have had any impact upon this species. If otter are still present along the stretch of River Alyn to the south east, activity in the farmyard 400m away is very unlikely to have any impact upon this species.

In order to provide a net benefit for biodiversity, the following is recommended:

- The south and west boundary of the new sheds/yard will be planted with a native, species-rich hedgerow, to provide approximately 200m of new hedge habitat
- Two Woodcrete bat boxes
- Two Woodcrete open-fronted nest boxes

8 REFERENCES

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FIGURE 1 LOCATION

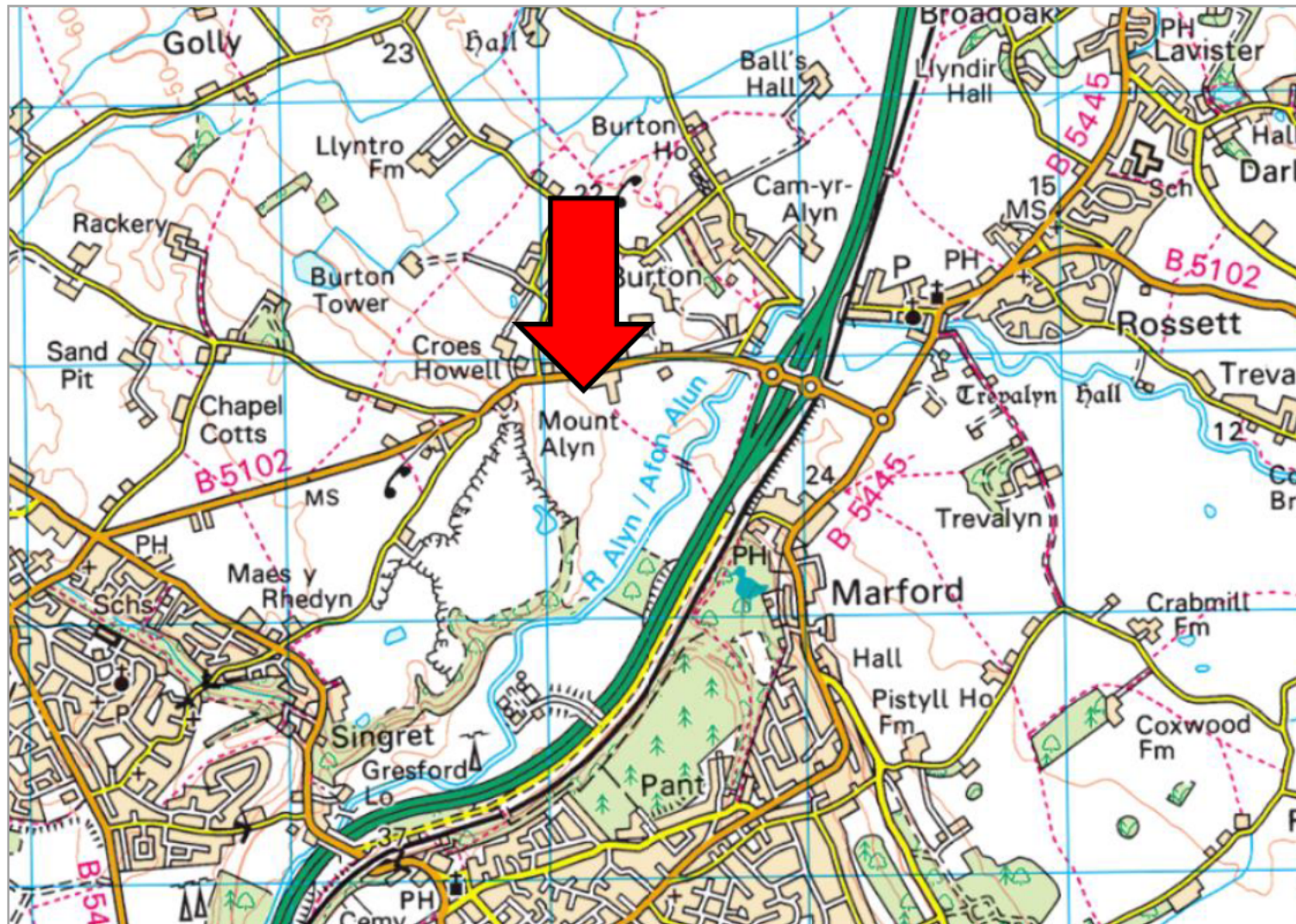


FIGURE 2 AERIAL PHOTOGRAPH



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FIGURE 3 SITE PLAN



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APPENDIX 1 PHOTOGRAPHS



Site prior to buildings



The site now



Land to west



Buildings



Land to north



Existing farmyard and access

