



ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE



PRELIMINARY ECOLOGICAL APPRAISAL

OLD HALL

Project name: Old Hall, Penley, Wrexham, Clwyd, LL13 0LU

Grid Reference: SJ41014009

Date: 25/10/2023

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Requested by: Peter Richards & Co.

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1 INTRODUCTION

1.1 BACKGROUND TO DEVELOPMENT

Planning permission will be sought for the construction of an agricultural building at Old Hall, Penley.

Arbor Vitae were commissioned by Peter Richards & Co. 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

Old Hall is a Grade II listed farmhouse property of late medieval origin, with a range of traditional and modern agricultural buildings. The property is located just off the A539, to the west of Penley village. The surrounding landscape is characterised by permanent pasture and well-established hedges, as well as some arable land.

The proposals will include the construction of a modern agricultural building on an area of part existing hardstanding, used for storing silage bales. The building will cover an area of approximately 150m² and have open sides.

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 24/10/2023. 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:

- [REDACTED]r
- Bats
- Breeding birds
- Great Crested Newt
- Reptiles

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

[REDACTED]

[REDACTED]

[REDACTED]

- [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).

Reptiles

The site was assessed based on its suitability to support reptile populations including connections to terrestrial land from water and suitable resting habitat nearby.

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 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		
██████	██████	████████████████████ ████████████████████
Common pipistrelle	800m	European Protected Species, Wildlife and Countryside Act 1981.
Birds		
Kestrel Fieldfare	100m	Wildlife and Countryside Act 1981.
Amphibians		
Great crested newt	20m	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

Part of the area for the new building is currently a crushed stone yard. Silage bales have been stored on part of this area and as such, areas of vegetation have developed around the edges. The track extends west, meeting the main farm track. The area of ground beneath the bales is waterlogged at present.

Rough grassland

A small area of rough grassland has developed around the edges of the stored bales. Species include: annual meadow grass, creeping bent, sweet vernal grass, timothy,

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.

creeping buttercup, common nettle, creeping thistle and chickweed. The sward is varied in height and bramble is encroaching.

4.3 ADJACENT HABITATS

Standing water

A number of ponds are present around the property, all of which are managed for wildlife. Pond 2 lies adjacent to the site and is bounded by rough grassland, willow scrub and bramble. Pond's 1 & 2 lie within 150m of the site and are also surrounded by rough grassland, willow scrub and developing bramble. Each pond has a series of amphibian hibernacula installed around them.

Hardstanding

To the east of the site is a large equestrian arena.

Hedgerow

An established native hedgerow runs along the roadside to the south of the site, consisting of: hawthorn, blackthorn, dogrose, elder and cherry plum.

4.4 PROTECTED SPECIES

[REDACTED]

[REDACTED]

[REDACTED]

Bats

There are no habitats/structures on the site which provide suitable roosting opportunities for bat species.

Adjacent habitats such as tree lines, developing scrub and the traditional farm buildings all provide opportunities for bat species.

Breeding birds

The site itself does not provide any opportunities for nesting birds. Adjacent habitats such as bramble/willow scrub around Pond 2 and roadside hedge provide nearby opportunities for breeding birds.

Great Crested Newt

Pond 1, 2 & 3 are all known to support breeding great crested newt and a range of other amphibians. For this reason, a HSI score was not calculated. All three of these ponds are roughly the same size at 500m². They are bound by rough grassland and tall vegetation such as: cow parsley, rosebay willow herb, hogweed, timothy, meadow foxtail, creeping bent and sweet vernal grass.

Pond 1 has mature trees present within the vicinity e.g. a plantation of hornbeam to the west and several established willows (goat and white) to the east. Pond 2 & 3 both have high densities of reedbed and willow scrub around the margins.

Pond 4 was found to provide 'poor' suitability as a breeding site according to the HSI. This is likely to be due to the presence of a dense carp population and shading around the margins, both lowering the score of the waterbody.

GCN HSI Calculator		
	Pond Name	Pond 4
	Grid Ref	SP04423801
SI No	SI Description	
1	Geographic location	1
3	Pond permanence	0.9
4	Water quality	0.5
5	Shade	0.2
6	Water fowl effect	0.67
7	Fish presence	0.01
8	Pond Density	1
9	Terrestrial habitat	1
10	Macrophyte cover	0.4
HSI Score		0.43
Pond suitability (see below)		<i>Poor</i>

Reptiles

The site offers little potential for reptile species although the surrounding and adjacent habitats provide good quality terrestrial opportunities for common reptiles.

5 POTENTIAL ECOLOGICAL IMPACT

5.1 HABITAT ASSESSMENT

Hardstanding

The proposals will result in the construction of an open-sided agricultural building on part crushed stone hardstanding. A steel frame will be erected using pad foundations and there will be no overall loss of land.

Rough grassland

A small area (approximately 30m²) of rough grassland encroaching onto the existing hardstanding will need to be cleared to accommodate the new building. The loss is of little concern in terms of habitats.

5.2 PROTECTED SPECIES ASSESSMENT

[REDACTED]

[REDACTED]

[REDACTED]

Bats

The proposals will have no impact upon potential roosting features, foraging areas or linear landscape features. No further survey work or mitigation is required with regard to bat species.

Breeding birds

The proposals are unlikely to have any impact upon breeding birds as works will be carried out mainly during the winter due to the presence of GCN within the environs.

Great crested newt

Numerous wildlife ponds have been created and managed at Old Hall, all with amphibian hibernacula, in order to maintain and improve the favourable conservation status of GCN within their natural range.

Given that;

1. There will be no overall loss of land within the vicinity of GCN breeding ponds, only very small areas where the steel frame is positioned,
2. The area currently does not provide brumation opportunities and would not be selected for over-wintering due to the presence of standing water on the ground,
3. Any/all ground work will be completed during winter months when GCN are below ground/hedgerow bases and not active,
4. Pond 2 adjacent to the site will be left undisturbed by the proposals and all surrounding scrub and rough grassland will be protected during work,
5. An amphibian hibernaculum will be installed adjacent to Pond 2 once all works are completed,

Works will be able to proceed without a European Protected Species Development Licence, provided that a strict set of Reasonable Avoidance Measures are adopted and adhered to.

Natural England's rapid risk assessment tool indicates that an offence to GCN is 'highly unlikely' given that the proposals will only result in a loss of less than 10m² of open ground within 100m of a known breeding pond:

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.05
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
	Maximum:	0.05
Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY	

Reptiles

The land within the site boundary provides limited opportunities for reptile species. Given that the majority of work will be carried out during winter months due to the presence of GCN within the environs, the plans are highly unlikely to have any impact upon reptiles.

6 AVOIDANCE, MITIGATION AND ENHANCEMENT

6.1 HABITAT MITIGATION

Mitigation for the construction of an open-sided agricultural building on an area of existing crushed stone and silage bales will not be required.

6.2 PROTECTED SPECIES MITIGATION

Breeding birds

Any essential vegetation removal will be carried out during winter months when breeding birds are not present. Bramble or other types of scrub will not be altered as a result of the plans on-site.

Great crested newt

The following set of reasonable avoidance measures will be adopted at the site in order to ensure that GCN remain undisturbed by the work:

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.

Timing & duration

- All ground work will be completed between November and February when over night temperatures routinely fall below 5°C and GCN spend several months in a state of brumation.
- Any residual work outside of ground works will be carried out during the day time when GCN are not active.

Site clearance

- The silage bales will be removed from the site during winter months. The area on which the bales are stored is crushed stone which is currently waterlogged and therefore the likelihood of GCN being present is very low.
- Before works begin to complete the foundations for the structure, a thorough ground search will be completed by a licenced ecologist.
- All essential vegetation clearance or removal along the southern edge of the site will be carried out under supervision by a licenced ecologist, as above.

Site compound

- The site compound will be situated on an area of existing hard-standing to avoid creating GCN resting places beneath stored materials.
- 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

As an additional precaution, the following measures will apply:

- 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.

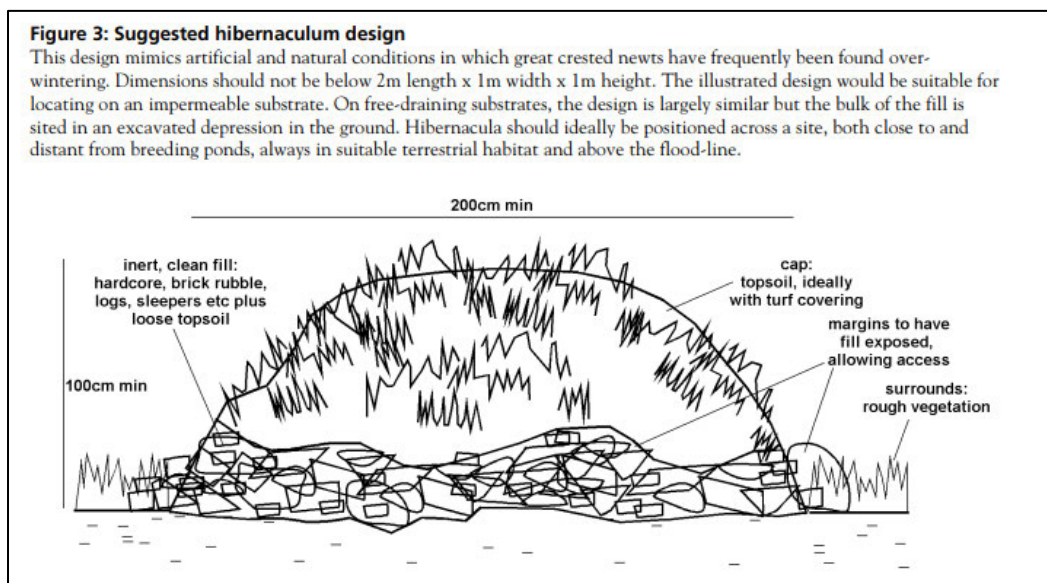
If GCN are found at any point during the development or activities outlined above, works must stop and an appropriately qualified ecologist should be contacted for advice. Contractors are prohibited from handling GCN.

Reptiles

The above measures will ensure that any common reptiles found within the vicinity of the site are also safeguarded during the work.

6.3 ECOLOGICAL ENHANCEMENT

One amphibian hibernaculum will be constructed between the south boundary with the road and the new building, based on the design outlined in Figure 3 of the GCN Mitigation Guidelines:



7 SUMMARY

Planning permission will be sought for the construction of an agricultural building at Old Hall, Penley. Arbor Vitae were commissioned by Peter Richards & Co. to undertake a Preliminary Ecological Appraisal in order to assess the impact of the development on habitats and protected species.

The proposals will include the construction of a modern agricultural building on an area of part existing hardstanding, used for storing silage bales. The building will cover an area of approximately 150m² and have open sides.

Mitigation for the construction of an open-sided agricultural building on an area of existing crushed stone and silage bales will not be required.

The proposals will have no impact upon badgers, their setts, or foraging areas. No further survey work or mitigation is required.

The proposals will have no impact upon potential roosting features, foraging areas or linear landscape features. No further survey work or mitigation is required with regard to bat species.

The proposals are unlikely to have any impact upon breeding birds as works will be carried out mainly during the winter due to the presence of GCN within the environs.

Numerous wildlife ponds have been created and managed at Old Hall, all with amphibian hibernacula, in order to maintain and improve the favourable conservation status of GCN within their natural range.

Works will be able to proceed without a European Protected Species Development Licence, provided that a strict set of Reasonable Avoidance Measures are adopted and adhered to.

The land within the site boundary provides limited opportunities for reptile species. Given that the majority of work will be carried out during winter months due to the presence of GCN within the environs, the plans are highly unlikely to have any impact upon reptiles.

Ecological enhancement opportunities at the site are limited given the already high levels of valuable habitat and biodiversity. In order to add to GCN terrestrial habitats, one amphibian hibernaculum will be constructed between the south boundary with the road and the new building, based on the design outlined in Figure 3 of the GCN Mitigation Guidelines.

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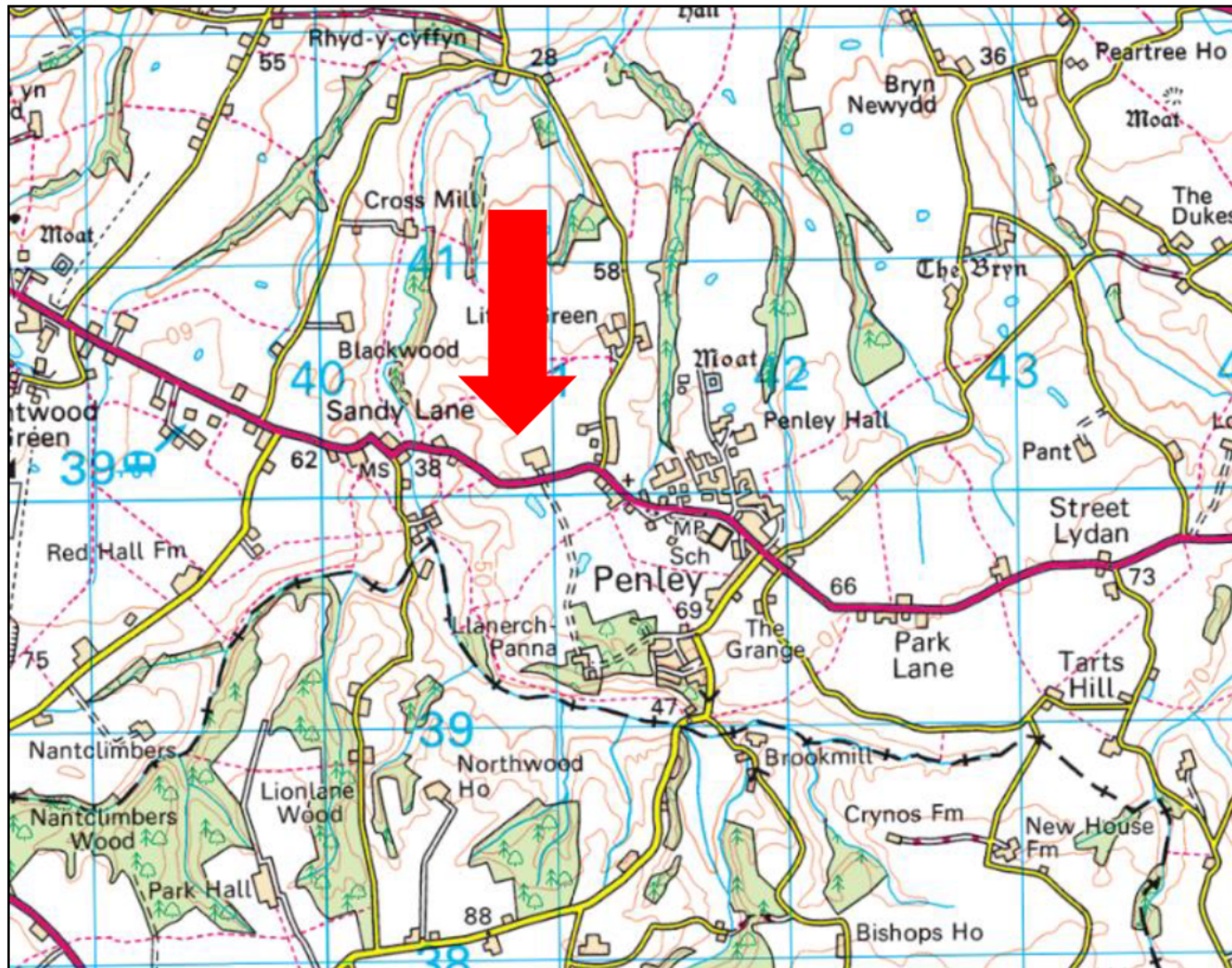
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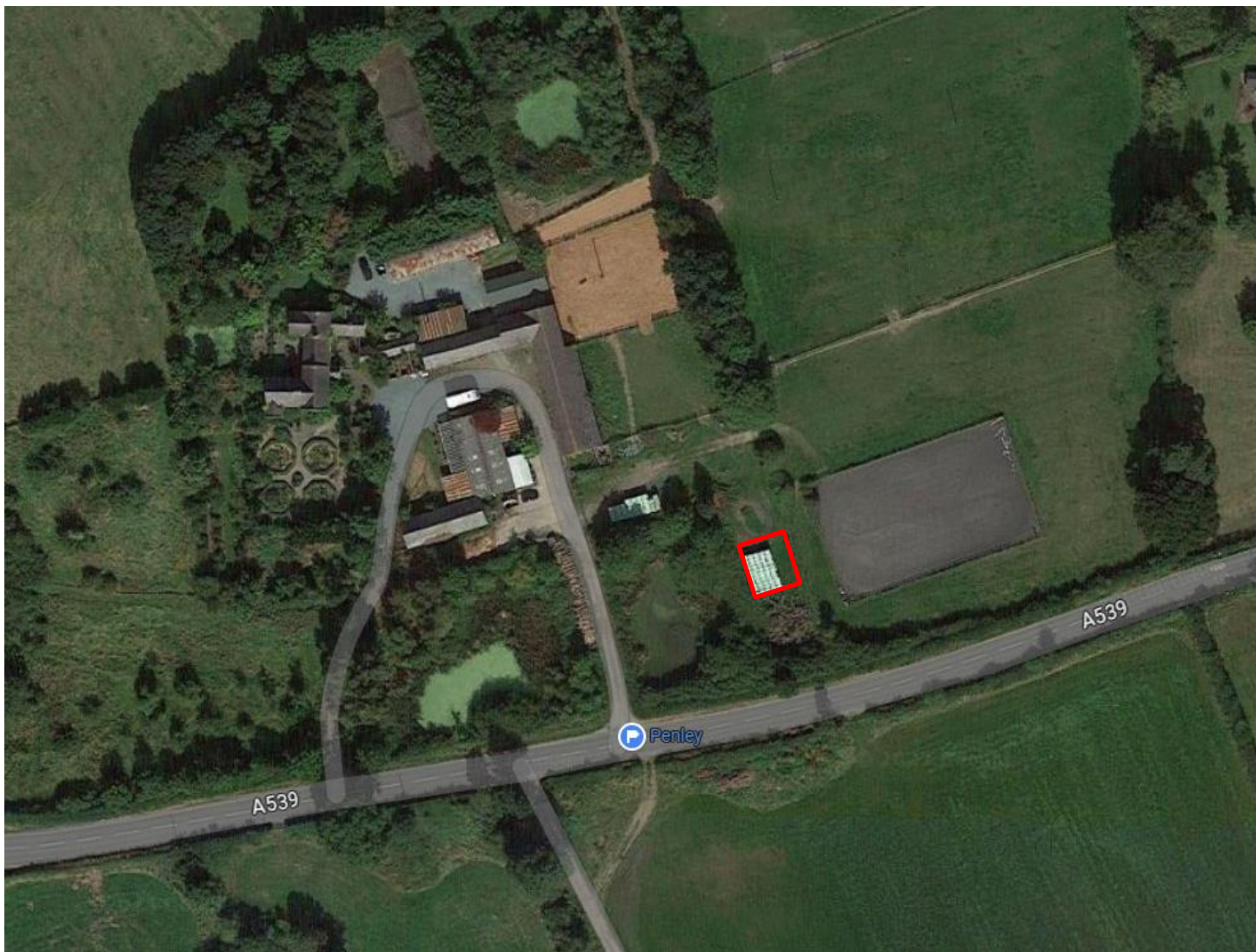
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FIGURE 1 LOCATION



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FIGURE 2 AERIAL PHOTOGRAPH

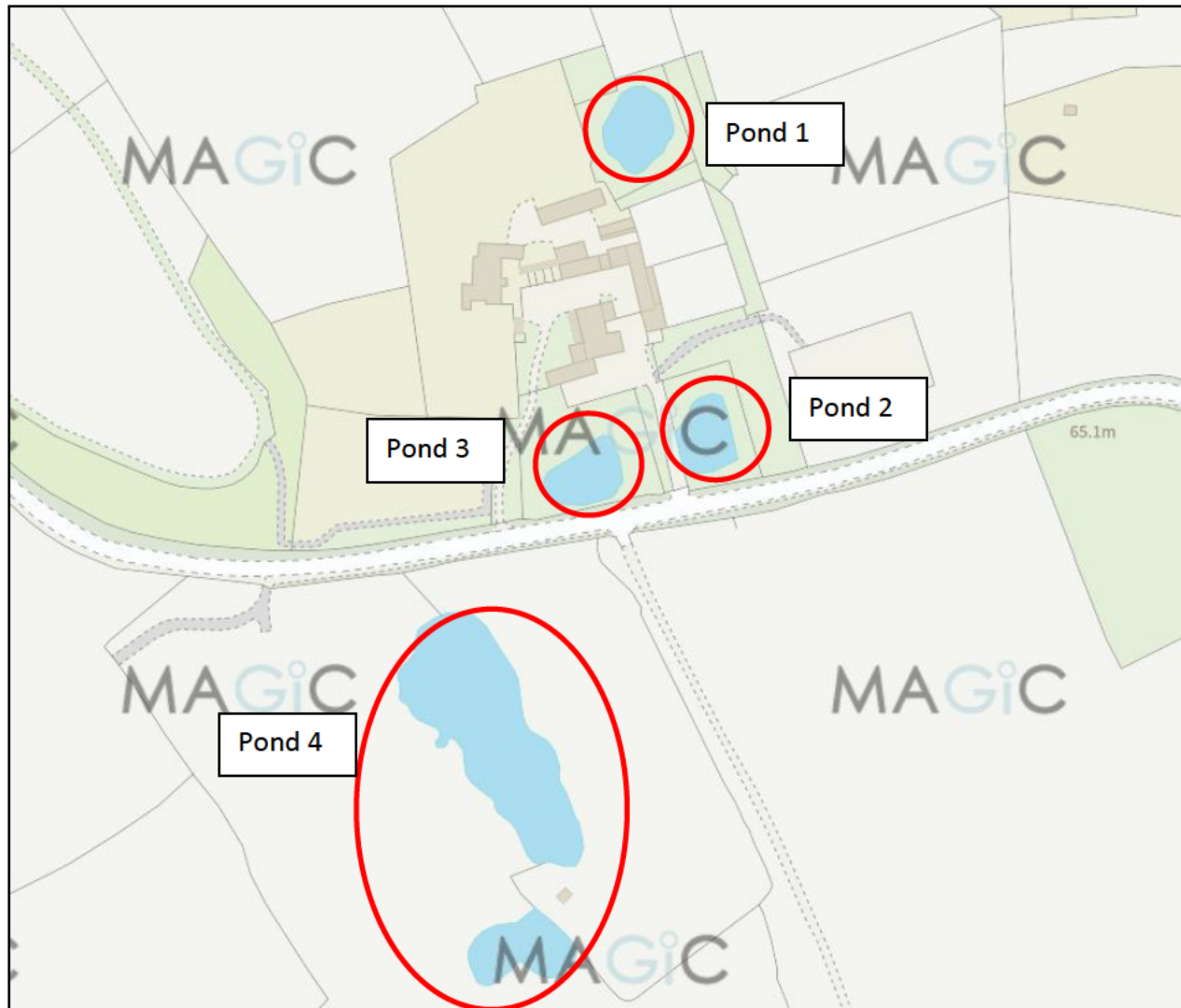


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FIGURE 3 SITE PLAN



FIGURE 4 PONDS WITHIN 250M



APPENDIX 1 PHOTOGRAPHS



The site



The site, adjacent bramble



Pond 1



Pond 2 adjacent the site



Pond 3



Pond 4



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