



A Preliminary Ecological Assessment for land at Tunnel House Inn

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

The Bathurst Estate
Cirencester Park
Cirencester
GLOS
GL7 2BU

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Prepared by Ros Willder
Willder Ecology

Telephone: Office 01452 849428, **Mobile** 07920147441

Email: roswillder@yahoo.co.uk

Website: www.willderecology.co.uk

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1.0 Introduction

As part of the planning application for six proposed self-contained holiday pods on land to the south of the Tunnel Inn, 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.

2.0 Methodology of Surveys

An extended Phase one habitat survey was carried out on the 10th February 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 data search request was made to GCER for both designated sites & species records, to identify any priority habitats, species & designated sites within a 2km radius of the proposed site see results discussed in section 3.2 & the maps in appendix three. In addition, a pond search was carried out using the NE Magic map search for all standing bodies of water within 250m and 500m of the location of the land, the results of which are discussed in Section 3.3 & shown in Appendix four.

3.0 Results of Surveys

3.1 Examination of the Land

The proposal is for the six self-contained pods to be placed within a small area of open woodland, south of the Tunnel House Inn. The woodland is a broadleaved woodland dominated by tall Beech trees.



Figure 1 – showing approximate location of the proposed pods (Circled in red).

The woodland has very little cover at ground level and there are limited numbers of shrubs and understorey species. This is due to the cover canopy being dominated by Beech trees with occasional self-sown Silver birch & Ash trees. The under storey is comprised of Holly (O) & Hazel, with Brambles & self-sown saplings (see figures 2-7).

The woodland is heavily used by walkers and there are a number of established well used footpaths running throughout the woodland including the Wysis footpath and these have stone beneath them which was deposited due to the site being quarried & the canal being built many years ago.

Along the south western boundary where the pods will be located overlooking the adjacent field there is a fence line and some Holly as well as some smaller Beech saplings. The location for each of the pods has been picked due to the naturally open areas along this boundary within the woodland meaning there will be no large tree removal required.



Figure 2 – Boundary one fence & holly and location of Pod one



Figure 3 – Pod two location

The Pods will be placed within the woodland on stilts/timber piles removing any need for any footings to be dug or ground/root disturbance to occur.



Figure 4 – pod site 3



Figure 5 – Pod site four

All trees on site are to be retained. All boundaries & habitats are marked on the phase one habitat map in appendix two.



Figure 6 – Pod five location



Figure 7 – Location of final Pod six

3.2 Designated sites & species records search

A designated site search was carried out using the Gloucestershire centre for Environmental records Service to identify designated sites and priority or legally protected habitats and species records within a 2km radius of the proposed development. Within the 2km radius from the site at Tunnel House Inn there are no sites of special scientific Interest (SSSI), however there are three Local Wildlife Sites (LWS) Hailey Wood LWS 25m away, Tarlton Wood LWS 591m away and Oakley Wood LWS 1.3km from the site at Tunnel Inn (Note that the above distances are taken from the tunnel Hill Inn not the proposed site which is 50m south of the Inn).

The following Priority habitats were recorded within the 2km search radius; Deciduous Woodlands, Good Quality Semi Improved Grassland, Lowland Calcareous Grassland, Traditional Orchard and Wood Pasture and Parkland.

The following Grassland Assemblage birds were recorded within Hailey Wood LWS (25m from site); Goshawk, Kestrel, Swift, Willow Warbler, Skylark, House Martin, Dunnock, Song Thrush, Mistle Thrush, Spotted Flycatcher, Marsh Tit, Starling, Linnet, Brambling, Bullfinch, Yellowhammer, Fieldfare, Redwing.

The other species records included Bluebells, Meadow saffron, Pearl bordered Fritillary, smooth newt, Badger, Brandt's Bat, Whiskered Bat, Western Barbastelle, Daubentons Bat, Natterer's Bat, Common Pipistrelle, Soprano Pipistrelle, Hazel Dormouse (2017) & Great Crested Newts.

The only records directly within the proposed site were of a spotted flycatcher at the edge of the woods & an unconfirmed site of broadleaved woodland along the canal.

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 as shown in appendix four. The pond had already been surveyed & eDNA tested by Natural England on 24/05/2018 & found to contain Great Crested Newts as such the impact on GCN by this proposal will also need to be considered.

4. Ecological impact assessment

The proposed pods are to be sited within a small part of a deciduous woodland that is dominated by Beech with a poor understorey & a poor ground flora. However, the woodland has already been identified as a priority habitat as deciduous woodland as shown on the Priority Habitat map produced by GCER (shown in appendix three). All Lowland Mixed Deciduous Woodland qualifies within the UK Biodiversity Action Plan as Priority Habitat.

The site currently has no designated within the woodland or immediately adjacent to it as it is an unconfirmed site which has not been designed as a Local Wildlife Site unlike the nearby Hailey & Tarlton Woods which are both LWS as shown in the designated site map from GCER in appendix three. The majority of protected species recorded within the local area are found within the above mentioned LWS not within the proposed site.

Although the proposed site for the individual pods is within woodland habitat that is identified as a Priority habitat. The woodland has a poor structure & lacks both a diversity of species & structure within the canopy, understorey & ground flora & is subject to regular disturbance due the large numbers of regular walkers through the wood. In addition, the close proximity to the Tunnel Inn carpark also increases the level of disturbance to the wood in the evenings.

During the site visit it was noted that there was debris in the woodland associated with pub users & walkers. In addition to the adjacent canal there is also an access road to the Tunnel Inn & the main Cheltenham to London rail line runs parallel with the site as such there is regular disturbance to the site.

The protected species recorded in the wider area such as Dormouse are unlikely to using this block of woodland as its structure is considered to be unsuitable habitat (lack of cover, aerial routes & food sources) for these species. However, the Saperton Tunnel to the north of the site by the canal is a well know Bat roost & as such the site has the potential to be used by all the recorded bat species for foraging as such the dark areas of woodland will need to be retained undisturbed by this proposal.

However, as the habitat is woodland the pods have been carefully designed to minimise the impact to the surrounding habitat. Firstly, a preliminary structural appraisal has been carried out by Martin Hewett of O'Brien & Price who concluded that timber piles could be used to minimise any potential damage to the trees (directly & indirectly by root damage) within the woodland & also reduce any need for tree removal thus reducing the impact of the proposal.

The design of the pods is also key in reducing secondary impacts within the woodland, as they have been designed to have no external lights & to allow no light spill from inside the pods into the trees by having an overhang of the roof over the doorways so that light spill will not occur into the surrounding woodland canopy as shown below in figure eight.



Figure eight – The pod designs

Ideally the pods will have no velux windows but if these are included it will be necessary to have automated blinds to be used in the spring/summer months to reduce light spill into the woodland tree canopy.

To reduce the impacts of the pods the siting of them has been designed to face away from the central part of the wood & face the adjacent agricultural field & they have been sited so that they will be positioned in areas where the woodland is already open & no established trees will need to be removed as shown in figures 2-7.

Whilst the proposal will have minimal impact to the woodland by using timber piles it is important that the dark areas within the woodland are maintained for foraging bats. In order to maintain the dark areas within the woodland & reduce the impact it is recommended that a full lighting plan is submitted for approval of the LPA to demonstrate that the canopy of the woodland will not be disturbed by light spill by this proposal.

The other impact to consider is disturbance to the woodland by people using the accommodation but as this woodland it already used by walkers & their dogs there is already a level of disturbance on the proposed site.

To make the proposed impact to the priority habitat woodland acceptable & as mitigation for this proposal, it is recommended that a ten-year woodland plan is draw up for the whole block of woodland which will include understorey enhancement planting & managing the trees within the wood to create a more diverse structure & diverse canopy within the woodland to make it more attractive for the wildlife in particular the protected species recorded in the local area. The Woodland plan will be submitted for approval of the LPA to ensure a biodiversity gain within the woodland.

In addition, as Great Crested Newts have been identified within the pond in the adjacent field situated 325m away from the woods. Whilst this is outside of the key 250m radius it is recommended that a precautionary approach to the proposed works is taken with an ecological clerk of works supervising the construction of the pods & services to avoid any potential harm to individual newts. All materials for the pods will be stored on pallets within the hard standing of the Tunnel Inn car park to further reduce any potential harm.

5.0 Conclusion, Mitigation & enhancements

The proposal is for six pods which will be limited to minimal works within the woodland itself as the pods will be constructed so that they sit on timber piles which will not require major digging that could directly affect the trees & tree roots. The siting of the pods has been chosen within the open Beech woodland & the pods have been sited within the most open areas so that no trees other than occasional saplings will required to be cut down. However, because Lowland mixed deciduous woodland is a priority habitat & this proposal whilst having minimal impacts (if all the mitigation is followed) still needs to demonstrate a clear biodiversity gain for this priority habitat as part of the proposal as detailed in section 5.1 Mitigation & 5.2. Enhancements.

If all the mitigation & enhancements are followed the proposal will not have any adverse effects on the woodland habitat or the wider area or the two local wildlife sites identified as Hailey Wood & Tarlton Wood or priority habitats or any European protected species such as Bats or amphibians or dormice in the wider area.

As bats are known to be in the area due to the Saperton Tunnel roosts no light spill into the tree canopy will be permitted from the pods & careful construction will be required to avoid any damage to the trees within the woodland. As GCN have been recorded in a pond 350m away from the woods a careful precautionary approach should be taken so that any impacts can be avoided all together as detailed in section 5.1 Mitigation.

Even though the mitigation has been designed to compensate for the proposed works this does not mean that enhancements cannot be designed to enable a clear biodiversity gain for wildlife as part of this proposal see section 5.2.

5.1.Mitigation (a precautionary approach)

All persons involved in the works to the site shall receive a detailed 'Toolbox Talk' on Bats, nesting birds & Great Crested from the Ecological Clerk of works Ros Willder of Willder Ecology, or a similarly qualified ecologist.

The toolbox talk will cover the following: -

- the full legal protection of Nesting birds & Bats & Great Crested Newts.
- the lifecycle of Bats and their potential roosting areas
the identification of Bats & their potential roosts
- The potential areas for nesting birds, bat roosts & cover for Great Crested newts
- All materials will be stored during works on areas of hard surfacing to avoid any runoff & to prevent any habitats being accidentally harmed by materials being stored in inappropriate areas.
- What to do if evidence of either Bats, nesting birds, Great Crested Newts are found during works

Before any works begin the woodland sites shall have a pre-commencement check to see if any birds have begun nesting in the areas planned for the pods to be sited. No tree works are planned but if any tree works become necessary these will be directly overseen by Ros Willder of Willder Ecology. All ground works will be over seen by the ecological clerk of works to avoid any potential harm to individual amphibians.

Before the pods are brought into use a ten-year woodland management plan shall be produced and submitted to the LPA for approval which will involve extensive woodland canopy & understorey enhancements to ensure a biodiversity gain for wildlife within this woodland block.

If any bats or Great Crested Newts are found all works will cease until Natural England has been contacted and way forward agreed which may include a license application to permit the works to continue.

No new external lighting are planned on the walls of the pods that could cause additional light spill into the surrounding area. All velux windows will have timed black out blinds fitted that will ensure no light spill into the woodland canopy. If required a lighting plan will be submitted to the LPA to show how the dark areas within the wood will be maintained as part of this proposal.

5.2 ENHANCEMENTS

Bird boxes will be incorporated into the pod walls on the eastern elevation as shown in appendix five.

As an enhancement for bats a soffit bat box incorporated behind the boards on the pods to encourage future use of the pods by bats as shown in Appendix five.

The ten-year woodland plan will also include some additional woodland edge planting along the edge of the woodland block that will create a graduated woodland edge to the woodland by planting of native shrubs such as Hazel & field maple to ensure enhancements for wildlife. Once this enhancement planting has been completed at least ten Dormice boxes will be erected within the woodland to encourage future use by them within the woodland block.

If all the recommendations are followed no harm will occur to either the designated sites or bats or birds and enhanced provision will be made for future use by both bats, birds, great crested newts & dormice as an overall enhancement for biodiversity to the site.

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

LEGAL PROTECTION OF BIRDS

The Wildlife and Countryside Act 1981 is the main instrument for the protection of wild birds in the law of England, Wales and Scotland.

It protects all wild birds of whatever species (certain exceptions apply within the act).

Barn Owls are listed on Schedule 1 which gives them special protection.

The act makes it an offence “if any person intentionally- Kills, injures or takes (handle) any wild bird;

Takes, damages or destroys the nest of any bird while that nest is in use or being built; (barn owls do not ‘build’ a nest but may make a nest scrape) or

Takes or destroys an egg of any wild bird”

It is also an offence “if any persons have in his possession or control-

any live or dead wild bird or any part of, or anything derived from, such a bird; or An egg of a wild bird or any part of such an egg” (s 1 (2)).

LEGAL PROTECTION OF AMPHIBIANS AND REPTILES

Reptiles are protected from killing and injury (two species are fully protected, this includes, but is not confined to:

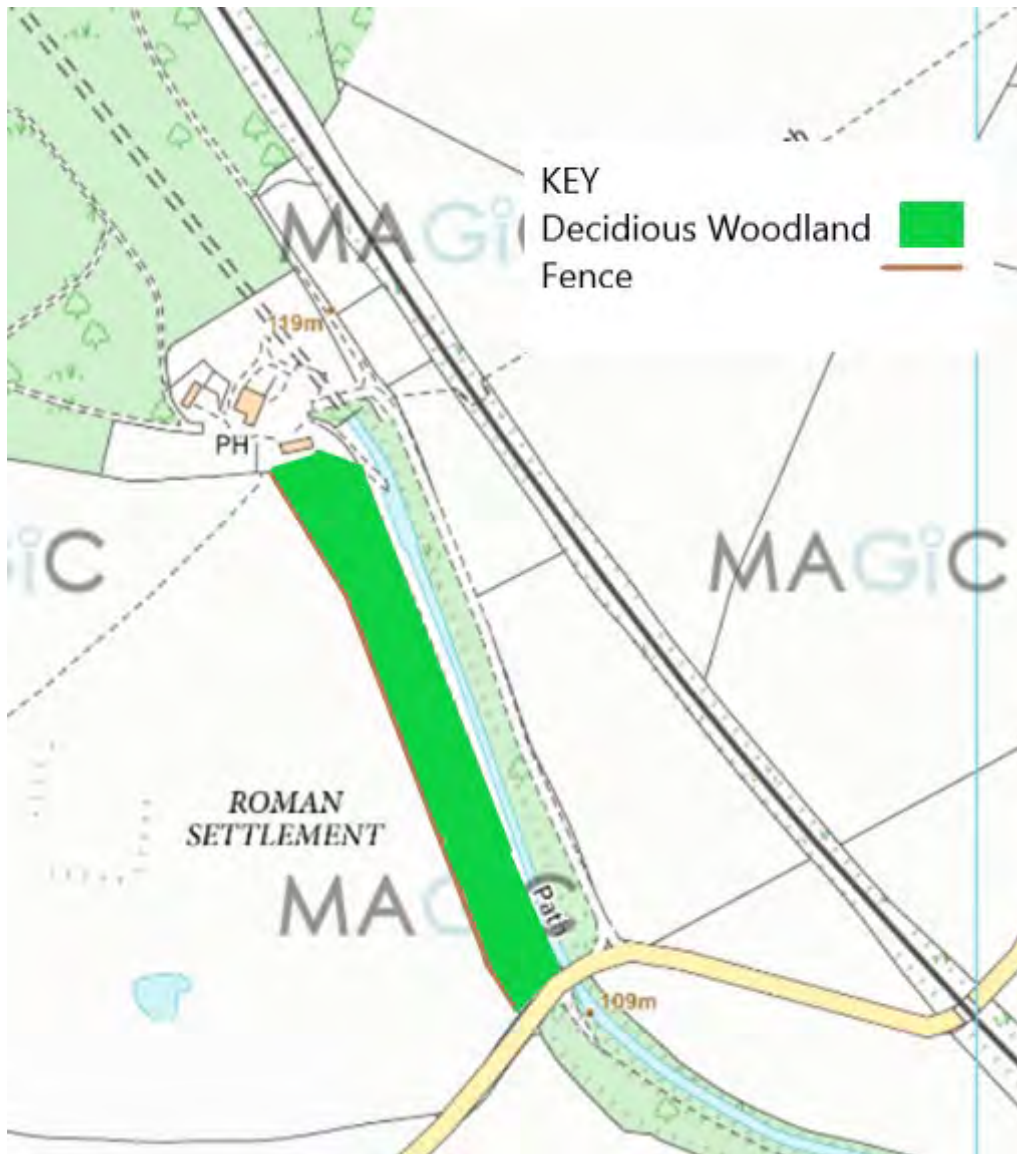
Disturbance and deliberate destruction of their habitat) under The Wildlife and Countryside Act 1981 (as amended).

The Conservation (Natural habitats &c.) regulations 1994 (the habitats Regulations were recently updated by The Conservation of Habitats and Species regulations 2017

Amphibians such as Great crested newts are fully protected, including protection against:

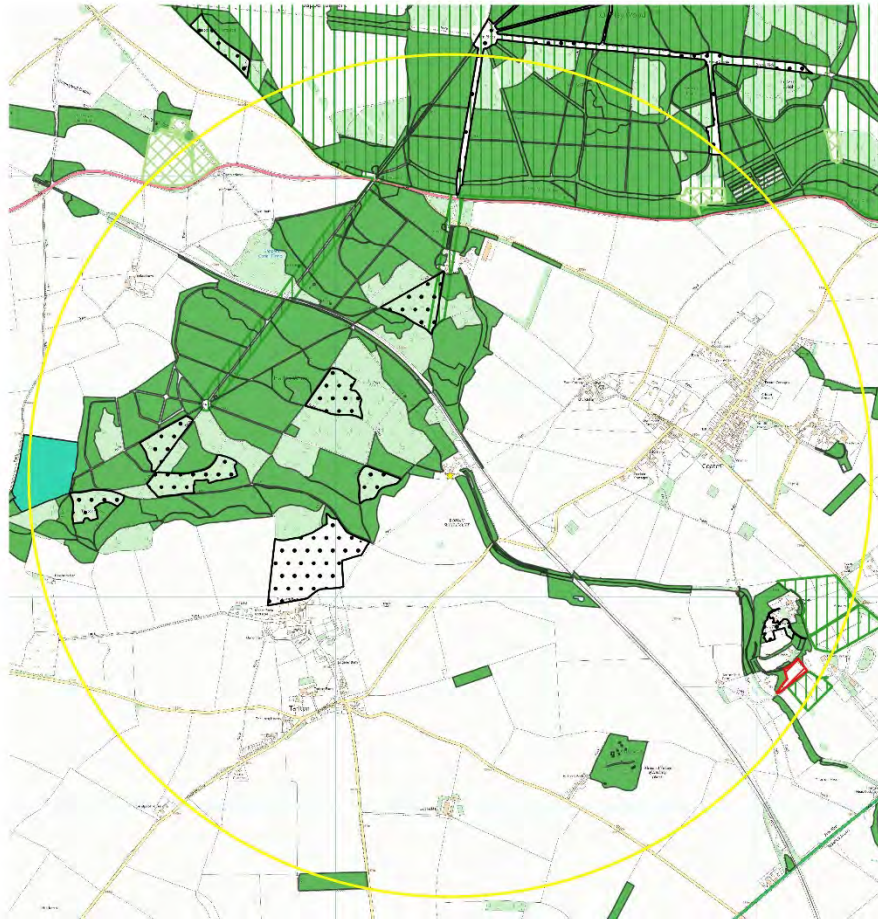
- Deliberate disturbance
- Deliberately killing or capturing
- Deliberately taking or destroying eggs
- Deliberately damaging or destroying breeding sites and places of shelter.

APPENDIX TWO PHASE ONE HABITAT SURVEY



APPENDIX THREE PRORITY HABITATS, DESIGNATED SITE, & SPECIES SEARCH FROM GCER

Priority habitats mapped within 2km



Priority Habitat Key

- Deciduous woodland
- Good quality semi-improved grassland
- Lowland calcareous grassland
- No main habitat but additional habitats present
- Traditional orchard
- Wood Pasture and Parkland

Zoom in for more detail



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 Priority Habitats layer provided by Natural England Open Data - PH1 v2.1
 Date produced: 2021-02-05



Project ref: Glamp
 Grid Ref: SO9654200577
 Search Area: 2km

Sites of conservation importance recorded within, or overlapping, the area of search

SPA, Ramsar, SAC

None present

SSSIs

None present

Local Wildlife Sites [LWS]

Site name	File Code	Reasons for selection	Distance from grid (m)
Hailey Wood LWS	SO90/011/01	Ancient semi-natural broad-leaved woodland site larger than 2 ha	25
Tarlton Wood LWS	SO90/011/04	Ancient semi-natural broad-leaved woodland site larger than 2 ha	591
Oakley Wood LWS	SO90/011/02	Ancient semi-natural broad-leaved woodland site larger than 2 ha	1331

National Nature Reserve, GWT Nature Reserve, Local Nature Reserve

None present

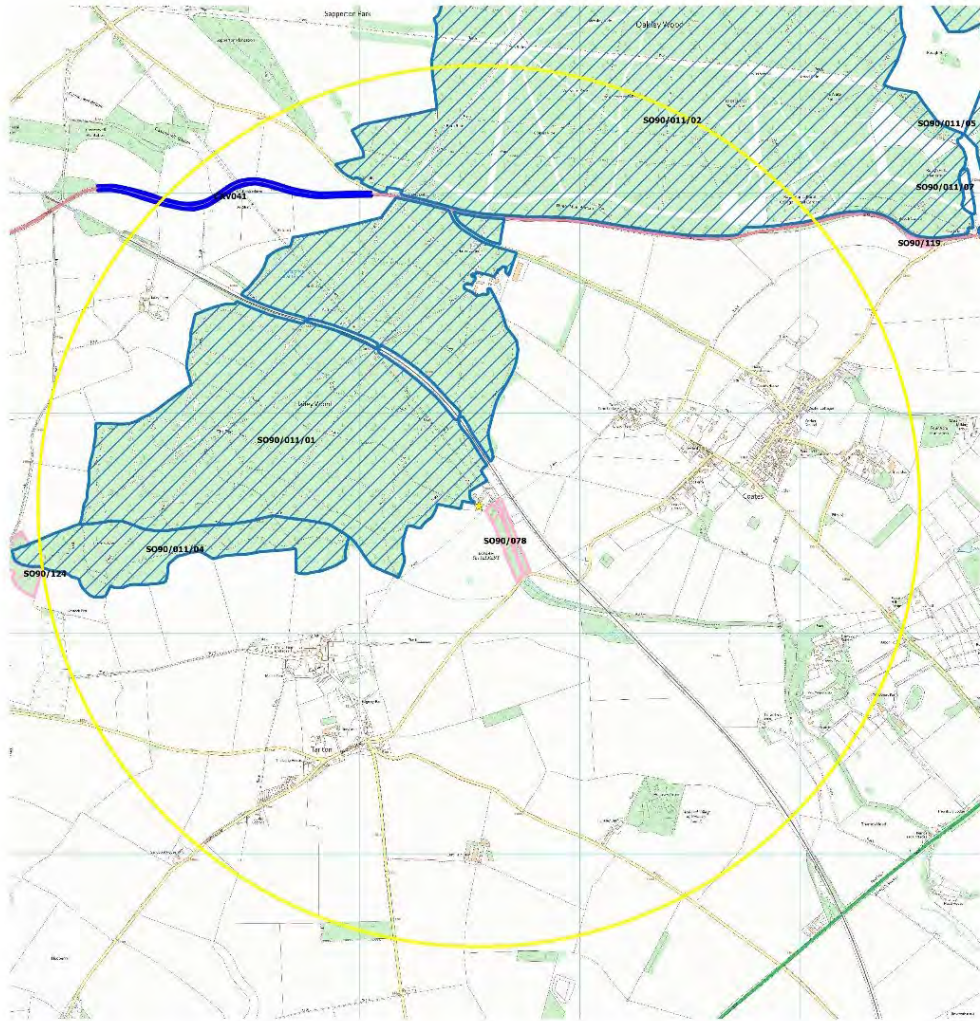
Conservation Road Verge

Site name	File Code	Reasons for selection	Distance from grid (m)
Sapperton A419	CRV041	Lowland calcareous grassland	1488

Unconfirmed Sites [Potential LWS quality only]

Site name	File Code	Type	Distance from grid (m)
Tarlton Canal Cutting U	SO90/078	Broad-leaved woodland along canal	27

Overview of sites mapped within 2km

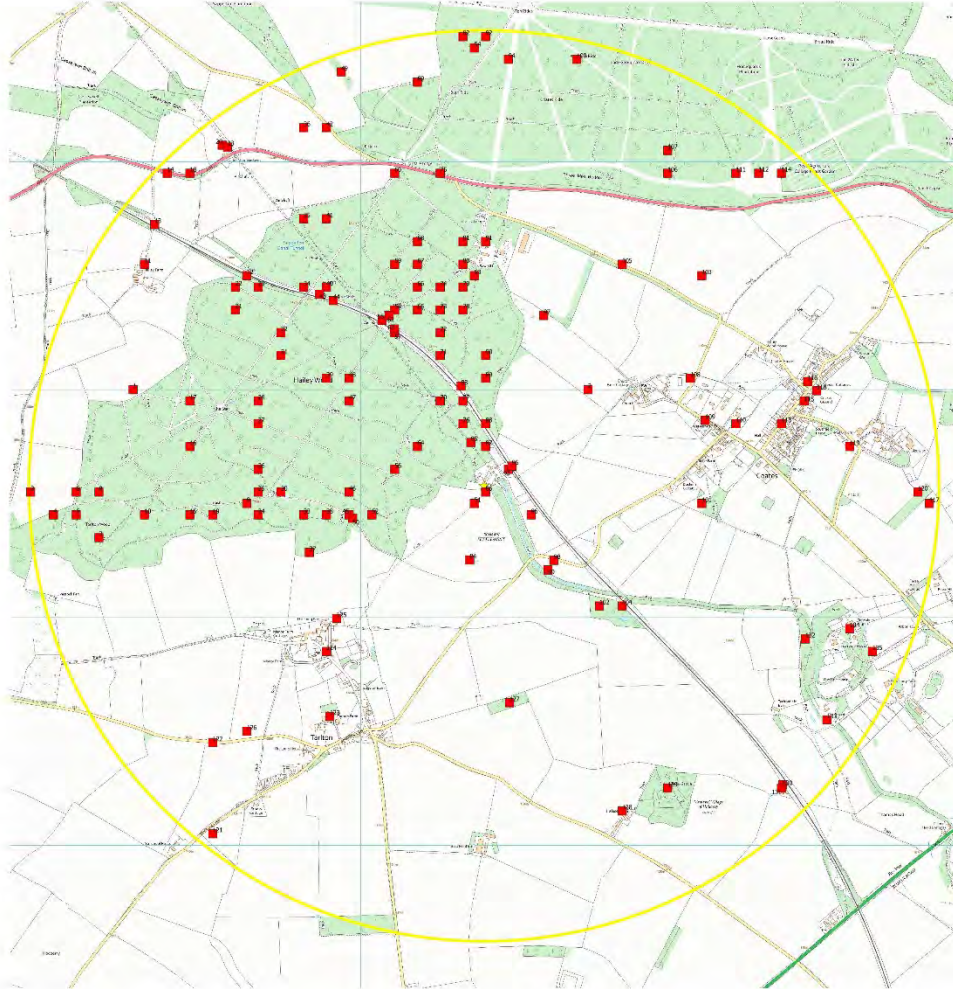


Zoom in for more detail



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Centroid grid references (displayed as codes) of rare and protected species mapped within 2km



Zoom in for more detail

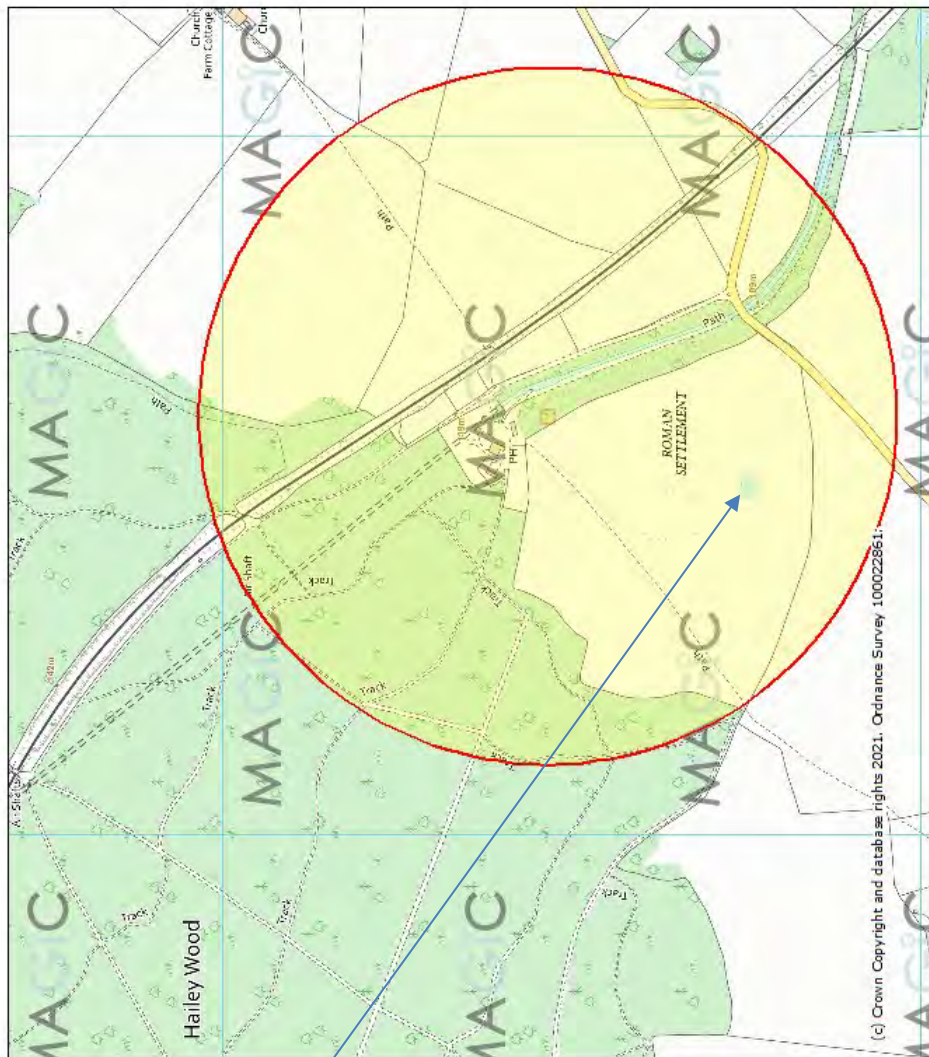


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APPENDIX FOUR POND SEARCH RESULTS

POND SEARCH

MAGiC



Only one pond found

Projection = OSG36
 xmin = 395200
 ymin = 200000
 xmax = 397700
 ymax = 201300
 Map produced by MAGiC on 17 March, 2021.
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGiC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

APPENDIX FIVE PROPOSED SITE PLAN & ENHANCEMENTS FOR WILDLIFE & LANDSCAPE



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.

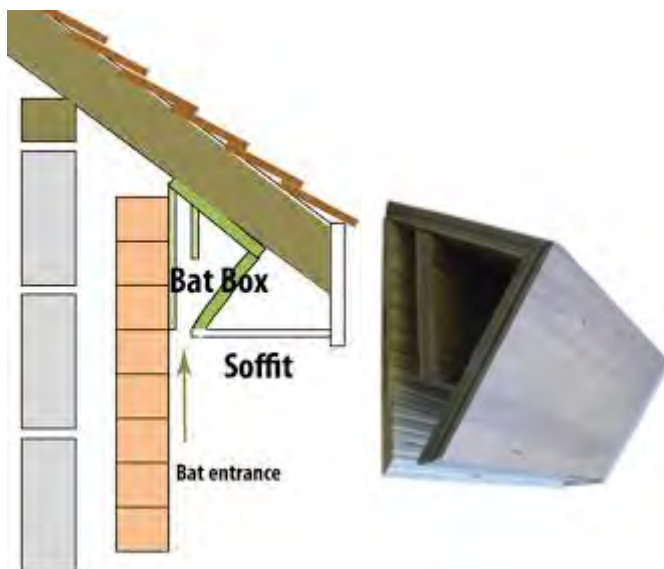
Traditional Wooden Bird Nest Box

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



Bat soffit box

Bat & bird boxes to be positioned within the rear wall of the pods



Dormouse Nest boxes can be used to enhance woodlands to encourage this species into the woodland block one enhancement planting has been carried out to make the woodland more suitable for this species.