



ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE



PRELIMINARY ECOLOGICAL APPRAISAL

STRYT Y HWCH

Project name: Stryt Y Hwch, Marchwiel, Wrexham, LL13 0YA

Grid Reference: SJ33794681

Date: 02/04/2024

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1 INTRODUCTION

1.1 BACKGROUND TO DEVELOPMENT

Planning permission will be sought for change of use from agricultural to B1/B8 at Stryt Y Hwch.

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

Stryt-yr-hwch farm is located at Marchwiel, just south of Wrexham (Figure 1). The surrounding land use is dominated by agricultural practices including arable and grazing land (Figure 2). The farm has historically served as a dairy farm but is now providing other uses.

Proposals will include the use of an existing access point and the creation of parking and turning areas.

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 14/03/2024. 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:

- Bats
- Breeding birds
- Great Crested Newt

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

Bats

The objective of the survey was to find and record any signs of use by bats, for example:

- Droppings, sometimes in concentrations below roost sites
- Feeding signs such as butterfly and moth wings
- Staining of timber, brickwork around access points

The general structure of the building was assessed for its potential to provide bats with roosting opportunities.

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: S090921/1.

3.4 CONSTRAINTS

There were no constraints to the survey being carried out successfully.

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
Sontley Marsh	SSSI	0.6km
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
Mammals		
Noctule Common pipistrelle	0.4km	European Protected Species, Wildlife and Countryside Act 1981.
Birds		
Kestrel Redwing Fieldfare	0.3-1km	Wildlife and Countryside Act 1981.
Amphibians		
Great crested newt	0.3km	Wildlife and Countryside Act 1981.
Reptiles		
Grass snake	0.9km	Wildlife and Countryside Act 1981.

4.2 HABITATS ON SITE

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

Buildings

The buildings which are subject to a change of use are all modern-style agricultural sheds used for housing livestock. There are four main structures included within the plans, as follows:



Reference	Description
B1	Steel frame, concrete flooring. Yorkshire boarding along the top quarter of the elevations, otherwise open-sided. Pitched roof with box-profile roofing sheets. Numerous sky lights in place and verges and eaves capped. Livestock and feed storage.
B2	Attached to B1. The same construction except the Yorkshire boarding covers the north and west facing elevations.
B3	Steel frame, cinder block around the bottom third of the walls. Yorkshire boarding the north and south gable. East and west elevations open and joined to B4. Concrete floors and pitched, box-profile roof. Skylights along the roof and ridges/verges capped.
B4	Large triple bay steel framed shed. Concrete floors throughout. Yorkshire boarding and box profile cladding at the south gable but otherwise open at the elevations. Pitched fibre cement roof with sky lights along the length.
B5	Part of B4, extended half-pitch shelter supported by steel frame set over a concrete pad.

Hardstanding

The farm yard is either concrete or crushed aggregate. This includes the areas beneath and around buildings at the site.

The proposed parking area is currently down to loose stone, with ephemeral vegetation present. There are piles of aggregate and materials in this area.

Introduced shrub

Buddleia is growing from the small embankments which have been created around the proposed parking area.

Other shrubs/small trees are also growing in this area including *Salix* and *Prunus sp.*

4.3 ADJACENT HABITATS

The surrounding landscape includes permanent pasture and other farmsteads. Native hedgerow and mature trees are found at field boundaries and broadleaved woodland flanks the Gefeiliau Brook to the north west of the farm yard.

4.4 PROTECTED SPECIES

Bats

None of the buildings which were assessed during the survey provide potential roosting features and no evidence of bats was found during the survey. Habitats present in the immediate vicinity of the farm are not particularly suitable for use by bat species.

Hedgerows, trees, and woodland in the surrounding landscape may all well be in use by bats.

Breeding birds

No previous or current nesting structures were identified within the buildings during the survey.

Other buildings on site may be in use by birds e.g. swallow.

Great Crested Newt

There are two ponds which sit at 250m distance from the site. One to the north east and one to the south west. Records of GCN exist at a distance of 250m from the site, in the northerly pond. Other records also exist for ponds within the local landscape.

5 POTENTIAL ECOLOGICAL IMPACT

5.1 HABITAT ASSESSMENT

The proposals will have no impact upon protected or priority habitats, and the relative value of the habitats on site is limited.

The opportunity will be taken to enhance conditions on site and ensure that there is no net loss in biodiversity.

5.2 PROTECTED SPECIES ASSESSMENT

Bats

The proposals will have no impact upon bat species, potential, or actual roosting sites. The current use of the buildings means that there is regular activity in and around the site and therefore the change of use is unlikely to have any impact upon adjacent habitats such as hedgerow and mature trees along Marchwiel Hall Road. As a precaution, a Wildlife Sensitive Lighting Plan will be adopted.

Breeding birds

The proposals will not result in the loss of any vegetation and there were no previous or current nesting sites within the buildings at the survey during the survey. The proposals

are unlikely to have any impact upon breeding birds but precautionary measures will be required given the transitory nature of birds.

Great crested newt

The concrete yard and surroundings offer no suitable terrestrial habitat for GCN and it is highly unlikely that they would be present.

Given that the plans will only include a change of use of existing buildings, and re-surfacing an area of existing aggregate, no further survey work with regard to GCN is required.

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).

6 AVOIDANCE, MITIGATION AND ENHANCEMENT

6.1 HABITAT MITIGATION

The buildings are of no intrinsic interest ecologically and mitigation will not be required.

The proposed parking area sits within an existing stone yard which is currently providing limited value as a habitat.

6.2 PROTECTED SPECIES MITIGATION

Bats

The following measures will be included with any plans for external lighting at the site:

- Hedgerows and key habitat features including mature trees on the site will not be illuminated in order to retain dark movement corridors for nocturnal wildlife.
- Any exterior security or decorative lights to be installed on the development site will be less than 3 m from the ground and fitted with hoods to direct the light below the horizontal plane, at an angle of less than seventy degrees from vertical, and shall not be fixed to, or directed at, bat boxes or gables or eaves.
- 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).

Breeding birds

Precautionary measures will be required in case breeding birds start using the buildings between this survey and any subsequent permission.

The buildings will be searched thoroughly for any sign of use by breeding birds, prior to works starting. If any nesting activity is found, works in that area and up to 5m from the nest will be postponed until all young have fledged.

General Avoidance Measures

The following measures should be implemented to decrease the likelihood of killing/injuring small animals such as amphibians and hedgehogs:

- If piles of rubble, logs, bricks, other loose materials or other potential refuges are to be disturbed, this should be done by hand and carried out during the active season (March to October) when the weather is warm to allow animals to disperse naturally.
- All building materials, rubble, bricks and soil must be stored on raised platform (e.g. wooden pallets) to prevent their use as refuges by wildlife.
- Where possible, trenches should be opened and closed in the same day to prevent any wildlife becoming trapped. If it is necessary to leave a trench open overnight then it should be provided with a means of escape in the form of a shallow ramp.
- Any open pipework should be capped overnight. All open trenches and pipework should be inspected at the start of each working day to ensure no animal is trapped.
- Any common reptiles or amphibians discovered should be allowed to naturally disperse. Advice should be sought from an appropriately qualified and experienced ecologist if large numbers of common reptiles or amphibians are present.
- If a great crested newt is discovered at any stage then all work must immediately halt and an appropriately qualified and experienced ecologist will be contacted for advice.

6.3 ECOLOGICAL ENHANCEMENT

Areas around the proposed parking spaces will be planted up with a range of native trees and shrubs. The following species will be included in any planting scheme at the site: field maple, rowan, wild cherry, hazel, spindle, dog rose, dog wood, Guelder rose and elder.

A range of wildlife boxes will be installed upon completion of works at the site, including:

- Two Woodcrete sparrow terraces,
- Two Woodcrete bat boxes,
- One invertebrate box or brick (depending on building alterations).

7 SUMMARY

Planning permission will be sought for change of use from agricultural to B1/B8 at Stryt Y Hwch. 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. Proposals will include the use of an existing access point and the creation of parking and turning areas.

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The proposals will not result in the loss of any vegetation and there were no previous or current nesting sites within the buildings at the survey during the survey. The proposals are unlikely to have any impact upon breeding birds but precautionary measures will be required given the transitory nature of birds.

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8 REFERENCES

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FIGURE 1 LOCATION

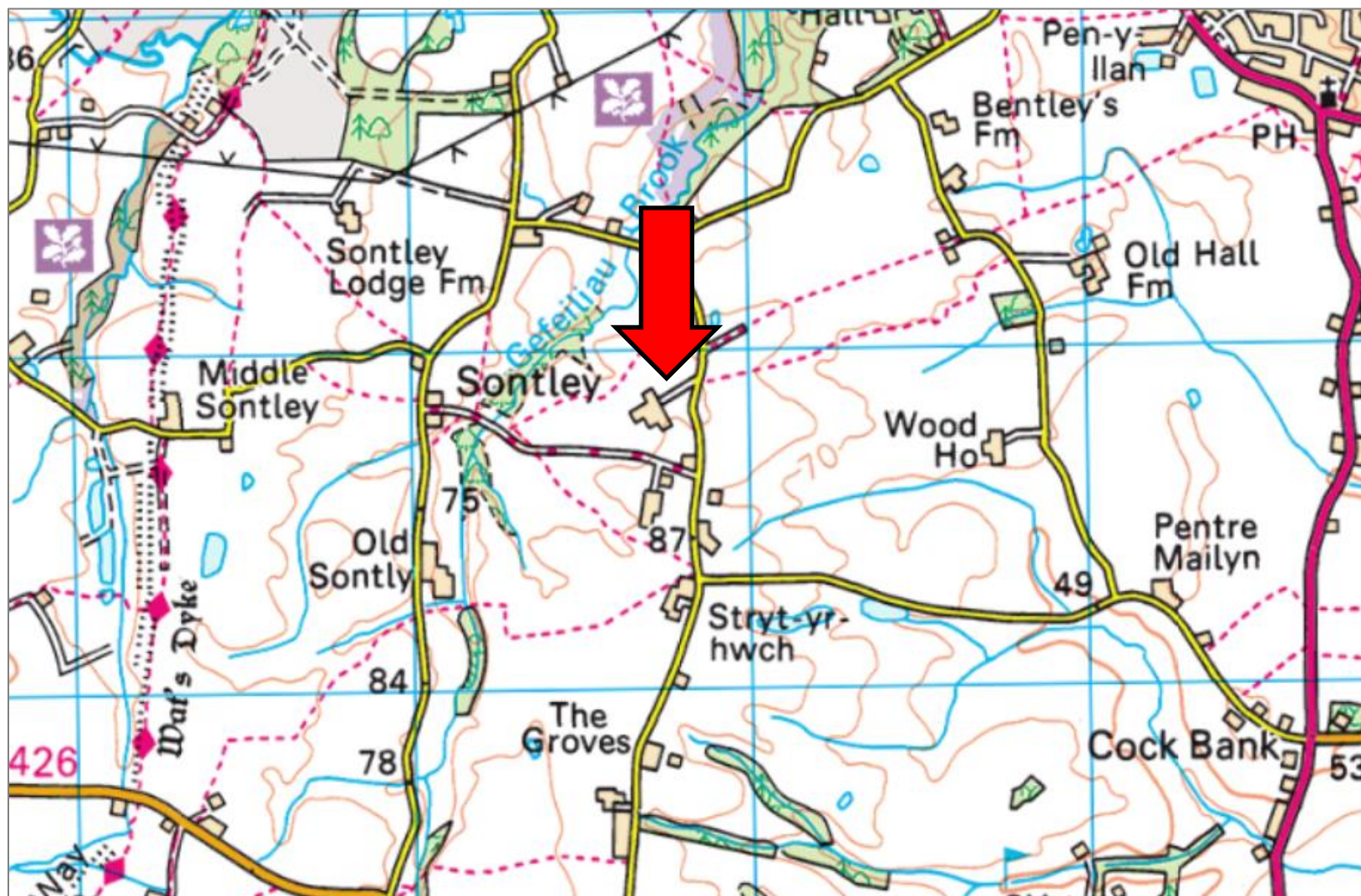
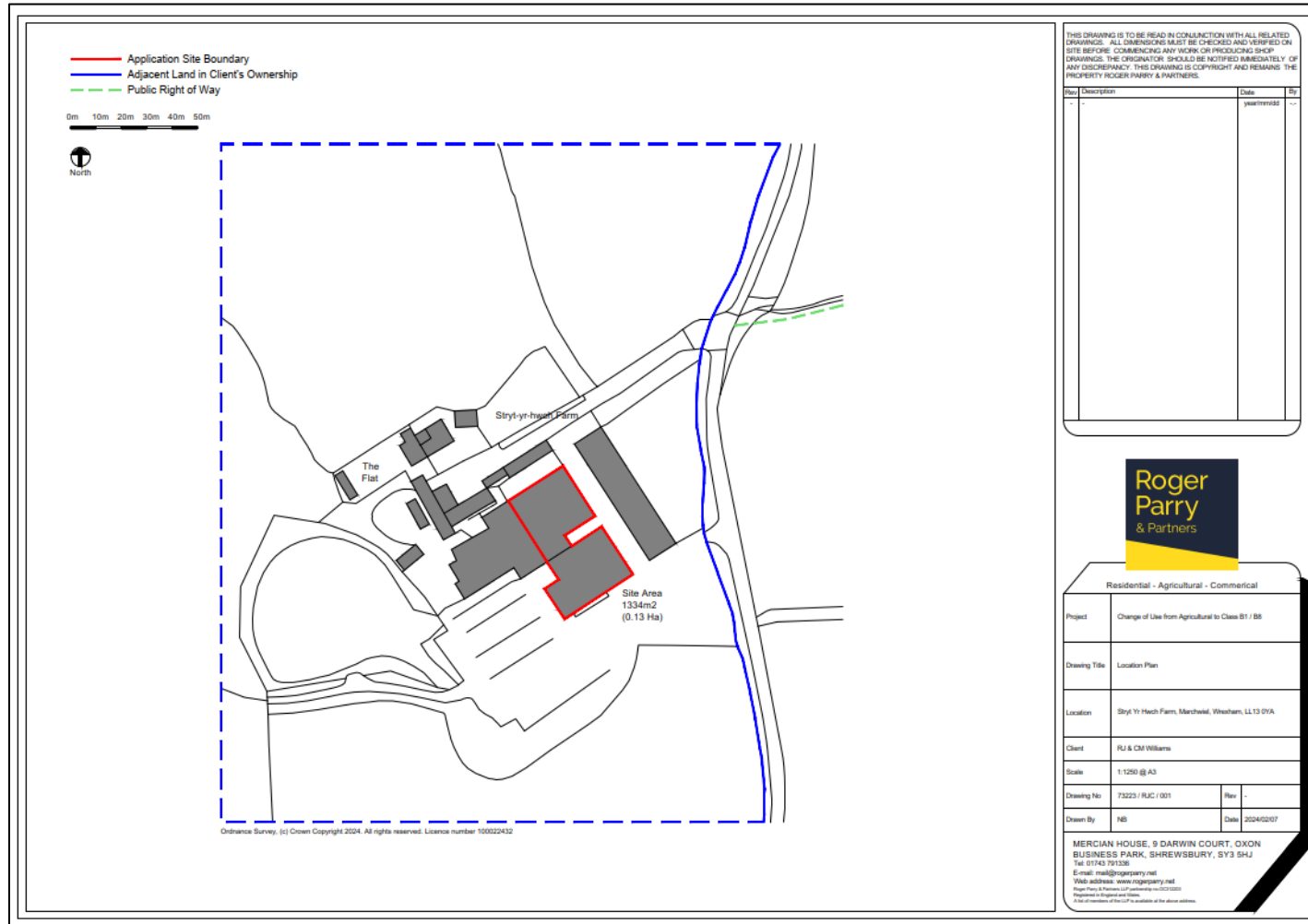


FIGURE 2 AERIAL PHOTOGRAPH



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FIGURE 3 SITE PLAN



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APPENDIX 1 PHOTOGRAPHS



B1



B2



B1



B2



B3 & 4



B3 & 4



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B4 & 5



Parking area



Parking area



Adjacent building



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