



# ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE



## PRELIMINARY ECOLOGICAL APPRAISAL

### LLANFORDDA UCHAF

**Project name:** Llanfordda Uchaf, Morda, Oswestry, SY10 7HJ

**Grid Reference:** SJ 26357 29591

**Date:** 02/02/2024

**Prepared by:** Phillipa Stirling BSc MSc ACIEEM

**Reviewed by:** William Prestwood BSc Director

**Requested by:** Roger Parry and Partners

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# 1 INTRODUCTION

## 1.1 BACKGROUND TO DEVELOPMENT

Planning permission will be sought for the construction of an agricultural shed and new track at Llanfordda Uchaf.

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

Llanfordda Uchaf is situated 1.6km to the west of Oswestry. The surrounding landscape predominantly consists of agricultural grassland. Fields are differentiated by well-established hedgerows, some of which contain mature trees at sparse intervals. Large areas of broadleaved deciduous plantations are present 0.26km to the south and 1km to the west, forming a 'C' shape around the site when viewed using aerial imagery.

The proposals will include the extension of an existing straw shed, and the installation of a new farm track.

## 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, Shropshire Environmental Network and NBN Atlas.

### 3.2 SITE SURVEY

A site visit was made on 18/01/2024. 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:

- Badger
- Bats
- Breeding birds
- Great Crested Newt
- Otters

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).

### **Otter**

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

- Spraint,
- Footprints,
- Feeding remains.

## **3.3 PERSONNEL**

The survey was carried out by Phillipa Stirling MSc ACIEEM: Ecologist.

Natural England bat licence number: 2021-52205-CLS-CLS and GCN licence number: 2019-42631-CLS-CLS.

## **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 1km of the site there were the following designations:

Name	Designation	Distance from site
Craig Forda	Ancient Replanted Woodland	900m
The search included Ramsar, SSSI, SAC, SPA, LWS, NNR and LNR. <sup>1</sup>		

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
<b>Mammals</b>		
Badger	0.8km	Protection of Badgers Act 1992, Wildlife and Countryside Act 1981.
Common pipistrelle Soprano pipistrelle Brown long-eared	0km	European Protected Species, Wildlife and Countryside Act 1981.
<b>Birds</b>		
Kingfisher Mute swan Kestrel Brambling Redwing Fieldfare	0.2-1km	Wildlife and Countryside Act 1981.
<b>Amphibians</b>		
Great crested newt	0.9km	European Protected Species, Wildlife and Countryside Act 1981.

<sup>1</sup> 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.

## 4.2 HABITATS ON SITE

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

### *Improved grassland*

The proposed new track will pass through two improved grassland fields, before joining up with an existing farm track. The grassland on site is characteristic of agriculturally improved pasture, with limited species diversity. Species recorded include: perennial ryegrass, common bent, cock's foot, annual meadow grass, white clover, chickweed, dock species and common nettle. The fields are grazed by livestock throughout the year.

### *Hedgerow*

H1 consists mainly of individual shrubs, forming a thick vegetative corridor. Species include: hawthorn, hazel and holly.

H2 consists of a uniform linear hedge feature, including hawthorn and holly. There is a mature holly shrub at the east end of the hedge, adjacent to the existing track.

H3 runs along the existing access drive for the farm and includes a range of species: holly, hawthorn, oak, field maple and hazel. Honeysuckle is also present.

H4 lies along the southern boundary of the farm yard and consists mostly of hawthorn, with some holly, ash and hazel. There are also some mature trees within this hedge line including oak and ash.

### *Running water*

There is a small stream which runs along the base of H1, before entering a culvert beneath the farm access track and continuing east through the fields. The watercourse is shallow and dries up on an annual basis. Vegetation is mostly limited to the grassland sward of the surrounding field.

### *Individual trees*

There is a very large and mature ash trees located just west of the existing farm access drive. The tree has a number of cavities/crevices visible from ground level and during the summer of 2023, bat surveys on the adjacent barns confirmed that the tree is a bat roost for at least 2-3 common pipistrelle bats.

### *Buildings*

There is an existing straw shed within the southern paddock which is of modern construction, with a steel frame and box profile cladding and roof.

#### *Hardstanding*

There are existing farm tracks in place around the buildings. The tracks are mostly compacted aggregate and bare earth.

### **4.3 ADJACENT HABITATS**

#### *Improved grassland*

The fields surrounding the site and farm yard are primarily agricultural pasture, used for grazing livestock.

#### *Hedgerow*

There is a well-established hedgerow system in place throughout the surrounding landscape.

### **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 large mature ash tree was confirmed as a bat roost for at least 3 common pipistrelle bats in 2023. Other bat roosts in the locality include small numbers of brown long-eared and soprano pipistrelle, residing in the traditional agricultural buildings at the farm.

The existing straw shed on site does not provide any potential roosting opportunities for bat species and no evidence of bats was recorded in association with this feature.

The surrounding hedgerow habitat are likely in use by bat species for foraging and commuting throughout the landscape.

#### *Breeding birds*

The hedgerows on site are likely to be in use by breeding birds given their level of vegetative cover and rural location.

Grassland habitats are very unlikely to be in use by breeding birds given their current condition and management regime.

### Great Crested Newt

Two ponds have been identified within 250m of the site. Of these, one was not accessible due to it being on private land.

GCN HSI Calculator		
	Pond Name	Pond 1
	Grid Ref	SJ26412959
SI No	SI Description	
1	Geographic location	1
2	Pond area	0.3
3	Pond permanence	0.1
4	Water quality	0.33
5	Shade	0.2
6	Water fowl effect	0.33
7	Fish presence	1
8	Pond Density	0.8
9	Terrestrial habitat	0.67
10	Macrophyte cover	0.3
<b>HSI Score</b>		<b>0.40</b>
Pond suitability (see below)		<i>Poor</i>

Pond 1 was surveyed for its suitability to be used by breeding amphibians. The pond is essentially a small attenuation area, collecting water from the yard and field. The area is densely shaded by non-native conifers and the water quality is poor with algal growth visible. The pond dries annually, with no water recorded in 2023 summer. The banks of the pond are denuded of vegetation due to the dense shading cast by the surrounding trees. The pond was found to provide 'poor' suitability for GCN.

### Otter

The small stream was inspected for any signs that might indicate that otter are present on site, or have been. No evidence of otter was found along some 400m of open stream, extending east and west of the surveyed areas.

## 5 POTENTIAL ECOLOGICAL IMPACT

### 5.1 HABITAT ASSESSMENT

#### *Improved grassland*

The proposals would result in the re-surfacing of a relatively small area of improved grassland, to create the new access track, and the loss of improved grassland to accommodate the new straw shed. The overall site area is 996m<sup>2</sup>. The loss of these small areas of grassland is not expected to have any significant ecological consequences and the proposals will not result in the loss of protected or priority grasslands.

#### *Hedgerow*

The proposals would result in the loss of around 10m of hedgerow from Hedge 1, Hedge 2 and Hedge 3, where the access track would pass through. None of these hedges contain more than 7 woody species, nor would they be considered 'important' hedges. However,

they do provide value to wildlife and their loss would need to be mitigated, with replacement planting provided.

#### *Running water*

The current plans will include the installation of a culvert within the stream corridor. The culvert includes a 750mm pipe, with compacted hardcore track over the top. The track will be approximately 5m wide.

Works in or near water will need to adhere to Pollution Prevention Measures, as a minimum. Mitigation is required to ensure that the works have no significant impact upon the watercourse.

#### *Individual trees*

The proposed track is likely to result in the removal of at least one of the mature holly shrubs (from Hedge 1). Replacement planting is required as a minimum.

Plans have been changed to ensure that the proposed new track lies at least 15m from the canopy spread of the mature ash tree. This is to ensure that the plans have no impact upon the root protection area of the tree (as per BS5837:2012 Annex D).

No part of the access track or culvert will be constructed within the root protection area of the mature ash tree.

#### *Buildings*

The existing straw shed provides little value as a habitat and its extension will be of no ecological consequence.

#### *Hardstanding*

Existing hardstanding areas will remain in their current condition.

## **5.2 PROTECTED SPECIES ASSESSMENT**

#### *Badger*

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

#### *Bats*

The proposed development will have no direct impact upon bats or their roosting sites but the mature ash tree adjacent to the proposed new track is a confirmed bat roost for at least 3x common pipistrelle.

As stated in Section 5.1 the proposed access track should not be installed within the root protection area of the tree to ensure that its longevity is not compromised.

Removal of small sections of the hedgerow will need to be mitigated through replacement planting to ensure that sufficient linear landscape features are retained, for commuting and foraging bats.

The proposals will not result in the installation of any external lighting or other measures which might disrupt nocturnal activity.

#### *Breeding birds*

The removal of small amounts of native hedgerow has the potential to disturb breeding birds, if carried out between March and August. Mitigation will be required.

#### *Great crested newt*

Pond 1 provides 'poor' suitability as a breeding site for GCN. This is mainly due to the fact that it dries annually, and is densely shaded by non-native conifers. GCN has been recorded at a distance of 900m from the site in 2014 and there are 6 other known waterbodies within 1km of the survey pond.

However, 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 GCN are present at Llanfordda Uchaf given that the pond on site does not provide suitable aquatic habitat for the species. The proposals are therefore unlikely to have any impact upon GCN and no further survey work is required.

Given that a second pond is located approximately 170m south west of the site and could not be surveyed, a set of avoidance measures will be adopted during all works on site in order to remove any residual risk to GCN.

#### *Otter*

The watercourse present on site does not provide suitable aquatic habitat for otter and no evidence of the species was found in association with the stream. The proposals will have no impact upon this species and no further survey work is required.

## **6 AVOIDANCE, MITIGATION AND ENHANCEMENT**

### **6.1 HABITAT MITIGATION**

#### *Hedgerow*

Replacement planting of hedgerow will be required on site. At least 30m of native species-rich hedge will be planted along the new access track in order to replace any losses incurred during the work. The hedge planting will include a minimum of 7 native species such as: hawthorn, hazel, holly, field maple, oak, elder, wild privet, guelder rose and dogrose.

#### *Running water*

Pollution prevention measures will be required for all works in or near to the watercourse on site. See Appendix 2 for more detail.

#### *Individual trees*

A minimum of 5 native trees will be planted in order to replace the mature holly from Hedge 1 and Hedge 2. It is recommended that planting takes place within the areas to the east of the proposed new track which will otherwise be cut off from the field. Suitable replacement species include: holly, hazel and field maple. All trees will be planted with suitable guards and canes.

There will be no storage of materials or vehicular access on the east side of the track, in proximity with the mature ash tree. This is to ensure that all works carried out will have no impact upon the tree and its long-term health.

### **6.2 PROTECTED SPECIES MITIGATION**

#### *Bats*

In order to ensure that the works have no impact upon the mature ash tree, works must not take place within the root protection area of the tree. A minimum 15m buffer has been implemented between the canopy spread of the tree and the proposed access track.

#### *Breeding birds*

In order to ensure that hedge removal has no impact upon breeding birds, this should be carried out during the non-breeding season i.e. September-February.

If this is not possible and hedgerow removal is planned during the breeding season, hedgerow can only be removed once a qualified ecologist has confirmed that there are no nests or breeding birds present within the hedge, and up to 5m from the sections to be removed.

### *Great crested newt*

#### Avoidance Measures

The following measures will 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.
- The grassland areas should 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 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 and Natural England (0300 060 3900) should be contacted for advice.

### **6.3 ECOLOGICAL ENHANCEMENT**

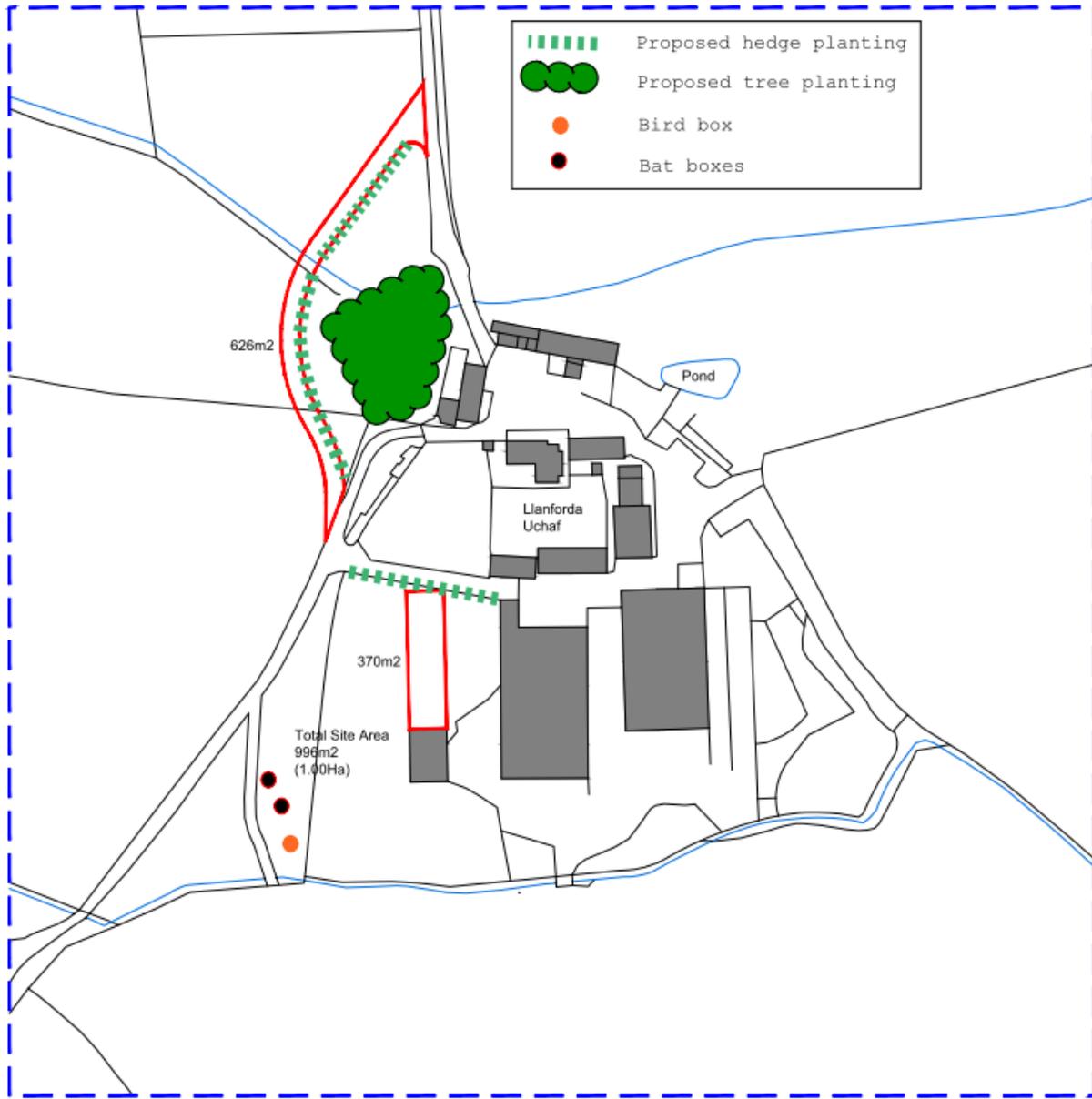
Hedge planting along the east side of the new track and along the north boundary of the south paddock will amount to approximately 50m of hedge creation (not including 30m

of replacement planting, also along the new track). The hedge planting will include a minimum of 7 native species such as: hawthorn, hazel, holly, field maple, oak, elder, wild privet, guelder rose and dogrose.

Tree and shrub planting is recommended in the small areas east of the proposed access track, to provide increased tree/shrub cover. These areas will also be naturally separated from the wider field due to the route of the track. An indicative plan is shown below. Species should include: holly, hazel, field maple, spindle, Guelder rose and dog rose. The area should be securely fenced to prevent livestock from grazing.

It is also recommended that the following wildlife boxes are installed into the area of trees/shrubs along the west boundary of the south paddock:

- Two Woodcrete general purpose bat boxes, suitable for crevice-dwelling species should be installed into mature trees. No lighting should be installed in the vicinity of the boxes. They should be at least 3m from the ground and face south or south west.
- One Woodcrete cavity nesting bird boxes with 28mm or 32mm access holes. This should be positioned within a mature tree on the boundary of the site and the access should face away from the prevailing wind.



Proposed ecological enhancement plan- indicative.

## 7 SUMMARY

Planning permission will be sought for the construction of an agricultural shed and new track at Llanfordda Uchaf. 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 proposals would result in the re-surfacing of a relatively small area of improved grassland, to create the new access track, and the loss of improved grassland to accommodate the new straw shed. The overall site area is 996m<sup>2</sup>. The loss of these small areas of grassland is not expected to have any significant ecological consequences and the proposals will not result in the loss of protected or priority grasslands.

The proposals would result in the loss of around 10m of hedgerow from Hedge 1, Hedge 2, and Hedge 3 where the access track would pass through. Replacement hedge planting will be required.

The current plans will include the installation of a culvert within the stream corridor. Works in or near water will need to adhere to Pollution Prevention Measures, as a minimum. Mitigation is required to ensure that the works have no significant impact upon the watercourse.

The proposed track is likely to result in the removal of at least one of the mature holly shrubs (from Hedge 1). Replacement planting is required as a minimum.

Plans have been changed to ensure that the proposed new track lies at least 15m from the canopy spread of the mature ash tree. This is to ensure that the plans have no impact upon the root protection area of the tree (as per BS5837:2012 Annex D). No part of the access track or culvert will be constructed within the root protection area of the mature ash tree.

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

The proposed development will have no direct impact upon bats or their roosting sites but the mature ash tree adjacent to the proposed new track is a confirmed bat roost for at least 3x common pipistrelle.

The removal of small amounts of native hedgerow has the potential to disturb breeding birds, if carried out between March and August. Mitigation will be required.

It is highly unlikely that GCN are present at Llanfordda Uchaf given that the pond on site does not provide suitable aquatic habitat for the species. The proposals are therefore unlikely to have any impact upon GCN and no further survey work is required.

The watercourse present on site does not provide suitable aquatic habitat for otter and no evidence of the species was found in association with the stream. The proposals will have no impact upon this species and no further survey work is required.

Ecological enhancement measures at the site include:

- 50m of species rich native hedgerow,
- 350m<sup>2</sup> of native tree and shrub planting,
- Three Woodcrete wildlife boxes.

## 8 REFERENCES

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FIGURE 1 LOCATION

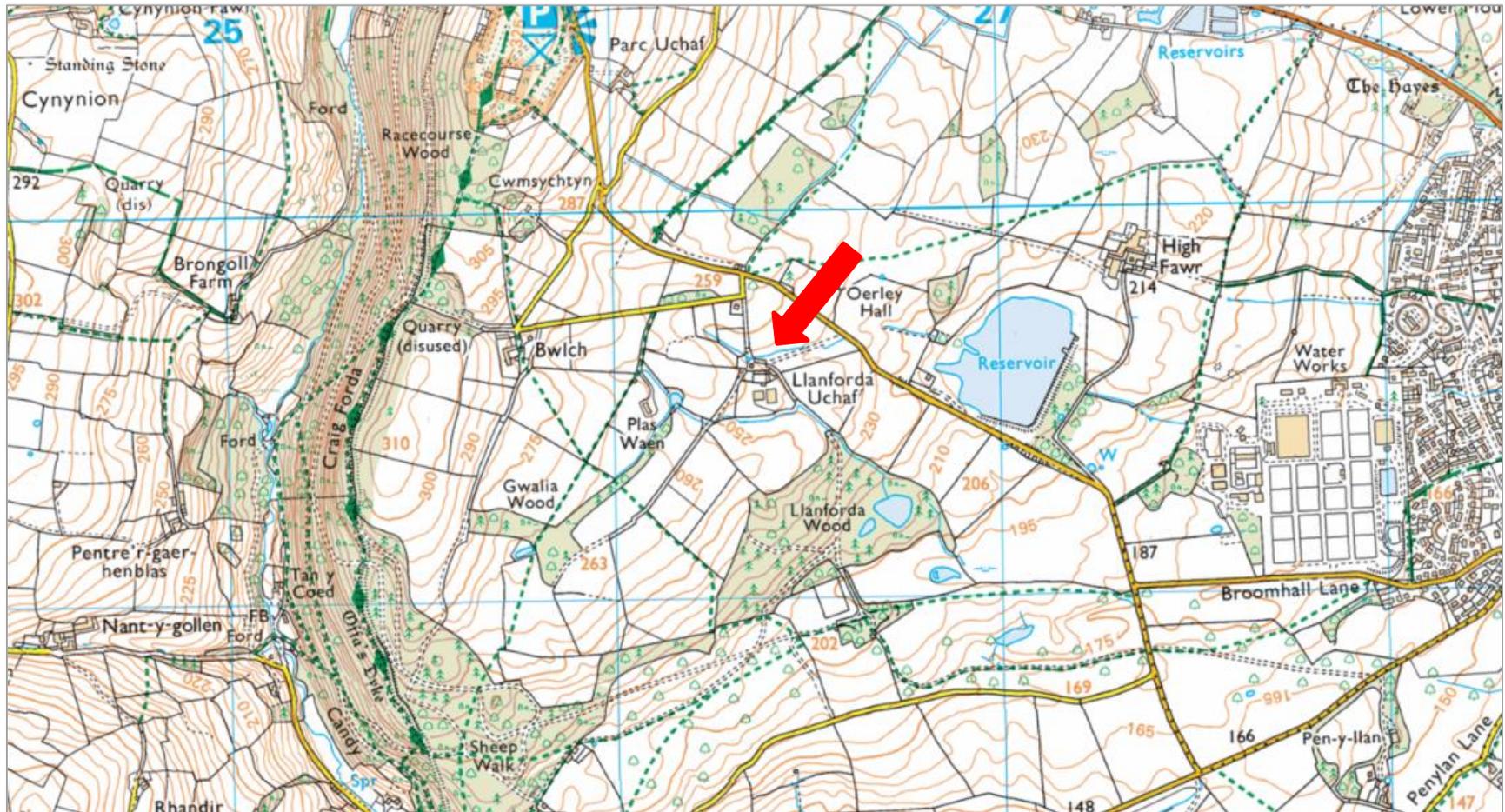
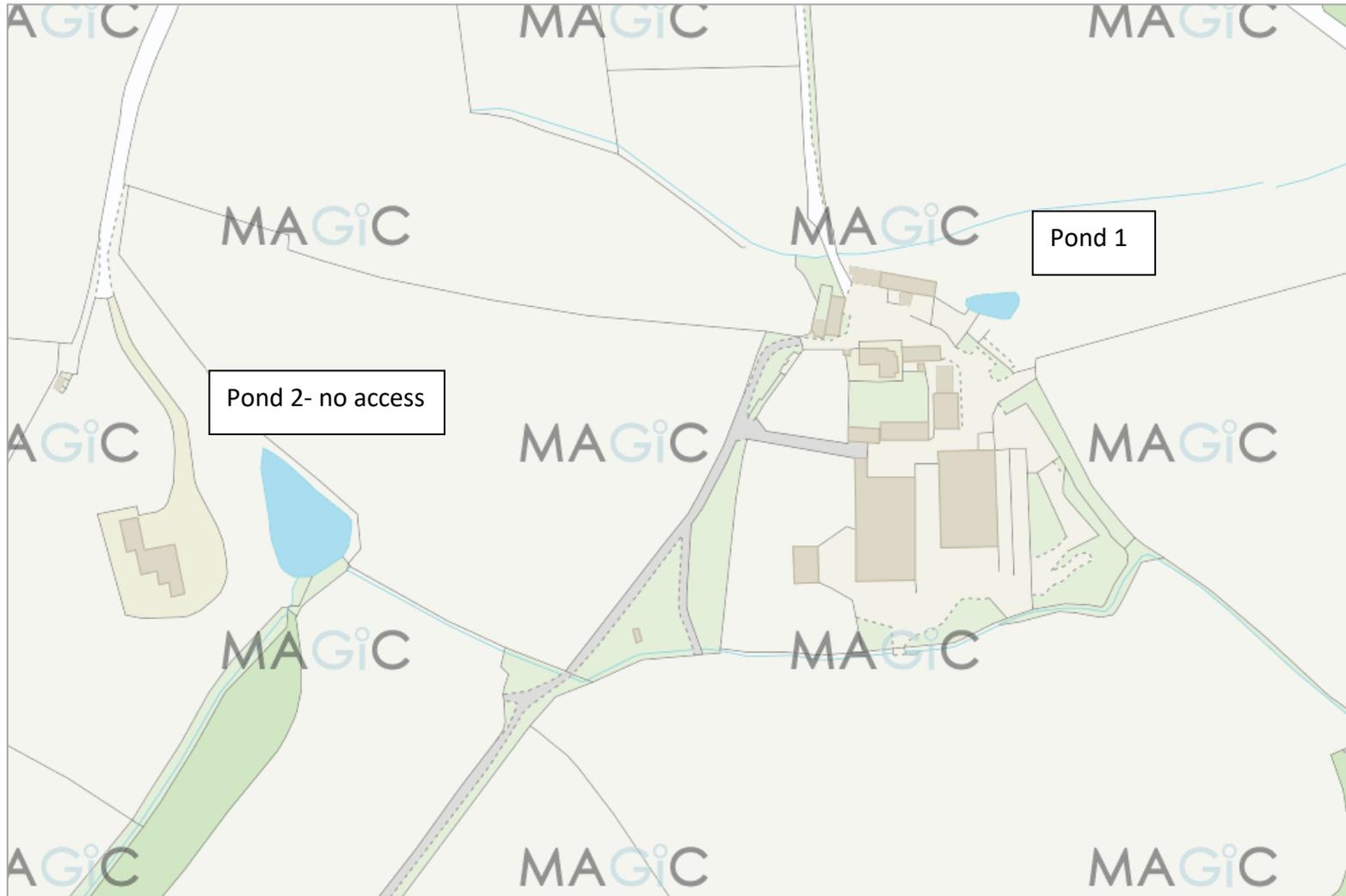


FIGURE 2 AERIAL PHOTOGRAPH



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FIGURE 3 PONDS WITHIN 250M



**FIGURE 4 PROPOSED SITE PLAN**

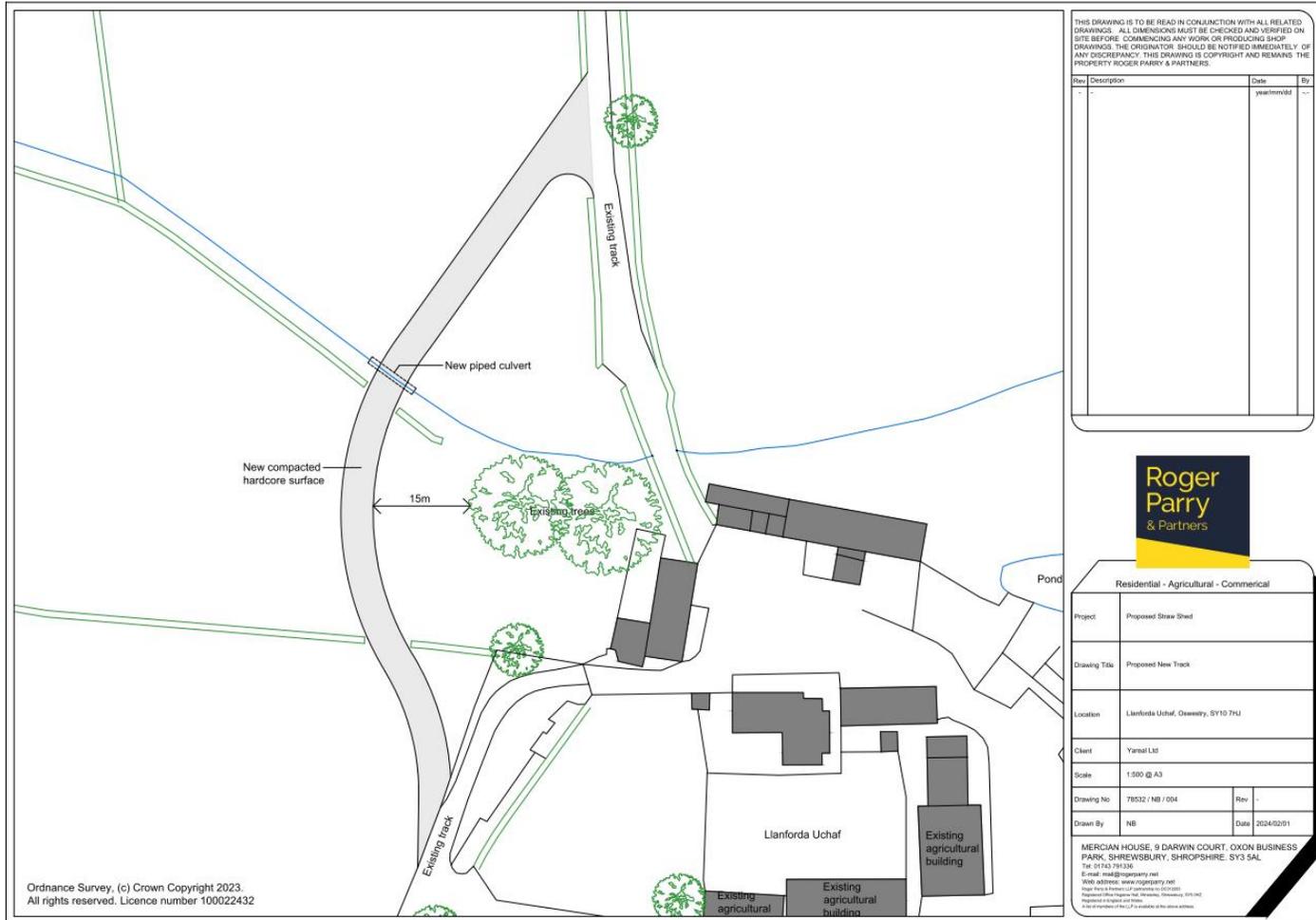
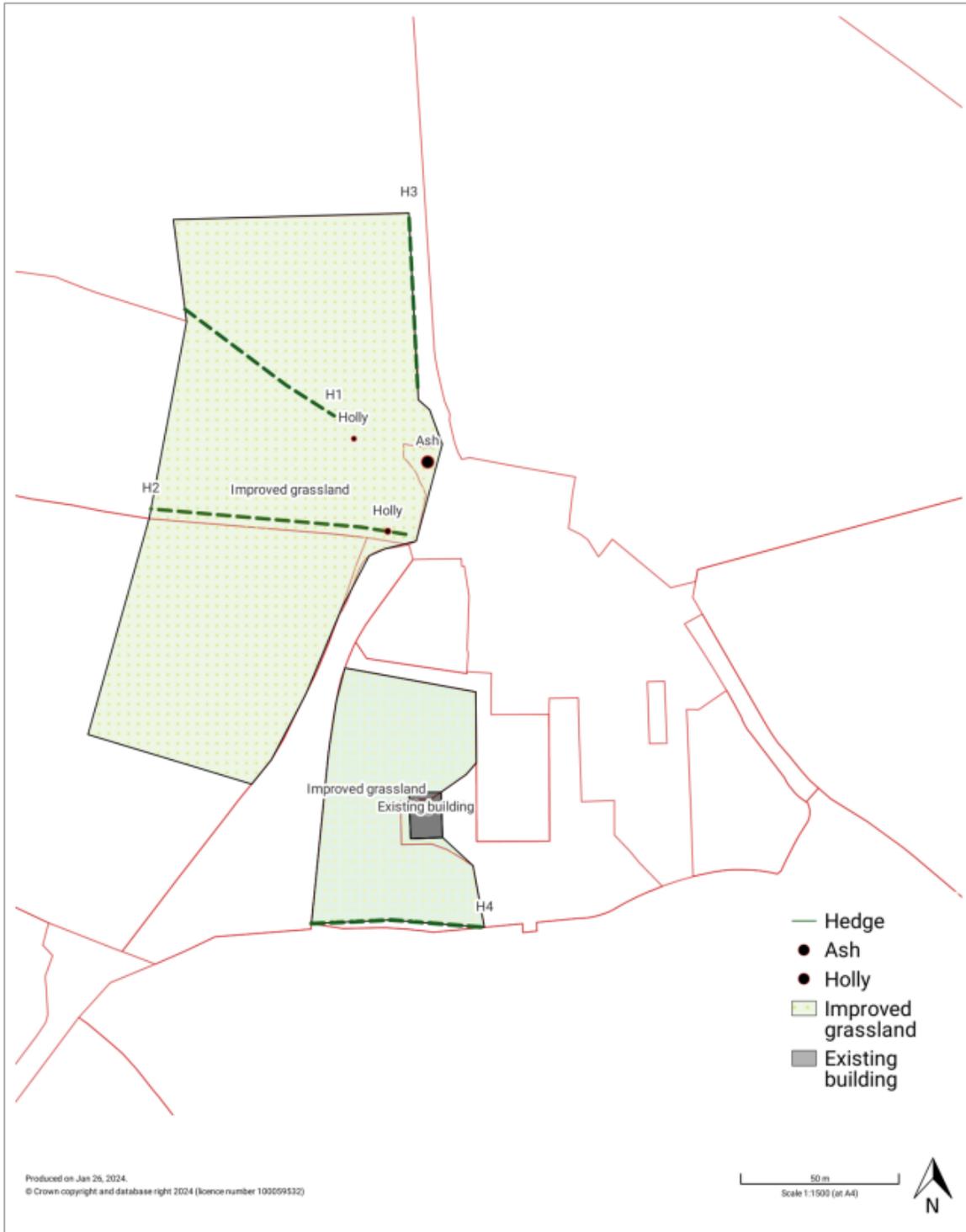




FIGURE 5 HABITAT MAP



APPENDIX 1 PHOTOGRAPHS



Existing field gate and proposed track route



Open watercourse to be culverted and mature ash



H1 and ash, looking north



H2 and holly, looking west



Improved grassland and existing shed



H4





Existing track



Pond 1



## APPENDIX 2 POLLUTION PREVENTION MEASURES

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.

### *General measures*

- Drop heights of materials e.g. sub base 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.

