A Preliminary Ecological Assessment for the land at Pant Wilkin Stables

Aim: To establish the presence or absence of protected species or habitats.

Mr & Mrs T Vaughan
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Aberthin,
Cowbridge
Wales
CF71 7GX

Reference: 4TV-Bat & bird's survey.doc
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1.0 Introduction

As part of the planning application for the proposed Fishing lakes and cabins, it is necessary to survey the areas to be directly affected by the proposal, to establish whether there are any protected species currently using the site, or any priority habitats in the area to be affected by this proposal.

2.0 Methodology of Surveys

An extended Phase one habitat survey was carried out on the 7th June 2021 by Ros Willder a full member of CIEEM, a Chartered Environmentalist and a Licensed Ecologist CLS12870 & Licenced Ecologist 2019-43685-CLS Natasha James. The survey followed the standard Phase One Habitat Survey methodology (JNCC, 2010) and focused on:

- A habitat survey to determine type, quality and extent of habitats present (using the DAFOR scale, which is Dominant, Abundant, Frequent, Occasional & Rare). Botanical lists of each habitat type where appropriate.

- A survey to determine the presence of, or the potential for the site to support protected animals which include the following:-

- Potential for reptile or amphibians particularly great crested newt.

- Potential for Badgers to use the site such as evidence of setts, latrines, tracks etc

- Potential for breeding birds or bats to use the site

In addition, A desktop study was undertaken using the SWEBReC , to identify any priority habitats, species, and designated sites within a 2km radius of the proposed site, the results of which are shown in section 3 and discussed in Section 4 and shown in Appendix three. In addition, a pond search was carried out for all standing bodies of water within 250m and 500m of the location of the land, the results of which are discussed in Section 4 and shown in Appendix Four.

3.0 Results of Surveys

3.1 Examination of the Land

The land for the proposed lakes to be built at Pant Wilkin stables is bordered to the North and west by a gravel farm track. To the south the field is bordered by the main A48 & the new access route off the main road to the stables. The area to be affected by the proposal is the central area of the much larger paddock field partly divided by a hedge.

Figure 1 – showing an overview of the site

The grass sward was recently sown in August 2020 and therefore is classed as a temporary grass in an Arable rotation (as shown in figures 1, 2 & 3). The grass species are comprised of; Italian Rye Grass, Common Dock, Annual Meadow Grass, Red fescue, Creeping Buttercup, Yorkshire Fog, Dandelion, White Clover, Bramble, Bindweed, Ribwort Plantain and Scarlett Pimpernel (O).

In the centre of the site is a patch of taller grasses shown below in figure two. The species are the same as the cut temporary grass ley sward areas but in addition they include Red Campion (O), Sow thistle, False Oat Grass and Cut Leaved Cranes Bill (O).

Figure 2 – taller grass sward

The western boundary is partly formed by a gravelled trackway as shown below in figure three.

Figure 3 – western boundary of the site

At the centre of the arable field currently down to a temporary grass ley there is a section of hedgerow that is unconnected to other hedgerows in the area either at the western or southern end.

The hedgerow is a 3m tall by 2meters wide hedge line and is comprised of Hazel, Blackthorn, Hawthorn, Elder and has one diseased Ash Tree (as shown below in Figure four). The base has common nettles, Cocks Foot grass, Red Campion (O) , Hogweed, Meadow Buttercup, Yorkshire Fog and Annual Meadow Grass.

Figure 4 – Hedge in centre of the site.

All the boundaries on the land apart from this central hedgerow are open to other arable fields, gravel trackways or the new access road off the main A48 road.

The temporary grass ley especially the main close-cut areas are of limited value due to the lack of permanent cover & lack of diversity & their open nature as shown over the page in figure five, as such within the grassland there is only limited wildlife value, & this is confined to the areas along the base of the hedge & the small patch that has been left uncut as shown above in figure 4 & in figure two.

Due to the open nature of the site & the fact it is managed in arable rotation this provides little permanent cover for wildlife apart from the central section of hedgerow, however as this hedgerow is unconnected to other hedgerows on site the wildlife value is also reduced due to its lack of connectivity as shown on the phase one habitat map in appendix two.

Figure 5 – overview of the site

3.2 Designated site search

A designated site search was carried out using the SWEBReC & MAGIC Map Service to identify designated sites and priority or legally protected habitats and species records within a 2km radius of the proposed development.

A desktop search revealed that the boundary is within 2km of a Site of Special Scientific Interest (SSSI) but no Special Areas of Conservation (SAC). The nearest Site of Special Scientific Interest being Cors Aberthin which is located 2km to the Northwest of the site. The nearest Nature Reserves are Coed Llwyn Rhydid 3km to the north of the site & Coed Garnllwyn Llancarfan which is 5.5km to the southeast of the site.

There are no Priority habitats recorded within the 2Km radius of the site, but the nearest woodlands recorded are Llanquian woods 2km to the north & Coed Myndd-coch & Mynydd Gwyn 2km to the N. East of the site. There are some small blocks of broad-leaved woodland to the south, but these are not directly connected to the proposed site.

A data search request for protected species recorded within 2km of the site has been made to southeast Wales biodiversity records centre & the results found the nearest nesting birds were, Great Tit & Blue tit with other birds such as Starling, Swift Swallow, Blue tit & House sparrow further away from the site. Bat species included Common Pipistrelle, Noctule, two records of unknown bats, Brown Long eared bats & Natterers bat, Common Pipistrelle, Noctule & Soprano Pipistrelle & one record for Lesser Horseshoe bat 1.6km away from the site. As such the records would suggest that the proposal will not adversely affect any of the above-mentioned species & enhanced provision will be made for the nearby species by the creation of new areas of open water & wetland associated plants around the edge of the lakes.

There were no Priority habitats recorded within the proposed development boundary of the site apart from the unconnected central section of hedgerow however the creation of the wetland/lake habitat will recreate a vital wildlife habitat which is in increasingly short supply for wildlife.

3.3 Pond Search

As a part of the desktop study, a pond search was carried out to a radius of 500m from the site, this identified one pond within a 500m radius of the site. However, this pond is separated from site by a heavily used tarmac track (used by stone quarry lorries day and night) it is also 483 meters from site. The site is bordered by tracks & lack permanent cover apart from the central hedgerow that is unconnected by habitats to the pond and therefore the likelihood of Great Crested Newts using the site are considered negligible. The location of the pond is shown on the pond search map in appendix four.

The proposal will create three large areas of open water with associated wetland plants around the edge & a large area of reed beds that will provide a better habitats for both reptiles & amphibians than the current temporary grass ley in arable rotation currently provides.

4. Ecological Assessment

The proposal is limited to a parcel of land that is predominantly a temporary grass ley in an arable rotation as such the proposed development will not have any adverse effects on any priority habitats in the wider area.

The evidence from the survey of the land would suggest that there are no suitable habitats within the development boundary that would support protected species apart from the section of hedge in the centre of the site. This is an isolated section of hedge which would be classed as a species poor hedge and although important for wildlife such as nesting birds its lack of connectivity to other hedges means it is not as beneficial for wildlife as some boundary hedgerows can be. There is one Ash tree within the section of hedgerow & The tree to be removed by this proposal is a severely diseased Ash that has already been assessed by an arboriculturist as having to be removed.

The proposal is limited to a recently sown temporary grass ley that has a small area uncut with limited species diversity or cover for wildlife, whilst the section of unconnected hedgerow is of wildlife value for nesting birds its lack of connectivity makes it unlikely to be used by foraging bats & the proposal will create areas of open water & areas of reed bed that will recreate lost Priority habitats of open water & wetland that will achieve a high biodiversity gain.

The evidence from the survey of the land would suggest that there are no suitable habitats within the development boundary that would support protected species. There nearest Pond is over 483m away & unconnected by habitats & it is therefore unlikely that any Great Crested newts will be affected by this development due to the lack of cover on site & the distance of the pond from the site. The nearest habitats to the proposed site are the trees along the main A48 which will be retained & be unaffected by this proposal.

There is one diseased Ash tree & a section of species poor hedgerow on site that will need to be removed and this will have to be removed outside of the main birds nesting season (April to August) & a native species rich section of hedge planted to compensated for the loss.

The nearest designated site Cors Aberthin SSSI is of sufficient distance (2km) from the proposed site for the new dwelling that there will be no adverse effects caused to the designated site by this proposal. The species records for both bats & birds are within a 2km radius of the site with the nearest species being birds, (Great & Blue tits) but provision will be made within the design of this proposal to include permanent integral features for both bats & birds in the cabins as well as the creation of both wetland & open water habitats which are both priority habitats of a high wildlife value so overall this proposal has been assessed as having an overall huge gain for biodiversity & wildlife.

5. Conclusion, Mitigation and Enhancements

In conclusion the habitats to be directly affected by this proposal are limited to a temporary grass Ley that is regularly maintained as a short sward apart from the small, tall section which has been left to provide cover for birds that is already subject to disturbance as it will be removed as part of the arable rotation, and a species poor hedgerow that is unconnected to other boundary habitats, so it provides some limited value for wildlife such as nesting birds & insects.

No designated sites will be adversely affected by this proposal, no priority habitats will be lost as part of this proposal & the habitat to be lost is unlikely to support any protected species. However as both bats & birds have been recorded within the wider area, a new native species rich hedgerow will be planted along the boundary of the site beside the permitted new access road to connect the site to the wider habitats & improve nesting & foraging habitat along the boundaries of the field as well as integral features for both bats & birds within the design of the cabins & no external lighting on the new cabins other than downlighters of less than 2Lux.

The proposal will create a large area of reedbeds and three areas of open water the design of the lakes will include emergent vegetation around them to provide added cover for wildlife & attract wetland insects, bats & birds.

In conclusion, this proposal has the potential to dramatically improve the wetland habitats and wildlife in the area & to provide long term enhancements for both wildlife and the local landscape.

In order to provide an overall biodiversity gain to the site it is proposed to plant new native hedgerows & trees that will connect the site to the existing wider network of hedgerows. This will compensate for the loss of the species poor hedgerow to be removed outside of the main bird nesting season (March/April to August/September). The proposed species for the new hedgerow should be a mixture of native species such as Hawthorn, Hazel, Dogwood, Common Spindle, Field Maple, Guelder & Dog Rose and interspersed with occasional trees such as Crab apple & Oak along the farm tracks & access road.

In addition, integral bird & bat boxes will be included in the Cabins by the lakes to provide permanent enhancements for the locally recorded species as shown in appendix five.

The native plants for the lakes should include a wide range of native plants that will include submergent oxygenators, floating leaved native plants, emergent & marginals as shown in the species lists of plants in appendix five.

The creation of the lakes & reedbeds & the planting of native wetland plants will provide a magnet for a wide range of wildlife & ensure a wide biodiversity gain for wildlife.

If all the recommendations are followed no harm will occur to any protected species and provision will be made for future use by wildlife as an enhancement to the site. **For the full details of proposed enhancements see the proposed plan in appendix five.**

APPENDIX ONE LEGAL STATUS OF BATS & BIRDS

LEGAL PROTECTION OF BATS

The Wildlife and Countryside Act 1981 (WCA) transposes into UK law the Convention on the Conservation of European Wildlife and Natural Habitats (commonly referred to as the 'Bern Convention'. The 1981 Act has been amended several times, most recently by the Countryside and Rights of Way [Crow] Act 2000, which added 'or recklessly' to S 9 (4)(a) and (b).
All species of bats are listed on Schedule 5 of the 1981 Act, and are therefore subject to the provisions of section 9, which make it an offence to:

Intentionally kill, injure or take a bat
Possess or control any live or dead specimen or anything derived from a bat
Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat
Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose

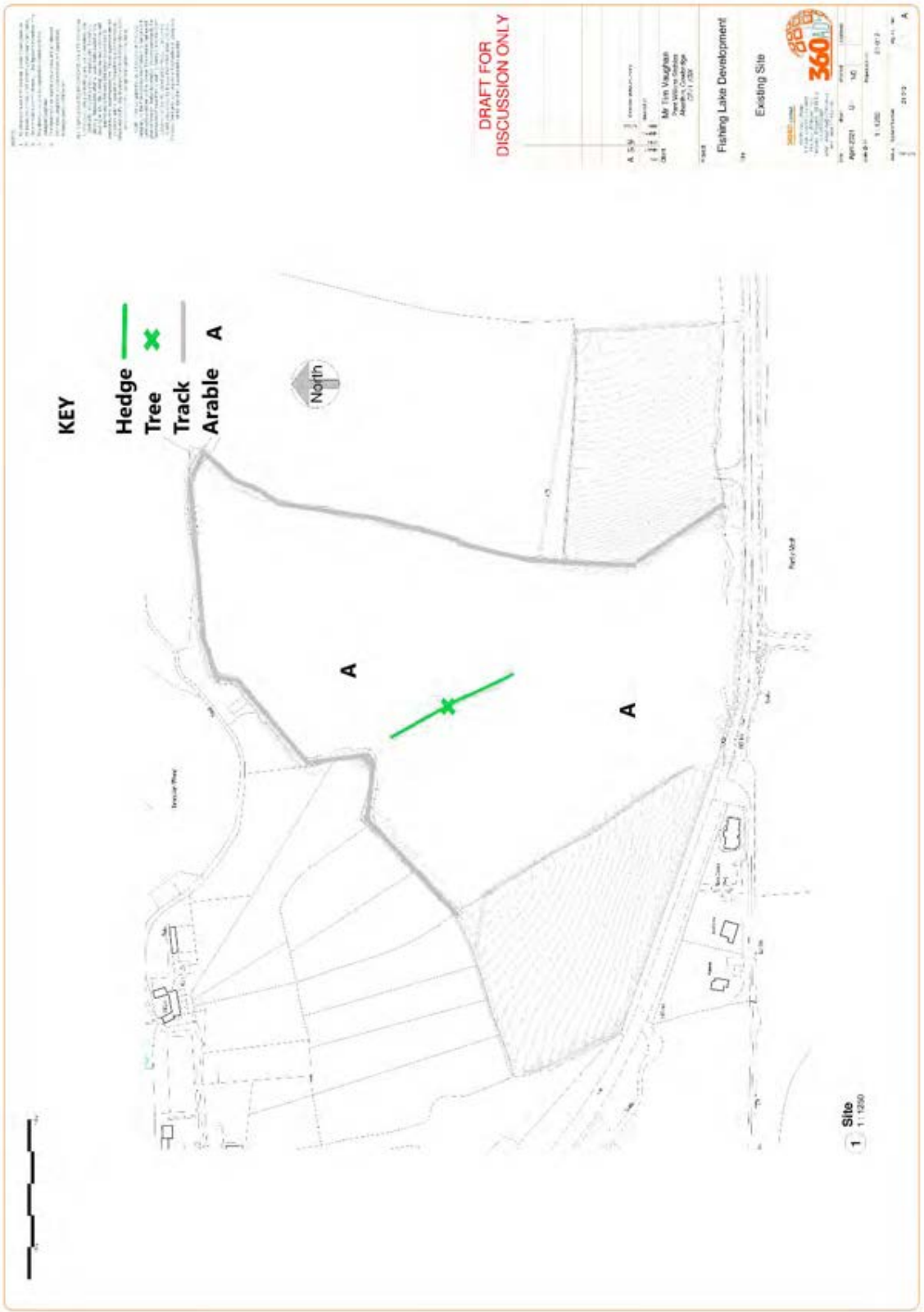
The Conservation of Habitats and Species Regulations 2017 which consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law and came into force on 30th November 2017.

All bats listed on Annex IV of the Directive and some are also listed on the Annex II. The latter Annex relates to the designation of Special Areas of Conservation (SACs) and covers **Greater** and **Lesser Horseshoe bats**, **barbastelle** and **Bechstein's** bat.

Inclusion on Annex IV ('European protected species) means that member states are required to put in place a system of strict protection as outlined in Article 12; this is done through inclusion on Schedule 2 of the Regulations. Regulation 53 makes it an offence to;

Deliberately capture or kill a bat
Deliberately disturb a bat
Damage or destroy a breeding site or resting place of a bat
Keep, transport, sell or exchange, or offer for sale or exchange alive or dead bat or any part of a bat

APPENDIX TWO PHASE ONE HABITAT SURVEY



APPENDIX THREE DESIGNATED SITE SEARCH

Species Map

Species records are mapped below. Records are mapped as centred points (centre of grid reference polygon)

Icon	Name
●	Bats
●	Birds

23/06/2020 Aderyn

Species

Species records are listed below. The distance listed below is the distance from the record polygon centroid to the search polygon centroid.

Records exist in the following taxon groups: Bats (15) and Birds (5).

Bats

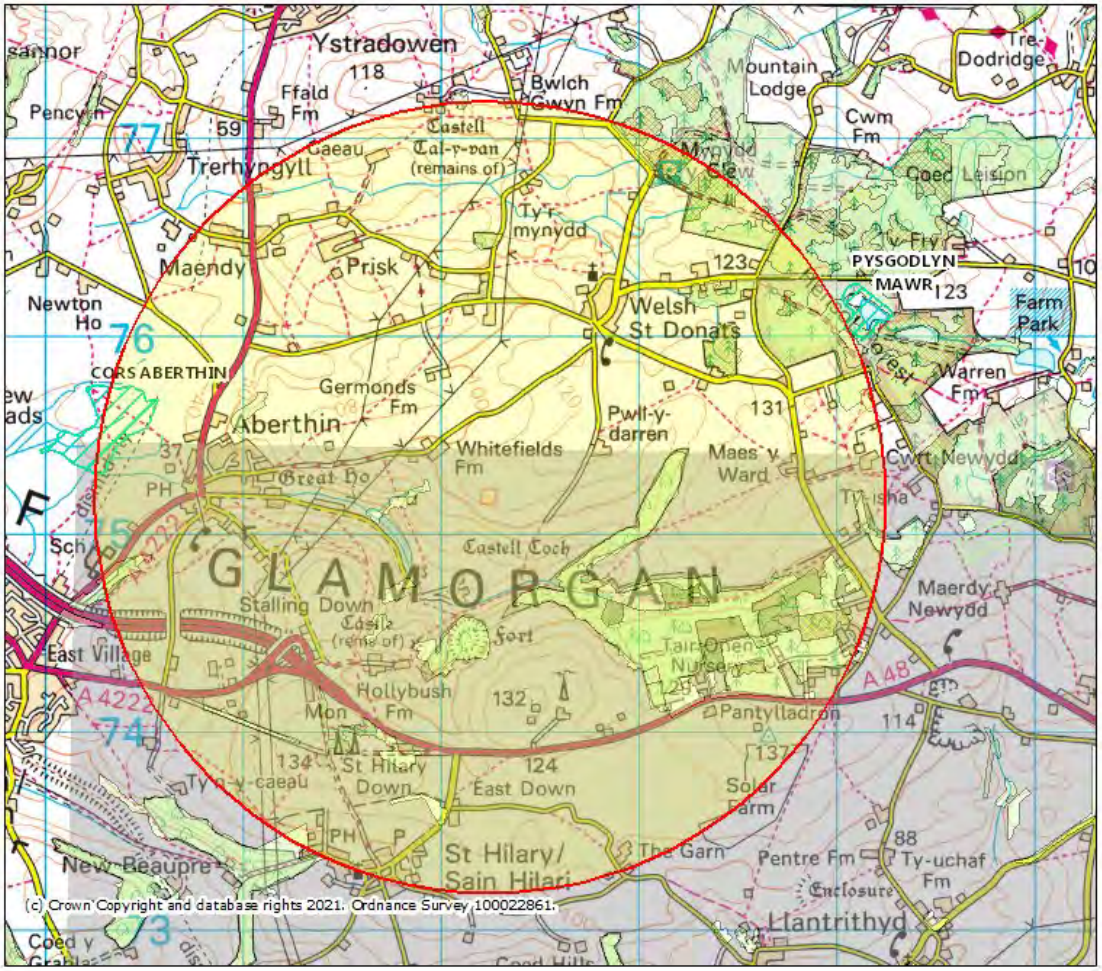
List Ref.	Dist. (m)	Scientific Name	Taxon Group	Date	Abundance	Source	Verification
[illegible]							

Birds

List Ref.	Dist. (m)	Scientific Name	Taxon Group	Date	Abundance	Source	Verification
[illegible]							

MAGiC

DSS Search



Legend

- Limestone Pavement Orders (England)
- Local Nature Reserves (England)
- Moorland Line (England)
- National Nature Reserves (England)
- National Nature Reserves (Scotland)
- National Nature Reserves (Wales)
- National Parks (England)
- Ramsar Sites (England)
- Proposed Ramsar Sites (England)
- Ramsar Sites (Scotland)
- Ramsar Sites (Wales)

Sites of Special Scientific Interest Units (England)

- Favourable Condition
- Unfavourable Recovering
- Unfavourable no change
- Unfavourable Declining
- Part Destroyed
- Destroyed
- Not Assessed

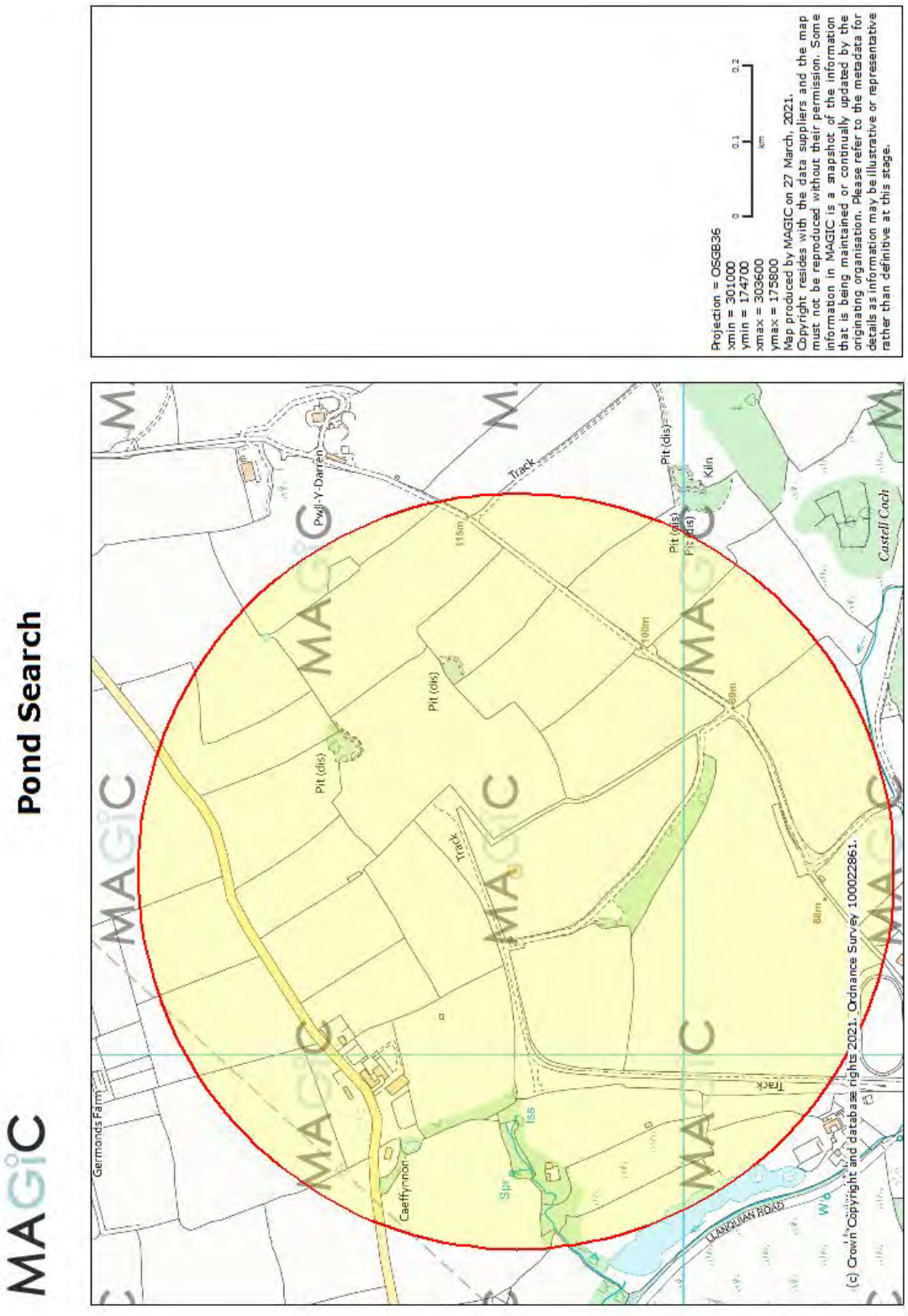
- Sites of Special Scientific Interest (England)
- SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
- Sites of Special Scientific Interest (Scotland)
- Sites of Special Scientific Interest (Wales)
- Special Areas of Conservation (England)
- Possible Special Areas of Conservation (England)
- Special Areas of Conservation (Scotland)
- Special Areas of Conservation (Wales)
- Special Protection Areas (England)
- Potential Special Protection Areas (England)
- Special Protection Areas (Scotland)
- Special Protection Areas (Wales)
- Biosphere Reserves (England)
- Biosphere Reserves (Scotland)

Projection = OSGB36
xmin = 296800
ymin = 172900
xmax = 308300
ymax = 177600

0 0.55 1.1
km

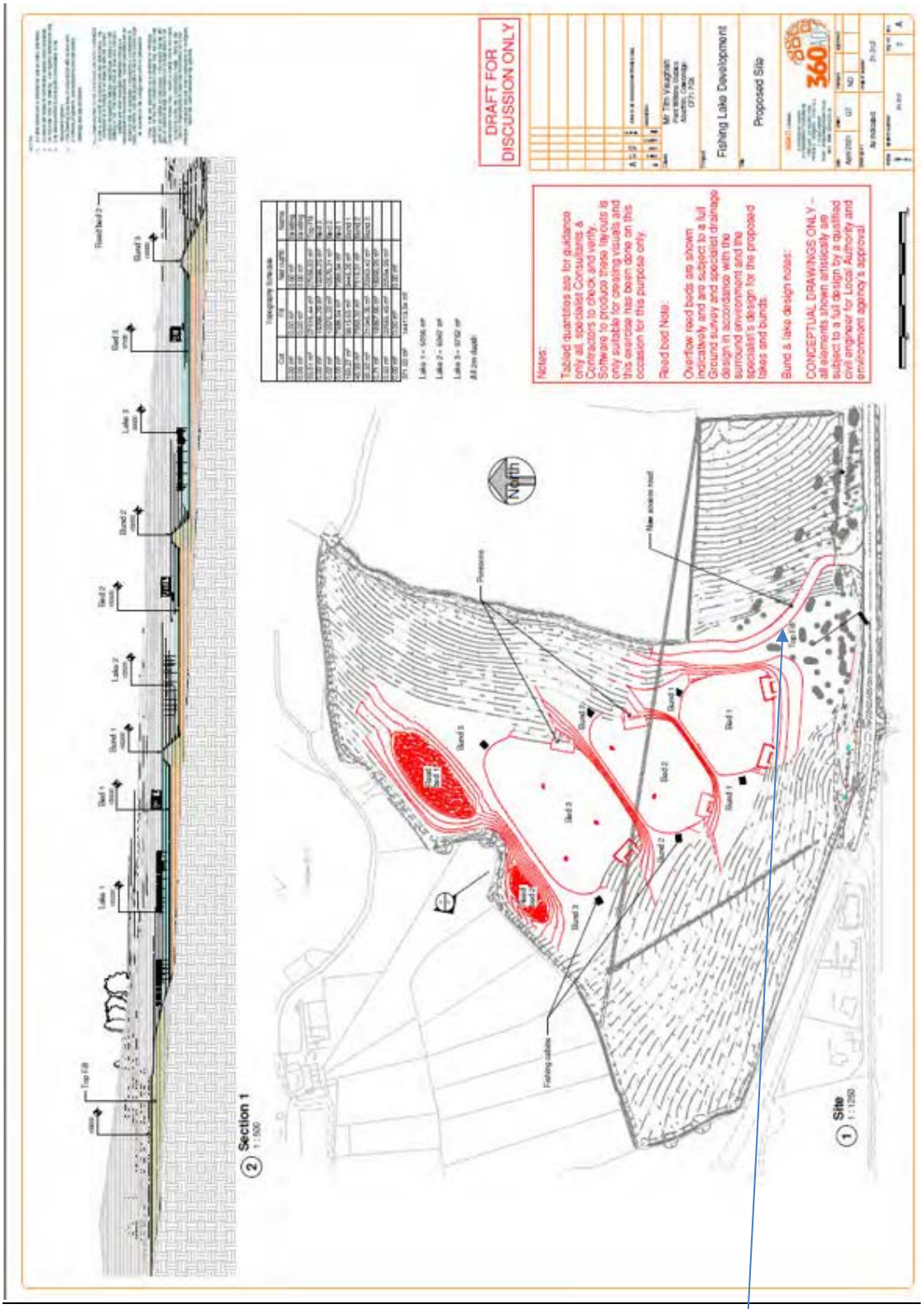
Map produced by MAGIC on 27 March, 2021.

APPENDIX FOUR POND SEARCH MAP



Red ring shown as 500m radius from Site centre.

APPENDIX FIVE PROPOSED ENHANCEMENTS FOR WILDLIFE & LANDSCAPE



Species rich hedgerows along the new access road & See native

wetland plants below to be planted in the new lakes & reedbeds

Bat & bird boxes to be included on the cabin walls by the lakes

Wooden Bat Boxes

Bat boxes are artificial roosts designed to encourage bats into areas where there are few roosting sites. Different bat species need different spaces. Micro-climate within a new roost is a very important, bats prefer warm spaces in the summer for rearing young and cooler spaces in the winter for hibernation. The box should be draught proof and made from a thermally stable material. Crevice dwelling bats crawl into their roosts via small gaps around 15-20mm high. Roughened vertical surfaces allow better access (by landing and crawling). Artificial light sources should not be directed onto bat boxes or flight paths as most bat species find artificial lighting very disturbing. Boxes that may accumulate bat droppings will also need to be cleaned regularly by a licensed bat worker, bat boxes must not be opened by anyone except a licensed bat worker

Improved Roost-Maternity Bat Box

Large 3 crevice box. Suitable for larger roosts or maternity groups of small, British, crevice-dwelling bats – Common and Soprano Pipistrelle, and Barbastelle. Exterior surface stained with black water based wood stain for improved thermal input, minimal vapour from the stain. Overhanging roof with additional internal insulation for protection from UK weather, and to seal crevices from internal airflow. Three separate crevices each with different temperature characteristics. Self cleaning. NHBS Price: £86.99 including VAT

External Bird Boxes

In our modern environments many bird species are struggling to find enough suitable nesting sites. As a result, a lot of species which have traditionally been so abundant in our gardens are declining, drastically, in numbers. Installing a nest box (or several boxes) in your garden is one of the easiest and best ways that you can help these local bird populations. A bird box will provide a warm, sheltered environment with protection from most types of predators, helping to improve the chances of breeding success.

Traditional Wooden Bird Nest Box

Manufactured from substantial 2cm thick FSC-certified European Redwood. This simple, breathable wooden bird box has a sloping roof and four drainage holes. The 25mm entrance hole is suitable for smaller tit species such as blue and coal tits, whilst the 32mm entrance hole will attract a wide range of garden birds including great tits, house sparrows and nuthatches. Boxes can be expected to last 5-10 years and are constructed using stainless steel staples which will not rust. These boxes can be installed on a tree or wall and should be placed two to four metres above ground. There should be a clear flight path to the entrance hole and the boxes should be placed so that the entrance is not exposed to strong sunlight or winds. NHBS Price: £12.00 including VAT.

Woodpecker/Starling Nest Box

This Woodpecker and Starling box is designed with a large round aperture and made from exterior quality resin bonded plywood. It is manufactured with surface sunk coated staples to resist rusting and finished with a non-toxic water repellent finish. The hinged roof provides convenient access for cleaning and there are drainage holes in the floor. This nest box can be fixed to a wall, fence, tree or building, position away from full sun or prevailing wind/rain. Site approximately 3 – 4 metres above ground level where there is easy flight access and where it cannot be reached by cats or other potential predators. NHBS Price: £22.50 including VAT