



# Preliminary Roost Assessment (PRA) / Preliminary Ecological Appraisal (PEA) at Hayes Manor Barn, Viney Hill

June 2023



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## 1 Executive summary

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- 1.1.1 In May 2023, MPEcology were commissioned by Mr J Falter to undertake a Preliminary Roost Assessment (PRA) and Preliminary Ecological Appraisal (PEA) at a rural residential property in Viney Hill.
- 1.1.2 A Phase 1 habitat survey and daytime inspection for bats was carried out by MPEcology on the 30th May 2023. A note of the habitat in relation to the UK Habitat Classification and incidental observations of plant and animal species were also made.
- 1.1.3 The residential property was subject to a daytime inspection on the same visit. During the visit the building was searched by an experienced, licensed bat worker in order to locate evidence of current or past bat roosts, in the form of bats, droppings, staining, feeding signs, and/or remains of bats.
- 1.1.4 The nearest statutory designated site identified in proximity to the site was Clarke's Pool Meadow Site of Special Scientific Interest (SSSI) and Gloucestershire Wildlife Trust Reserve. The SSSI lies approximately 0.91km to the east and is noted for its species-rich grassland. In addition to the SSSI, two sites of international importance were noted: Severn Estuary Special Area of Conservation (SAC) and Special Protection Area (SPA), 1.92km to the south-east; and the Wye Valley and Forest of Dean Bat Sites SAC, 4.14km to the north.
- 1.1.5 Hayes Manor Barn is an existing residential property with gardens to the front and rear. The property is located on a south-east facing slope in a rural location. The surrounding landscape included stock-grazed pastures and two woodland blocks. The woodlands: Hayes Wood; and Hayes Wood East), are both listed as ancient woodland on the inventory of Natural England.
- 1.1.6 The proposed development involves the conversion of an existing garage and open-fronted byre.
- 1.1.7 Evidence to suggest use of the open-fronted byre by bats was found. Based on the location of droppings, the structure was suspected of being used as a night roost by Greater Horseshoe bats. Further survey work will be required to characterise use of the open-fronted byre by bats. Given the presence of droppings and crevice features with potential for use by (other) bat species, three emergence / roost return surveys are recommended. Deployment of a static bat detector should also be carried out to remotely monitor activity at the suspected night-roost.
- 1.1.8 Given the confirmed presence of bats, conversion of the structure would be illegal without a European Protected Species development licence from Natural England.

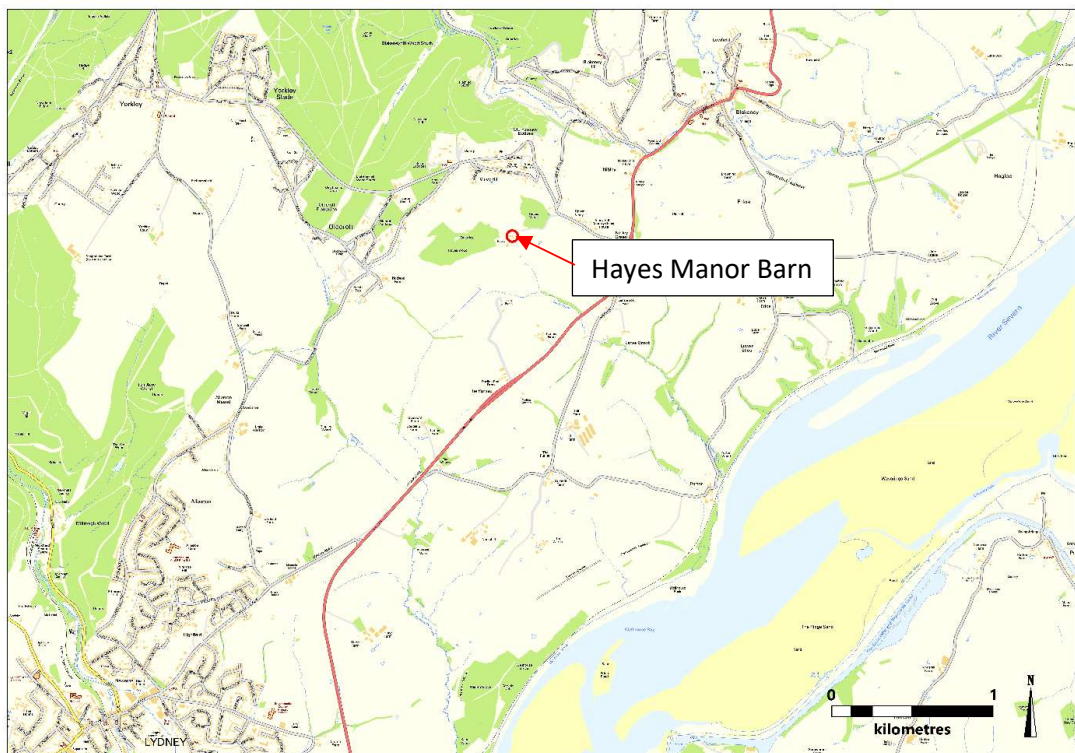
## 2 Introduction

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### 2.1 Background

- 2.1.2 In May 2023, MPEcology were commissioned by Mr J Falter to undertake a Preliminary Roost Assessment (PRA) and Preliminary Ecological Appraisal (PEA) at a rural residential property in Viney Hill (hereafter also referred to as ‘the site’).
- 2.1.3 The site is located to the north-east of Lydney within the administrative boundary of The Forest of Dean District Council (National Grid Reference SO 6583 0615).

**Figure 1:** Location of the site.



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### 2.2 Purpose of this document

- 2.2.1 The purpose of the report is to provide an overview of potential ecological constraints to planned development at the site.

## **3 Legislation, planning policy and guidance**

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### **3.1 The Conservation of Habitats and Species Regulations 2017**

- 3.1.1 Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, known as the ‘Habitats Directive’ and the Birds Directive (Council Directive 2009/147/EC (which codifies Directive 79/409/EEC) for rare, vulnerable and regularly occurring migratory bird species and internationally important wetlands. The requirements of the Habitats Directive and the Birds Directive are transposed into UK legislation by ‘The Conservation of Habitats and Species Regulations 2017, commonly known as the ‘Habitats Regulations’.
- 3.1.2 The Habitats Regulations allow for the designation of both Special Protection Areas (SPAs) for birds and Special Areas of Conservation (SACs) for the protection of other species and habitats. These protected areas are collectively known as the Natura 2000 network of sites. Species listed under the Habitats Regulations are known as European Protected Species (EPS) and are afforded a higher level of protection. EPS including Great Crested Newts, Otter and all species of bat are fully protected under UK law making it an offence to kill, injure or disturb EPS and to destroy any place used for rest or shelter.

### **3.2 Wildlife and Countryside Act 1981 (as amended)**

- 3.2.1 The Wildlife and Countryside Act 1981 (as amended) (WCA) is the principal legislation relating to wildlife protection in the United Kingdom. The Act provides for the designation of Sites of Special Scientific Interest (SSSI), which are selected as the best national examples of habitat types, sites with notable species and sites of geological importance.
- 3.2.2 Schedules 1-4 of the Act deal with the protection of wild birds. Schedule 5 of the Act details with the protection of other animal species. Full protection is given under Section 9 of the Act to certain animals listed on Schedule 5, including all species of bats. Partial protection under Section 9 is given to certain other species, including all common species of reptile. Schedule 8 of the Wildlife and Countryside Act details protection for plants and fungi. It is an offence to knowingly cause the spread, into the wild, of plants listed on Schedule 9 of the Act.
- 3.2.3 Special penalties are available for offences related to birds listed on Schedule 1 of the Act and there are additional offences of disturbing these birds at their nests, or their dependent young, as well as the strict protection afforded to birds, their nests and eggs.

### **3.3 The Countryside and Rights of Way Act 2000**

- 3.3.1 The Countryside and Rights of Way Act 2000 (CRoW Act) primarily deals with the rights of members of the public to access the countryside. The CRoW Act updated and strengthened the legal protection for designated sites (such as SSSIs) as well as certain species. In particular, the CRoW Act strengthened legislation by introducing the offence of ‘reckless disturbance’. Section 74 of CRoW Act placed a statutory duty on government departments to have regard to biodiversity conservation and requires the preparation and maintenance of lists of priority species and habitats. Some of the provisions set out in CRoW Act have

been incorporated into amendments to the WCA or have been superseded by the Natural Environment and Rural Communities Act 2006 (NERC 2006).

### 3.4 National Planning Policy Framework (NPPF) (2018)

3.4.1 The revised National Planning Policy Framework (NPPF) was published in July 2018 and sets out the framework by which government intends growth to be achieved, whilst protecting the natural and historic environment for future generations. In particular paragraph 175 states:

3.4.2 When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- *if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

### 3.5 Forest of Dean Adopted Local Plan

3.5.1 The Local Plan was adopted and published in February 2012 and is intended to provide a planning framework which guides development until 2026<sup>1</sup>. The plan establishes broad principles about acceptable levels of development in both the towns and the countryside and creates a policy framework that sets the scene for future planning decisions. In particular, it determines how, where and when various kinds of development will be distributed around the District. The Development Strategy is articulated through a number of “Core Policies”.

3.5.2 The following policy was considered relevant to the project:

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<sup>1</sup> <https://www.fdean.gov.uk/planning-and-building/planning-policy/>

**Core Policy CSP.1:** Design, environmental protection and enhancement (strategic objective: providing quality environments).

3.5.3 *The design and construction of new development must take into account important characteristics of the environment and conserve, preserve or otherwise respect them in a manner that maintains or enhances their contribution to the environment, including their wider context. New development should demonstrate an efficient use of resources. It should respect wider natural corridors and other natural areas, providing green infrastructure where necessary.*

3.5.4 *In achieving the above, the following will be considered:*

- *The effect of the proposal on the landscape including AONBs and any mitigation/enhancement that is necessary or desirable;*
- *The impact on any protected sites (natural and historic sites and heritage assets and potential for avoiding and/ or mitigating any impacts, or providing enhancement, should the development be acceptable;*
- *The requirements of the management plans of the AONBs;*
- *Whether the existing infrastructure is adequate- additional provision will be required where it is not;*
- *Whether the development is at risk from flooding, whether it can be permitted taking into account any risks, and the sequential approach and any mitigation that may be necessary to ensure the development is safe and flood risk is not increased elsewhere;*
- *The impact of the development on any land contamination or risk to the development from ground instability including the mining legacy- Proposals must undertake appropriate remediation measures and verification works where contamination and /or stability issues are identified;*
- *The potential for the development to cause pollution and any mitigation measures to avoid pollution or make environmental improvements where existing problems occur;*
- *The provision of water supply and the development's impact on groundwater, watercourses and any protected abstractions;*
- *Any potential impact on the sterilisation of mineral resources and consideration of the potential for the prior extraction of those mineral resources ahead of development Proposals for waste minimisation and management.*

*Development that is not able to be satisfactorily accommodated in respect of the above will not be permitted.*

**Core Policy CSP.2** - Climate Change Adaptation (Strategic objective: thriving sustainable communities)



3.5.5 *Proposals for development will be required to demonstrate that their design and layout will reduce the impacts of climatic change as identified in national, regional and local predictions over the lifetime of the development concerned. The following should be addressed in an integrated way, demonstrating that one element benefits another:*

*Water management*

- *Improving water efficiency - proposals should demonstrate high levels of water efficiency. Rain water harvesting and grey water recycling systems should be incorporated unless it can be demonstrated that it is not appropriate in a specific location.*
- *Managing surface run off- Sustainable Drainage Systems (SUDS) and measures to reduce or avoid water contamination and safeguard ground water supply should be incorporated into all development unless it can be demonstrated that this is not appropriate in a specific location.*
- *Flood risk- ensuring that risks (including changing risks due to climate change) are taken account of in new development, including improving resistance, resilience and safety of the areas concerned.*

*Heating and cooling*

- *Proposals will be required to demonstrate how the development comprehensively utilises passive solar gain and provides cooling for buildings, gardens and communal areas at the appropriate times of the year.*

*Biodiversity*

- *Developments must support green infrastructure corridors that link to existing habitat features and networks. They must show that the integrity of any affected nature conservation sites is not compromised by the development proposed. Proposals that prevent or restrict network connections will not be supported.*
- *Developments will be required to make long lasting biodiversity enhancements which could include the creation of new habitats where these would be appropriate. They should support existing features (trees, ponds, hedgerows etc), provide and manage public open space and should also provide additional features for a wide variety of species and habitats in appropriate locations throughout the development. Additional features provided should be consistent with the characteristics of the surrounding area.*

## 4 Methodology

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### 4.1 Desk study

- 4.1.1 A search for existing records of protected or otherwise notable species within 1km of the site was commissioned from the Gloucestershire Centre for Environmental Records (GCER). GIS resources of Natural England (NE) were also used to identify nearby statutory designated sites.

### 4.2 Extended phase 1 habitat survey

- 4.2.1 A Phase 1 habitat survey of the site following standard methodology (IEA, 1995) was carried out by MPEcology on the 30<sup>th</sup> May 2023. During the site visit, each distinct habitat type was mapped and target noted according to categories set out by the Joint Nature Conservation Committee (JNCC, 2010). A note of the habitat in relation to the UK Habitat Classification<sup>2</sup> and incidental observations of plant and animal species were also made.

### 4.3 Daytime building inspection for bats

- 4.3.1 During the visit a search was undertaken by an experienced, licensed bat worker to locate evidence of current or past bat roosts, in the form of bats, droppings, staining, feeding signs, and/or remains of bats.

### 4.4 Surveyor

The lead surveyor and author of this report was Matthew Pickard (BSc., MSc.), an ecologist with over 20 years environmental consultancy experience, a Chartered Environmentalist (CEnv), full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) and a licensed bat (CL18-2015-12416-CLS) and great crested newt surveyor.

### 4.5 Survey limitations

- 4.5.1 Seasonal timing was not considered to be a constraint to assessment of the site.

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<sup>2</sup> <https://ukhab.org/>

## 5 Baseline Conditions

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### 5.1 Statutory Designated Sites

5.1.1 The nearest statutory designated site identified in proximity to the site was **Clarke's Pool Meadow** Site of Special Scientific Interest (SSSI) and Gloucestershire Wildlife Trust Reserve. The SSSI lies approximately 0.91km to the east and is noted for its species-rich grassland. In addition to nationally significant sites, two sites of international importance were noted:

5.1.2 The Severn Estuary lies approximately 1.92km to the south-east. The Severn Estuary is afforded protection under the following designations:

- **Severn Estuary Special Protection Area (SPA)** - An estuary with a large tidal range supporting extensive intertidal mud and sand-flats, rocky platforms and islands. The estuary supports over-wintering or on-passage bird populations of European importance including: Bewick's Swan (*Cygnus columbianus bewickii*); Curlew (*Numenius arquata*); Dunlin (*Calidris alpina alpina*); Pintail (*Anas acuta*); Redshank (*Tringa totanus*); Shelduck (*Tadorna tadorna*); and Ringed Plover (*Charadrius hiaticula*). In addition, the site qualifies as a wetland of international importance for regularly supporting an assemblage of at least 20,000 waterfowl;
- **Severn Estuary Ramsar** - An estuary supporting over-wintering birds, feeding and nursery grounds for a diverse assemblage of fish, as well as providing passage to spawning rivers for migratory fish including Salmon (*Salmo salar*), Sea Trout (*Salmo trutta*), Sea lamprey (*Petromyzon marinus*), Twaite Shad (*Alosa fallax*) and Eel (*Anguilla Anguilla*);
- **Severn Estuary Special Area of Conservation (SAC)** – Annex I habitats forming a primary reason for site selection: 1130 Estuaries; 1140 Mudflats and sandflats not covered by seawater at low tide; and 1330 Atlantic salt meadows (*Glaucopuccinellietalia maritimae*). Annex I habitats present as a qualifying feature: 1110 Sandbanks which are slightly covered by sea water all the time; and 1170 Reefs. Annex II species that are a primary reason for site selection: 1095 Sea lamprey (*Petromyzon marinus*); 1099 River lamprey (*Lampetra fluviatilis*); and 1103 Twaite shad (*Alosa fallax*); and
- **Severn Estuary and Upper Severn Estuary SSSIs** – The SSSIs encompasses extensive areas of mudflat and sandbanks as well as saltmarsh and adjacent neutral and improved grasslands used by overwintering wildfowl. The Severn Estuary SSSI forms the basis of the Severn Estuary SPA and Ramsar site.

5.1.3 Component parts of the Wye Valley and Forest of Dean Bat Site SAC were also identified:

- **Wye Valley and Forest of Dean Bat Sites SAC** – Thirteen component SSSIs which provide habitat supporting the largest concentration of Lesser Horseshoe bats in the UK as well as significant numbers of Greater Horseshoe bats. Component SSSIs within 10km included Buckshaft Mine and Bradley Hill Railway Tunnel SSSI (4.14km), Devil's Chapel Scowles SSSI (5.13km) and Old Bow and Old Ham Mines SSSI (7.93km).

5.1.4 SSSIs within 5km (not associated with SACs / SPAs) included:

- **Clarke's Pool Meadow SSSI** – semi-natural grassland managed for hay and grazing, supporting Green-winged Orchid (*Orchis morio*), Twayblade (*Listera ovata*), Adder's-tongue (*Ophioglossum vulgatum*) and Meadow Saffron (*Colchicum autumnale*);
- **Meezy Hurst SSSI** – a geological site noted for its Upper Carboniferous Westphalian exposures, located approximately 2.87km to the north-west;
- **Purton Passage SSSI** - a geological site noted for its fossiliferous Silurian era rocks containing bone beds with primitive fish remains, located approximately 3.05km to the south-east;
- **Oakenhill Railway Cutting SSSI** - a geological site presenting a sequence of Carboniferous era shales, sandstone and coals, located approximately 3.2km to the north-west;
- **Lydney Cliff SSSI** – a geological site with two important fish-bearing sequences of the Upper Silurian- Lower Devonian. Located approximately 3.9km to the south; and
- **Soudley Ponds SSSI** – a series of ponds situated along the Soudley Brook supporting wetland habitat bordered by damp woodland. Located approximately 4.44km north.

5.1.5 The development falls within a SSSI Impact Risk Zone (IRZs) of Natural England<sup>3</sup>. New residential of 50 units require consideration however, the proposals involve replacement rather than new residential development.

## 5.2 Locally Designated Sites

5.2.1 GCER provided information on a single Conservation Road Verge (CRV) within 1km of Hayes Manor Barn. The CRV was:

- **Nibley Green CRV091** – a lowland calcareous grassland road verge, located approximately 634m to the west;

5.2.2 No direct or indirect impact to any of SNCIs is envisaged by the proposed development.

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<sup>3</sup> [SSSI Impact Risk Zones \(England\) | SSSI Impact Risk Zones \(England\) | Natural England Open Data Geoportal \(arcgis.com\)](#)

### 5.3 Habitats

5.3.1 Hayes Manor Barn is an existing residential property with gardens to the front and rear. The property is located on a south-east facing slope in a rural location. The surrounding landscape included stock-grazed pastures and two woodland blocks. The woodlands: Hayes Wood; and Hayes Wood East), are both listed as ancient woodland on the inventory of Natural England<sup>4</sup>.

#### Trees

5.3.2 No trees with bat roosting potential were identified in proximity (<30m) of the property.

#### Amenity grassland and garden

5.3.3 The mown amenity grassland associated with the site was relatively impoverished. The dominant species were Perennial Ryegrass (*Lolium perenne*), Yorkshire-fog (*Holcus lanatus*), Cock's-foot (*Dactylis glomerata*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Common Bent (*Agrostis capillaris*), Dandelion (*Taraxacum officinale* agg) and Creeping Buttercup (*Ranunculus repens*). Red Fescue (*Festuca rubra*) and Meadow Foxtail (*Alopecurus pratensis*) were also evident within a small area of uncut lawn (no-mow May) at the front (eastern side) of the house. The lawns typically attained a species count of <9/m<sup>2</sup>.

	<p><b>Photo 1:</b> Garden south-west of the property.</p>
	<p><b>Photo 2:</b> Mown amenity grassland to the north of the property.</p>

<sup>4</sup> [www.data.gov.uk](http://www.data.gov.uk)

## Buildings

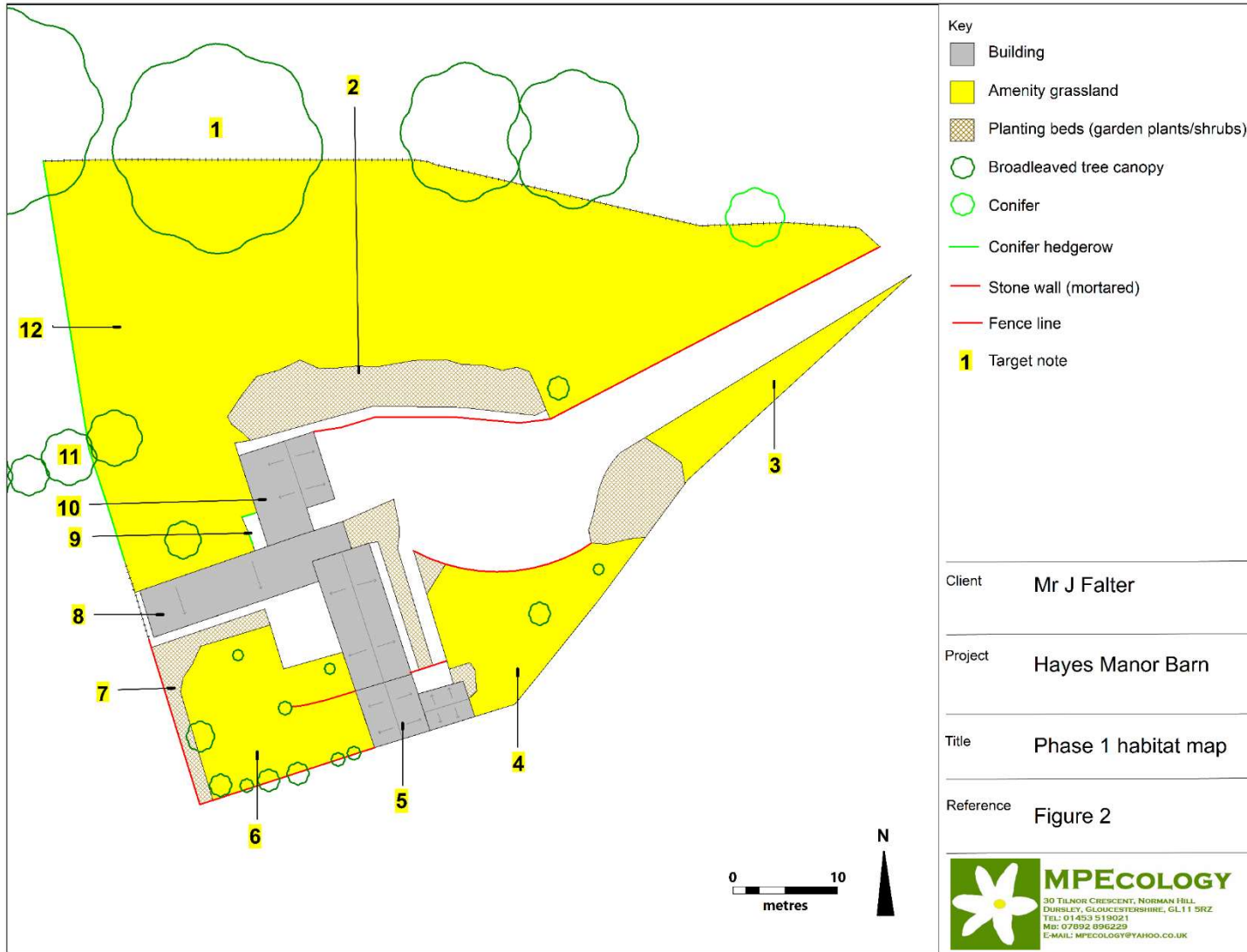
- 5.3.4 The property comprised a converted stone-built barn with clay-tiled roof. A single storey double-garage was present to the north-east and an open-sided byre to the west. Please refer to Appendix 1 for further detail.



**Photo 3:** Converted barn and garage viewed from the east.



**Photo 4:** Converted barn and open-sided byre viewed from the west.



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**Table 5.1 Phase 1 habitat survey target notes**

Target note (TN)	Description
1	Trees. Semi-mature broadleaf trees, shrubs and fence line at the northern boundary.
2	Planting bed. Steep slope with a mix of ornamental shrubs and bedding plants.
3	Hardstanding. Driveway and parking area.
4	Amenity grassland. Lawn left to grow for 'no-mow May'. The lawn supported a sward of grasses dominated by Red Fescue although it lacked significant herb cover.
5	Building. Residential property consisting of a converted barn and small extension to the south. Please refer to Appendix 1 for greater detail.
6	Amenity grassland. Mown amenity grassland dotted with a few small ornamental trees/shrubs (<2m high).
7	Planting bed. Mix of shrubs and bedding plants punctuated by small ornamental trees (<4m high).
8	Building. Open-fronted byre.
9	Oil tank. Tank with a visual screen comprising a Laurel ( <i>Prunus laurocerasus</i> ) hedge.
10	Building. Double garage.
11	Hedgerow. A hedgerow consisting of outgrown shrubs meets the north-western end of the garden. A single Hawthorn ( <i>Crataegus monogyna</i> ) falls within the garden although further to the west the hedgerow/tree line included Hazel ( <i>Corylus avellana</i> ), Ash ( <i>Fraxinus excelsior</i> ) and Silver Birch ( <i>Betula pendula</i> ).
12	Amenity grassland. Mown lawn supporting a species-poor sward of Perennial Ryegrass ( <i>Lolium perenne</i> ), Cock's-foot ( <i>Dactylis glomerata</i> ), Yorkshire-fog ( <i>Holcus lanatus</i> ), Sweet Vernal-grass ( <i>Anthoxanthum odoratum</i> ), Common Bent ( <i>Agrostis capillaris</i> ) and Creeping Buttercup ( <i>Ranunculus repens</i> ). The sward attained a species count of <9/m <sup>2</sup> .



## 5.4 Desk study

5.4.1 A total of 622 records of protected or otherwise notable species were returned by GCER within 1km of the site. The majority were field records of birds. GCER records are discussed further in relevant categories below:

## 5.5 Protected, rare or notable plant species

5.5.1 GCER returned 2 records of flowering plants within 1km: Bluebell (*Hyacinthoides non-scripta*); and Cut-leaved Germander (*Teucrium botrys*). However, no protected or notable species were present or would be expected from the proposed construction area.

## 5.6 Amphibians

5.6.1 GCER did not return any records of amphibians within 1km of the site. Five ponds were identified using Ordnance Survey mapping (see Figure 3 below). Common and widespread species such as Common Frog (*Rana temporaria*), Common Toad (*Bufo bufo*) and Palmate Newt (*Lissotriton helveticus*) may be expected to occur locally.

**Figure 3:** Ponds within 500m



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5.6.2 The study area falls within an area of suitability for Great Crested Newts where they are considered likely to occur (Nature Space amber zone<sup>5</sup>). However, data available via DEFRA<sup>6</sup>

<sup>5</sup> [https://naturespaceuk.com/wp-content/uploads/2022/02/Stroud-District-Council\\_Impact-Risk-Zones.pdf](https://naturespaceuk.com/wp-content/uploads/2022/02/Stroud-District-Council_Impact-Risk-Zones.pdf)

<sup>6</sup> <https://magic.defra.gov.uk/>

provided no confirmation of Great Crested Newts from nearby waterbodies (within 1km). The nearest confirmed record being near Gatcombe approximately 1750m to the south-east. Given the distances from potential breeding ponds and habitat associated with the buildings at Hayes Manor Barn, Great Crested Newts are not considered likely to occur within the proposed construction areas.

## 5.7 Reptiles

- 5.7.1 GCER returned no records of reptiles within 1km of the site. Commonly occurring reptiles may occur at the periphery of the property but are unlikely to be associated with habitat of the proposed construction area.

## 5.8 Invertebrates

- 5.8.1 GCER returned 7 records of moths within 1km of the site. Habitat associated with the proposed construction area was considered of limited potential for invertebrates although habitat associated with the wider landholding is likely to support a suite of invertebrate species with trees / woodland forming the focus of interest.

## 5.9 Breeding birds

- 5.9.1 GCER returned 584 records of birds within 1km of the site. Common breeding birds may be associated with trees at the periphery of the site. The only species identified using the site during the visit was House Sparrow (*Passer domesticus*). House Sparrow is a red-listed bird species of conservation concern (Stanbury et al, 2021) and was noted nesting at the eaves on the east-facing side of the property.

## 5.10 Bats

### Data search

- 5.10.1 Gloucestershire supports a diverse bat fauna and a range of bat species would be expected to occur locally. GCER returned 19 local records identifying the presence of Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Brown Long-eared (*Plecotus auritus*), Noctule (*Nyctalus noctula*), Leisler's (*Nyctalus leisleri*), Serotine (*Eptesicus serotinus*), Greater Horseshoe (*Rhinolophus ferrumequinum*) and Netterer's (*Myotis nattereri*). Other species such as Lesser Horseshoe (*Rhinolophus hipposideros*) would also be expected locally.

### Daytime inspection

- 5.10.2 Droppings confirming the presence of bats were found at the western end of the open byre during daytime inspection of the property. The droppings were considered likely to indicate use of the structure as a night roost for Greater Horseshoe bats. A sample of droppings was retained for DNA analysis. Further detail on findings of the daytime inspection can be found in Appendix 1.

## 5.11 Badgers

- 5.11.1 No evidence of Badgers (*Meles meles*) was found during the visit and this species was not considered likely to be impacted by proposals.

## 5.12 Other mammals of conservation concern

- 5.12.1 GCER retained 9 records of Hedgehog (*Erinaceus europaeus*) at Viney Hill and a single record of Water Shrew (*Neomys fodiens*). Hedgehogs are likely to occur locally although no features with potential to offer refuge are considered likely to be impacted by proposals.

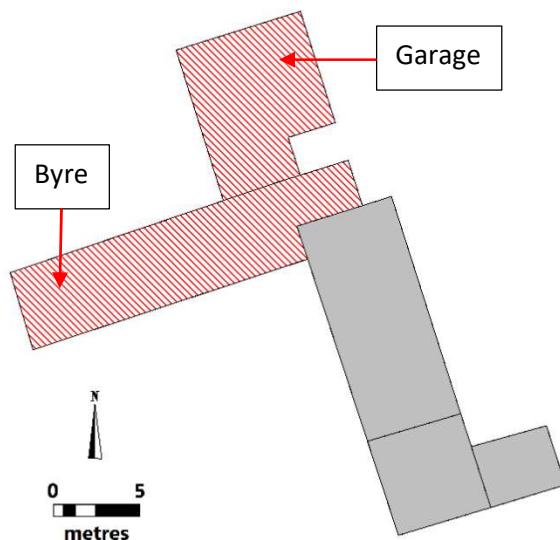
## 6 Assessment

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### 6.1 Proposed development plan

- 6.1.1 The proposals involve the conversion of the open-fronted byre and double garage at the northern and north-western ends of the property. Building works are not likely to impact any significant areas of semi-natural habitat (amenity grassland / planting beds) given the abundance of surrounding hard-standing providing working areas.
- 6.1.2 Only internal works are proposed for the garage (including installation of a ceiling) and no impact to bats is expected. Conversion and subsequent enclosure of the open-fronted byre would exclude any bats currently using the building and will require further investigation.

**Figure 4:** Proposals



### 6.2 Important ecological features

#### Habitats

- 6.2.1 The footprint of the proposals is centered over existing structures accessible via areas of existing hard-standing.

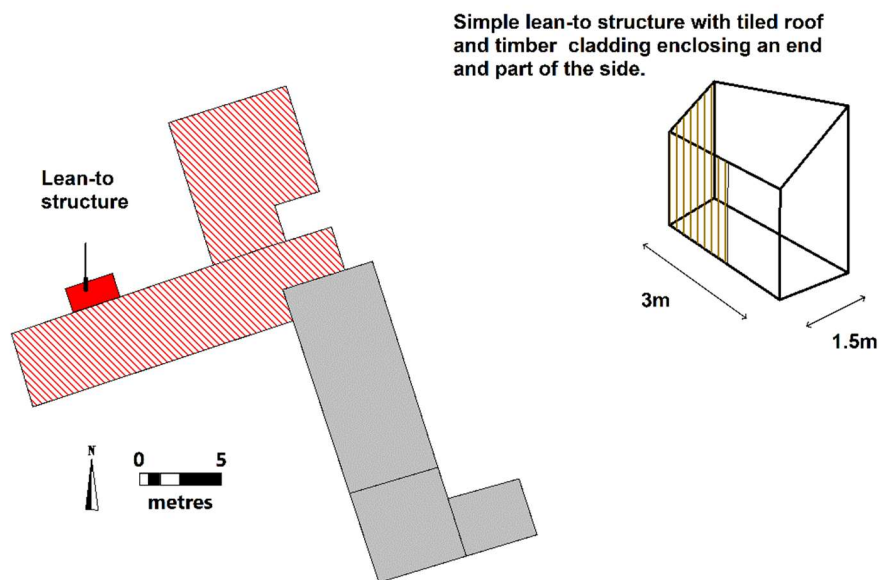
#### Species

##### Bats

- 6.2.2 Evidence to suggest use of the open-fronted byre by bats was found. Based on the location of droppings, the structure was suspected of being used as a night roost by Greater Horseshoe bats. Night roosts are considered to play a valuable function for foraging Lesser Horseshoe bats by minimising distances to feeding sites, therefore allowing bats to rest and digest between foraging bouts (Knight & Jones, 2009). It is likely that night roosts are of similar importance to Greater Horseshoe bats.

- 6.2.3 Further survey work will be required to characterise use of the open-fronted byre by bats. Given the presence of droppings and crevice features with potential for use by other bat species, three emergence / roost return surveys are recommended. Deployment of a static bat detector should also be carried out to remotely monitor activity at the suspected night-roost.
- 6.2.4 A mitigation plan will need to be guided by survey findings. However, if a night roost supporting Greater Horseshoe bats is confirmed, provision of a suitable replacement structure could provide mitigation to off-set potential impacts. A suitable structure could be built onto the northern wall of the byre.

**Figure 5.** Outline mitigation



### Great Crested Newts

- 6.2.5 As a European Protected Species (EPS), the presence of Great Crested Newts (GCN) in ponds close to a development site pose a potential constraint to development. However, the nearest GCN identified by DEFRA occurred >1km to the south-east. The presence of Great Crested Newts within the site is not considered likely due to the absence of potential breeding habitat and lack of terrestrial ground cover within the impact area.

## 7 Conclusion

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- 7.1.1 The proposed development involves the conversion of an existing garage and open-fronted byre. The principal impact of the development will be the loss of a structure currently used by roosting bats. Further work will be required to characterise use of the building. However, provision of an alternative structure could be used to mitigate potential impacts.
- 7.1.2 Given the confirmed presence of bats, conversion of the structure would be illegal without a European Protected Species development licence from Natural England.

## 8 References

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## 9 Appendices

### Appendix 1: Daytime inspection for bats

#### Open-fronted byre - South-facing elevation



1 – Occasional gaps (missing mortar) in masonry may provide access for crevice dwelling bat species. A previous owner installed chicken wire at wall tops to prevent nesting by birds and this creates a barrier excluding bats.





2 – Droppings on a pile of stones at the western end of the byre identified use of the structure by bats.



3 – Gaps between roof timbers and wall provided potential crevice features for bats at the western end of the structure. No evidence of current use was found during the site visit.



4 – A few gaps under roof tiles were evident but were not common.




### Open-fronted byre - South-facing elevation



5 – The exterior wall at the northern and western ends of the byre lacked any features with potential for roosting bats.

### Garage - East-facing elevations






	<p>5 – A gap between the wall and fascia was wide and offered limited potential for bats.</p>
	<p>6 – A few gaps were present beneath tiles offering potential access between tiles and underlying felt.</p>
	<p>No evidence of roosting bats was found within the interior of the garage.</p>

### Main house - Eastern elevation



7 – Wall top gaps were present but blocked by mesh. Sparrows were observed using an available gap near the junction between roof sections.

	<p>8 – Gaps at the wall top had been blocked by chicken wire preventing access by bats / birds.</p>
	<p>9 – A few gaps were present beneath tiles offering potential access for bats between tiles and underlying felt.</p>
	<p>10 – A Sparrow nest was noted at the northern end of the wall top (eastern elevation).</p>