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PRELIMINARY ECOLOGICAL APPRAISAL

RIDLEYWOOD FARM

Arbor Vitae Environment Ltd, Lower Betton Farm, Cross Houses, Shrewsbury, Shropshire, SY5 6JD

Project name: **Ridleywood Farm, Holt Road, Ridleywood, Wrexham, LL13 9YA**

Grid Reference: SJ39745116

Date: 09/03/2023

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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 erection of an agricultural storage shed at Ridleywood Farm, Wrexham.

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

Ridleywood Farm is located along Holt Road at Ridleywood, Wrexham. The proposed storage shed would sit between existing farm yard buildings at the south west of the holding. The shed will occupy approximately 0.04ha.

The surrounding landscape is largely dominated by improved pasture, arable and farm holdings.

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 24/02/2023. 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:

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).

3.3 PERSONNEL

The survey was carried out by Phillipa Stirling MSc ACIEEM: Ecologist. Natural Resources Wales bat licence number: S091037-1 and GCN licence number: S089109-1.

3.4 CONSTRAINTS

Breeding birds would not have been present at the time of the survey but previous nesting and appropriate nesting sites would have been apparent.

4 SURVEY RESULTS

4.1 DESK STUDY

The desk study found that within 2km of the site there were the following designations:

Name	Designation	Distance from site
River Dee and Bala Lake	SSSI SAC	1.5km
The search included Ramsar, SSSI, SAC, SPA, LWS, NNR and LNR. [1]		

[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.

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
Birds		
Kestrel Redwing Fieldfare	0.8-1km	Wildlife and Countryside Act 1981.
Amphibians		
Great crested newt	0.9km	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).

Hardstanding

Approximately 100m2 of hardstanding would be occupied by the proposed storage shed.

Improved grassland

300m2 of poor quality improved grassland would be lost for the storage shed. The grassland area has some bare patches of earth and species in the sward are limited to: perennial ryegrass, white clover, creeping thistle, broad leaved dock and chickweed.

4.3 ADJACENT HABITATS

Improved grassland

Land to the west and south of the site is made up of large open agriculturally improved fields. The grassland sward on site is largely limited to: perennial ryegrass, Yorkshire fog, white clover, chickweed, broad leaved dock and dandelion.

Hardstanding

Land to the north of the proposed site is dominated by a concrete farm yard.

Buildings

There are several large steel portal agricultural sheds to the north of the proposed site. The building at the south east of the site is a large open fronted steel frame agricultural building used for housing livestock. The building at the north-west boundary is a single storey brick barn with a fibre cement roof.

Bats

The site itself provides very limited opportunities for bat species. The surrounding modern agricultural buildings may provide some foraging opportunities for bat species.

Hedgerow and tree lines around the edges of surrounding fields may provide commuting/foraging opportunities for bats but there are no know/recorded bat roosts within 1km of the site.

Breeding birds

The site does not provide any suitable nesting opportunities for breeding birds.

Great Crested Newt

The site itself does not provide any suitable terrestrial or aquatic habitat for GCN.

There is one pond present at 250m from the site boundary. Pond 1 is a man-made feature in the middle of a large improved grassland field. The pond is unfenced and as such, livestock have access. The banks and surrounding land are trampled and denude of vegetation. There are no obvious habitat connectivity features to the wider landscape and several of the other ponds mapped within 1km do not exist on the ground. The majority of the pond's banks are shaded by mature vegetation, including oak, ash, goat willow and hawthorn. The area dries out sometimes. The pond provides 'below average' suitability as a breeding site for GCN.

GCN HSI Calculator

	Pond Name	POND 1
SI No	SI Description	
1	Geographic location	1
2	Pond area	1
3	Pond permanence	0.5
4	Water quality	0.33
1	Shade	0.5
6	Water fowl effect	0.33
7	Fish presence	1
0.6	Pond Density	1
9	Terrestrial habitat	0.33
10	Macropyhyte cover	0.3
HSI Score		**0.55**
Pond suitability (see below)		*Below average*

GCN has been recorded at a distance of 0.9km, south west of the site. The records originate from the north eastern edge of Wrexham's Industrial Estate.

5 POTENTIAL ECOLOGICAL IMPACT

5.1 HABITAT ASSESSMENT

The proposals will result in the loss of 100m2 of existing hardstanding and 300m2 of poor quality improved grassland. Both habitat types provide negligible ecological value and their loss will have no wider implications.

The River Dee and Lake Bala SSSI/SAC is located 1.5km from the site. The proposals will have no impact upon this protected site.

5.2 PROTECTED SPECIES ASSESSMENT

Bats

The proposals will have no impact upon potential or known roosting sites.

Breeding birds

The proposals will have no impact upon potential nesting habitat and therefore no impact upon breeding birds.

Great crested newt

The proposals will have no impact upon suitable terrestrial or aquatic habitat which GCN may use. Pond 1 lies 250m south, with no obvious connecting habitat between the two sites. Furthermore, Pond 1 provide 'below average' suitability for GCN given that;

- The banks are largely trampled and all emergent vegetation is grazed,
- The banks of the pond are mostly shaded by mature vegetation, in turn causing a build-up of organic matter from leaf litter,
- The land surrounding the pond provides sub-optimal terrestrial habitat for GCN and the pond is essentially isolated in the landscape.

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 other ponds present within 250m of the site and it is highly unlikely that GCN would be using Pond 1 and therefore, the proposals will have no impact upon this species.

6 AVOIDANCE, MITIGATION AND ENHANCEMENT

6.1 HABITAT MITIGATION

The proposals will have no impact upon habitats of any ecological interest and mitigation will not be required.

6.2 PROTECTED SPECIES MITIGATION

The proposals will have no impact upon protected species and mitigation is not required.

6.3 ECOLOGICAL ENHANCEMENT

In order to provide a range of opportunities for protected/priority species, the following wildlife boxes will be installed onto the building upon its completion:

- 1x barn owl box to be installed at the apex of the south west facing gable.
- 2x Woodcrete sparrow terrace with double brood chamber to be installed at the north-west facing elevation.
- 2x Woodcrete low-profile bat boxes will be installed at the north-west facing elevation.

7 SUMMARY

Planning permission will be sought for the erection of an agricultural storage shed at Ridleywood Farm, Wrexham. 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. Key findings of the survey are:

- The proposals will result in the loss of 100m2 of existing hardstanding and 300m2 of poor quality improved grassland. Both habitat types provide negligible ecological value and their loss will have no wider implications.
- The proposals will have no impact upon badger, their setts, or potential foraging areas.
- The proposals will have no impact upon potential or known roosting sites.
- The proposals will have no impact upon potential nesting habitat and therefore no impact upon breeding birds.
- The proposals will have no impact upon suitable terrestrial or aquatic habitat which GCN may use. Pond 1 lies 250m south, with no obvious connecting habitat between the two sites. There are no other ponds present within 250m of the site and it is highly unlikely that GCN would be using Pond 1 and therefore, the proposals will have no impact upon this species.
- Ecological enhancement will be achieved through a wildlife box scheme to include: a barn owl box, two house sparrow terraces and two bat boxes.

8 REFERENCES

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FIGURE 1 LOCATION

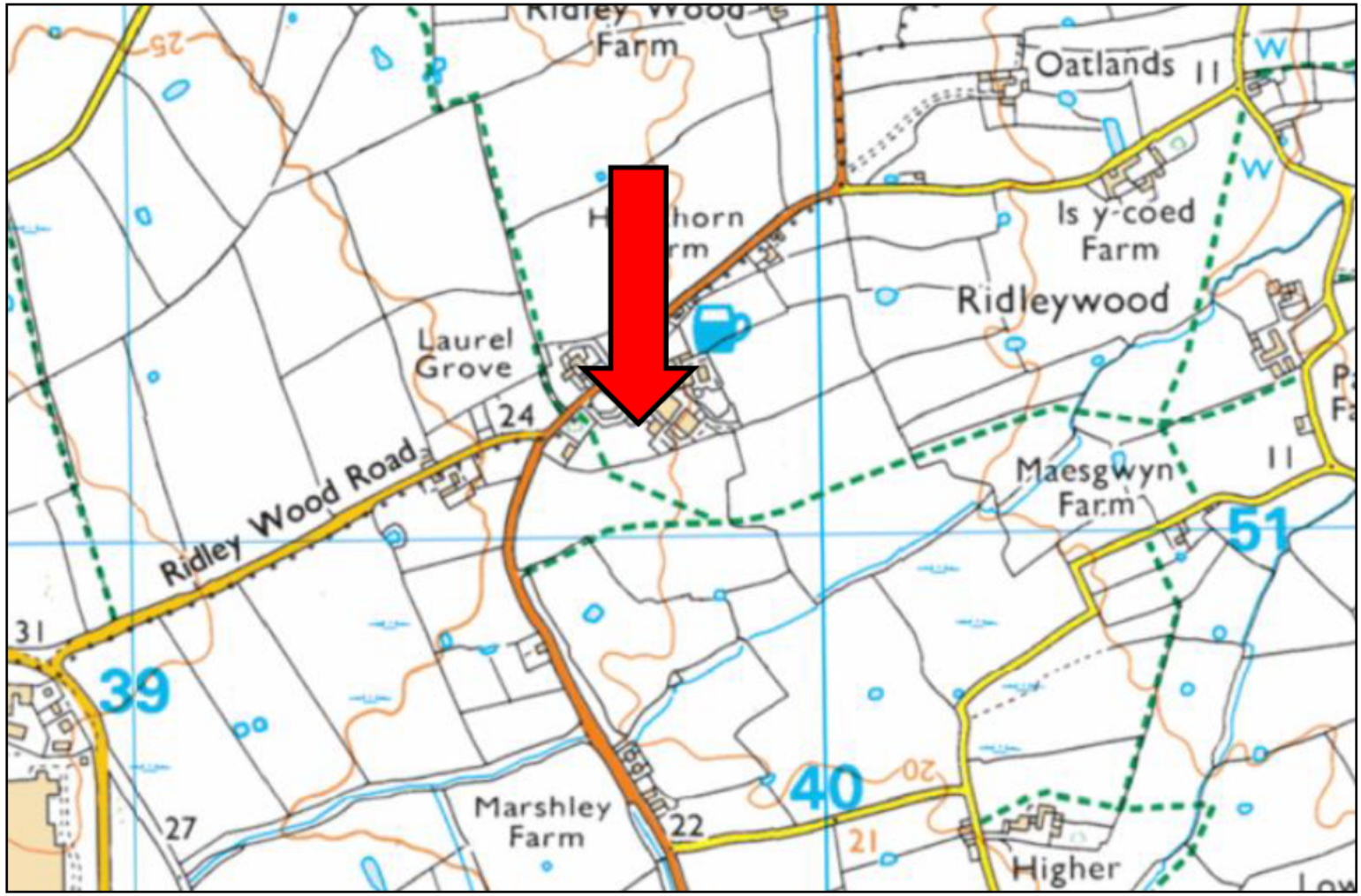


FIGURE 2 AERIAL PHOTOGRAPH



FIGURE 3 PONDS WITHIN 250M

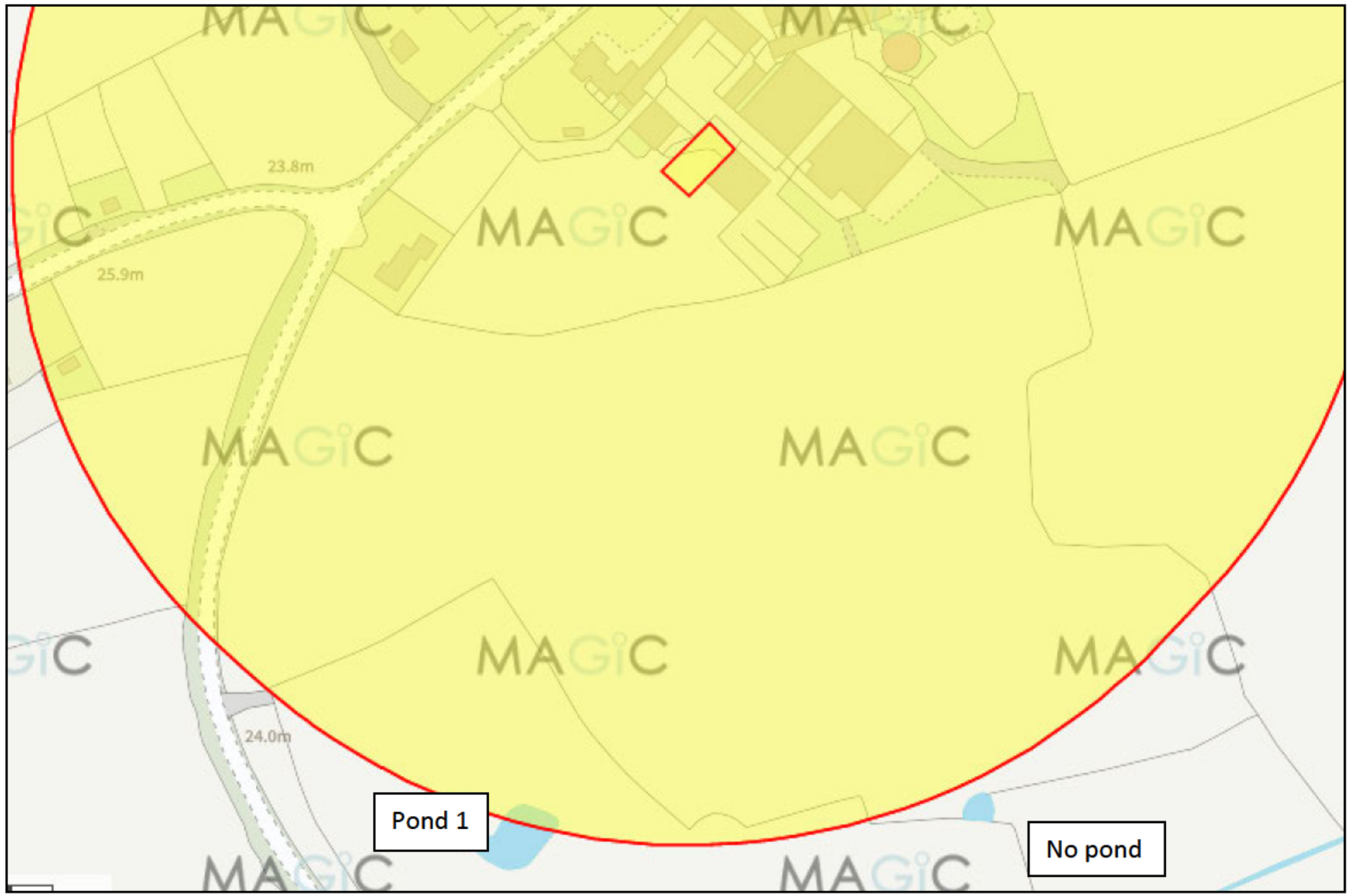
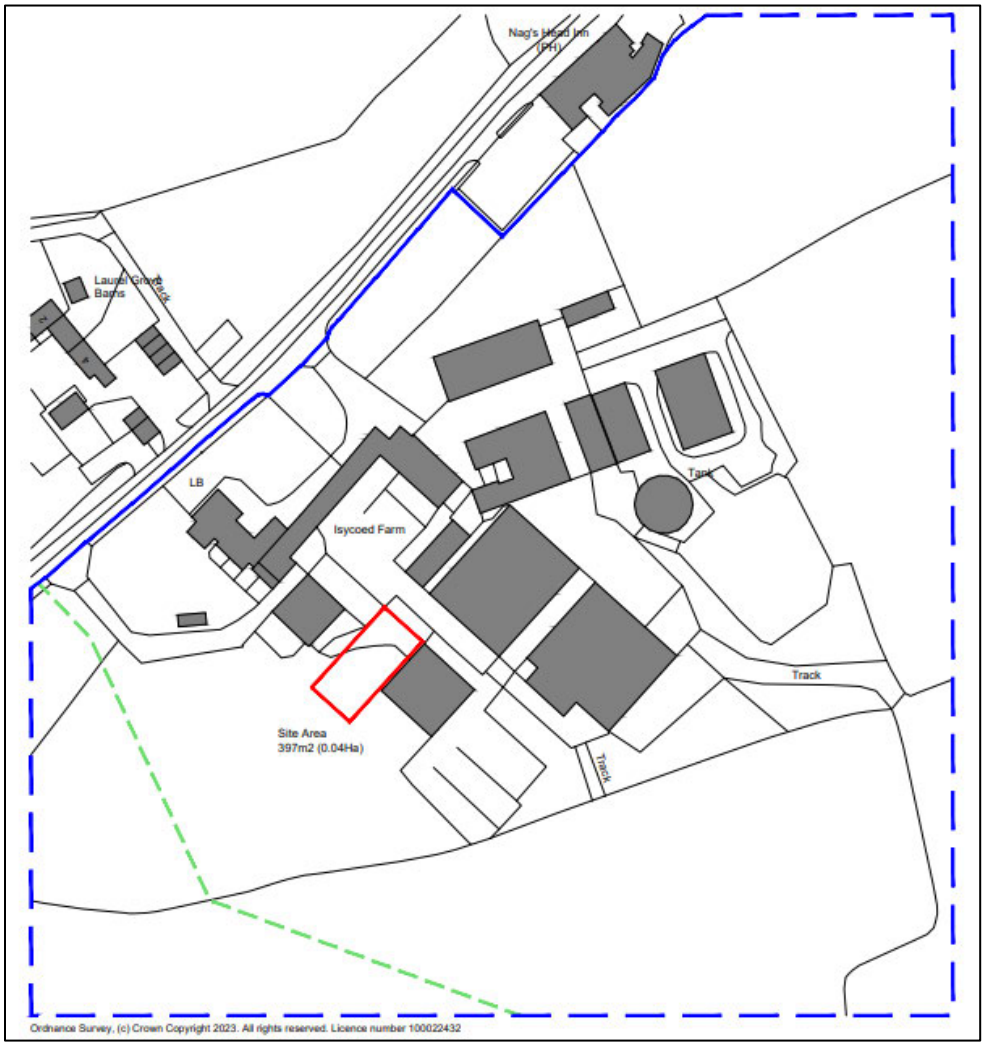


FIGURE 4 SITE PLAN



APPENDIX 1 PHOTOGRAPHS

	
The site.	Adjacent building.
	
The site.	Adjacent building.