

Preliminary Ecological Appraisal Report, barn reconstruction, The Folly, Folly Lane,  
May Hill, Longhope, Gloucestershire GL17 0NP



## DOCUMENT HISTORY

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### Document review and certification

**Document author:** Stewart Rampling MCIEEM

**Position:** Director

Document author, reviewer and sub-contractor approval of the report providing a true and accurate representation of the evidence and interpretation gathered.

***“The information, data, evidence, advice and opinion expressed within this report which we have prepared and provided is true, and has been prepared and given in accordance with the guidance of my professional institution’s Code of Professional Conduct, and we confirm that the opinions expressed are our true and professional opinions.”***

**Signed:**



**S. Rampling**

**10/05/23**



## NON TECHNICAL SUMMARY

<b>What</b>	<ul style="list-style-type: none"> <li>• First stage ecological survey and evaluation of plans to reconstruct a derelict stone barn adjacent to woodland on the edge of May Hill village.</li> </ul>
<b>Why</b>	<ul style="list-style-type: none"> <li>• The site is located adjacent to woodland and in proximity of other habitats making consideration for protected habitats and species relevant.</li> </ul>
<b>How &amp; When</b>	<ul style="list-style-type: none"> <li>• Walk-over and habitat survey by experienced ecologist March 2023.</li> <li>• Use of previous site survey reports and data sources.</li> </ul>
<b>Key findings</b>	<ul style="list-style-type: none"> <li>• Habitats present: bare ground; buildings (stone wall); developed land (stone track) scrub; ruderal; ornamental shrub (adjacent broadleaved woodland and ancient woodland).</li> <li>• Pond located 68m to south-east within edge of field on neighbouring land.</li> <li>• Land to immediate north (within 20m) designated as a local wildlife site.</li> <li>• Pond on neighbouring land represents good quality habitat for great crested newts within an area where they are considered to be high likely to be present. Potential for individual newts and other amphibians to be present.</li> <li>• Several high value breeding and hibernation sites for horseshoe bats within 3km-4km and surrounding woodland considered very likely to provide core foraging habitat for these and other species making it very sensitive.</li> <li>• Evidence of nesting bird within stone wall crevice.</li> <li>• Surrounding woodland likely to be used by hazel dormouse although no suitable habitat features on the development site.</li> <li>• No other protected species likely to be associated with the development site.</li> </ul>
<b>Significance</b>	<ul style="list-style-type: none"> <li>• Site includes ecological features of value at an international level.</li> </ul>
<b>Further survey</b>	<ul style="list-style-type: none"> <li>• Environmental DNA sampling of pond 68m to the south-east if possible.</li> </ul>
<b>Potential constraints</b>	<ul style="list-style-type: none"> <li>• Surrounding woodland will need protecting from potential damage during the construction phase.</li> <li>• Timing of wall demolition to avoid disturbance to any nesting bird.</li> <li>• Potential presence of great crested newts within development site.</li> <li>• High value habitats for foraging bats which are sensitive to lights.</li> </ul>
<b>Mitigation / compensation</b>	<ul style="list-style-type: none"> <li>• Protection of adjacent woodland habitats through fences erected prior to start.</li> <li>• No construction activities outside of development area.</li> <li>• Sensitive working to avoid damage to woodland soils immediately adjacent.</li> <li>• Timing of wall demolition during the period 1<sup>st</sup> September - 28<sup>th</sup> February.</li> <li>• Lighting controls to prevent disturbance to bats.</li> <li>• Replacement of lost bird nesting habitat through recreation of stone wall crevice.</li> <li>• Creation of habita pile (refugia) for amphibians within woodland.</li> </ul>
<b>Opportunities for net enhancement</b>	<ul style="list-style-type: none"> <li>• 250m<sup>2</sup> adjacent woodland to be enhanced through thinning of sycamore and underplanting of native shrub mix.</li> <li>• New bat and bird boxes to be integrated into walls of reconstructed barn.</li> <li>• Hedgehog house to be installed to site.</li> </ul>
<b>Conclusion</b>	<ul style="list-style-type: none"> <li>• <b>Site is located within very ecologically sensitive area although no high value habitats associated with the development area, and key will be avoiding indirect damage to adjacent woodland during the construction phase.</b></li> <li>• <b>Pond to south-east is sufficiently close as to make presence of great crested newts an issue given favourable places for newts to shelter such as stone rubble piles, base of walls and leaf litter. Should newts be present, a licence under the District Licensing Scheme is recommended to give legal certainty on the protection of newts during development.</b></li> <li>• <b>Design of the building to avoid potential adverse impacts through artificial light spill on adjacent habitats.</b></li> <li>• <b>Measures to mitigate for potential impacts and deliver net gain are appropriate.</b></li> </ul>

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## **REFERENCES**

**Appendix 1: Phase 1 Habitat Plan**

**Appendix 2: Biodiversity constraints and opportunities plan**

## **1. INTRODUCTION**

### **1.1 Purpose & scope of this report**

- 1.1.1 Plans are to be submitted to reconstruct a derelict stone barn at The Folly in May Hill Village. The structure is located adjacent to an area of woodland habitat as well as being located in a sensitive area for protected and notable species.
- 1.1.2 An ecological assessment of the proposals will be required to inform plans and avoid adverse ecological impacts in accordance with policies contained in the adopted Forest of Dean District Local Plan and National Planning Policy Framework. The first stage of assessment is a Preliminary Ecological Appraisal.
- 1.1.3 A Preliminary Ecological Appraisal is an industry recognised format for establishing an ecological baseline, and to determine whether significant impacts are likely to arise which might need addressing within more detailed impact assessment.
- 1.1.4 This report has been commissioned and prepared in accordance with best practice guidelines for preliminary ecological appraisal set out by the Chartered Institute of Ecology and Environmental Management (2020), good practice principles for biodiversity net gain (CIEEM 2021) and relevant survey handbooks. It is also intended to conform with the British Standard for Biodiversity BS 42020 (BSI 2013). The survey and report have been completed by professional ecologist who is a full member of the Chartered Institute of Ecology and Environmental Management with a working knowledge of the local area.
- 1.1.5 Countryside Consultants Ltd is a Registered Practice with the Chartered Institute of Ecology and Environmental Management (CIEEM). CIEEM's Registered Practices are champions of high professional standards and the delivery of the best outcomes for biodiversity whilst supporting a thriving economy. Being a registered practice is a recognised benchmark of quality gives confidence in our commitment, our collective competence and our own high standards.

### **1.2 Commissioning brief & aims of survey**

- 1.2.1 The commissioning brief was as follows:
- to consult with the Gloucestershire Centre for Environmental Records, previous site survey reports and other desk-top data sources to determine a context for the proposed land, the scope of study and to inform or appraise possible further survey requirements;
  - to characterise the habitats present through a Phase 1 habitat survey based upon the approach and guidelines set out in the Phase 1 Habitat Survey Handbook (Joint Nature Conservation Committee (JNCC) 2010) with appropriate conversion to UK Habitat Inventory Classifications, making a condition assessment of each habitat recorded based upon the Farm Environment Plan Handbook (DEFRA 2010);
  - to carry out a walk-over inspection of the land for any evidence of or considered potential for protected species or notable species defined within taxonomic lists, Red Data Book, UK or Local Biodiversity Action Plans and the Natural Environment and Rural Communities Act 2006;

- to undertake an inspection of buildings and trees on the site to assess the roosting, foraging and commuting potential for bats based upon best practice guidance contained in Bat Surveys for Professional Ecologists – Good Practice Guidelines (Collins 2016);
- to identify potential constraints - the key conservation features present on the site, and biodiversity enhancement opportunities; and,
- to recommend further surveys where these are required to provide an adequate level of survey effort and enable assessment of potential significant impacts and effects of any proposed development on important habitats, legally protected or notable species.

1.2.2 This report represents a preliminary appraisal. A key function of this appraisal is to identify at an early stage ecological impacts which are deemed to be 'significant' and requiring further detailed assessment. 'Significant' within the definition set out by the CIEEM is termed to mean:

*"... 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local." (CIEEM 2019)*

1.2.3 Where ecological impacts fall below the threshold for significance, for example: where a no net loss to biodiversity is deemed to be important; or net enhancement is a core planning policy expectation, the Preliminary Ecological Appraisal may be reasonably extended in scope to assess ecological impacts and to provide recommendations to mitigate and compensate for any impacts although this currently does not form part of the CIEEM guidance.

### 1.3 Site location & description

1.3.1 The proposed site is associated with a derelict former stone barn located 28m south-west of The Folly, Folly Lane, May Hill, Longhope, Gloucestershire GL17 0NP. The Ordnance Survey Grid Reference is SO 7045 2080.

1.3.2 The former barn is located adjacent to a stone access track leading off Folly Lane, servicing the dwelling and woodland enterprises. It is characterised by partially remaining walls of the original barn and small yard to the south side. The original barn measures 8m x 4m and the yard a further 8m x 4m.

1.3.3 The structure is located adjacent to an area of broadleaved woodland bounded by Folly Lane to the south, the stone access track to the north-east side and a mixed plantation woodland to the north and north-west.

1.3.4 The former barn is of a rubble stone wall construction. Only the first storey walls remain, largely to the north-west and north-east gable ends with partial remnants of the enclosed yard walls to the south side and an internal dividing wall. The roof and first floor has collapsed with only remnants of roof timbers and stone rubble piles on the floor.

1.3.5 The footprint includes areas of exposed bare ground, leaf litter, bramble *Rubus fruticosus* scrub, dense ruderals dominated by stinging nettle *Urtica dioica*, sapling sycamore *Acer pseudoplatanus* and a recently felled sweet chestnut tree *Castanea sativa*. To the north side of the structure is a patch of mahonia *Mahonia japonica*.



*Image 1: north elevation*



*Image 2: east gable end and woodland to rear*



*Image 3: view east across internal dividing wall*



*Image 4: inside view west gable end wall*





*Image 5: view east across gable and dividing wall*



*Image 6 stone wall remnant*



*Image 7: view north across bare ground and plantation woodland to north-east*



*Image 8: stone rubble pile inside the structure (target note 1)*

## **1.4 Summary of the development proposals**

- 1.4.1 The proposals are for the reconstruction of the barn with mezzanine floor and pitched roof to the original 8m x 4m footprint. The former yard to the south side will be retained in its current condition. This reconstruction will likely necessitate careful demolition of the standing walls, excavation of footings, new concrete slab floor and stone and block wall construction. There will be a small area of hard surface created to the north-east side of the barn linking to the existing stone access drive.
- 1.4.2 Surface drainage will be attenuated through natural drainage to the woodland.

## **2. SURVEY**

### **2.1 Contextual research & consultations**

- 2.1.1 A search of the Gloucestershire Centre for Environmental Records was commissioned for the following parameters:
- protected and notable species within 2km;
  - non statutory nature conservation sites within 2km.
- 2.1.2 Aerial photographs, Ordnance Survey Maps (both current and old) and other web-based tools such as Natural England's mapping tools were studied to identify statutory nature conservation sites within the scope of the potential site impacts, and to provide a context for site survey and assessment taking particular account of records for important species groups and connective features in the landscape.
- 2.1.3 A previous site ecological survey report for land to the north (The Slim Woodlands CJC 2018) was also appraised.

### **2.2 Survey area**

- 2.2.1 The best practice guidance for preliminary ecological appraisals (CIEEM 2020) and BS 42020 (BSI 2013) indicate a potential difference between a proposed development area, and a much wider area or zone of influence which may have ecological receptors which may be indirectly impacted by the development.
- 2.2.2 In this instance, taking account of the: extent of the proposed site; context; land use; nature of the proposals; the survey area was determined as being the proposed site boundary and any potential features within 30m of these boundaries. Consideration was also made for any pond within 68m on adjacent land to the south-east.

### **2.3 Phase 1 habitat survey & site walk-over methodology**

- 2.3.1 The field survey comprised the following:

- Phase 1 habitat survey in accordance with the guidelines set out in the Handbook for Phase 1 Habitat Survey (JNCC 2010) with conversion to the appropriate UK Habitat Classification <https://ukhab.org/> . Target notes were used to record any habitats or features of particular interest and any sightings, signs or evidence of protected or notable faunal species, any notifiable or injurious weeds, or any potential habitat for such species;
- for each habitat recorded, an assessment was made of its condition using the methodology set out in the Farm Environment Plan Handbook (DEFRA 2010);
- a walk-over of the survey area looking for evidence of field signs of badger *Meles meles*, hazel dormouse *Muscardinus avellanarius*, harvest mouse *Micromys minutus*, reptiles, amphibians, nesting birds, bats and other mammals;
- assessment of bat foraging, commuting and roosting potential on buildings and trees within the survey area as set out in Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins 2016);
- assessment of the habitat suitability for reptiles based upon the techniques set out in Common Standards Monitoring Guidance (Joint Nature Conservation Committee 2004); and,
- assessment of the potential for other notable species listed within the UK or Gloucestershire Species Action Plans, List 41 of the Natural Environment and Rural Communities Act 2006 or other relevant taxa-specific listings was made on the basis of field experience and habitats present.

## **2.4 Survey personnel**

- 2.4.1 The Phase 1 habitat survey and walk-over survey were undertaken by Stewart Rampling BSc MCIEEM. Stewart holds full membership of the Chartered Institute of Ecology and Environmental Management (CIEEM) and is a consultant ecologist and Director of Countryside Consultants Ltd with over twenty six year's professional field ecology experience and impact assessment techniques, including a working knowledge of the local area.

## **2.5 Date of survey**

- 2.5.1 The Phase 1 habitat survey and walk-over survey took place on the 20<sup>th</sup> March 2023.

# **3. RESULTS**

## **3.1 Habitats recorded**

3.1.1 The following habitats were recorded by the phase 1 habitat survey:

- broadleaved woodland with semi-mature sycamore, wild cherry *Prunus avium*, occasional conifers and shrub layer comprising occasional hazel *Corylus avellana* and sycamore saplings and ground flora comprising occasional dog's mercury *Mercurialis perennis*;
- ruderal (stinging nettle *Urtica dioica* dominated) and scattered bramble scrub;
- bare ground and leaf litter;
- hard surface formed by crushed stone access drive;
- a patch of ornamental (mahonia) scrub;
- stone walls of the former barn and yard enclosure to the south side;

Habitat descriptions are mapped within appendix 1.

## 3.2 Data records and contextual information

3.2.1 The nearest National Network Site is the Wye Valley and Forest of Dean Bat Sites Special Area of Conservation (SAC), with the closest component being located 4.7km to the west / south-west. The site is identified (Forest of Dean District Council 2021) within the 1km buffer for lesser horseshoe maternity sites and 3km hibernation sites buffer, indicating that functionally linked roost sites to the SAC are present within 3km.

3.2.2 The nearest Site of Special Scientific Interest (SSSI) is May Hill SSSI located 595m to the west. Hobbs Quarry Longhope SSSI (a geological SSSI) is located 1.6km to the south. There are no other SSSIs within 2km.

3.2.3 Gloucestershire Centre for Environmental Records (GCER) identifies multiple Local Wildlife Sites within 2km. The nearest are: Newent Woods South-west immediately to the north of the site; Castle Hill and Cherry Wood (566m); Gander's Green Conservation Roadside Verge (538m); and, the unconfirmed local wildlife sites at: Ann's Acre Orchard 50m to the south-west; Glasshouse Hill Farm Field (240m); Home Farm Wood (770m); May Hill Farm (825m).

3.2.4 The site is located within an area of priority broadleaved woodland habitat according to MAGIC. The woodland to the immediate north is identified as forming part of a large block of ancient replanted woodland. There are further small parcels of broadleaved woodland and a high density of traditional orchards within 1km.

3.2.5 The landscape within 1km is characterised by: large tracts of coniferous and mixed plantation woodland on ancient woodland sites; a small scale field pattern with pastoral land use, hedgerows and frequent traditional orchards; and, a large tract of open grassland associated with May Hill. The site is located with in an edge of village setting.

3.2.6 The ecological survey of the land to the immediate north in 2018 identified presence of mixed plantation woodland, amenity grassland and patches of *Rhododendron* sp.. No invasive species were however recorded in 2023 within the survey boundary.

## 4. ECOLOGICAL EVALUATION

### 4.1 Habitat assessment

4.1.1 The Chartered Institute of Ecology and Environmental Management (CIEEM) (2020) sets out a geographical framework for evaluating key ecological features. The highest value is assigned to International level whilst features at the local or site level are considered of least ecological importance.

#### *Features of national or international level significance*

4.1.2 There are no such features present on or within the zone of influence of the proposed site.

#### *Features of County level significance*

4.1.3 The broadleaved woodland to the immediate south and west of the proposed development site would constitute a feature of county level significance through qualification as a Priority Habitat type within a high value ecological setting.

#### *Features of District level significance*

4.1.4 The woodland to the immediate north of the proposed site would constitute a district level site, identified as being ancient replanted woodland within a high value ecological setting.

#### *Features of local level significance*

4.1.5 There are no such features present on or within the zone of influence of the proposed site.

#### *Features of site level significance*

4.1.6 The ruderal and bramble scrub habitats would be considered of site level significance.

#### *Features of negligible ecological value*

4.1.7 Bare and exposed ground, remnant stone walls, ornamental shrub and hard surfaces would be considered to be of a negligible ecological value.

### 4.2 Protected and notable species assessment

#### *Invertebrates*

4.2.1 Figure 1 below details the habitat elements present and grading system applied as proposed by the Invertebrate Habitat Potential Assessment (IHPI) (Dobson and Fairclough 2021).

Habitat element	Site representation	Grading
<i>Decaying wood</i>	Absent	Absent
<i>Rotational management</i>	Absent	Absent

<i>Nectar resources</i>	Limited bramble, nettle and mahonia flower forage	Negligible
<i>Wet substrates</i>	Absent	Absent
<i>Open water habitats</i>	Absent	Absent
<i>Structural patchwork</i>	Ruderal – scrub - woodland	Minor
<i>Still air (sun traps)</i>	Absent	Absent
<i>Still air (humid)</i>	Within woodland	Moderate
<i>Connectivity</i>	Good continuity of woodland habitats adjacent to site	Major
<i>Ecolines</i>	Absent	Absent
<i>Bare earth</i>	Bare ground / leaf litter	Minor

Figure 1: Invertebrate habitat potential assessment

4.2.2 Figure 2 below collates the IHPI site assessment and biological records to provide an overall assessment of the site's potential value.

IHPA values from figure 3 for field parcel	E	E	E	E	E	D	E	C	B	E	D	Modal value	E
Primary ecological feature(s)	<ul style="list-style-type: none"> <li>Forms part of larger woodland habitat with still, humid air and structural patchwork.</li> </ul>												
Secondary feature(s)	<ul style="list-style-type: none"> <li>Lower woodland strata habitats – bare ground / leaf litter and some ruderal / scrub.</li> </ul>												
GCER records (UK BAP/ Nationally Scarce/Red List)	Noble chafer												
<i>Knot grass</i>	<i>Ghost moth</i>												
<i>Mouse moth</i>	<i>Wood white</i>												
<i>Sprawler</i>	<i>Grizzled skipper</i>												
<i>Green-brindled crescent</i>	<i>Small heath</i>												
<i>Rustic</i>	<i>Oak hook-tip</i>												
<i>Rosy rustic</i>	<i>Pale egger</i>												
<i>Large wainscot</i>	<i>Blood-vein</i>												
<i>Dusky brocade</i>	<i>Shaded broad-bar</i>												
<i>Sallow</i>	<i>Small phoenix</i>												
<i>Beaded chestnut</i>	<i>Pretty chalk carpet</i>												
<i>Brown spot pinion</i>	<i>Dusky thorn</i>												
<i>Cente-barred sallow</i>	<i>September thorn</i>												
<i>Deep brown dart</i>	<i>Brindled beauty</i>												
<i>Dark brocade</i>	<i>Buff ermine</i>												
<i>Powdered quaker</i>	<i>White ermine</i>												
<i>Feathered gothic</i>	<i>Dot moth</i>												
<i>Shoulder striped wainscot</i>	<i>Small square spot</i>												
<i>Western bee fly</i>													
Other likely notable associations	Moths, butterflies, ants, saproxylic beetles												

Overall assessment	Site considered to be of part of a County level potential significance given presence of qualifying features for woodland and proximity to habitats associated with notable moth, butterfly and saproxylic beetles – site itself of lower potential value given lack of tree cover.
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Figure 2: overall invertebrate potential assessment

**Amphibians**

4.2.3 There is no pond on the site. The nearest pond is located approximately 68m to the south-east within the corner of a grass field. This pond was assessed using the Habitat Suitability Index (HSI) (Oldham et al 2000).

Date HSI assessment undertaken	03/03/2023
Pond ref	
SI1 - Location	1
SI2 - Pond area	0.2
SI3 - Pond drying	0.5
SI4 - Water quality	0.67
SI4 - Shade	1
SI6 - Fowl	0.67
SI7 - Fish	1
SI8 - Ponds	1
SI9 - Terr'l habitat	1
SI10 - Macrophytes	0.6
HSI	0.70

Figure 3: HSI assessment



Image 9: pond 68m to south-east



- 4.2.4 Based upon this assessment, and application of the Lee Brady categorisation, this is equivalent to a 'good' quality pond for great crested newts. *Naturescape* indicates the site to be located within a red zone where broad scale presence of great crested newt would be considered highly likely.
- 4.2.5 The nearest record for great crested newts held by GCER is 1.07km to the NE. Taking account of the surrounding context and the HSI assessment, it is concluded that presence of great crested newt within the pond located 68m distant is likely. Most newts will be found within 50m of a pond, and the distribution beyond this distance drops off. However, this assessment should take account of the value of terrestrial habitat around the pond. In this instance, the woodland provides better quality habitat than the grazed pasture to the south and east sides of the pond. The probabilities of great crested newts being present on the site are therefore elevated despite being beyond the 50m buffer.
- 4.2.6 Features such as piles of stone rubble (target note 1) and deep leaf litter provide both foraging and sheltering opportunities for amphibians. The site is therefore considered to provide 'immediate' terrestrial habitat for great crested newt. This value will also extend to other amphibians such as common frog *Rana temporaria* and common toad *Bufo bufo*. The surrounding context, including a high density of ponds suggests a district to county level significance for great crested newt.

#### **Reptiles**

- 4.2.7 There are multiple records for several species of reptile held by GCER. The site however is within woodland shade and lacks structural diversity of vegetation. It is therefore considered very unlikely to provide suitable habitat for reptiles.

#### **Woodland and farmland birds**

- 4.2.8 MAGIC identifies the site as being within an area of significance for turtle dove *Streptopelia turtur*. GCER holds multiple records for a range of woodland and farmland birds. The nearby Newent Woods South-west Local Wildlife Site and May Hill Woodland SSSI are notable for their woodland bird populations.
- 4.2.9 The site is therefore considered to be within an area of district to county level significance for woodland birds. No suitable trees or bushes are present within the immediate development footprint although wider sensitivity would be attached as the site is located adjacent to broadleaved woodland habitat.

#### **Bats**

- 4.2.10 A small number of wall crevices were found within the stone walls. These were inspected with an endoscope and no evidence of roosting bats found. There were no trees on or within 20m adjacent to the site with potential to support roosting bats.
- 4.2.11 GCER holds records for: pipistrelle species *Pipistrellus sp.*; common pipistrelle; soprano pipistrelle *Pipistrellus pygmaeus*; brown long-eared bat *Plecotus auritus*; whiskered *Myotis mystacinus*; myotis sp. *Myotis sp.*; serotine *Eptesicus serotinus*; noctule *Nyctalus noctula*; lesser horseshoe *Rhinolophus hipposideros*; and, greater horseshoe *Rhinolophus ferrumequinum* within 2km. This includes a maternity roost site for brown long-eared and day roost for serotine within 500m. Given the surrounding landscape context, these records are unlikely to be fully representative of the range of species present.

4.2.12 The site is located within 2km of a lesser horseshoe maternity roost and 4km of a greater horseshoe hibernation site. Both are high value species and very likely to be use the site for foraging purposes.

4.2.13 Taking account of these local records, and based upon the framework for valuing bats in ecological impact assessment (Wray et al 2010), the site is likely to form part of an internationally valued landscape unit for foraging bats.

***Otter and water vole***

4.2.14 There are no no features on or adjacent to the site which would be considered suitable.

***Badger***

4.2.15 No evidence of setts, entrance holes, paths, latrines or foraging signs were observed during the survey and it is considered unlikely that the site is of significance for badgers.

***Hazel dormouse***

4.2.16 There are no suitable features on the site or immediately adjacent to support this species. The woodland within 10m of the site was considered to lack suitable features for sheltering or foraging individuals with wide, well spaced sycamore trees and lack of a developed shrub layer although it is noted that GCER holds multiple records within 2km.

***Hedgehog & other mammals***

4.2.17 Hedgehog has been recorded within 500m and is considered likely to occur locally, with the surrounding habitats considered to be highly supportive. The site would provide suitable foraging and potential refuge habitat, albeit over a relatively small area.

4.2.18 Polecat has not been recorded within 2km although its habitat requirements would be similar to hedgehog. This species, listed in the UK Priority Species Action Plan, could potentially use habitat on the site on a temporary basis. As such, the site would be considered of some limited but probably non-significant potential for this species.

4.2.19 Harvest mouse *Micromys minutus* has not been recorded within 2km although this may be more representative of a lack of survey effort. No evidence of any nesting was found on the site and it is considered unlikely that this species is present with a lack if suitable habitat.

**4.3 Wider biodiversity network & overall ecological significance**

4.3.1 The site is located within a high value area of habitats comprising plantation and broadleaved woodland, small scale field pattern with a high density of traditional orchards and large extent of open grassland on May Hill.

4.3.2 Ecological features present on the site have been assessed at a potential international level of significance in respect of foraging bats, and of a district to local level potential value in respect of: invertebrate assemblages; amphibians and birds.

4.3.3 Taking account of these considerations, the proposed site, at a preliminary stage, is considered to be of maximum local level of international significance based on the framework set out by the Chartered Institute of Ecology and Environmental Management (CIEEM 2020).

## **4.4 Legislative and planning context**

### ***Protected sites***

- 4.4.1 The Conservation of Habitats and Species Regulations 2017 (as amended) requires appropriate assessment of potential impacts from development to National Network Sites. The nearest site is a component of the Wye Valley and Forest of Dean Bat Sites SAC within 4.7km. As the site is considered to form part of the core sustenance zones for populations functionally linked to the SAC, application of the Regulations, Policy CSP.1 of the Forest of Dean Local Plan and paragraphs 174 (a) and 181 (c) of the NPPF.
- 4.4.2 The nearest local wildlife site (Newent Woods SW) is located within 10m to the north. The protection of this feature would be consistent with Policy CSP.1 of the Local Plan and Paragraph 174 (a) of the NPPF.

### ***Protected habitats***

- 4.4.3 Presence of broadleaved woodland has been identified on immediately adjacent land to the proposed development. This would be considered an irreplaceable habitat and protected through paragraphs 174 (a) and 180 (d) of the NPPF.

### ***Protected species***

- 4.4.4 The Conservation of Habitats and Species Regulations 2017 (as amended) and Wildlife and Countryside Act 1981 (as amended) are of relevance to the protection of any great crested newt and sheltering on the site.
- 4.4.5 Protection of the value of the site for foraging and commuting bats, as habitat for woodland birds and terrestrial habitat for amphibians is required through application of paragraph 174 (d) and Policy CSP.1 of the Local Plan.

### ***Mitigation, compensation and net enhancement***

- 4.4.6 Paragraphs 174 (d) 180 (a) of the NPPF and Policy CSP.1 of the Local Plan require any significant impacts to biodiversity to be mitigated through appropriate measures.
- 4.4.7 Net gain to biodiversity is set out within paragraph 174 (d) and Policy CSP.1 of the Local plan.

## **5. BIODIVERSITY CONSTRAINTS**

### **5.1 Habitats**

- 5.1.1 The proposed reconstruction will not directly impact trees or shrubs whilst an area of approximately 53m<sup>2</sup> of woodland soil habitat immediately adjacent will be impacted through construction activities. There is potential for indirect damage to protected adjacent broadleaved woodland and the designated Newent Woods SW through storage

of materials, use of machinery in and around the woodland habitat and spreading of excavated materials or excess cementous substances.

## **5.2 Protected or notable species**

- 5.2.1 Potential presence of great crested newt within the development area has been identified. Based upon Natural England's risk assessment tool, development of a footprint of 180m<sup>2</sup> (calculated at the original barn footprint plus yard to the south and working area around the sides of the structure) with any pond used by great crested newt located within 100m would likely result in an offence in respect of damage to terrestrial habitat.
- 5.2.2 Potential unlawful disturbance of individuals occupying a place of shelter as well as a risk of squashing individual newts, either through initial clearance of vegetation, soil, walls and piles of rubble as well as movement of stored materials could also occur.
- 5.2.3 A small number of crevices in the stone walls of the structure have the potential to provide nesting opportunities for small birds. There was some indication of nesting material inside one wall crevice. Demolition of the walls has the potential to disturb a nest site, which would be unlawful under the Wildlife and Countryside Act 1981 (as amended). The timing of any demolition works or repointing of retained stone walls should therefore take place outside of the period 1<sup>st</sup> March through 31<sup>st</sup> August.
- 5.2.4 The building has been identified within an area of high value for foraging bats. Measures to avoid adverse impacts through artificial lighting to bat flight will need to be designed into the renovated structure.
- 5.2.5 Presence locally of hedgehog suggests that any clearance of vegetation and leaf litter will need to be done carefully so as to avoid any harm to sheltering individuals.

## **5.3 Ecological networks**

- 5.3.1 Whilst the site is located within an ecologically sensitive area, the limited scale of the works and potential impacts suggest there will be no adverse impacts to ecological networks, subject to lighting controls to avoid adverse impact to the use of the adjacent habitats by foraging bats.

## **5.4 Further surveys required**

- 5.4.1 Any use of the pond located within 68m to the south-east would trigger potential offences under the Wildlife and Countryside Act 1981 (as amended). It would therefore be desirable, where possible, to determine presence or absence of great crested newt using an environmental DNA methodology. However, this pond is located on privately owned land outside of the control of the applicant. The neighbouring land owner are not inclined to have this survey.

## **5.5 Threshold for significance of impacts**

- 5.5.1 If great crested newts use the pond located 68m to the south-east, the threshold for significant potential impacts would be triggered.
- 5.5.2 Potentially significant impacts to bat foraging habitat may be reasonably designed out through appropriate lighting controls, particularly as the structure is intended to provide ancillary storage for the existing dwelling and woodland enterprises.
- 5.5.3 The damage of approximately 53m<sup>2</sup> of woodland soils and largely ruderal ground vegetation is not considered to represent a significant impact although measures to avoid any compaction or chemical spills would be appropriate given the status of this priority habitat.

## **6. BIODIVERSITY MITIGATION AND OPPORTUNITIES**

### **6.1 Habitat conservation**

- 6.1.1 No trees (other than sapling sycamore) will be felled to allow for the reconstruction of the barn. Any storage of building materials, mixing of cement / lime mortar, excavated materials, plant and machinery will be on existing areas of hard surfaced or bare ground so as to avoid damage to tree roots and soils. Any excess cement or concrete will be disposed off away from the site and under no circumstances will be tipped into woodland habitat. No washings from mixers or other mixing buckets will be disposed off within woodland habitat.
- 6.1.2 To protect the adjacent woodland, a protective fence formed by 2m *Heras* fence or similar will be erected prior to commencement within 3m of the existing barn footprint. This will be erected and maintained in accordance with BS5837 and located on appendix 2.

### **6.2 Site clearance and construction phase**

- 6.2.1 Cutting of vegetation in and around the working area, and demolition of walls will be carried out during the period 1<sup>st</sup> September through 28<sup>th</sup> February to avoid disturbance to nesting birds, or outside of this period if the site has been inspected by a suitably qualified ecologist and no evidence of nesting birds found in areas impacted by the works. Cutting will be carried out carefully by hand only so as to avoid the risk of harm to sheltering mammals.
- 6.2.2 Any excavated trenches will be lined with plastic sheet so as to prevent contamination of the adjacent soil with concrete.
- 6.2.3 Excavation of ground will be performed from tracked excavators working from the existing hard surfaces or working backwards across the footprint so as to avoid compaction of

soils adjacent. Plastic sheet will be erected on top of the ground adjacent to the barn prior to commencement to prevent mortar or other substances entering the soil.

6.2.4 Subject to no evidence of great crested newts being present within the pond located to the south-east through eDNA negative test, precautionary measures to avoid any risk of harm to sheltering amphibians will be as follows:

- (i) any clearance of piles of rubble, disturbance to base of stone walls will be by hand only – any amphibians (with the exception of any great crested newt) found will be removed carefully and relocated within woodland well away from the construction site;
- (ii) surface vegetation will be removed carefully to ground level prior to any demolition of walls or excavation of footings;
- (iii) storage of materials, welfare units or skips will be on pallets or similar to raise them off the ground to prevent them from being attractive shelters and subsequent squashing of amphibians when moved.

6.2.5 To provide a replacement for any loss of sheltering habitat for amphibians, a surface hibernacular measuring 2m x 2m will be created outside of the construction area. This will be formed through course rubble with a plastic pipe leading to the core and capped with soil.

### **6.3 Building design features**

6.3.1 The following lighting restrictions will be applied to the reconstructed building:

- (i) no external lighting units will be fitted to the structure;
- (ii) any wired fixed circuit internal lighting within 2m of a glazed opening will be recessed spot type with a directional mount, pointed away from the glazed opening;
- (iii) any internal lighting will be fitted with a maximum 5 Watt LED bulb in warm white tone (<2750K).

6.3.2 Details of lighting will be supplied with the planning application to allow for appropriate assessment of potential impacts to the bat foraging habitat. This will include details of positioning, unit type and maximum strength bulb.

6.3.3 To compensate for the loss of bird nesting habitat within the stone walls, at least two wall crevices with a 30mm wide aperture will be formed on north or east facing elevations above 2m on height.

### **6.4 Biodiversity enhancement**

6.4.1 An area of 250m<sup>2</sup> of adjacent woodland habitat will be managed through coppicing of existing shrubs, selective thinning of sycamore and conifers (subject to any necessary

felling licenses or other consents) and underplanting of the canopy with a mixture of native shrubs in bare root whip form comprising: 50% hazel; 20% field maple; 10% hawthorn; 5% crab apple; 5% holly; 5% dogwood; 5% blackthorn. Whips will be planted at 2m centres.

6.4.2 To provide additional bird nesting habitat and new bat roosting habitat, the following integrated boxes / tubes will be included :

- (i) 1 x woodstone or similar bat tube fitted to the south elevation at the apex of the gable end;
- (ii) 1 x 28mm aperture woodstone or similar bird box on the north or east elevations at 2m or higher.

6.4.3 A hedgehog hibernation box will be installed as located in appendix 2.

## **6.5 Preliminary evaluation of the site and its ability to accommodate development**

6.5.1 The site is located within a high value ecological area, with sensitive woodland habitats on adjacent land.

6.5.2 The potential impacts of the proposals may however be reasonably avoided through sympathetic design, timing and careful working.

6.5.3 In absence of any conclusive survey data, the presence of great crested newt should be assumed within a pond located 68m to the south-east. It is therefore considered that there would be a high risk of an offence under the Wildlife and Countryside Act 1981 (as amended) and likely offence under the Conservation of Habitats and Species Regulations 2017 (as amended) occurring. A licence under the Regulations through the District Licensing Scheme would therefore be required prior to commencement.

6.5.4 The enhancement of adjacent woodland habitat and enhancements for nesting birds, bats and hedgehogs will deliver net enhancement for biodiversity.

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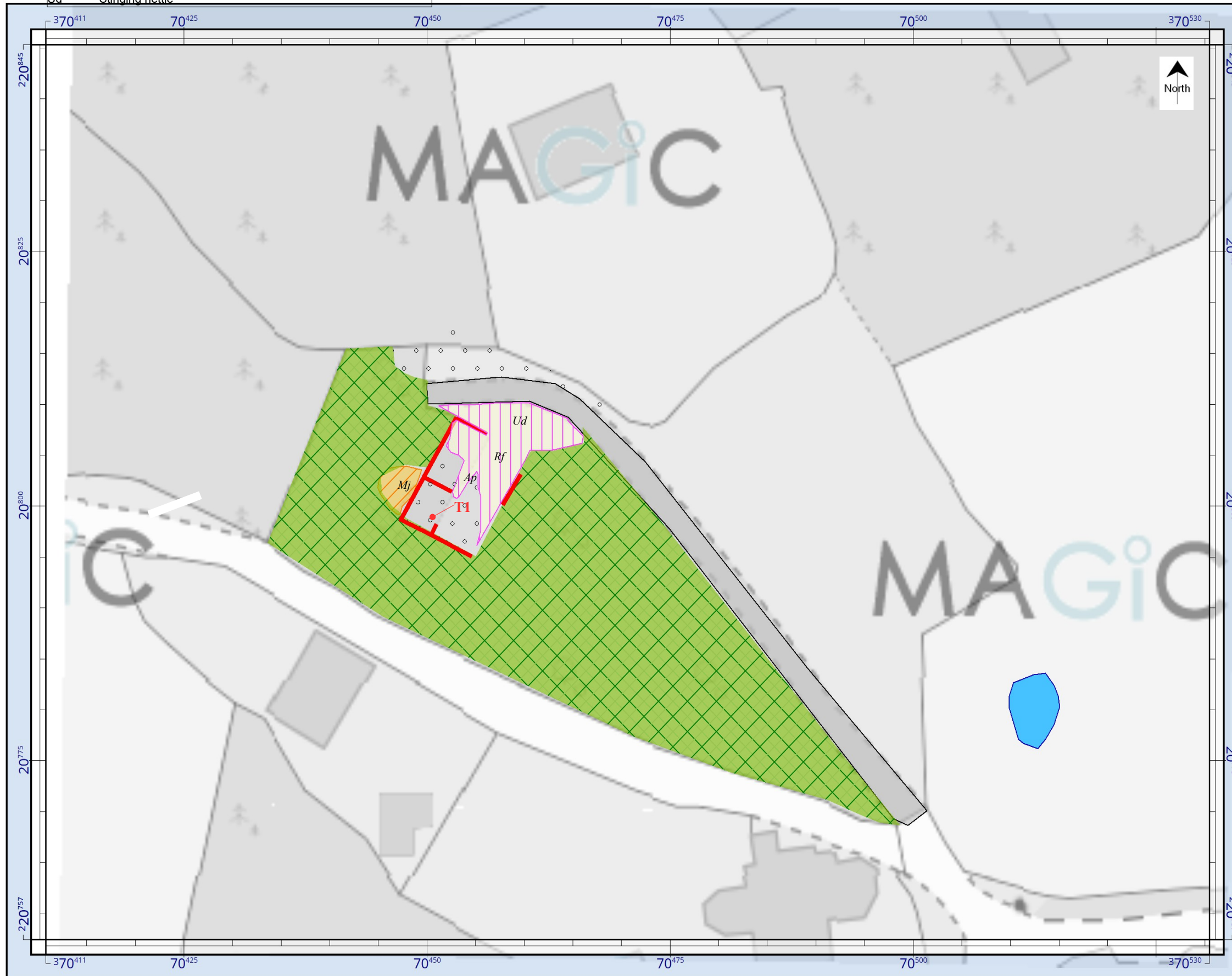
Key to species code:

Ap Sycmaore  
 Mj Mahonia  
 Rf Bramble  
 Ud Stinging nettle

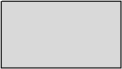







Target note record:

T1 – pile of stone rubble with potential for sheltering amphibians

Preliminary Ecological Appraisal Report,  
 barn reconstruction, The Folly, Folly Lane,  
 May Hill, Longhope, Gloucestershire GL17  
 ONP



Key

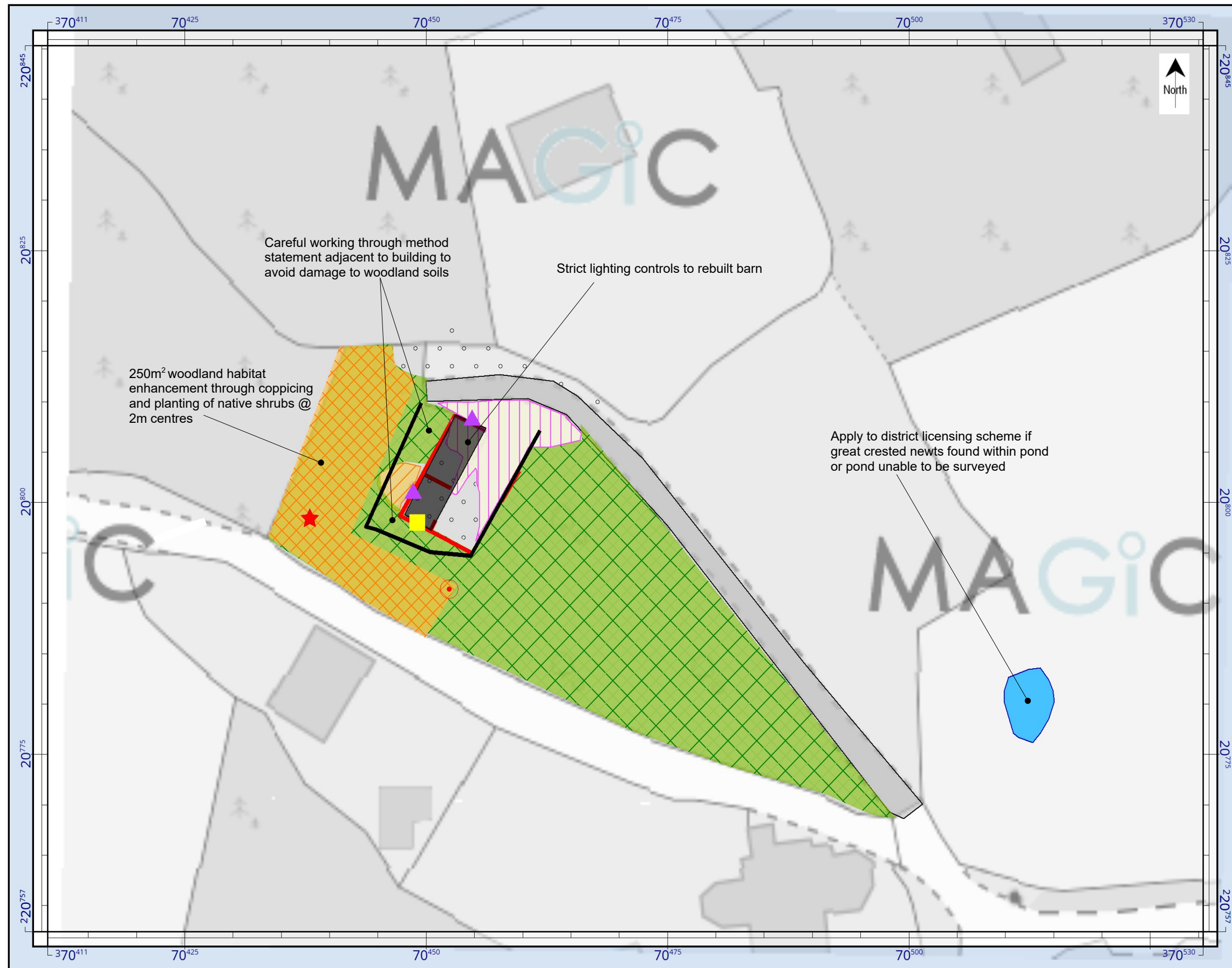
-  crushed stone access drive
-  broadleaved woodland
-  ruderal
-  bare ground
-  ornamental shrubs
-  pond
-  wall
-  target note

Drawing title: Phase 1 habitat plan  
 Drawing ref: Appendix 1  
 Version: v1.1  
 Date: 03/05/23  
 Drawn by: S. Rampling MCIEM  
 Date survey: as at 20/03/23

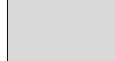













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Key

-  crushed stone access drive
-  broadleaved woodland
-  ruderal
-  bare ground
-  ornamental shrubs
-  pond
-  wall
-  reconstructed barn
-  woodland enhancement - shrub planting
-  protective fence during construction
-  hedgehog box
-  bat tube / box
-  28mm aperture bird box / wall crevice
-  amphibian hibernacula

Drawing ref: Appendix 2  
Version v1.2  
Date: 04/05/23  
Drawn by: S. Rampling MCIEEM  
Date survey: as at 20/03/23

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