



ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE



PRELIMINARY ECOLOGICAL APPRAISAL

WREXHAM ROAD, PULFORD

Project name: Wrexham Road, Pulford, Chester, CH4 9EY

Grid Reference: SJ37485865

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Contents

1	INTRODUCTION	2
1.1	BACKGROUND TO DEVELOPMENT.....	2
1.2	SCOPE OF SURVEY.....	2
1.3	KEY PRINCIPLES	2
2	SITE DESCRIPTION	3
2.1	LOCATION, LANDSCAPE, AND BACKGROUND.....	3
3	SURVEY METHODOLOGY	3
3.1	DESK STUDY.....	3
3.2	SITE SURVEY	3
3.3	PERSONNEL	4
3.4	CONSTRAINTS.....	4
4	SURVEY RESULTS.....	5
4.1	DESK STUDY.....	5
4.2	HABITATS ON SITE.....	5
4.3	ADJACENT HABITATS.....	5
4.4	PROTECTED SPECIES.....	6
5	POTENTIAL ECOLOGICAL IMPACT	8
5.1	HABITAT ASSESSMENT	8
5.2	PROTECTED SPECIES ASSESSMENT	8
6	AVOIDANCE, MITIGATION AND ENHANCEMENT	9
6.1	HABITAT MITIGATION	9
6.2	PROTECTED SPECIES MITIGATION	9
6.3	ECOLOGICAL ENHANCEMENT	10
7	SUMMARY.....	10
8	REFERENCES.....	11
	FIGURE 1 LOCATION. 1:50,000.....	12
	FIGURE 2 AERIAL PHOTOGRAPH	13
	FIGURE 3 PONDS WITHIN 250M.....	14
	FIGURE 4 PROPOSED SITE PLAN	15
	APPENDIX 1 PHOTOGRAPHS	16

1 INTRODUCTION

1.1 BACKGROUND TO DEVELOPMENT

Planning permission will be sought for the change of use of an arable field to a dog walking area at Wrexham Road, Pulford.

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 English/Welsh border, just north of Lavister and west of the A483 (Figure 1). The surrounding landscape is a mixture of arable land, agricultural grassland and plantation woodland with small villages to the north and south (Figure 2).

The proposal will be for the change of use of an existing agricultural field into a dog walking area.

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 29/04/2021. A site walkover was completed on 8th August 2023 to ensure that all information provided is accurate. 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]
- Bats
- Breeding birds
- Great Crested Newts
- Otters

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

[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 newts

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 Resources Wales bat licence number: S091037-1 and GCN licence number: S089109-1.

3.4 CONSTRAINTS

There were no constraints to the survey being carried out.

4 SURVEY RESULTS

4.1 DESK STUDY

The desk study found that within 1km of the site there were no designated site. The search included Ramsar, SSSI, SAC, SPA, 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
Otter	0.5km	European Protected Species, Wildlife and Countryside Act 1981.
Common pipistrelle	0.8km	European Protected Species, Wildlife and Countryside Act 1981.
West European Hedgehog	0.3km	S41 NERC
Brambling	0.9km	Schedule 1 Wildlife and Countryside Act 1981.
Redwing	0.5km	Schedule 1 Wildlife and Countryside Act 1981.
Fieldfare	0.5km	Schedule 1 Wildlife and Countryside Act 1981.

4.2 HABITATS ON SITE

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

Arable

The site is part of a larger arable field which appears to be intensively managed. There is a field margin around the edge of the crop which is up to 6m in some places. The area is dominated by common nettle and broad-leaved dock with perennial ryegrass, cock's foot, cleavers, cow parsley and ground ivy also present.

4.3 ADJACENT HABITATS

Hedgerow

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.

The hedgerow at the roadside along the west boundary consists of hawthorn and bramble with the ground flora dominated by ryegrass, dandelion and common nettle. There is a single ash tree within the hedgerow next to the existing access gate.

Broadleaved woodland

There is a small block of broadleaved woodland to the north-east of the site, approximately 30m away at the closest point. Species include oak, ash, hawthorn, hazel, alder, aspen and a single Scot's pine.

Running water

Pulford Brook runs along the west boundary of the site. The channel is approximately 3.5m wide and although not full at the time, the channel is at least 3m deep. The brook is fed by an additional channel from the south which is culverted and piped.

The banks of the brook are bare in places but where vegetation remains, common nettle dominates. Other species recorded include garlic mustard, bramble, dandelion, white clover, creeping thistle and cleavers.

A small drainage ditch runs along the south boundary of the site which appears to be dry. The area is vegetated with cock's foot, cow parsley, greater willowherb, hogweed, common nettle, elder, creeping thistle and chickweed.

Tree line

There are several hawthorn shrubs and 3x young oak trees along the south boundary of the site, presumably once part of a hedgerow. These have been allowed to grow and now reach up to around 4m in height. There is also a young ash tree at the west boundary, adjacent to the main road.

Crab apple and some small hawthorn shrubs are present along the west boundary of the site.

4.4 PROTECTED SPECIES

[REDACTED]

[REDACTED]

[REDACTED]

Bats

The site itself does not provide any roosting opportunities for bat species. The adjacent broadleaved woodland is likely to provide suitable foraging habitat for any bat species within the landscape.

Common pipistrelle has been recorded approximately 0.8km from the site but there are no biological records originating from the site.

Breeding birds

There was no evidence of nesting on site during the survey. The woodland and hedgerow may provide suitable nesting sites to some bird species.

The crop vegetation was around 0.5m in height during the survey and is also unlikely to be suitable for ground nesting birds from this point on in the breeding season. The grass margin may provide certain species with nest sites including partridge and pheasant.

Great Crested Newt

Three ponds are mapped within 250m of the site. Pond 1 is a set of ornamental ponds which form part of a sensory garden at the nearby hotel. The ponds are surrounded by gravel and flagstones with dense populations of carp. A grey heron was observed 'fishing' during the survey.

Pond 2 is another ornamental waterbody, created in the hotel grounds. The margins are entirely shaded by weeping willows and the land surrounding the pond is very shortly mown amenity grassland. Pond 1 and 2 lie on the opposite side of Pulford Brook and the main road B5445.

Pond 3 does not hold any water and was completely dry and vegetated at the time of the survey. The ground below is solid and the area has been colonised by *Salix sp.* and reedmace.

GCN HSI Calculator

	Pond Name	Pond 2	Pond 1
	Position	SJ37355861	SJ37365872
SI No	SI Description		
1	Geographic location	1	1
2	Pond area	1	0.01
3	Pond permanence	0.9	0.9
4	Water quality	0.67	0.67
5	Shade	0.2	1
6	Water fowl effect	0.33	1
7	Fish presence	0.01	1
8	Pond Density	0.9	0.7
9	Terrestrial habitat	0.33	0.33
10	Macrophyte cover	0.3	0.3
HSI Score		0.36	0.46
Pond suitability (see below)		<i>Poor</i>	<i>Poor</i>

Otter

The brook does not provide any visible root systems which would accommodate resting for otters. There were no obvious trails within the arable margin and no feeding signs or spraint found. Otter has been recorded approximately 0.5km from the site and it is likely that this species has and will use this section of water whilst travelling and possibly hunting.

5 POTENTIAL ECOLOGICAL IMPACT

5.1 HABITAT ASSESSMENT

The proposals will result in the reversion of approximately 0.6ha of arable land into permanent grassland. The reduction in intensive arable farming on the site will be beneficial for the immediate watercourse adjacent to the site.

There is an existing access point from the main highway and therefore no hedgerow removal will be necessary.

5.2 PROTECTED SPECIES ASSESSMENT

[REDACTED]

[REDACTED]

Bats

The proposals will have no impact upon potential roosting, commuting or foraging habitats which could be in use by bat species. There is street lighting present along the B5445 which illuminates the existing access point and additional lighting on site is not anticipated. The proposed reversion work will have no impact upon bat species.

Breeding birds

Whilst it is unlikely that ground nesting birds would use this site, it might still be possible during the earlier part of the breeding season. Precautionary measures will be adopted.

Great crested newt

There are no records of GCN within 1km of the site and the proposals will result in an overall betterment in local habitat availability with no permanent terrestrial loss of land. Pond 1 and 2 both provide poor suitability as a breeding site and also sit on the opposite

side of a fast moving brook and main road, providing a significant terrestrial barrier to movement.

The site does not provide any suitable hibernation sites and a lack of other ponds within the immediate surrounds would suggest that the species is likely to be absent from this area. The likelihood of this species being present on site is very low and therefore the proposals are unlikely to have any impact upon this species.

Otter

The proposals will have no direct impact upon the adjacent water corridor. It could be harmful to allow dogs into the brook channel and appropriate fencing will be installed.

6 AVOIDANCE, MITIGATION AND ENHANCEMENT

6.1 HABITAT MITIGATION

The proposals will result in arable land being reverted to permanent grassland which is an improvement in terms of soil structure, erosion risk and reduction in artificial fertiliser/pesticides.

The west and south boundary of the site will be securely fenced to prevent animals from gaining access to local water courses.

6.2 PROTECTED SPECIES MITIGATION

Breeding birds

A thorough ground inspection should be carried out at least 4 weeks before works begin over the entirety of the site to search for signs of breeding birds. If any nesting sites are discovered, works will be delayed until the end of the breeding season in September.

If no nesting sites are discovered, the vegetation on site should be cut to and maintained at a height of 10cm before works begin.

Alternatively, works can be carried out between September and February in any given year to avoid the breeding season.

Otter

The west boundary of the site will be securely fenced and planted with a new native species hedge (approximately 50m). This will ensure that dogs cannot gain access into the brook.

6.3 ECOLOGICAL ENHANCEMENT

Additional native hedge planting will take place along the north boundary of the site, to include a minimum of 7 woody species such as: hawthorn, hazel, holly, field maple, elder, blackthorn, crab apple, dog wood, Guelder rose. This will provide an additional 150m of native species-rich hedge on site.

A small group of native trees will also be planted at the east boundary of the site to include species such as: rowan, wild cherry and field maple.

All tree and hedge planting will be fitted with spiral guards and appropriate supports. Planting will take place during the first available planting season once work on site has begun.

7 SUMMARY

Planning permission will be sought for the change of use of an arable field to a dog walking area at Wrexham Road, Pulford. 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 will result in the reversion of approximately 0.6ha of arable land into permanent grassland. The reduction in intensive arable farming on the site will be beneficial for the immediate watercourse adjacent to the site.

There is an existing access point from the main highway and therefore no hedgerow removal will be necessary.

The survey revealed no signs of use by badger and there are no historic records of badger at the site. The proposals will have no impact on this species.

The proposals will have no impact upon potential roosting, commuting or foraging habitats which could be in use by bat species. There is street lighting present along the B5445 which illuminates the existing access point and additional lighting on site is not anticipated. The proposed reversion work will have no impact upon bat species.

Whilst it is unlikely that ground nesting birds would use this site, it might still be possible during the earlier part of the breeding season. Precautionary measures will be adopted.

The site does not provide any suitable hibernation sites and a lack of other ponds within the immediate surrounds would suggest that the species is likely to be absent from this area. The

likelihood of this species being present on site is very low and therefore the proposals are unlikely to have any impact upon this species.

The proposals will have no direct impact upon the adjacent water corridor. It could be harmful to allow dogs into the brook channel and appropriate fencing will be installed.

Ecological enhancement on the site will include the planting of approximately 200m of native, species rich hedge and a small group of native broadleaved trees.

8 REFERENCES

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Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10(4), 143-155.

FIGURE 1 LOCATION. 1:50,000

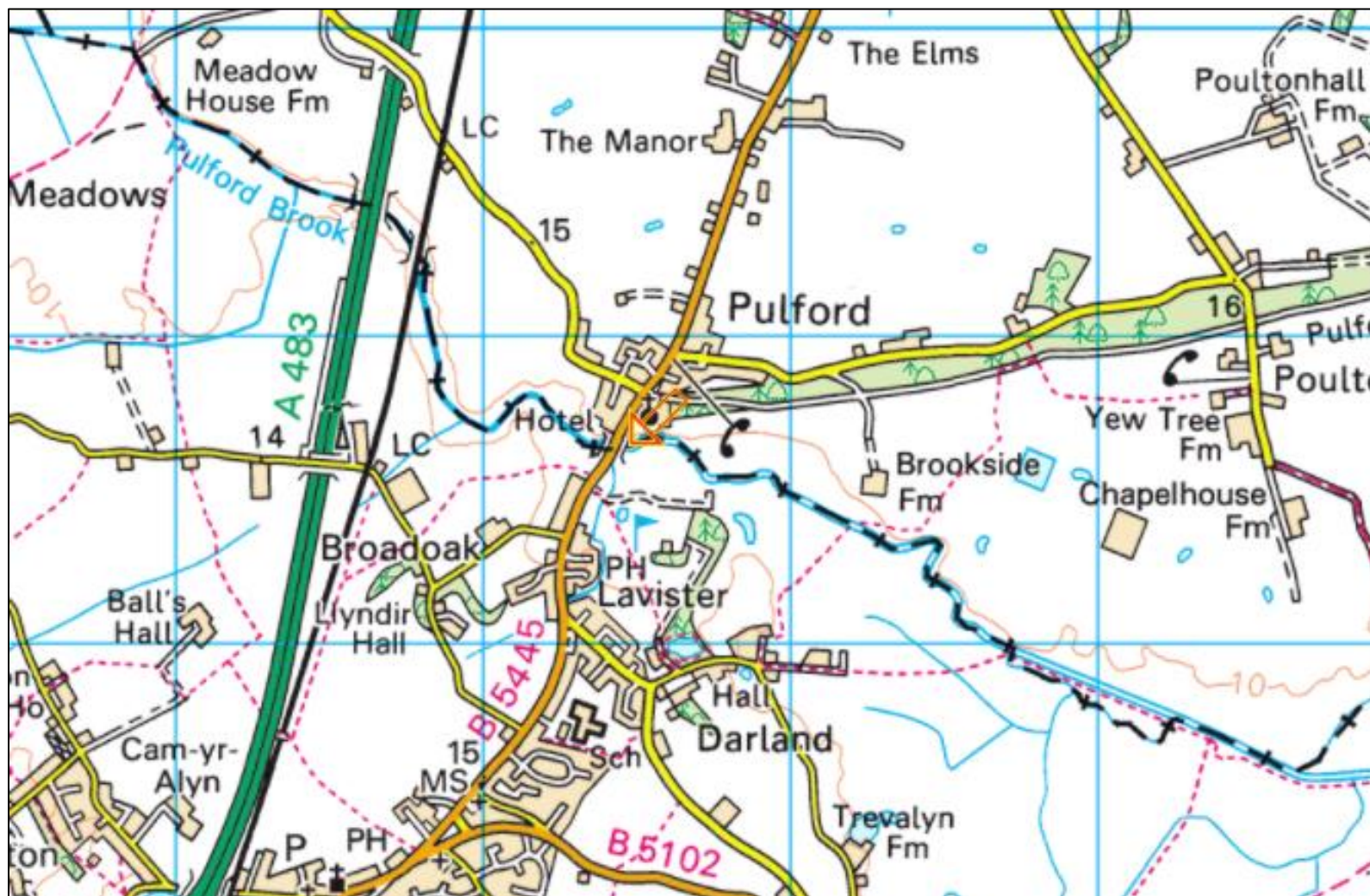


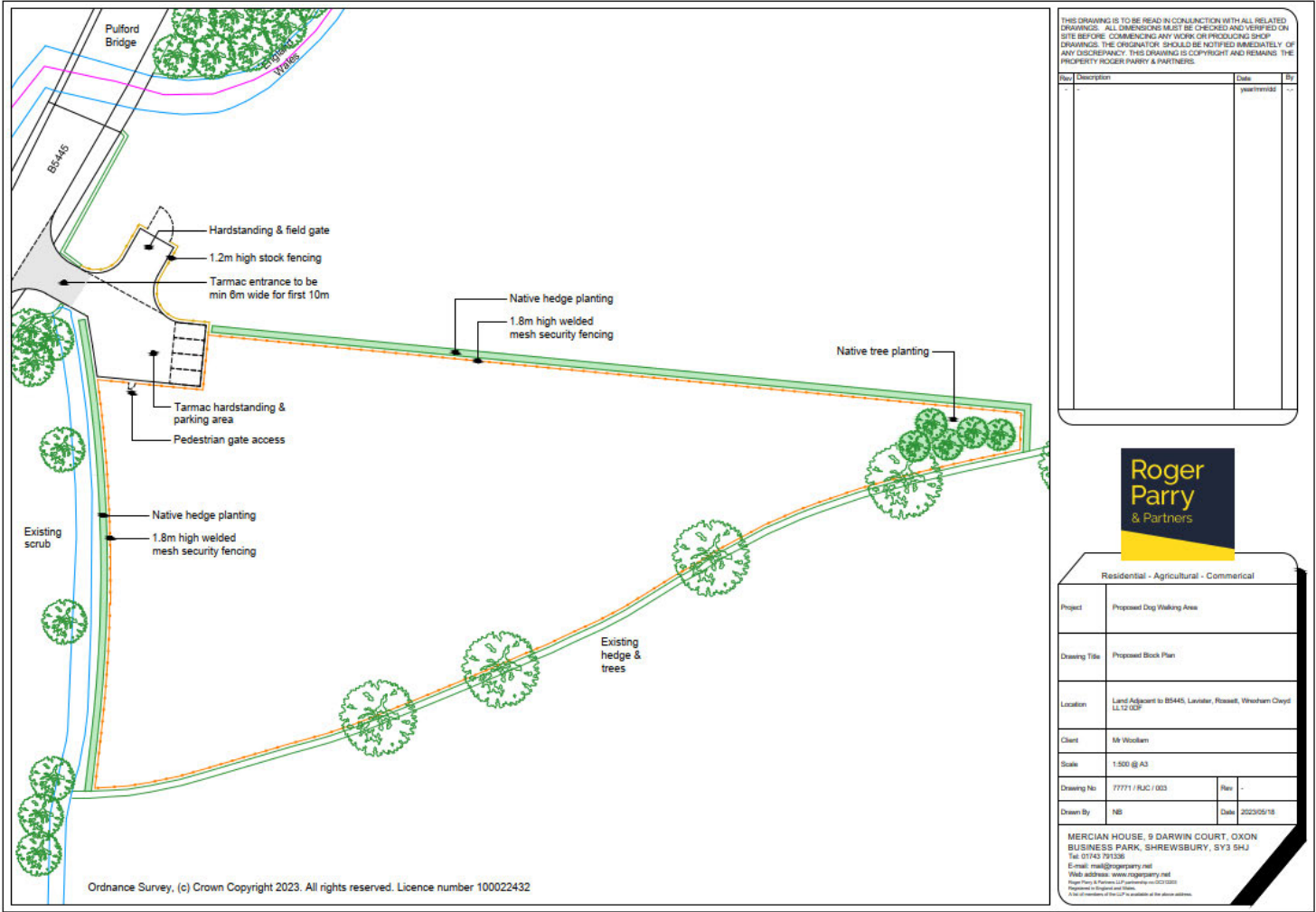
FIGURE 2 AERIAL PHOTOGRAPH



FIGURE 3 PONDS WITHIN 250M



FIGURE 4 PROPOSED SITE PLAN



APPENDIX 1 PHOTOGRAPHS



Existing access to the site.



The site.



Adjacent brook.



Dry drainage ditch.



West boundary.



South boundary.





Pond 1 – ornamental sensory garden at the hotel.



Pond 2.

