ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE

PRELIMINARY ECOLOGICAL APPRAISAL

GAERFECHAN

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

Project name: **Gaerfechan, Cerrigydrudion, Corwen, LL21 0RS**

Grid Reference: SH95754784

Date: 23/04/2025

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Reviewed by: William Prestwood BSc Director

Requested by: Roger Parry & Partners

Contents

1 INTRODUCTION

1.1 BACKGROUND TO DEVELOPMENT

Planning permission will be sought for the construction of a cattle shed at Gaerfechan Farm.

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

Gaerfechan is located just east of the A5, some 700m south of Cerrigydrudion in Conwy. The site in question is accessed via a farm track directly from the A5 road which serves a large agricultural shed used for livestock and machinery storage.

The plans will include the construction of a cubicle shed and access track from the existing farmyard. The building and concrete pad will measure approximately 2765m2.

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 and NBN Atlas.

3.2 SITE SURVEY

A site visit was made on 28/01/2025. 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
- Otters
- Water vole
- White clawed crayfish

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 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).

Otter

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

- Spraint,
- Footprints,
- Feeding remains.

Water vole

The watercourse was searched for suitable habitat which may be used by water vole and field signs, including:

- Wide swathes of vegetation growing along the banks and within a watercourse,
- Sandy/silty banks for burrowing,
- Slow-flowing watercourses of varying depths,
- Latrines, burrow entrances and 'runs',
- Discarded vegetation, cut at a 45-degree angle.

White clawed crayfish

The water course was assessed based on the following habitat specifications:

- Fast-flowing, shallow watercourse,
- Presence of natural or artificial refuges,
- Fully submerged refuges,
- Aerated conditions,
- Stable and resistant to high water.

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

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 there are no designated sites within 1km of the search area: 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		
Brown long-eared	900m	European Protected Species, Wildlife and Countryside Act 1981.

[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.

Birds		
Kestrel Redwing	300-600m	Wildlife and Countryside Act 1981.

4.2 HABITATS ON SITE

All habitats are classified using UKHab v2.01.

Modified grassland

The site is located within a modified grassland field. There are frequent patches of bare earth visible, and the sward is grazed by livestock. Species recorded during the survey include perennial ryegrass, annual meadow grass, chickweed, broadleaved dock, creeping buttercup, white clover, spear thistle.

4.3 ADJACENT HABITATS

Running water

A ditch runs along the north boundary of the adjacent field site and turns 90 degrees to run past the adjacent agricultural building. Water seems to originate from the farmyard and is of very poor water quality. There is a build up of sediment within the channel and an oily film is present on top of the water. There is a slurry lagoon near to the top of the ditch which may be the reason for the poor water quality. The banks of the ditch are vegetated with modified grassland and concentrations of thistle and nettle are apparent.

The watercourse is open to livestock and there seems to be dogwood shrubs growing along the north side of the ditch along the north field boundary. Other plants recorded in association with the ditch were limited.

4.4 PROTECTED SPECIES

Badgers

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

Bats

The agricultural shed adjacent to the site does not provide any suitable potential roosting features for bat species and no evidence of bats was recorded whilst on site. There are no other features on or adjacent to the site which may be used by roosting bats. Linear landscape features are limited, and the surrounding land is dominated by modified grassland, with limited hedge and tree habitat.

Breeding birds

The adjacent agricultural shed provides some opportunity for nest-building, but none was observed at the time of the survey. The modified grassland habitat is not suitable for nesting birds and there are no nearby features which might be used for nesting/breeding.

Great Crested Newt

No ponds were identified within 250m of the proposed development site and therefore no further survey work is required with regard to this species.

Otter

The ditch adjacent to the agricultural building continues south before being culverted where it meets the A5. It is unclear where the ditch ends up, but the River Ceirw lies to the southwest and it is possible that the water eventually flows into this feature.

The ditch on site does not provide suitable habitat for otter as there is very little likelihood of fish or other foraging being available. The site is also on the opposite side of the A5 when compared with the nearest major river and there was no evidence to suggest that the species was active on or adjacent to the site. There are no records of otter within 1km of the site.

Water vole

There was no evidence to suggest that water voles are using the ditches on site, and it is unlikely that they would be, given the water quality. There are also no records of water vole within 1km of the site.

White clawed crayfish

The ditch habitat does not provide suitable opportunities for white clawed crayfish due to the water quality and high levels of sediment.

5 POTENTIAL ECOLOGICAL IMPACT

5.1 HABITAT ASSESSMENT

Modified grassland

The new buildings will result in the loss of 2700m2 of modified grassland which is patchy and has very low species diversity. The loss of this grassland will have no wider ecological impact but mitigation in the form of habitat creation will be adopted on-site.

Running water

Whilst there are no plans for the adjacent ditch, Pollution Prevention Measures will be required to stop any additional pollutants from entering the water.

5.2 PROTECTED SPECIES ASSESSMENT

Badger

The proposals will have no impact upon habitats which are in use by badgers and there is no evidence to suggest that badger is active locally. No further survey work or mitigation is required.

Bats

The agricultural building has negligible potential as a bat roost and there are no features on or adjacent to the site which provide suitable roosting sites. No further survey work or mitigation is required.

Breeding birds

The plans will not result in the loss of any habitat which may be in use by breeding birds, or disturbance of any nearby habitat. No further survey work or mitigation is required.

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 ponds within 250m and no records of GCN within 1km of the site. No further survey work or mitigation is required.

Otter/Water vole/White clawed crayfish

The ditches adjacent to the site are not suitable for use by otter, water vole, or white clawed crayfish. No evidence of protected species was recorded during the survey and no further survey work or mitigation with regard to these species is required.

6 AVOIDANCE, MITIGATION AND ENHANCEMENT

6.1 HABITAT MITIGATION

Modified grassland

A native woodland copse will be planted to the south of the new shed. This area will measure approximately 500m2 and will consist of the following species: oak, sycamore, silver birch, field maple, hazel, hawthorn, dog rose, wych elm, and Guelder rose. Details provided as per 'Biodiversity Enhancement Plan' – Parrys.

Running water

As part of another proposal at the site, it is recommended that the ditches on site are fenced on both sides to exclude livestock from entering. This will contribute to water quality locally and downstream for the River Ceirw.

The following Pollution Prevention Measures will also be adopted during all works on site:

All works will adhere to the Pollution Prevention Guidance set out in GPP 1: A General guide to preventing pollution and GPP 5: Works and maintenance in or near water.

The following specific measures will be implemented throughout the duration of the demolition phase:

General measures

- Drop heights of materials e.g. subbase and aggregate will be kept to a minimum to reduce velocity of dust movement.
- All aggregate arriving on site will be delivered in enclosed or sheeted vehicles.
- The storage of materials on the site and 'drop zones' will be as far from the west boundary as possible.
- There will be no burning of materials on the site.
- Earth works, excavation and digging should be avoided during exceptionally dry periods unless static sprinklers are used to dampen the material before moving.
- Cutting and grinding of materials on-site should be kept a minimum. Dust suppression should always be adopted during these activities.
- All construction works must take place within the red line boundary.
- All arisings from the site, both vegetative and construction related, will be cleared on a daily basis and disposed of through correct methods. The site manager should keep a record of waste disposal to ensure it is being properly managed.

Storage and waste products

- A waste hierarchy will be adopted on site which consists of five principles: Reduce, reuse, recycle, recover and dispose of.
- If any hazardous liquids such as oils and fuels need to be stored on site they will be stored within bunded storage drums and containers.

- All hazardous waste will be stored, handled and disposed of separately to normal waste. The site manager should keep a record of waste disposal to ensure it is being properly managed.

Spills & leaks

- Spill kits will be stored within the site compound during and post construction and all spills will be cleaned up accordingly and if necessary reported.
- All chemical substances and hazardous materials will be stored in accordance with EA guidelines with all diesel fuel and other lubricants being stored in appropriate containers and within double bunded storage areas.
- Any washing of concreting vehicles will be done well away from any watercourses and/or drainage systems. Preferably this will not be carried out on site at all but at an approved yard.
- Any re-fuelling and re-lubrication will only be completed in an approved area in which a spill kit is available.

6.2 PROTECTED SPECIES MITIGATION

General Avoidance Measures

The following measures should be implemented to decrease the likelihood of killing/injuring small animals that are present locally:

- If piles of rubble, logs, bricks, other loose materials or other potential refuges are to be disturbed, this will 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.
- The grassland areas will be kept short prior to and during construction to avoid creating attractive habitats for wildlife.
- All building materials, rubble, bricks and soil must be stored on raised platforms (e.g. wooden pallets) to prevent their use as refuges by wildlife.
- Where possible, trenches will be opened and closed on the same day to prevent any wildlife becoming trapped. If it is necessary to leave a trench open overnight, then it will 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 will be inspected at the start of each working day to ensure no animal is trapped.
- Any common reptiles or amphibians discovered will be allowed to naturally disperse. Advice will be sought from an appropriately qualified and experienced ecologist if large numbers of common reptiles or amphibians are present.

6.3 ECOLOGICAL ENHANCEMENT

The following wildlife boxes will also be installed:

- 1x Woodcrete 28mm nest box. To be installed onto the east facing side of the existing agricultural shed, on the ditch side.
- 2x Woodcrete bat box, to be installed on the west-facing side of the building away from the main entrance. The boxes should be at least 3m from ground level.

7 SUMMARY

Planning permission will be sought for the construction of a cattle shed at Gaerfechan Farm. 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 new buildings will result in the loss of 2700m2 of modified grassland which is patchy and has very low species diversity. The loss of this grassland will have no wider ecological impact but mitigation in the form of habitat creation will be adopted on-site.

Whilst there are no plans for the adjacent ditch, Pollution Prevention Measures will be required to stop any additional pollutants from entering the water.

The plans are unlikely to have any direct impact upon protected or priority species, but a set of general avoidance measures will be adopted during all works, to remove any residual risk.

A native woodland copse will be planted to the south of the new shed. This area will measure approximately 500m2 and will consist of native species.

The following wildlife boxes will also be installed:

- 1x Woodcrete 28mm nest box. To be installed onto the east facing side of the existing agricultural shed, on the ditch side.
- 2x Woodcrete bat box, to be installed on the west-facing side of the building away from the main entrance. The boxes should be at least 3m from ground level.

8 REFERENCES

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FIGURE 1 LOCATION

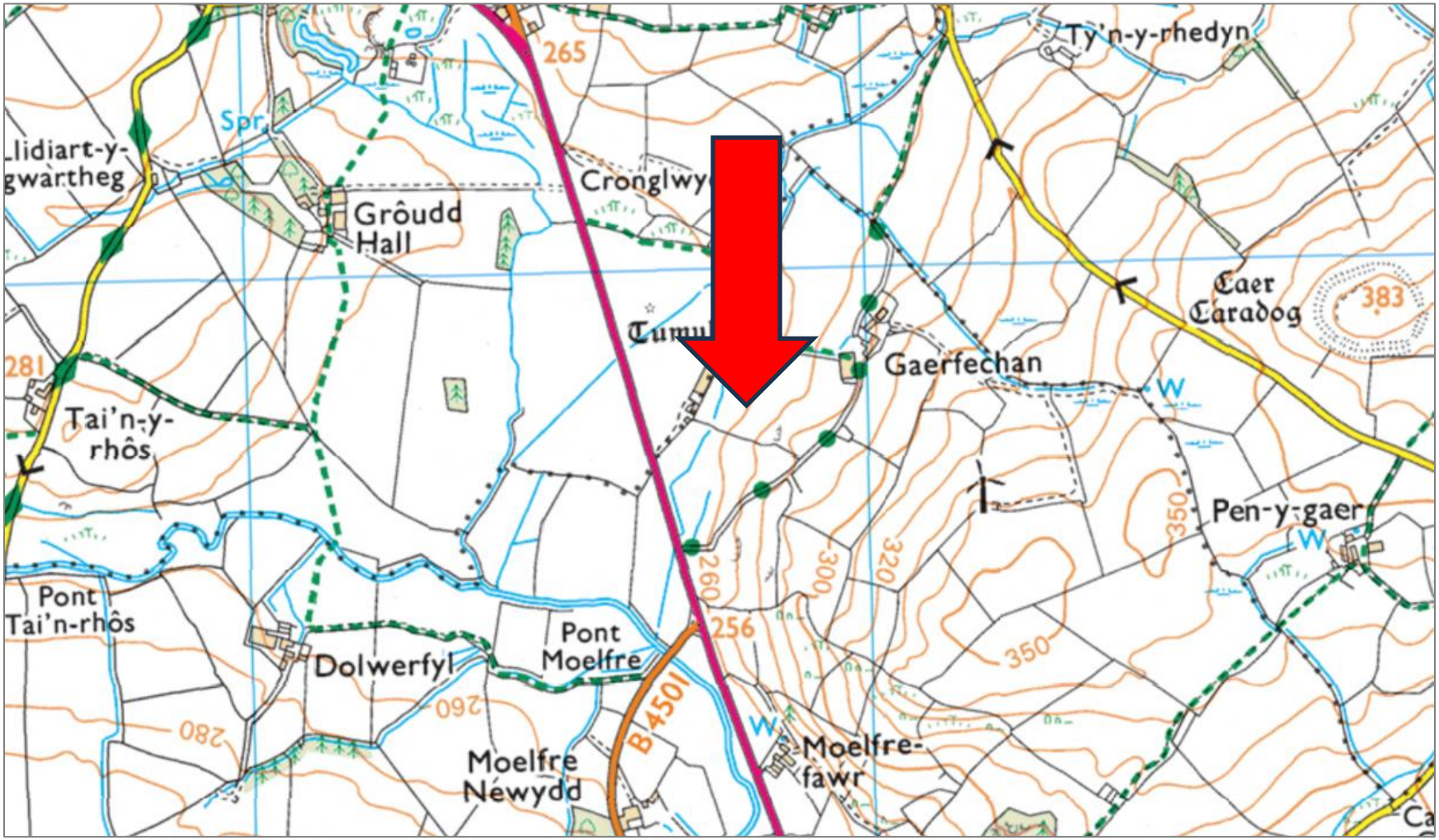
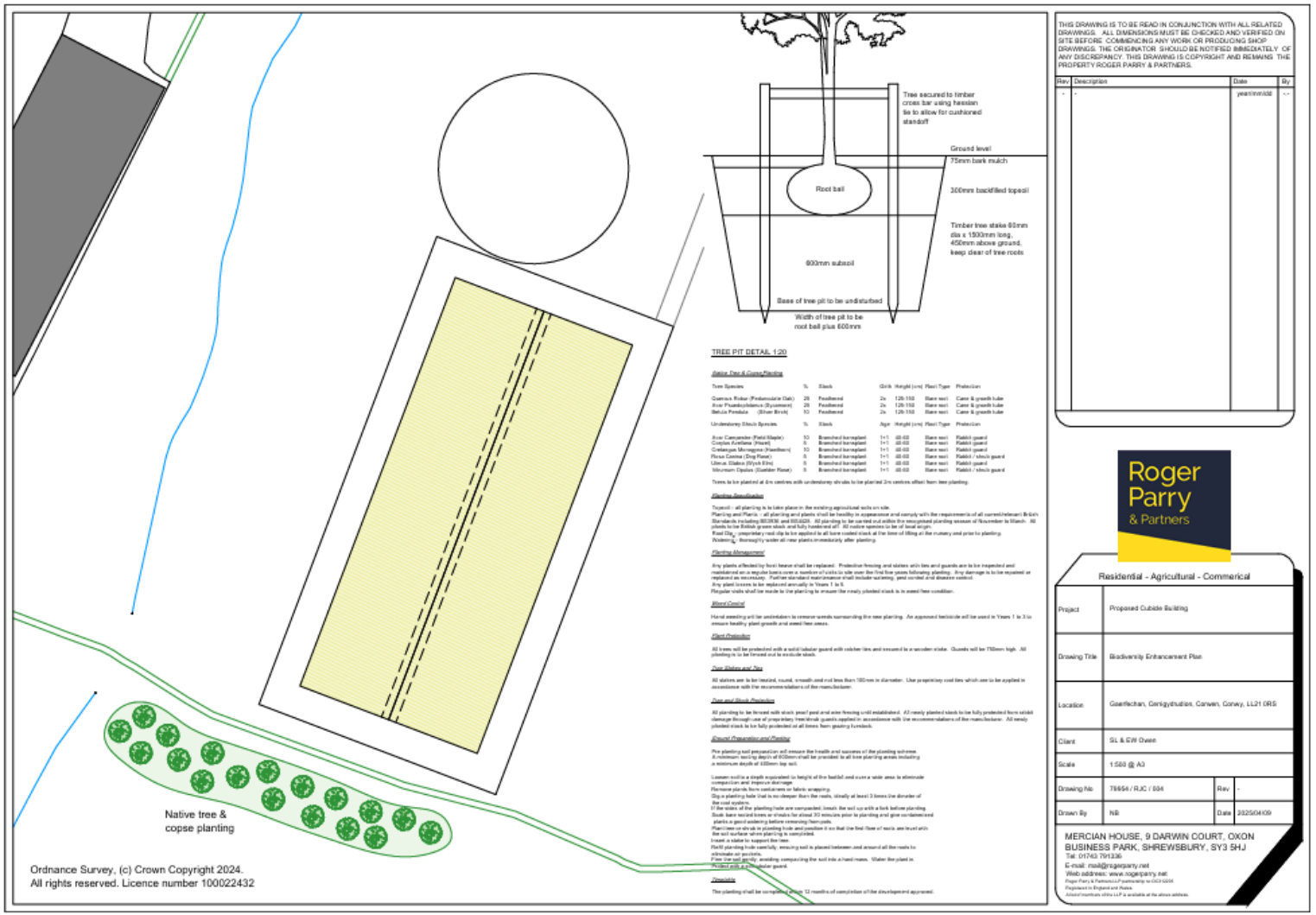


FIGURE 2 AERIAL PHOTOGRAPH

FIGURE 3 PROPOSED SITE PLAN



APPENDIX 1 PHOTOGRAPHS

The site looking north

Ditch along north boundary and access route

Adjcaent agricultural building

The site looking south

Ditch in adjacent field