



# ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE



## PRELIMINARY ECOLOGICAL APPRAISAL

### TORRIAD FARM, HOSELEY

**Project name:** Torriad Farm, Wrexham, LL13 9RT.

**Grid Reference:** SJ40864917

**Date:** 13/10/2021

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**Requested by:** Roger Parry and Partners

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# 1 INTRODUCTION

## 1.1 BACKGROUND TO DEVELOPMENT

Planning permission will be sought for the extension of an existing slurry store at Torriad Farm, Hoseley.

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**

Torriad Farm is located 1.5km east of Wrexham Business Park and 1km west of the River Dee (Figure 1). The landscape surrounding the farm is intensively managed for the most part with improved grassland and arable dominant (Figure 2).

The proposal will include extension of an existing earth banked slurry storey.

## **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, Lle Geoportal and NBN Atlas.

### **3.2 SITE SURVEY**

A site visit was made on 09/06/2021. 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:

- Badger
- Bats
- Breeding birds
- Great Crested Newt

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

#### **Badger**

An area within 50 metres of the site was closely searched for the following signs of badger activity:

- Setts,
- Tracks and footprints,
- Latrines,
- Snuffle holes.

### **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 newts**

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).

## **3.3 PERSONNEL**

The survey was carried out by Phillipa Stirling MSc ACIEEM: Ecologist. NRW GCN survey licence no.: S089109-1.

## **3.4 CONSTRAINTS**

Pond 3 was not accessible at the time of the survey.

## 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 |
|-----------------------------------------------------------------------|-------------------------------|--------------------|
| River Dee                                                             | SSSI<br>SAC                   | 0.5km              |
| Suttongreen Fox Covert                                                | Ancient Semi Natural Woodland | 0.6km              |
| The search included Ramsar, SSSI, SAC, SPA, NNR and LNR. <sup>1</sup> |                               |                    |

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                                                        |
|------------|----------|-------------------------------------------------------------------|
| Otter      | 0.8km    | European Protected Species,<br>Wildlife and Countryside Act 1981. |
| Kingfisher | 0.9km    |                                                                   |
| Brambling  | 0.5km    |                                                                   |
| Redwing    | 0.4km    |                                                                   |
| Fieldfare  | 0.7km    |                                                                   |

### 4.2 HABITATS ON SITE

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

#### *Improved grassland*

The areas surrounding the slurry lagoon are subject to frequent disturbance and therefore much of the ground is bare earth. The slurry lagoon sits within a large field site categorised as improved grassland. Species recorded within the sward include: perennial ryegrass, broadleaved dock, creeping buttercup and chickweed.

### 4.3 ADJACENT HABITATS

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<sup>1</sup> 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.

### *Buildings*

The adjacent farmyard sits at the north boundary of the slurry lagoon and is made up of several steel framed agricultural buildings with open sides and box profile rooves and cladding.

### *Hardstanding*

The ground throughout the farmyard is concrete with some areas of stone chippings.

## **4.4 PROTECTED SPECIES**

### *Badgers*

There are no historical records of badger at the site or within 1km and no field signs were found within the search area.

### *Bats*

The site does not provide any roosting opportunities for bat species nor do any of the adjacent habitats.

### *Breeding birds*

The grassland on site is not suitable for ground nesting birds given the management regime. The sward is permanently short and patchy in places and no evidence of wild nesting birds was recorded during the survey.

### *Great Crested Newt*

Two ponds were identified within 250m of the slurry lagoon. Pond 1 is a small field pond which is fed by run-off from the farmyard. There is a buffer around the pond which consists of rough grassland. Emergent vegetation covers around 70% of the pond and includes: fools watercress, creeping buttercup, yellow iris, cursed crowfoot and water plantain.

During the survey, an egg search was carried out amongst the emergent vegetation. No newt eggs were found during the inspection. Fish are known to be present in the pond. Overall, the pond scored 'good' in terms of its suitability to support breeding GCN. The pond sits approximately 115m from the proposed

| GCN HSI Calculator           |                     |            |
|------------------------------|---------------------|------------|
|                              | Pond Name           | Pond 1     |
|                              | Position            | SJ40884908 |
| SI No                        | SI Description      |            |
| 1                            | Geographic location | 0.5        |
| 2                            | Pond area           | 1          |
| 3                            | Pond permanence     | 0.9        |
| 4                            | Water quality       | 0.67       |
| 5                            | Shade               | 1          |
| 6                            | Water fowl effect   | 1          |
| 7                            | Fish presence       | 0.33       |
| 8                            | Pond Density        | 1          |
| 9                            | Terrestrial habitat | 0.67       |
| 10                           | Macrophyte cover    | 1          |
| HSI Score                    |                     | 0.76       |
| Pond suitability (see below) |                     | Good       |

development site and is separated by expansive concrete of the farm yard and agricultural sheds housing cattle.

Pond 2 was not accessible at the time of the survey as it lies on neighbouring land.

## **5 POTENTIAL ECOLOGICAL IMPACT**

### **5.1 HABITAT ASSESSMENT**

The proposed development will result in the loss of a small area of improved grassland which is of little ecological significance. Overall, the impact upon habitats will be negligible.

### **5.2 PROTECTED SPECIES ASSESSMENT**

#### *Badger*

The survey revealed no signs of use by badger and there are no historic records of badger at the site. The proposals will have no impact on this species.

#### *Bats*

The proposed development will not result in the loss of any potential foraging or roosting habitat and therefore is unlikely to have any impact upon bat species.

#### *Breeding birds*

The site does not provide any suitable opportunities for breeding birds and no nesting activity was observed whilst carrying out the survey.

#### *Great crested newt*

The proposed development site offers poor terrestrial habitat to GCN and it is unlikely that the species would be found on site. The nearest pond is 100m away and studies have shown that 95% of GCN summer refuges are within 63m of their breeding pond (Jehle, 2000). Given that Pond 1 is immediately surrounded by rough grassland which links to hedgerow to the south, it is reasonable to assume that the species would favour these optimal habitat types over short, improved grassland with regular bare earth patches.

No newt eggs were found amongst the vegetation in Pond 1 during the inspection and the area of land to be disturbed is sub-optimal terrestrial habitat for GCN.

The likelihood of an offence being committed, unmitigated, under the relevant legislation is extremely low and in order to further reduce any residual risk, enabling and ground works will take place during months when amphibians are not active above ground i.e.

October-February. The proposed development site does not offer any brumation opportunities for GCN and therefore would not be disturbed by groundworks in the field.

A full Reasonable Avoidance Measures Method Statement will be adopted on site and throughout the duration of the project to ensure that the proposed development does not result in an offence. The proposed development will have no impact on the favourable conservation status of GCN in this area.

## **6 AVOIDANCE, MITIGATION AND ENHANCEMENT**

### **6.1 HABITAT MITIGATION**

The proposed development will impact a small area of improved grassland and therefore mitigation is not required.

### **6.2 PROTECTED SPECIES MITIGATION**

#### *Great crested newt*

For the reasons outlined in 5.2 *Great crested newt* the risk of causing an offence to GCN under the relevant legislation is low and in order to remove any residual risk, a Reasonable Avoidance Measures Method Statement will be adopted for all work on site. This will include enabling and ground works taking place between October and February when amphibians are unlikely to be active above ground. Appendix 2 contains further details.

### **6.3 ECOLOGICAL ENHANCEMENT**

The new boundary of the slurry lagoon should be planted with a native species hedgerow to include: hawthorn, hazel, holly, elder, dog rose and Guelder rose.

Consideration should be given to the use of a 'floating cover' on the slurry store to reduce ammonia emissions and the volume of dirty water which needs to be stored and spread.

## 7 SUMMARY

Planning permission will be sought for the extension of an existing slurry store. 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 proposed development will result in the loss of a small area of improved grassland which is of little ecological significance. Overall, the impact upon habitats will be negligible.

The survey revealed no signs of use by badger and there are no historic records of badger at the site. The proposals will have no impact on this species.

The proposed development will not result in the loss of any potential foraging or roosting habitat and therefore is unlikely to have any impact upon bat species.

The site does not provide any suitable opportunities for breeding birds and no nesting activity was observed whilst carrying out the survey.

The proposed development site offers poor terrestrial habitat to GCN and it is unlikely that the species would be found on site. No newt eggs were found amongst the vegetation in Pond 1 during the inspection and the area of land to be disturbed is small in size.

The likelihood of an offence being committed, unmitigated, under the relevant legislation is extremely low and in order to further reduce any residual risk, enabling and ground works will take place during months when amphibians are not active above ground i.e. October-February.

A full Reasonable Avoidance Measures Method Statement will be adopted on site and throughout the duration of the project to ensure that the proposed development does not result in an offence.

The new boundary of the slurry lagoon should be planted with a native species hedgerow to include: hawthorn, hazel, holly, elder, dog rose and Guelder rose.

Consideration should be given to the use of a 'floating cover' on the slurry store to reduce ammonia emissions and the volume of dirty water which needs to be stored and spread.

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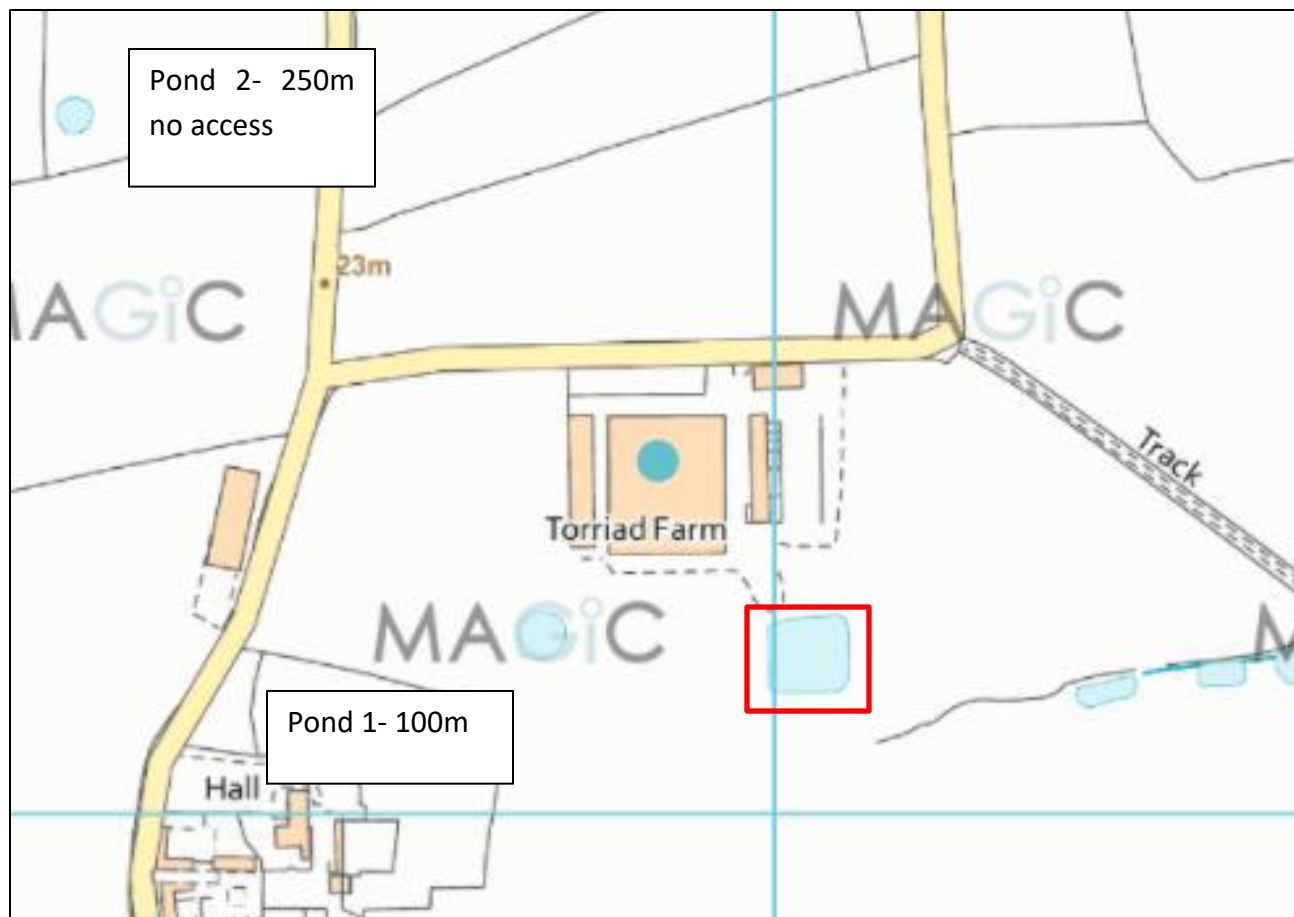
FIGURE 1 LOCATION. 1:50,000



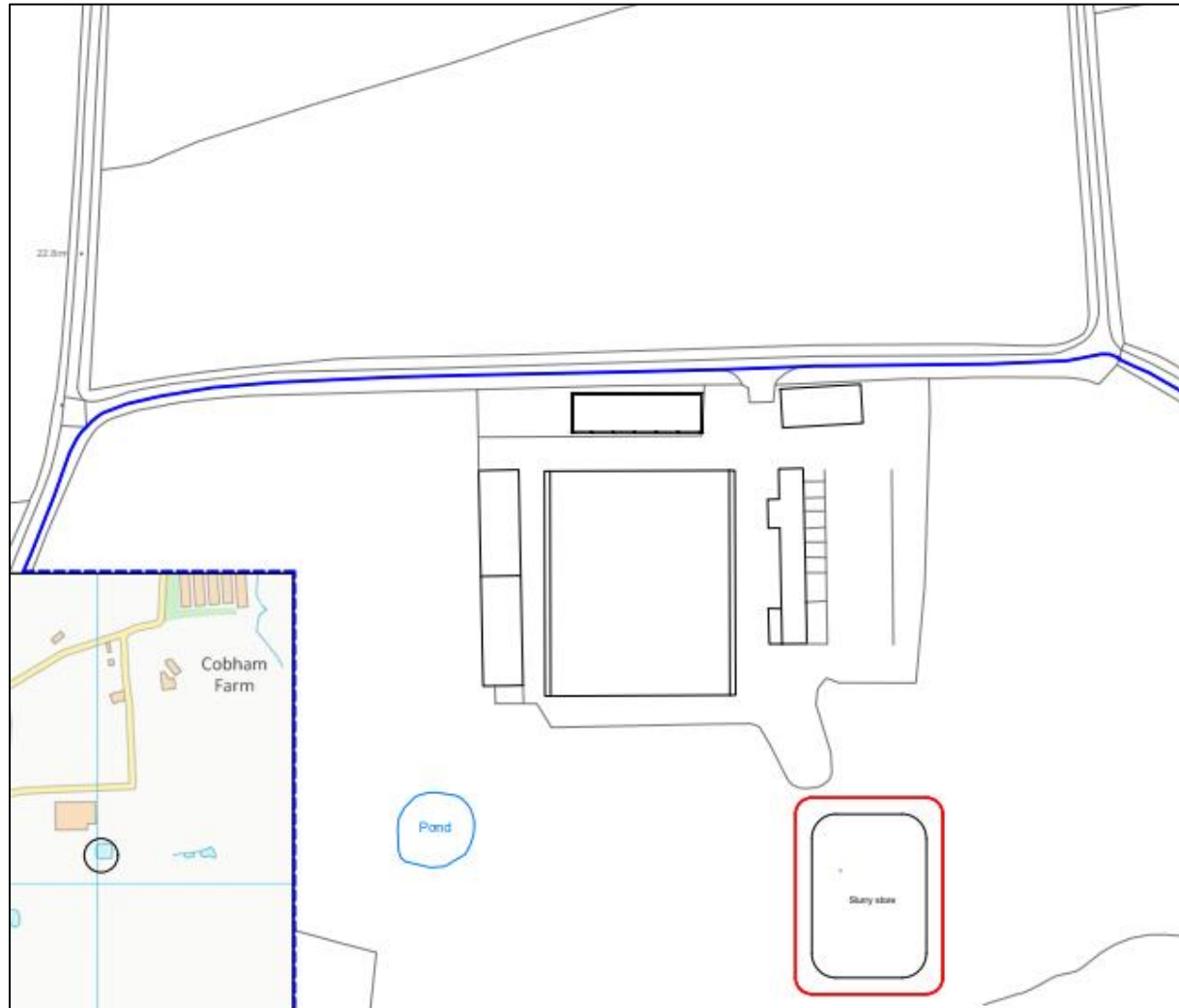
FIGURE 2 AERIAL PHOTOGRAPH



**FIGURE 3 PONDS WITHIN 250M**



**FIGURE 4 PROPOSED SITE PLAN**



## APPENDIX 1 PHOTOGRAPHS

|                                                                                     |                                                                     |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------|
|    | <p>Pond 1</p>                                                       |
|   | <p>Habitat surrounding Pond 1 is maintained as rough grassland.</p> |
|  | <p>Slurry lagoon to be extended.</p>                                |





The site is adjacent to the concrete farmyard and agricultural buildings.



## **APPENDIX 2. REASONABLE AVOIDANCE MEASURES METHOD STATEMENT**

### **Legislation**

Great Crested Newts (GCN) are a European Protected Species (EPS) and they and their habitats are fully protected under national (Wildlife & Countryside Act 1981 (as amended)) and European law (The Habitats and Species Regulations 2017 (as amended)). The combined legislation makes it illegal to:

- deliberately capture, kill or injure a great crested newt;
- damage or destroy a breeding site or resting place
- intentionally or recklessly obstruct access to any place used for shelter and protection including resting and breeding places, whether occupied or not;
- deliberately, intentionally or recklessly disturb a great crested newt when in a place of shelter;
- possess a great crested newt, or any part of it, unless acquired lawfully;
- sell, barter, exchange or transport or offer for sale great crested newts or parts of them.

### **Induction of contractors**

- A toolbox talk will be given to all site personnel in order to make them aware of the possible presence of GCN, how to identify this species and the avoidance measures to be used on site.
- A paper copy of the avoidance measures will be retained on site together with the contact details of the GCN licensed ecologist.

### **Timing & duration**

- All ground works/excavations will be undertaken between October and February when GCN are rarely active above ground.

### **Site clearance**

- Any improved grassland to be disturbed on site will be cut to, and maintained at, a height of 10cm before March (in any given year) in order to reduce the number of potential resting/feeding opportunities on site.
- Any stored materials will be removed from site during the GCN active season. This will aim to remove any materials which could act as a refuge for GCN.



### **Site compound**

- The site compound will be situated on an area of existing hard-standing within the adjacent farm yard to avoid creating GCN resting places beneath stored materials etc.
- All site materials will be stored on pallets or other raised objects to avoid creating resting places/refuges for GCN.
- Any toxic or poisonous materials will be safely stored within a locked container.

### **Construction methods and special precautions**

- All excavations on site will be covered at night or ramps will be provided to allow amphibians to exit excavations. All excavations will be checked for amphibians each morning prior to the re-commencement of works.
- All exposed new pipework and drains will be capped at night so as to avoid trapping amphibians.
- All excavated materials/waste will be stored in skips or similar and not on the ground where it could be used as a refuge/resting area by amphibians. Alternatively, all waste will be removed from site daily.
- All stored building materials that might be used as temporary resting places by amphibians will be stored off the ground on pallets or similar.

**If GCN are found at any point during the development or activities outlined above, works must stop and an appropriately qualified ecologist should be contacted for advice, as well as Natural Resources Wales.**

**Contractors are prohibited from handling GCN.**

