ATW ECOLOGY

Meadowside, Lumbar Lane,
Hernhill, Lugwardine,
Herefordshire, HR1 4AL

for Chris [redacted] Frith

ECOLOGICAL IMPACT ASSESSMENT

October 2023

5416

ATW Ecology Ltd.

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Report control

Site address	Meadowside, Lumbar Lane, Hernhill, Lugwardine, Herefordshire, HR1 4AL		
Survey date	04 October 2023		
Version	**Date**	**Author**	**Action**
1.0	02 September 2023	Andrew Tillson-Willis	PEA report created
1.0	28 November 2023	Andrew Tillson-Willis	Document checked and issued

Signed Disclosure

The information/ data/ evidence/ advice/ opinion which we have prepared and provided is true and has been prepared and provided in accordance with the Chartered Institute of Ecology & Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Andrew Tillson-Willis MRSB MCIEEM MIFM Mem.RES
Director & Principal Consultant
ATW Ecology Ltd., Malvern Hills Science Park, Geraldine Rd, Malvern, Worcs. WR14 3SL

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IMPORTANT

Please note, due to the dynamic nature of the natural environment, our reports can only provide a snap-shot of what was present at the time of survey and as such often have a limited period of validity. Many statutory authorities regard one year as the maximum time that should elapse before a report will need to be updated. Where a protected species licence is required, a walk-over of the site should be conducted within three months of an application being submitted to check that the habitats have not changed significantly since the survey was conducted. Any information relating to legal matters in this report is provided in good faith but does not purport in any way to give any advice on or interpretation of the law whatsoever. Professional legal advice should always be sought. Any designs, specifications, advice, suggestions, or comments written or verbal relating to construction or supervision of building-related work of any kind are provided for consideration only and under no circumstances are to be interpreted as provision of design, management or supervision *sensu* the Construction (Design and Management) Regulations 2007.

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Objectives, Methods, & Limitations

Introduction and objectives

ATW Ecology Ltd. were commissioned by Arbor Architects Ltd on behalf of Chris [redacted] Frith to undertake a preliminary ecological appraisal of a barn / garage at Meadowside, Lumbar Lane, Hernhill, Lugwardine, HR1 4AL. A timber framed building used as garage and workshop set within ornamental gardens extending to approximately 0.7ha. OS Grid Reference SO 54882 41391 (approx. centre of building).

The appraisal aims to provide baseline information of habitats present on site and identify the following (where relevant):

- Identify areas and features (both on- and off-site) including appropriate buffer areas that, by virtue of their importance, should be retained and avoided by both construction activities and the overall footprint of the project;
- areas and features where opportunities exist to undertake necessary mitigation and compensation;
- areas and features with potential for biodiversity enhancement;
- areas where ongoing biodiversity conservation management is required to prevent deterioration in condition during construction/implementation;
- areas needing protection on site and/or in adjacent areas (e.g. from physical damage on site or pollution downstream) during the construction process; and
- areas where biosecurity measures are necessary to manage the risk of spreading pathogens or non-native invasive species

Methods

The site was surveyed by Andrew Tillson-Willis MRSB MCIEEM MIFM Mem.RES an appropriately experienced ecologist on 14 April 2023, Natural England CL18 level 2 bat class licence registration number 2020-48784-CLS-CLS, Natural England individual great crested newt survey licence number 2023-64271-SCI-SCI.

An ecological walk-over survey was conducted in accordance with current Chartered Institute of Ecology and Environmental Management guidelines for preliminary ecological appraisal (Second edition, December 2017).

Ponds within 0.1km of the site boundary were subject to a great crested newt scoping survey using the Habitat Suitability Index for great crested newt methodology of Oldham *et. al.* as adapted by Lee Brady of Kent ARG and through consultation at, and following, the 2007 Herpetofauna Workers Meeting as published in ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index.

Trees and built structures were subject to preliminary bat roost appraisal, a thorough inspection for any bat field signs or evidence of, or potential for bat roosting. Methods followed those outlined in the Bat Conservation Trust's 2016 survey guidelines (Collins 2016).

Limitations

Ecological survey based on a single site visit will typically under-represent the biodiversity of a site due to seasonal variations in plant growth and animal activity.

Results

General description

The site surveyed comprises a timber framed barn used as garages and workshop set within mature ornamental gardens with existing entrance track. The site extends to approximately 0.7ha.

Trees and woody shrubs present within the site include yew, ivy, Cotoneaster spp., willow, apple, hazel, ash, laurel, Rosa spp., Leyland cypress, bramble agg., holly, snowberry, clematis, Japanese spindle tree, Elaeagnus sp., and sycamore.

Grasses and forbs present include annual meadow grass, perennial rye grass, cleavers, dandelion agg., broad leaved dock, common nettle, lesser celandine, herb-Robert, white clover, greater plantain, mallow, white dead nettle, Geranium spp., oxeye daisy, Russian-vine, spear thistle, ground elder, ribwort plantain, creeping buttercup, mullein, smooth sow thistle, cock's-foot, and field pansy.

Designated sites

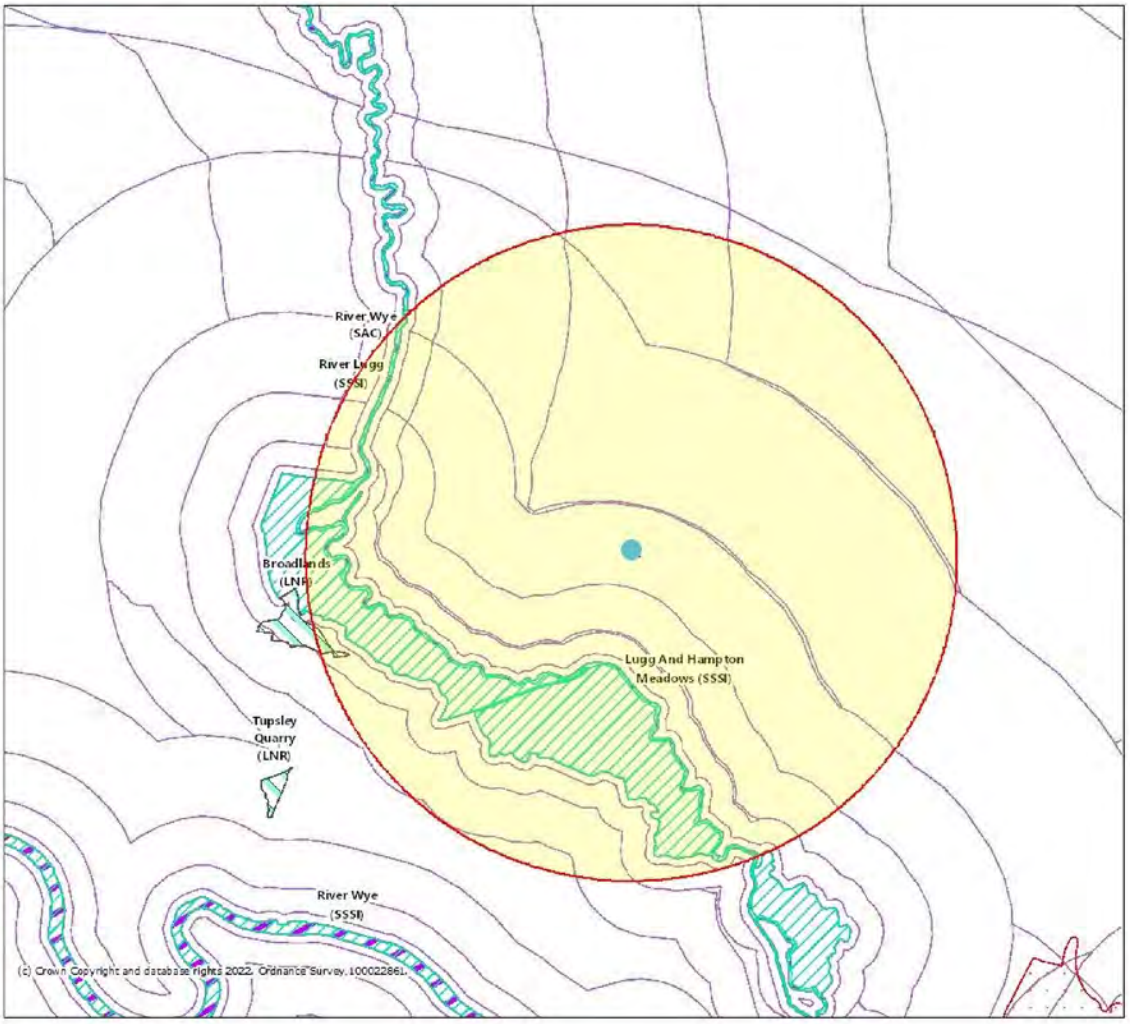
A search for Statutory Designated Sites within a 2km search radius was conducting using DEFRA's Magic Map Application which returned three results:

- River Lugg SSSI
- Lugg and Hampton Meadows SSSI
- Broadlands LNR

Designated sites records plans

MAGiC

Designated sites 2km



Legend

- Areas of Outstanding Natural Beauty (England)
- Local Nature Reserves (England)
- National Nature Reserves (England)
- National Parks (England)
- Ramsar Sites (England)
- Sites of Special Scientific Interest (England)
- SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
- Special Areas of Conservation (England)
- Special Protection Areas (England)

Projection = OSGB36
xmin = 348300
ymin = 238500
xmax = 360600
ymax = 244800

Map produced by MAGIC on 11 November 2023.
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Protected & notable habitats

Grassland

None of note, grassland within the site is poor semi-improved and maintained for amenity.

Trees, hedgerows, woodland & scrub

Of note is a group of young fruit trees north-west of the barn. Fruit trees are typically short lived (less than 100 years) and acquire increasing ecological value with age as a source of nectar for pollinating insects, and as a habitat for saproxylic invertebrates. It is recommended that fruit trees are retained wherever possible, if they require removal any resultant wood shall be used to create habitat piles or log pyramids at suitable locations within the wider site, and additional locally sourced fruit trees of heritage varieties planted as compensation.

Ponds & water courses

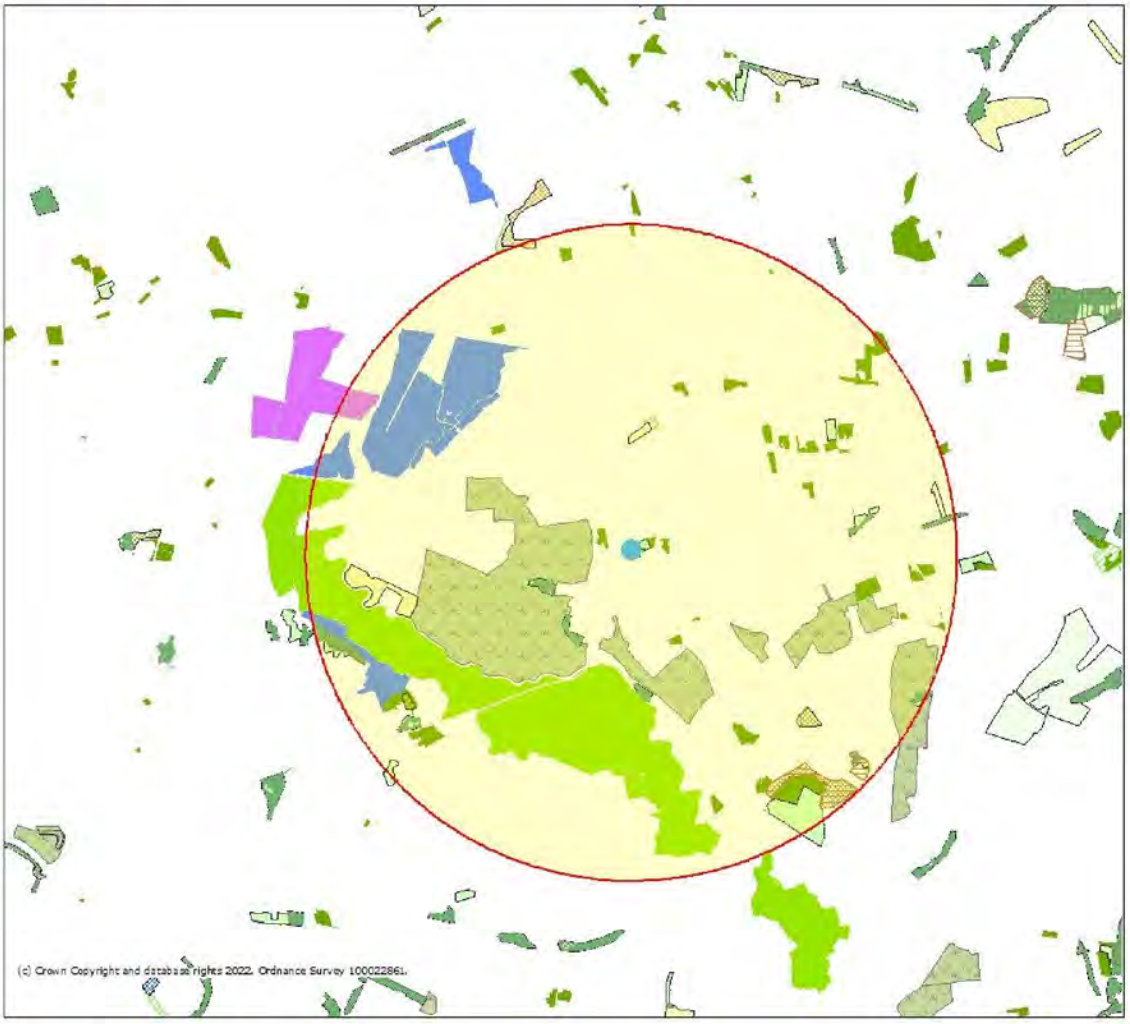
None within or immediately adjacent to the site.

A pond located approximately 0.8km south of the barn was subject to a Habitat Suitability Index for great crested newt, full details can be found in the relevant section below.

Priority habitats records plans

MAGiC

Priority habitats 2km



Legend

- Priority Habitat Inventory - Calaminarian Grassland (England)
- Priority Habitat Inventory - Coastal and Floodplain Grazing Marsh (England)
- Priority Habitat Inventory - Good quality semi-improved grassland (Non Priority) (England)
- Priority Habitat Inventory - Lowland Calcareous Grassland (England)
- Priority Habitat Inventory - Lowland Dry Acid Grassland (England)
- Priority Habitat Inventory - Lowland Meadows (England)
- Priority Habitat Inventory - Purple Moor Grass and Rush Pasture (England)
- Priority Habitat Inventory - Upland Calcareous Grassland (England)
- Priority Habitat Inventory - Upland Hay Meadows (England)
- Priority Habitat Inventory - Lowland Heathland (England)
- Priority Habitat Inventory - Mountain Heaths and Willow Scrub (England)
- Priority Habitat Inventory - Upland Heathland (England)
- Priority Habitat Inventory - Blanket Bog (England)
- Priority Habitat Inventory - Lowland Fens (England)
- Priority Habitat Inventory - Lowland Raised Bog (England)
- Priority Habitat Inventory - Reedbeds (England)
- Priority Habitat Inventory - Upland Flushes, Fens and Swamps (England)

Ancient Woodland (England)

- Ancient and Semi-Natural Woodland
- Ancient Replanted Woodland
- Priority Habitat Inventory - Deciduous Woodland (England)
- Forestry Commission Legal Boundary (England)

National Forest Inventory (GB)

- Assumed woodland
- Broadleaved
- Cloud \ shadow
- Conifer
- Coppice
- Coppice with standards
- Failed
- Felled
- Ground prep
- Low density
- Mixed mainly broadleaved
- Mixed mainly conifer
- Shrub
- Uncertain
- Windthrow
- Young trees
- Priority Habitat Inventory - Traditional Orchards (England)

Projection = OSGB36
xmin = 348300
ymin = 236500
xmax = 350600
ymax = 244800

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0 0.55 1.1
km

Protected & notable species

Bats

The building subject to a daytime bat walkover is a barn/workshop with garage. Constructed of timber frame with lapped timber cladding, cladding is in good condition and tightly fitted with minimal warping. The façade features timber framed doors and windows in good condition and tight to apertures, and an aluminium up-and-over door. A timber framed door at first floor level of northern gable is in poor condition / poorly fitted. Timber facia and soffits on the façade have a hole in the soffit on the southern corner providing access directly to the interior. Light ivy growth is present on the southern gable. Gable roof is covered with corrugated aluminium with folded metal ridge and verge coverings. Photo voltaic solar panels are present on the western aspect along with clear polycarbonate panels. Internally the ground floor is boarded out with chip board, gables at the first floor level are lined with clear polythene. Facia and soffit box structure is open to the interior. Roof is lined with string reinforced polythene, urethane foam insulation is wedged between rafters in the northern half of the barn along with a small amount of sheep wool insulation. Clear polycarbonate roof panels fill the interior with light.

All interior and exterior surfaces were inspected for evidence of bat activity including bats live and dead, faeces, oil and urine staining, scratch marks, feeding remains etc. but none were found.

The building is assessed as having negligible potential to support roosting bats. In line with currently accepted guidelines no further surveys are required, however as a precaution a soft-strip of roofing materials is recommended, in the unlikely event that bats are discovered during works all work shall halt immediately while the project ecologist is consulted on how to proceed.

[redacted]

[redacted]

Other mammals

Commonly occurring mammal species are likely to use the site on occasion.

Any newly installed fencing shall include 130mm holes at ground level to allow the free movement of hedgehogs and other wildlife.

Great crested newt

A search for granted European protected species applications, class licence returns and district level licence survey results returned three positive results within a 2km radius, the closest 1.25km north-east.

An offsite pond located 85 meters south-east of the barn, 40 meters south-east of the existing entrance track and within same ownership was subject to a habitat suitability index for great crested newt retuning a result of 0.84 'Excellent' suitability to support great crested newt.

The proposed site comprises an existing building and existing entrance track. Research has shown that the majority of great crested newts are found within 0.5km of their breeding ponds, as the barn and proposed changes to landscaping surrounding the barn are located over 0.5km north of the pond the impacts without mitigation are expected to be low. With suitable precautionary working measures implemented negative effects can be suitably mitigated and an offence is considered highly unlikely. A method statement is provided in the appendix of this report.

Component	**Likely effect** (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.05
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
	Maximum:	0.05
Rapid risk assessment result:	**GREEN: OFFENCE HIGHLY UNLIKELY**	

Other amphibians

Common toad, common frog, smooth and palmate newt are likely to occur locally.

Rare amphibians; natterjack toad and pool frog are not found locally.

Reptile

Shrubs, scrub and ruderal vegetation within the site provides suitable habitat for widespread reptiles (grass snake and slow worm) however is unlikely to support a significant population.

Rare reptiles; sand lizard and smooth snake are not found locally.

To prevent harm to widespread reptiles a precautionary approach is recommended with vegetation clearance phased to deter reptiles entering the development area, a method statement is provided in the appendix of this report.

Birds

Trees, shrubs, and scrub provide suitable habitat for nesting birds. Under the Wildlife and Countryside Act 1981, as amended (section 1), it is an offence to remove, damage or destroy the nest of any wild bird while that nest is in use or being built. Planning consent for a

development does not provide a defence against prosecution under this act. Trees, shrubs, hedgerows, scrub, and buildings are likely to contain nesting birds between 1st March and 31st August inclusive.

Trees, hedgerows, shrubs, scrub and buildings are present on the application site and are to be assumed to contain nesting birds between the above dates, unless a recent survey has been undertaken by a competent ecologist to assess the nesting bird activity on site during this period and has shown it is absolutely certain that nesting birds are not present.

No removal of hedgerows, trees, shrubs, scrub, or buildings that may be used by breeding birds shall take place between 1st March and 31st August inclusive, unless a competent ecologist has undertaken a careful, detailed check of vegetation and buildings for active birds' nests immediately before the area is cleared and provided written confirmation that no birds will be harmed and/or that there are appropriate measures in place to protect nesting bird interest on site. Any such written confirmation should be submitted to the local planning authority.

Fish

No suitable habitat within the site boundary.

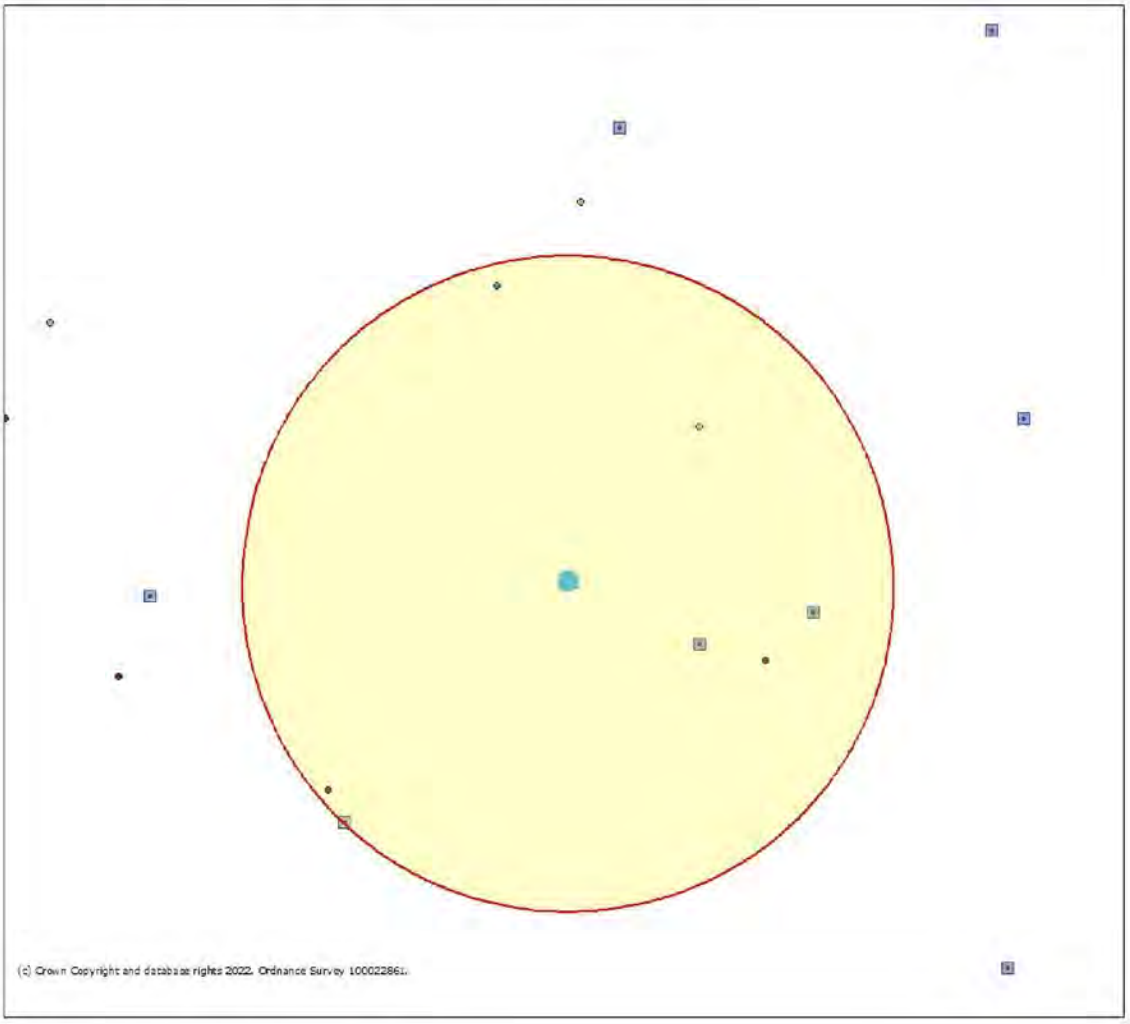
Invertebrates

A full assessment of invertebrate assemblage is beyond the scope of this survey, however no important habitats were observed likely to indicate the presence of protected or notable species.

Protected and notable species records plans

MAGIC

EPSML & Class licence data 2km



Legend

Granted European Protected Species Applications (England)

- Amphibian
- Bat
- Cetacean
- Invertebrate
- Other Mammal
- Plant
- Reptile
- Great Crested Newt Class Survey Licence Returns (England)
  - 8 FIG present
  - 6 FIG present
  - 4 FIG present
  - 4 FIG absent
  - 4 FIG inconclusive

Great Crested Newt Pond Surveys 2017 - 2019

- 10 FIG present
- 10 FIG absent
- 10 FIG inconclusive

Projection = OSGB36
xmin = 348700
ymin = 238700
xmax = 361000
ymax = 245000

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Invasive non-native species & pathogens

NNIS plants

A number of cotoneaster species were identified at several locations around the site including in ornamental shrubs surrounding the barn planned for clearance.

Russian vine was identified in ruderal vegetation north-east of the barn, an area planned for clearance.

Montbretia was identified amongst ornamental planting within the wider site.

Australian stonecrop and a water weed were identified at the offsite pond.

It is not an offence to have these species on your land and you do not need to notify anyone of their presence, however, under section 14, schedule 9, of the Wildlife and Countryside Act it is an offence to plant or allow to spread onto adjacent land and into the wild, such offences may result in fines and custodial sentences.

Plant matter and soils containing NNIS are classified as controlled waste and removal from site requires certified waste carriers and licensed landfill.

Weeds act natives

None noted.

INNS animals

Harlequin ladybird and grey squirrel were noted on site.

Serious plant diseases & pathogens

None noted.

Serious animal diseases & pathogens

None noted.

Policy

No known conflicts with local, national & international planning biodiversity policy.

Concluding remarks

ATW Ecology Ltd. were commissioned by Arbor Architects Ltd on behalf of Chris [redacted] Frith to undertake a preliminary ecological appraisal of a barn / garage at Meadowside, Lumbar Lane, Hernhill, Lugwardine, HR1 4AL. A timber framed building used as garage and workshop set within ornamental gardens extending to approximately 0.7ha. OS Grid Reference SO 54882 41391 (approx. centre of building). This report has been compiled in support of an application for conversion of the barn to ancillary residential.

The barn was subject to preliminary bat roost appraisal resulting in an assessment of 'negligible' bat roost suitability. In line with currently accepted guidelines no further surveys are required and bats are not expected to pose a constraint on development. If bats are unexpectedly discovered during works all work shall halt while the project ecologist is consulted.

Cotoneaster spp., Russian vine, and Montbretia were identified amongst ornamental planting within the site including surrounding the barn in areas planned for clearance. It is not an offence to have these species on your land and you do not need to notify anyone of their presence, however, under section 14, schedule 9, of the Wildlife and Countryside Act it is an offence to plant or allow to spread onto adjacent land and into the wild, such offences may result in fines and custodial sentences. Plant matter and soils containing NNIS are classified as controlled waste and removal from site requires certified waste carriers and licensed landfill, it is therefore recommended that plant matter containing NNIS is incinerated on site to prevent spread.

Evidence of bird nesting was observed within the barn and trees / shrubs within the site provide suitable nesting habitat. No clearance of hedgerows, trees, shrubs, scrub, or buildings that may be used by breeding birds shall take place between 1st March and 31st August inclusive, unless a competent ecologist has undertaken a careful, detailed check of vegetation and buildings for active birds' nests immediately before the area is cleared and provided written confirmation that no birds will be harmed and/or that there are appropriate measures in place to protect nesting bird interest on site. Any such written confirmation should be submitted to the local planning authority.

A pond located 0.8km south of the barn was confirmed as having 'excellent' suitability to support great crested newt. Research has shown the majority of great crested newt to stay within 0.5km of their breeding ponds, the project entailing conversion of an existing building and resurfacing of an existing track with only minor landscaping surrounding the barn is expected to have a 'negligible' impact on any great crested newt population present. As a precaution all site staff shall be made aware of the possible presence of great crested newt and precautionary working methods shall be implemented including:

- All waste shall be stored in skips on areas of existing hard standing, or immediately removed from site
- All materials delivered to site shall be stored raised off the ground on pallets or skids on existing hard standing

- Any rocks, logs, slabs or other materials in the work area requiring removal, that may provide refuge for newts shall be moved by hand
- Vegetation shall be cleared in phases, first to a height of 30cm, then 24 hours later to a height of 10cm before being taken down to ground level after a further 24 hours
- Any excavations shall be backfilled at the end of each day, any excavations left overnight shall be fitted with a means of escape such as a plank or wood and shall be checked for wildlife prior to works restarting
- If great crested newt are discovered on site all work shall halt while the project ecologist is consulted

To protect adjacent habitats external lighting shall be minimised and must not shine onto hedgerows, trees, access routes for bat roosting features, or other sensitive features. Lighting fixtures should have 0% upward light ratio meaning that only light produced is directed to the floor. Fixtures should have a colour temperature not exceeding 2700k.

As enhancement for biodiversity the following features shall be provided within the site and shall be maintained in perpetuity:

- one general purpose bat box (Schwegler 2F or suitable alternative) shall be installed on a mature tree otherwise unaffected by the proposed development. Bat boxes shall be installed on a south-facing aspect at a height in excess of three meters
- two general purpose bird boxes (Schewegler 1B or suitable alternative) shall be installed on the barn or nearby mature trees. Bird nest boxes shall be installed on north to north-eastern facing aspects at a height in excess of two meters
- any newly installed fencing shall include 130mm holes at ground level to allow the free movement of hedgehogs and other wildlife

Photographs

All photographs taken 04 October 2023.

Plate 1. The barn as viewed from the south-west.

Plate 2. Ivy growth on southern gable of barn.

Plate 3. Damage to soffits on south-western corner of barn providing access to interior.

Plate 4. Northern gable of barn.

Plate 5. Eastern rear aspect of barn.

Plate 6. General view of garage interior.

Plate 7. Northern gable from interior of barn.

Plate 8. Southern gable from interior of barn.

Plate 9. Cotoneaster species growing south of the barn.

Plate 10. Cotoneaster species growing west of the barn.

Plate 11. Montbretia growing west of the barn.

Plate 12. Group of young fruit trees.

Plate 13. Existing track.

Plate 14. Cotoneaster species growing alongside existing track.

Plate 15. Offsite pond.

Results - Habitat Suitability Index for great crested newt

Ponds known to be present and accessible within 0.25km of the development site were assessed for their suitability to support great crested newts according to the Habitat Suitability Index (*sensu* Oldham *et alii* 2000). The Habitat Suitability Index (HSI) incorporates ten suitability indices (SIs), all of which are factors believed to affect this species. It is a numerical score where 0 indicates unsuitable habitat and 1 represents optimal habitat.

Pond name / reference to key plan: Pond 1 (offsite 0.04km south-east of existing access track, 0.085km south-east of barn).
Date: 04 October 2023.
10-fig grid ref, centre of pond: SO 54923 41295 approx.
Surveyor: Andrew Tillson-Willis.

Field drainage pond off line of nearby stream, unshaded, dominated by non-native invasive water weed and Australian stonecrop. Netting revealed a good diversity of invertebrates including indicators of good water quality.

	HSI factor	Site assessment	HSI value	Explanatory notes / rationale
S1	Location	Zone A	1	
S2	Pond area (m^2)	$314m^2$	0.6	Approximate area calculated and rounded to $300m^2$ for calculation
S3	Years out of ten that pond dries out	Never dries	0.9	Field drainage pond off line of nearby stream
S4	Water quality	Good	1	Netting revealed freshwater shrimp, water boatman, pond skater, water hoglouse, mayfly larvae, and daphnia
S5	Shade - % of 1m belt of pond within perimeter	Unshaded	1	Unshaded and some distance from nearby trees
S6	Waterfowl – #/$1000m^2$	Minor	0.67	Moorhen present. Mallard is likely to occur but little sign of impact on the pond.
S7	Presence of fish	Absent	1	No history of fish stocking, none netted.
S8	# ponds / km within 1km radius	$2/\pi=0.63$	0.55	Ordnance Survey online shows 2 ponds within 1km, excluding those separated by major barriers.
S9	Quality of terrestrial habitat	Good	1	Pond is surrounded by permanent grassland with church yard, and residential gardens.
S10	% macrophyte cover	95%	0.85	Dominated by NNIS water weed and Australian stone crop

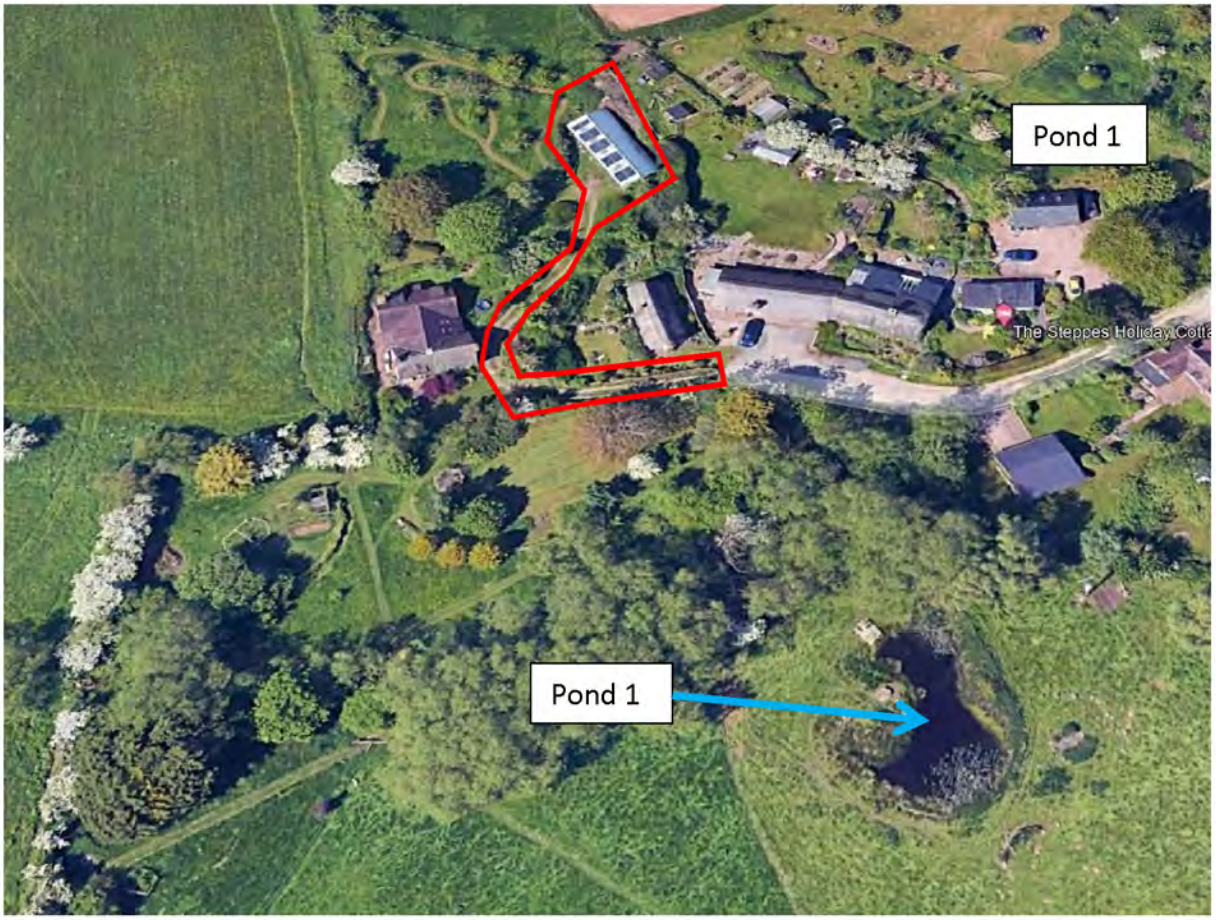
Score = (S1 x S2* x S3 x S4 x S5 x S6 x S7 x S8 x S9 x S10)$^{1/10}$ = 0.84

**omit this factor if pond is over 2000m^2, and calculate the 9th root*

HSI score	Pond suitability for great crested newts
Less than 0.5	Poor
0.5-0.59	Below average
0.6-0.69	Average
0.7-0.79	Good
More than 0.8	Excellent

Pond name / ref to key plan	Date	8-fig grid ref	Surveyor	HSI score	HSI assessment
Pond 1 (offsite)	04/10/2023	SO 54923 41295	A Tillson-Willis	0.84	Excellent

Ponds plan



Legislation and Planning Policy

Legislation birds

The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010 afford certain habitats and species protection. The following are of relevance to this assessment:

Under the Wildlife and Countryside Act 1981 (as amended) it is an offence to:

- Intentionally kill, injure, or take any wild bird.
- Intentionally take, damage, or destroy the nest of any wild bird while it is in use or being built.
- Intentionally take or destroy the egg of any wild bird.

Legislation bats

Bats and their habitats are protected under The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulation 2010. Formal policies and recognised best practice include the UK Post-2010 Biodiversity Framework (former UK Biodiversity Action Plan), PAS2010 Planning to Halt the Loss of Biodiversity, Circular 06/2005 Biodiversity and Geological Conservation, BS 42020: 2013 and BS 8583: 2015 on Biodiversity, the National Planning Policy Framework.

All bat species are designated and protected as European protected species (EPS). EPS are protected under the Conservation of Habitats and Species Regulations 2017.

It is an offence to:

- deliberately kill, injure, disturb or capture them
- damage or destroy their breeding sites and resting places (even when bats are not present)
- possess, control or transport them (alive or dead)

It is also an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly:

- disturb bats while they occupy a structure or place used for shelter or protection
- obstruct access to a place of shelter or protection

Several species of bats are listed as rare and most threatened species under Section 41 of the Natural Environment and Rural Communities Act (2006). You must have regard for the conservation of Section 41 species as part of your planning decision.

Bats may use a variety of structures for roosting including but not limited to buildings (including modern and ancient structures), caves, mines, tree hollows, and purpose-built bat boxes. Bats change roosts seasonally with different roosts serving different purposes

(breeding, hibernating, maternity) and some roosts such as day roosts and transitional roosts may only be used briefly and infrequently, however unoccupied roosts are still protected by law. Due to multiple factors including loss of roost sites, loss or degradation of foraging habitat, predation by domestic pets, and persecution by humans, UK bat populations have suffered significant decline leading to them being considered of conservation concern.

Legislation great crested newts

Triturus cristatus (great crested newt) are afforded protection under the Wildlife and Countryside Act 1981 (as amended) prohibiting the intentional or reckless damage, disturbance, or obstruction of access, to their places of shelter, both aquatic and terrestrial. They are also given European wide protection via Annex II and Annex IV of the EC Habitats Directive. The Conservation of Habitats and Species Regulations 2017 transpose the EC Habitats Directive into UK law thus making it illegal to:

- deliberately capture, injure, or kill
- deliberately disturb with the significant likelihood to affect population survival, breeding, local distribution or abundance
- deliberately take or destroy eggs
- damage or destroy a breeding site or resting place
- possess, control, transport, sell or exchange, or offer for sale or exchange

The above applies to all life stages in whole, part, or any derivative thereof.

The Natural Environment and Rural Communities (NERC) Act 2006 places a duty on public bodies to consider enhancement of biodiversity within all their actions. This Act also includes measures to protect species and habitat considered to be of Principal Importance and highlighted as requiring particular conservation action by the national and relevant local Biodiversity Action Plans (BAP).

Legislation reptiles

Smooth snakes, and sand lizards are designated and protected as European protected species (EPS). EPS are protected under The Conservation of Habitats and Species Regulations 2017.

It is an offence to:

- deliberately kill, injure, disturb or capture them
- deliberately take or destroy their eggs
- damage or destroy their breeding sites and resting places
- possess, control or transport them (alive or dead)

For smooth snakes and sand lizards, it is also an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly:

- disturb them while they occupy a structure or place used for shelter or protection
- obstruct access to a place of shelter or protection

Other native reptiles are protected under the Wildlife and Countryside Act 1981. It is an offence to kill or injure:

- adder
- grass snake
- common or viviparous lizard
- slow worm

All native reptiles are listed as rare and most threatened species under Section 41 of the Natural Environment and Rural Communities Act (2006).

Legislation hazel dormouse

Hazel dormice are designated and protected as European protected species (EPS). EPS are protected under the Conservation of Habitats and Species Regulations 2017.

It is an offence to:

- deliberately kill, injure, disturb or capture them
- damage or destroy their breeding sites and resting places
- possess, control, transport (alive or dead)

It is also an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly:

- disturb hazel dormice while they occupy a structure or place used for shelter or protection
- obstruct access to a place of shelter or protection

Hazel dormice are listed as rare and most threatened species under Section 41 of the Natural Environment and Rural Communities Act (2006).

National Planning Policy

In accordance with the National Planning Policy Framework 2012, the planning system should contribute to and enhance the natural environment by minimising impacts on biodiversity and providing biodiversity net gain where possible, promote the preservation, restoration and re-creation of priority habitats, and the protection and recovery of priority species populations and ecological networks.

Local planning authorities should aim to conserve and enhance biodiversity by applying the following principles when determining planning applications:

- Planning permission should be refused if harm resulting from a development cannot be avoided, adequately mitigated, or compensated.
- Opportunities to incorporate biodiversity in and around developments should be encouraged.
- Planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes, and nature conservation.

Additional advice set out in the National Planning Practice Guidance (2014) section 'Natural Environment' emphasizes the need for biodiversity to be taken into account when preparing a planning application, as detailed above, and sets out how biodiversity can be protected and enhanced by: seeking to include habitat restoration; re-creation and expansion; improved links between existing sites; buffering of existing important sites; new biodiversity features within a development; and securing management for long term enhancement.

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Quality Assurance

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Originally founded in 2003 as a zoological consultancy dedicated to improving the captive husbandry and propagation of amphibia in zoological, educational, and private collections and established as the UK's leading independent batrachoculture research facility with an international reputation for advancements in herpetology. In 2013 following customer demand we began offering herpetological fieldwork services including freelance ecological surveying and supervision, these services have expanded greatly over recent years working with a network of freelance partners to cover all aspects of ecological consultancy. Other subsidiary companies within the group specialising in entomology, ichthyology, animal nutrition, and media, provide a unique and diverse base of in-house expertise.

Contracts undertaken by ATW Ecology cover a wide spectrum of projects at local and national levels in the construction, agricultural, leisure, and utilities sectors. All our scientific staff and freelance partners belong to appropriate professional institutes by whose codes of practice they abide. Due consideration of the British Standards on Biodiversity is included in relevant work and applied where appropriate.

Andrew Tillson-Willis** MRSB MCIEEM MIFM MemRES — **Principal consultant

Andrew is an experienced ecologist, herpetologist, and entomologist with nineteen years' experience as a zoological consultant and eight years as a freelance ecological surveyor before joining full time ecological consultancy four years ago. He holds Natural England survey licences for great crested newt (personal licence), bats (level 2 class licence), and white-clawed crayfish (class licence), a Natural Resources Wales survey licence for great crested newt, is registered under the Construction Skills Certification Scheme (CSCS), is a registered member of the Royal Society of Biology, and Institute of Fisheries Management, a full member of the Chartered Institute of Ecology and Environmental Management, and Royal Entomological Society. In his spare time Andrew is co-ordinator and recorder for the Worcestershire Reptile & Amphibian Group, long-standing committee member of the Herefordshire Amphibian & Reptile Team, committee member of Worcestershire Mammal Group, steering member of the Malvern Hills Crayfish Group, and an active member of the Worcestershire Bat Group, and Herefordshire Mammal & Bat Group.

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Please note that this report is a baseline ecological site audit of factors and features that may be significant for regulatory compliance and biodiversity policies relating to change of use or other disturbance. Such reports may not, on their own, contain sufficient information for a planning application and may require further more detailed study to assure compliance.

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