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ECOLOGY • FORESTRY • LAND USE

PRELIMINARY ECOLOGICAL APPRAISAL

THE VINE CARAVAN PARK

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

Project name: **The Vine Caravan Park, Arddleen, Llanymynech, Powys, SY22 6RU**

Grid Reference: SJ25391501

Date: 02/04/2025

Prepared by: Charlotte Skinner MSc

Reviewed by: Phillipa Stirling MSc ACIEEM

Requested by: Roger Parry and Partners

Contents

1 INTRODUCTION

1.1 BACKGROUND TO DEVELOPMENT

Planning permission will be sought for a tourism development at The Vine Caravan Park.

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

The site is located on the southern outskirts of the village of Arddleen, located between Welshpool and Oswestry. The site can be accessed via the B4392 Road that runs through the village and is located opposite the Arddleen Post Office.

The immediate surrounding landscape is dominated by agricultural fields and the Montgomery Canal also runs approximately 50m east from the site, where there are residential dwellings situated between the site and the canal.

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 04/03/2025. 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
- Hedgehog
- Reptiles

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 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).

Hedgehog

The site was assessed in terms of its suitability for hedgehog e.g. areas of rough vegetation, built structures with cavities beneath, availability of feeding areas.

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: S094220-1 and GCN licence number: S090921/1.

And Charlotte Skinner MSc: Assistant Ecologist.

3.4 CONSTRAINTS

Breeding birds may 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 1km of the site there were the following designations:

Name	Designation	Distance from site
Montgomery Canal	Sites of Special Scientific Interest Special Areas of Conservation	50m
Cae Glas, Wern	Sites of Special Scientific Interest	900m
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		
Hedgehog	0.4-1km	s.41 NERC 2006
Otter	0.4km	European Protected Species, Wildlife and Countryside Act 1981.
Badger	0.4km	Protection of Badgers Act 1992, Wildlife and Countryside Act 1981.
Brandt's Brown long-eared Common pipistrelle Daubenton's Lesser horseshoe Natterer's Noctule Soprano pipistrelle Whiskered	0.4-1km	European Protected Species, Wildlife and Countryside Act 1981.
Birds		
Barn owl Black redstart Brambling Fieldfare	0.4-1km	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.

Hobby Kingfisher Peregrine Redwing Scaup		
Reptiles		
Grass snake Adder Slow-worm	0.4km	Wildlife and Countryside Act 1981.
Amphibians		
Great crested newt	0.4km	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).

Modified grassland

The field situated on the northern-western area of the site is well grazed by sheep and the second field appears to be frequently mown. The following species were identified within the sward: perennial rye grass, yorkshire fog, Cock's foot, creeping buttercup, lesser celandine, broadleaved dock, cleavers, nettle, daisy, spear thistle and springy turf moss.

The grassland has limited botanical diversity and appears to be largely managed for leisure purposes.

Artificial, unvegetated, unsealed surface

There is a large area of hardstanding to the northeast of the site and there are gravel areas, paths and caravan pitches within the site already.

Non-native hedgerow

H1: *leylandii* hedgerow which is well trimmed.

Native hedgerow

H2: a newly planted hawthorn, oak, field elm and holly hedgerow with spiral guards on the individual saplings.

H3: a dogrose, hawthorn, oak, ash, holly, elder and ivy hedgerow approximately 2m tall.

Native hedgerow with ditch

H3.1: a dogrose, hawthorn, oak, ash, holly, elder and ivy hedgerow, where a deep ditch runs along the base on the western boundary. The ditch dries annually with vegetation growing at the base and the following species were found growing along the banks: primrose, hemlock water dropwort, soft rush and lesser celandine.

Native hedgerow with trees

H4: a hedgerow with the same species as H3, in addition to 5 small, young ash trees.

Individual trees

Tree ref.	Notes
T1	A large mature oak
T2	A multi-stemmed hawthorn with dead wood in the canopy
T3	A medium sized *prunus spp* with a nest box
T5	A medium sized *prunus spp*
T6	A medium sized *prunus spp*
T7	A small sized *prunus spp*
T8	medium sized *prunus spp*
T9	A large ash tree covered in ivy.

4.3 ADJACENT HABITATS

Buildings

East of the site boundary is a collection of buildings associated with the caravan park.

Agricultural fields

To the north and west of the site are several agricultural fields.

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

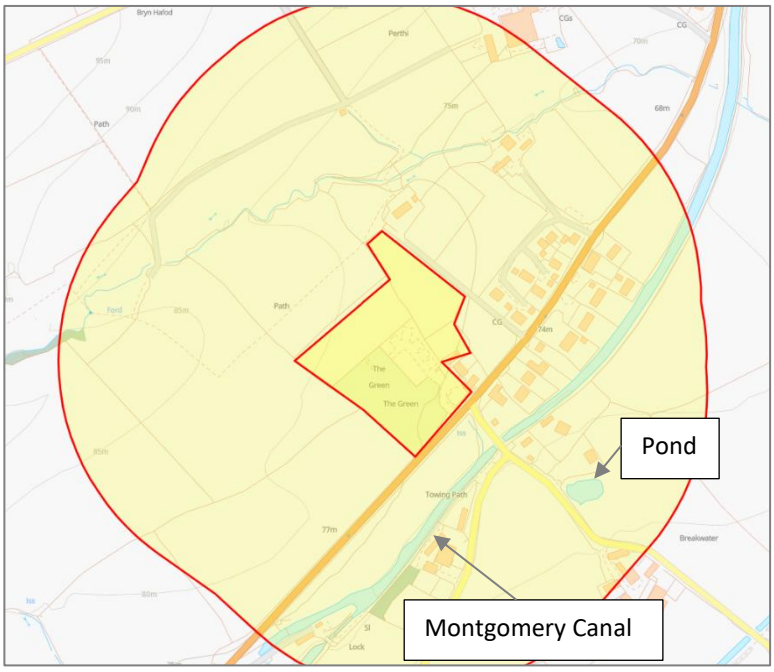
There are no buildings with the site boundary. The trees were assessed for their potential to support a bat roost:

Tree ref.	Bat roosting potential
T1	Oak- **low potential** where there are minor cracks in the limbs.
T2	A multi-stemmed hawthorn- **low potential** where there is dead wood in the canopy and some natural crevices.
T3	A medium sized *prunus spp*- **low potential** where there are natural crevices.
T5	A medium sized *prunus spp*- **low potential** where there are natural crevices.
T6	A medium sized *prunus spp*- **low potential** where there are natural crevices.
T7	A small sized *prunus spp*- **low potential** where there are natural crevices.
T8	A medium sized *prunus spp*- **low potential** where there are natural crevices.
T9	A large ash tree- **moderate potential** as it has a dense ivy cover, creating natural crevices.

Breeding birds

The grassland areas are not suitable for ground nesting birds, however, both the native and non-native hedgerows around the site do provide suitable opportunities for generalist bird species.

Great Crested Newt



One pond and the Montgomery Canal is situated within 250m of the site. However, both the pond and Montgomery Canal is situated on the opposite side of the B4392 road, which provides a significant barrier to terrestrial dispersal for amphibians. No ponds were identified on the northern side of the main road within 250m of the site.

Furthermore, part of the site's frontage is fencing with a concrete base, and the habitats present throughout the site are not conducive to terrestrial movement. There is no reason for GCN or other amphibians to migrate toward the caravan park in search of open water.

Hedgehogs

The site does provide some suitable opportunities for hedgehogs to forage and commute due to the open grassland and the hedgerows surrounding the site. No suitable hibernation or nesting sites were identified during the survey.

Reptiles

The site itself provides limited opportunities for reptiles, where the there is no diverse vegetation structure as the grassland is kept short and is well maintained. The hedgerows around the site do provide a form of shelter and a commuting habitat for reptiles but it is unlikely that reptiles would seek out this site.

5 POTENTIAL ECOLOGICAL IMPACT

5.1 HABITAT ASSESSMENT

The tourism development will result in the loss of modified grassland areas. This type of habitat has limited ecological significance and a poor species diversity; however, a native landscaping scheme will be included with the plans of the development to mitigate the loss of this habitat and provide an overall enhancement at the site.

Plans for the site do not involve the removal of any individual trees or hedgerows.

5.2 PROTECTED SPECIES ASSESSMENT

Badger

No field signs were identified within the site area or the adjacent habitats, therefore plans for the site are unlikely to impact this species and no further survey work or mitigation is required.

Bats

Plans for the site do not involve the removal of any individual trees therefore no further survey work is required. However, as the individual trees within the site provide either 'low' or 'moderate' potential as a bat roosting site, a Wildlife Sensitive Lighting Scheme will be implemented to reduce the light disturbance on nocturnal species.

Breeding birds

Plans for the site do not involve the removal of any hedgerows within the site area, therefore will not likely have an impact on breeding birds.

Great crested newt

The Montgomery Canal and a pond was identified within 250m of the site; however, the B4392 Road is situated between the site and the waterbodies, providing a significant barrier to dispersal.

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).

It is highly unlikely that plans will have any impact upon GCN, and no further survey work is required. General avoidance measures will be adopted, due to the local records, which will reduce any residual risk to the species.

Hedgehogs

Hedgehogs could be present within the hedgerows at the site, and it is possible that they are using the grassland as a foraging and commuting habitat. General avoidance measures will be adopted to remove any risk to the species.

Reptiles

It is unlikely the plans will impact reptiles, as the site offered limited opportunities for the species. However, due to the records of reptiles within 1km, general avoidance measures will be adopted.

6 AVOIDANCE, MITIGATION AND ENHANCEMENT

6.1 HABITAT MITIGATION

A native planting scheme will be adopted through the site. The following tree species will be planted in open green space: wild cherry, rowan and silver birch. A minimum of 12 trees will be planted. All trees will be planted as light standards (at least 3m tall and 8cm girth) to provide immediate landscape effect.

It is also recommended that areas of rough grassland are maintained along the sides of the open ditch. Ideally, this feature will be fenced off before development begins in order to protect the watercourse and surrounding water bodies.

6.2 PROTECTED SPECIES MITIGATION

Bats

Wildlife Sensitive Lighting Scheme:

- 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.
- Lighting must be less than 3 lux at ground level and there shall be no light splay exceeding 1 lux along buildings, eaves or roof or adjacent hedgerows or trees.
- 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).
- Internal luminaires will be recessed where installed in proximity to windows to reduce glare and light spill. LED luminaires will be used internally where possible due to their sharp cut-off, lower intensity, and dimming capability.
- Luminaires will always be mounted horizontally with an upward light ratio of 0%.

General Avoidance Measures

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

- The site owner/site manager will ensure that anyone (including sub-contractors) undertaking construction, demolition and landscaping (both creation and management), is made aware of the potential for the site to support protected species, where to expect them, their protected status and the procedure to follow in the unlikely event that protected species are discovered during works. A copy of this Precautionary Method of Working will be always kept on site and available for inspection.
- 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.
- Following removal of tall vegetation, remaining vegetation will be maintained at a height of 30mm through regular mowing or strimming to discourage common reptiles and amphibians from returning.

- 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 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.
- If a great crested newt is discovered at any stage, then all work must immediately halt, and an appropriately qualified and experienced ecologist and Natural Resources Wales will be contacted for advice.

6.3 ECOLOGICAL ENHANCEMENT

In order to provide shelter, breeding and hibernating opportunities for a variety of wildlife, we recommend that a nest box scheme is adopted as follows:

- Three Woodcrete general purpose bat boxes, suitable for crevice-dwelling species should be installed onto mature trees within the site. No lighting should be installed in the vicinity of the boxes. They should be at least 3m from the ground and face south or southwest.
- Three Woodcrete cavity nesting bird boxes with 28mm or 32mm access holes. This should be positioned within mature trees on the boundary of the site and the access should face away from the prevailing wind.
- Two hedgehog domes should be installed into the base of H3 with their entrances facing into the centre of the hedgerow.

7 SUMMARY

Planning permission will be sought for a tourism development at The Vine Caravan Park. 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 tourism development will result in the loss of modified grassland areas. This type of habitat has limited ecological significance and a poor species diversity; however, a native landscaping scheme will be included with the plans of the development to mitigate the loss of this habitat.

No field signs were identified within the site area or the adjacent habitats, therefore plans for the site are unlikely to impact this species and no further survey work or mitigation is required.

Plans for the site do not involve the removal of any individual trees therefore no further survey work is required. However, as the individual trees within the site provide either 'low' or 'moderate' potential as a bat roosting site, a Wildlife Sensitive Lighting Scheme will be implemented to reduce the light disturbance on nocturnal species.

Plans for the site do not involve the removal of any hedgerows within the site area, therefore will not likely have an impact on breeding birds.

The Montgomery Canal and a pond was identified within 250m of the site; however, the B4392 Road is situated between the site and the waterbodies, providing a significant barrier to dispersal. It is highly unlikely that plans will have any impact upon GCN, and no further survey work is required. General avoidance measures will be adopted, due to records of GCN within 1km, which will reduce any residual risk to the species.

Hedgehogs could be present within the hedgerows at the site, and it is possible that they are using the grassland as a foraging and commuting habitat. General avoidance measures will be adopted to remove any risk to the species.

It is unlikely the plans will impact reptiles, as the site offered limited opportunities for the species. However, due to records of reptiles within 1km, general avoidance measures will be adopted.

In order to provide shelter, breeding and hibernating opportunities for a variety of wildlife, we recommend that a nest box scheme is adopted.

8 REFERENCES

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FIGURE 1 LOCATION

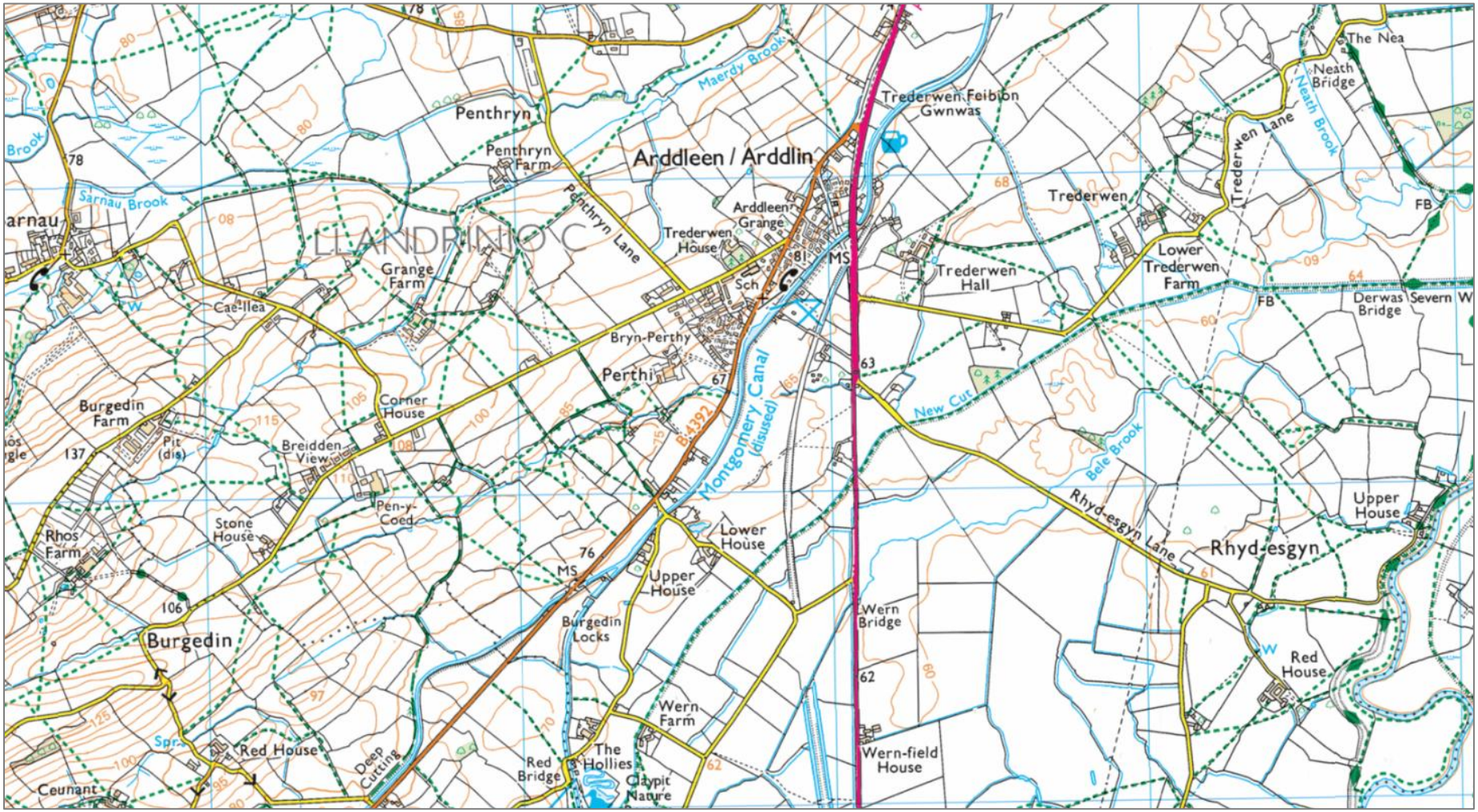

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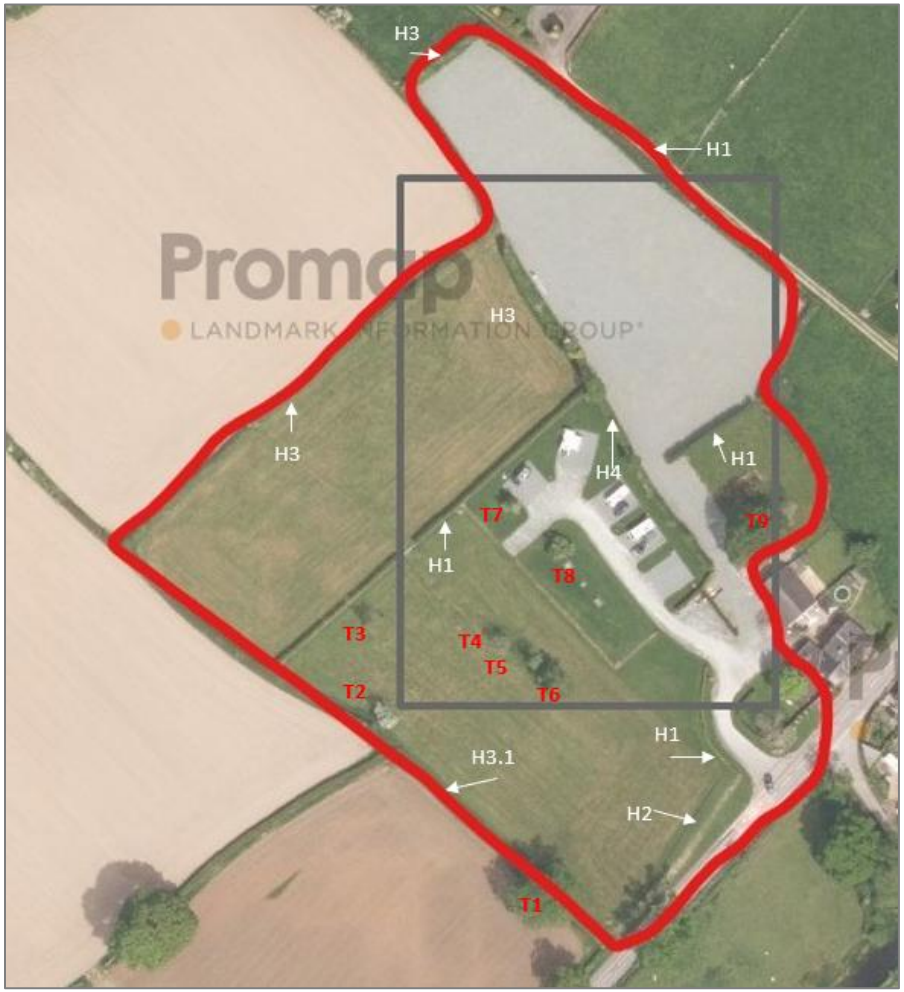
FIGURE 2 AERIAL PHOTOGRAPH

FIGURE 3 TREE AND HEDGE REFERENCES



APPENDIX 1 PHOTOGRAPHS

Modified grassland and H1.

H2.

H3.1 and T1.

Ditch along H3.1.

T4, T5 and T6.

H1 and H3.

	
Northern-western modified grassland field and H3.	Gravel caravan pitches, T7 and T8.
	
H4.	Gravel and grassland areas.
	
T9.	Gravel area, H1 and H3.