



ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE



PRELIMINARY ECOLOGICAL APPRAISAL

LAND AT RIDLEYWOOD FARM

Project name: Land at Ridleywood Farm, Holt Road,
Ridleywood, Wrexham, LL13 9YA

Grid Reference: SJ40195077

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1 INTRODUCTION

1.1 BACKGROUND TO DEVELOPMENT

Planning permission will be sought for the erection of a covered manure store on land at Ridleywood Farm, Wrexham.

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

Ridleywood Farm is located along Holt Road at Ridleywood, Wrexham. The survey site is a small piece of land just south of the main farm yard, off Maesgwyn Lane. The site is already used as a manure mixing area and lies at the south west corner of a large open field which is used in an arable rotation. The surrounding landscape is largely dominated by improved pasture, arable land and farm holdings.

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 24/02/2023. 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:

- Badger
- Bats
- Breeding birds
- Great Crested Newt

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).

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 within 2km of the site there were the following designations:

Name	Designation	Distance from site
River Dee and Bala Lake	SSSI SAC	1.5km
The search included Ramsar, SSSI, SAC, SPA, LWS, NNR and LNR. ¹		

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.

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
Birds		
Kestrel Redwing Fieldfare	0.8-1km	Wildlife and Countryside Act 1981.
Amphibians		
Great crested newt	0.8km	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).

Manure/slurry mixing area

An area of approximately 0.05ha is currently being used as a mixing area, forming an enclosed section of 0.09ha in the south west corner of an arable rotation field. The current site is occupied by piles of manure and a mixing pool.

Hedgerow

The west and south boundary of the plot of land is mature native hedgerow, consisting mainly of hawthorn. There is some dense ivy and bramble growth throughout the hedgerows and the ground flora is dominated by coarse grasses, common nettle and cleavers.

There is a single early mature oak tree within the hedgerow, approximately 25m south west of the proposed covered store.

4.3 ADJACENT HABITATS

Arable

Land to the south and east of the site appears to be within an arable rotation, forming large open field systems with routinely managed hedgerow at the periphery.

Improved grassland

Land to the west of the site is currently a large open agriculturally improved field with several mature in-field oak trees. The grassland sward on site is limited to: perennial ryegrass, Yorkshire fog, white clover, chickweed, broad leaved dock and dandelion.

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 site currently provides very limited opportunities for bat species. Hedgerow and tree lines around the edges of surrounding fields may provide commuting/foraging opportunities for bats but there are no know/recorded bat roosts within 1km of the site.

Breeding birds

The site's value to breeding birds is limited to the surrounding hedgerow. No previous nesting was recorded during the visit.

Great Crested Newt

The site itself does not provide suitable terrestrial or aquatic habitat for GCN given that;

- It is subject to regular disturbance through waste management,
- The piles of manure and waste mixed into the water on site provide very bad quality aquatic opportunities.

There is one pond present within 250m of the site boundary. Pond 1 is a small, man-made pond which sits in the middle of an improved grassland field. The pond is unfenced and as such, livestock have access. The banks are partly trampled and denude of vegetation. There are no obvious habitat connectivity features to the wider landscape and several of the other ponds mapped within 1km do not exist on the ground. The pond provides 'below average' suitability as a breeding site for GCN.

GCN has been recorded at a distance of 0.8km, south west of the site. The records originate from the north eastern edge of Wrexham's Industrial Estate.

GCN HSI Calculator

		Pond Name	POND 1
SI No	SI Description		
1	Geographic location		1
2	Pond area		0.4
3	Pond permanence		0.9
4	Water quality		0.33
1	Shade		1
6	Water fowl effect		0.33
7	Fish presence		0.67
0.6	Pond Density		1
9	Terrestrial habitat		0.33
10	Macrophyte cover		0.3
HSI Score			0.55
Pond suitability (see below)			<i>Below average</i>

5 POTENTIAL ECOLOGICAL IMPACT

5.1 HABITAT ASSESSMENT

The installation of a covered manure store will provide several environmental benefits, including:

- Make better use of organic nutrients,
- Improving water quality,
- Improving air quality,
- Reducing greenhouse gases.

The proposals will have no impact upon protected or priority habitats.

All hedgerow adjacent to the site will be retained and protected throughout work on site. An existing access point already exists from Maesgwyn Lane and will continue to be used.

The River Dee and Lake Bala SSSI/SAC is located 1.5km from the site. The proposals will have no impact upon this protected site.

5.2 PROTECTED SPECIES ASSESSMENT

Badger

The proposals will have no impact upon badger, their setts, or potential foraging areas.

Bats

The proposals will have no impact upon potential or known roosting sites. There will be no introduction of artificial lighting to the site and all hedgerow and tree habitat will be retained and protected throughout works on site.

Breeding birds

The proposals will have no impact upon potential nesting habitat and therefore no impact upon breeding birds.

Great crested newt

The proposals will have no impact upon suitable terrestrial or aquatic habitat which GCN may use. Pond 1 lies 105m west, with no linear connecting habitat between the two sites. Furthermore, Pond 1 provide 'below average' suitability for GCN given that;

- The banks are largely trampled and all emergent vegetation is grazed,

- The land surrounding the pond provides sub-optimal terrestrial habitat for GCN and the pond is essentially isolated,
- The total area of the pond is small and fish have the potential to be present within.

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 other ponds present within 250m of the site and it is highly unlikely that GCN would be using Pond 1 and therefore, the proposals will have no impact upon this species.

6 AVOIDANCE, MITIGATION AND ENHANCEMENT

6.1 HABITAT MITIGATION

The proposals will result in an overall improvement in air and water quality. The work to create a covered manure store will impact only an existing manure mixing area of negligible ecological interest. Mitigation for this development will not be required.

6.2 PROTECTED SPECIES MITIGATION

The proposals will have no impact upon protected species and mitigation is not required.

6.3 ECOLOGICAL ENHANCEMENT

The installation of the covered manure store is, in itself, an enhancement for local ecological systems.

In addition, 20m of species-rich native hedgerow will be planted along the north east boundary of the site. Species will include: hawthorn, hazel, field maple, oak, elder, wild privet, Guelder rose and dog rose.

Hedgerow plants will be spaced in a staggered row at 6 per m². All plants will be fitted with guards and support canes and any losses within the first 3 years will be replaced. The base of the hedge will be kept clear of competing vegetation through either manual (preferred) or chemical control.

7 SUMMARY

Planning permission will be sought for the erection of a covered manure store on land at Ridleywood Farm, Wrexham. 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. Key findings of the survey were:

- The installation of a covered manure store will provide several environmental benefits, including:
 - ❖ Make better use of organic nutrients,
 - ❖ Improving water quality,
 - ❖ Improving air quality,
 - ❖ Reducing greenhouse gases.
- The proposals will have no impact upon protected or priority habitats.
- All hedgerow adjacent to the site will be retained and protected throughout work on site. An existing access point already exists from Maesgwyn Lane and will continue to be used.
- The proposals will have no impact upon badger, their setts, or potential foraging areas.
- The proposals will have no impact upon potential or known roosting sites. There will be no introduction of artificial lighting to the site and all hedgerow and tree habitat will be retained and protected throughout works on site.
- The proposals will have no impact upon potential nesting habitat and therefore no impact upon breeding birds.
- The proposals will have no impact upon suitable terrestrial or aquatic habitat which GCN may use. Pond 1 lies 105m west, with no linear connecting habitat between the two sites. Furthermore, Pond 1 provide 'below average' suitability for GCN. There are no other ponds present within 250m of the site and it is highly unlikely that GCN would be using Pond 1 and therefore, the proposals will have no impact upon this species.
- The installation of the covered manure store is, in itself, an enhancement for local ecological systems. In addition, 20m of species-rich native hedgerow will be planted along the north east boundary of the site.

8 REFERENCES

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FIGURE 1 LOCATION

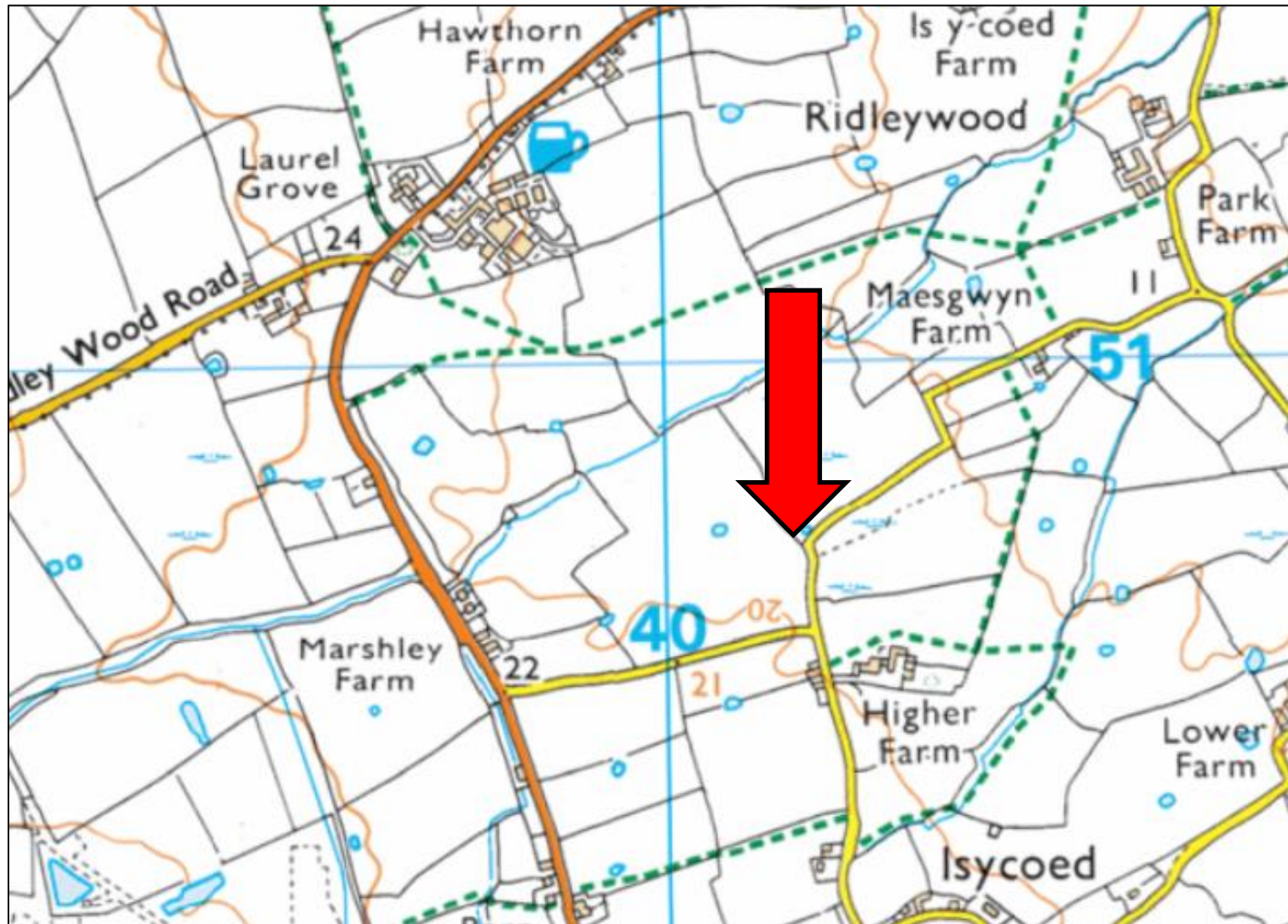


FIGURE 2 AERIAL PHOTOGRAPH



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FIGURE 3 PONDS WITHIN 250M

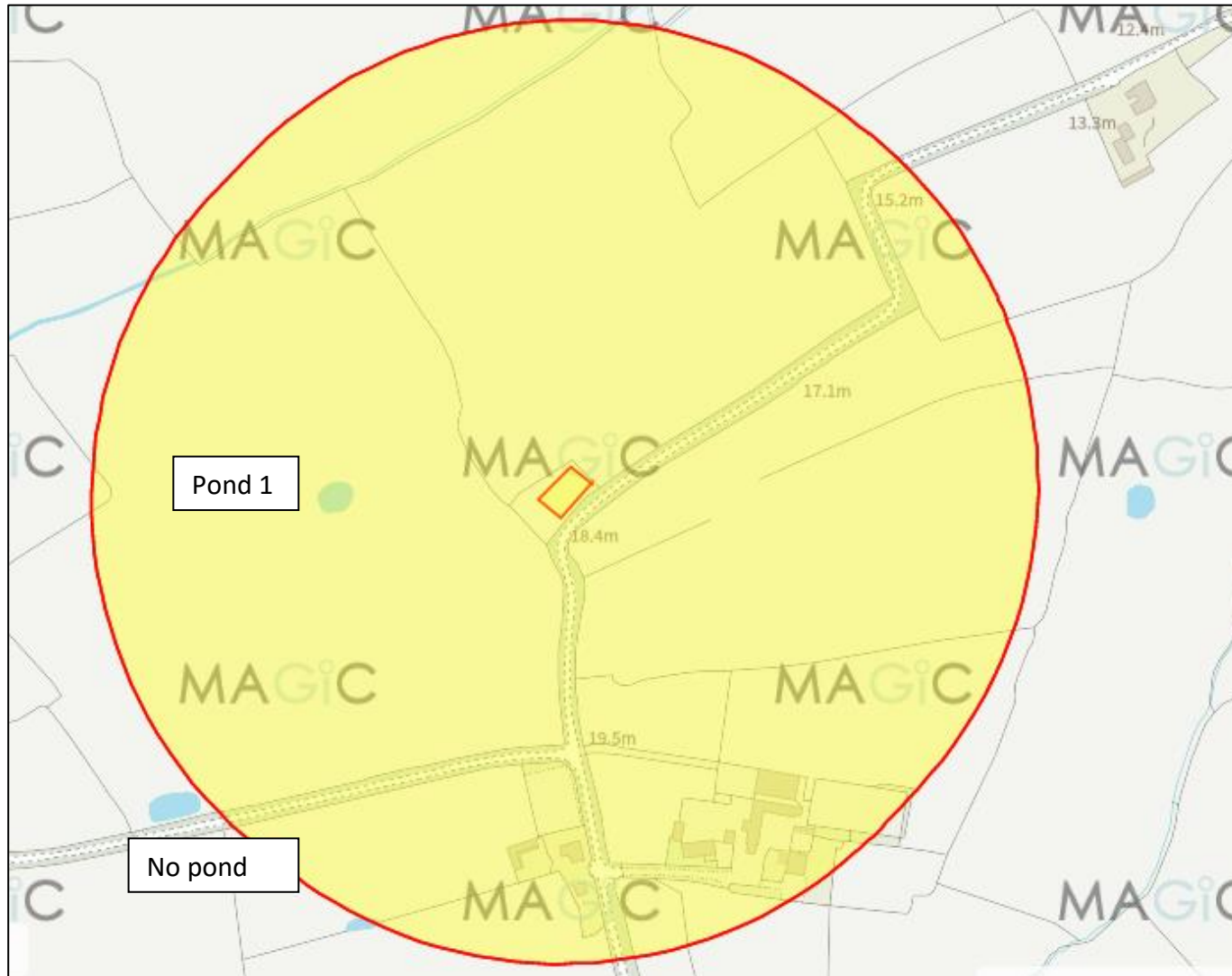
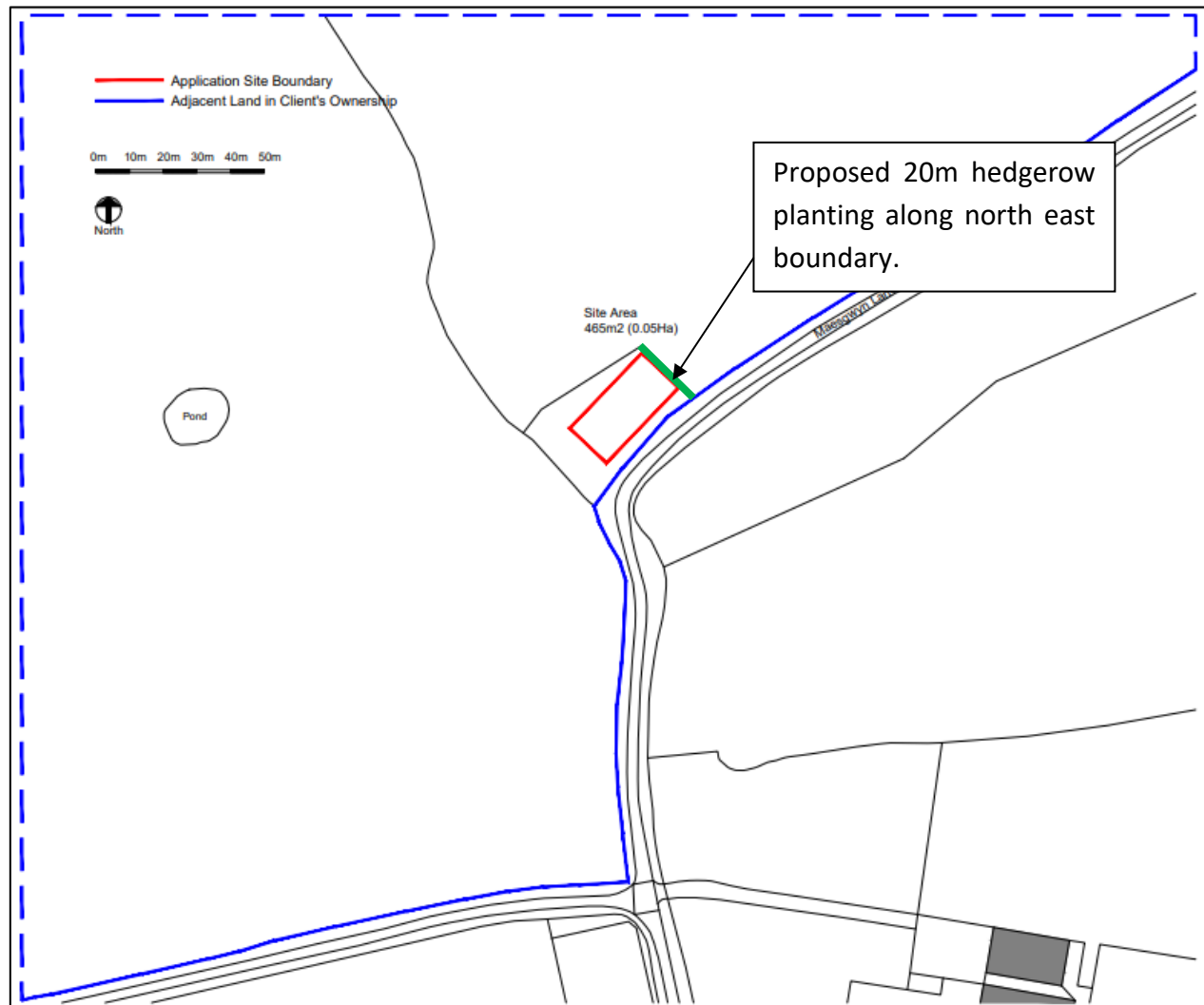


FIGURE 4 SITE PLAN



APPENDIX 1 PHOTOGRAPHS



Existing access point.



Mixing area/slurry.



Adjacent hedgerow.

