



**ATW
ECOLOGY**

Land at Brake Mill Farm,
Hagley, DY8 2XY

for Paul Armson

PRELIMINARY ECOLOGICAL APPRAISAL



February 2024

5492

ATW Ecology Ltd.

MHSP, Geraldine Road, Malvern, WR14 3SZ

07739072405

hello@atwecology.com

www.atwecology.com

Report control

| | | | |
|---|---|-----------------------|-----------------------------|
| Site address | Land at Brake Mill Farm, Hagley, DY8 2XY | | |
| Survey date | 15 February 2024 | | |
| Surveyor | Andrew Tillson-Willis MRSB MCIEEM MIFM Mem.RES & Dr Giles King-Salter | | |
| Version | Date | Author | Action |
| 1.0 | 16 February 2024 | Giles King-Salter | Document created |
| 1.0 | 22 February 2024 | Andrew Tillson-Willis | Document checked and issued |
| Signed Disclosure | | | |
| <p>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.</p>  <p>Andrew Tillson-Willis MRSB MCIEEM MIFM Mem.RES Director & Principal Consultant ATW Ecology Ltd., Malvern Hills Science Park, Geraldine Rd, Malvern, Worcs. WR14 3SL</p> | | | |

+++

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.

Table of Contents

| | |
|--|----|
| Report control..... | 1 |
| Objectives, methods and limitations | 4 |
| Introduction and objectives..... | 4 |
| Methods..... | 4 |
| Limitations | 5 |
| Results..... | 5 |
| General description..... | 5 |
| Designated sites..... | 6 |
| Designated sites records plans | 7 |
| Habitats..... | 8 |
| UKHab habitats survey plan..... | 9 |
| Priority habitats records plans..... | 10 |
| Protected and notable species | 11 |
| Bats..... | 11 |
| Badger | 11 |
| Other mammals | 11 |
| Great crested newt | 12 |
| Other amphibians | 14 |
| Reptiles..... | 15 |
| Birds | 15 |
| Fish..... | 15 |
| Invertebrates..... | 15 |
| Protected and notable species records plans..... | 16 |
| Invasive non-native species & pathogens..... | 17 |
| NNIS plants..... | 17 |
| Weeds Act natives..... | 17 |
| INNS animals | 17 |
| Serious plant diseases & pathogens | 17 |
| Serious animal diseases & pathogens..... | 17 |
| Concluding remarks | 18 |
| Photographs..... | 19 |
| Legislation and Planning Policy..... | 23 |
| Legislation birds | 23 |
| Legislation bats | 23 |

| | |
|---------------------------------------|----|
| Legislation great crested newts | 24 |
| Legislation reptiles | 24 |
| Legislation hazel dormouse | 25 |
| National planning policy | 25 |
| References | 27 |
| Quality Assurance | 28 |

Objectives, methods and limitations

Introduction and objectives

ATW Ecology Ltd. were commissioned by Paul Armson to undertake a preliminary ecological appraisal of land at Brake Mill Farm, Hagley, DY8 2XY. The site is a horse paddock extending to approximately 0.23 ha. OS Grid Reference SO 89257 79926 (approx. centre of area coverage).

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 on 15 February 2024, by Andrew Tillson-Willis and Dr Giles King-Salter, appropriately experienced ecologists.

| | | |
|--|--|----------------------|
| Andrew Tillson-Willis MRSB MCIEEM MIFM Mem.RES | Natural England individual great crested newt survey licence | 2023-64271-SCI-SCI |
| | Natural Resources Wales individual great crested newt survey licence | S090634/1 |
| | Natural England CL18 level 2 bat survey class licence | 2020-48784-CLS-CLS |
| | Natural England CL11 white-clawed crayfish survey class licence | 2019-41348-CLS-CLS-1 |
| Dr Giles King-Salter | Natural England CL08 level 1 great crested newt class licence | 2023-11617-CL08-GCN |

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

Habitats within the site were mapped using the UK Habitat Classification Version 2.0 as detailed in UKHab Ltd (2023) at <https://www.ukhab.org>. Habitats were mapped to the fine-

scale minimum mappable unit of 25m² area or 5m length and were classified to at least level 3, with level 4 and 5 classifications assigned where possible.

Buildings and trees 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 Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edition).

Ponds adjacent to the site 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 (2010). ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index. Amphibian and Reptile Groups of the United Kingdom.

Desk study was conducted using DEFRA's Magic Map application.

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.

The month of February is outside the main period of activity for many species, however the overall habitat types could be adequately assessed.

Results

General description

The site comprises a fenced horse paddock extending to approximately 0.23 ha. The site is managed by grazing although horses were absent on the survey date. The vegetation is classified as g3c 'other neutral grassland'. Near the south-eastern corner, an area of approximately 0.015 ha is occupied by a former manure heap. Vegetation in this area is dominated by common nettle, with false oat-grass, cleavers and other coarse ruderal plant species present.

There were no trees or woody shrubs present within the site.

Grasses and forbs recorded on site:

Agrostis gigantea (black bent), *Anthoxanthum odoratum* (sweet vernal-grass), *Aphanes* sp. (parsley-piert), *Arrhenatherum elatius* (false oat-grass), *Ballota nigra* (black horehound), *Cerastium fontanum* (common mouse-ear), *Cirsium vulgare* (spear thistle), *Cynosurus cristatus* (crested dog's-tail), *Festuca rubra* (red fescue), *Galium aparine* (cleavers), *Holcus lanatus* (Yorkshire-fog), *Hypochaeris radicata* (cat's-ear), *Jacobaea vulgaris* (common ragwort), *Luzula campestris* (field wood-rush), *Ornithopus perpusillus* (bird's-foot), *Plantago lanceolata* (ribwort plantain), *Rumex acetosa* (common sorrel), *Taraxacum* spp. (dandelion), *Trifolium repens* (white clover), *Urtica dioica* (common nettle) and *Vicia sepium* (bush vetch).

Adjacent land is permanent grassland, with rural houses and gardens to the west. To the south is a large tree-lined pond with an area of approximately 1.2ha. Other habitats nearby include arable land, mixed plantation woodland, broadleaved woodland and suburban housing with well-vegetated gardens. The railway line between Kidderminster and Stourbridge passes within 100m of the site to the south.

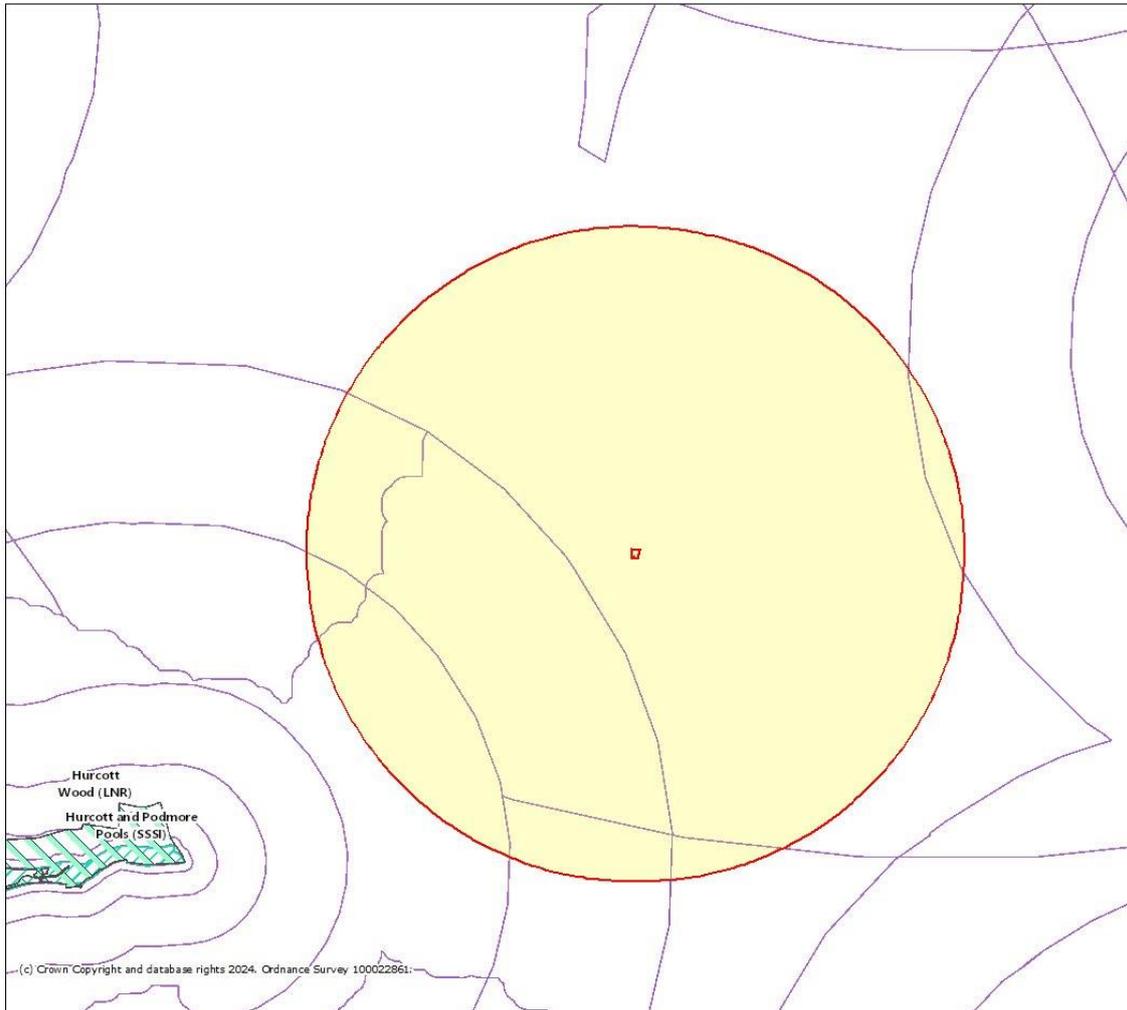
Designated sites

A search for statutory designated sites within a 2km search radius was conducted using DEFRA's Magic Map Application. This returned no results.

Designated sites records plans

MAGiC

Designated Sites 2km



Legend

- Areas of Outstanding Natural Beauty (England)
- Limestone Pavement Orders (England)
- Local Nature Reserves (England)
- Moorland Line (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)

Projection = OSGB36
 xmin = 382600
 ymin = 277200
 xmax = 395100
 ymax = 283200

Map produced by MAGiC on 14 February, 2024.
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGiC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

Habitats

g3c (other neutral grassland). Secondary codes: 103 'horse grazed'

A grazed horse paddock with a short sward of grasses and forbs. Over 10 species per 1m².

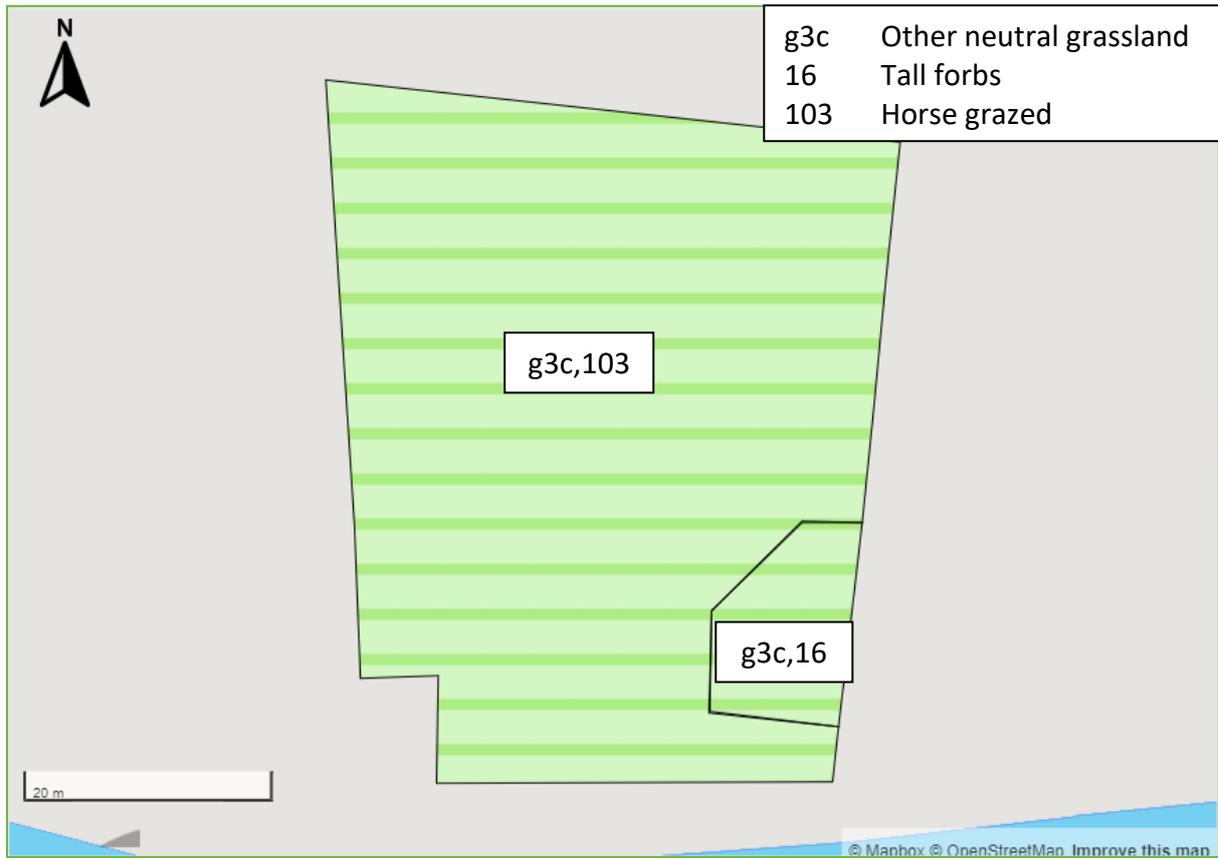
Species recorded: *Anthoxanthum odoratum* (sweet vernal-grass), *Aphanes* sp. (parsley-piert), *Cerastium fontanum* (common mouse-ear), *Cynosurus cristatus* (crested dog's-tail), *Festuca rubra* (red fescue), *Holcus lanatus* (Yorkshire-fog), *Hypochaeris radicata* (cat's-ear), *Jacobaea vulgaris* (common ragwort), *Luzula campestris* (field wood-rush), *Ornithopus perpusillus* (bird's-foot), *Plantago lanceolata* (ribwort plantain), *Rumex acetosa* (common sorrel), *Taraxacum* spp. (dandelion), *Trifolium repens* (white clover) and *Vicia sepium* (bush vetch).

g3c (other neutral grassland). Secondary codes: 16 'tall forbs'

A former manure heap near the edge of the site, occupied by common nettle and other coarse ruderal species.

Species recorded: *Agrostis gigantea* (black bent), *Arrhenatherum elatius* (false oat-grass), *Ballota nigra* (black horehound), *Cirsium vulgare* (spear thistle), *Galium aparine* (cleavers) and *Urtica dioica* (common nettle).

UKHab habitats survey plan



Priority habitats records plans

MAGiC

Priority Habitats 2km



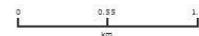
(c) Crown Copyright and database rights 2024. Ordnance Survey, 100022861.

Legend

- | | | |
|---|---|---|
| <ul style="list-style-type: none"> ■ 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) | <ul style="list-style-type: none"> ■ Priority Habitat Inventory - Mountain Heaths and Willow Scrub (England) ■ Priority Habitat Inventory - Upland Heathland (England) ■ Priority Habitat Inventory - Limestone Pavements (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) ■ Priority Habitat Inventory - Ponds and Lakes (England) | <ul style="list-style-type: none"> ■ Eutrophic ■ Mesotrophic (Marl) ■ Mesotrophic ■ Oligotrophic |
|---|---|---|
- OS Priority Ponds with Survey Data (polygons)**
- Clean Water for Wildlife and Priority Pond
 - Clean Water for Wildlife
 - Priority Pond
- Priority Habitat Lakes**
- Dystrophic

Projection = OSGB36
 xmin = 382600
 ymin = 277200
 xmax = 395100
 ymax = 283200

Map produced by MAGiC on 14 February, 2024.
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGiC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.



Protected and notable species

Bats

A search for granted EPS licences revealed 2 licences granted for works affecting bat roosts within a 2km radius:

- 2011 licence for destruction of a non-breeding roost of common pipistrelle, soprano pipistrelle and brown long-eared bat.
- 2018 licence for destruction of a breeding roost of common pipistrelle and brown long-eared bat.

There are no trees or structures on site that could support roosting bats. Grassland on site has poor vegetation structure and is of low quality as a foraging habitat.

The ponds adjacent to the site, especially the 1.2ha pond immediately to the south, are likely to be an important foraging resource for bats. The large pond is lined with mature trees, which were not assessed but are likely to contain potential roost features.

To protect adjacent foraging habitat, commuting lines and potential roosts, lighting plans shall follow recommendations contained within: [Guidance Note 8 Bats and Artificial Lighting | Institution of Lighting Professionals \(theilp.org.uk\)](http://theilp.org.uk)

Badger

No signs of badger were recorded, but it is likely that badgers are present in the wider area and use the site on occasion.

Other mammals

Molehills were abundant in the paddock.

A rabbit burrow with fresh droppings was present in the paddock.

Digging in the former manure heap was of a size and shape consistent with being a fox earth.

Other widespread species, including hedgehog and small mammals, are likely to use the site on occasion.

Plans indicate that the proposed stable will be dug into the bank with a retaining wall. Care must be taken during excavation to prevent harm to wildlife occupying nearby burrows.

Any excavations left overnight should be covered, backfilled or fitted with ramped means of escape to prevent the accidental trapping of wildlife during construction.

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

Great crested newt

The desk study found no records of great crested newts within 2km of the proposed development site.

The site itself contains no ponds. Three ponds are mapped within a 500m radius of the site boundary, of which two are within 250m. Ponds P1 and P2 were subject to Habitat Suitability Index (HSI) to assess their suitability to support great crested newt.



Pond name / reference to key plan: P1.

10-fig grid ref, centre of pond: SO 89267 79856 (10m south of site boundary).

| | HSI factor | Site assessment | HSI value | Explanatory notes / rationale |
|----|--------------------------------------|----------------------|-----------|--|
| S1 | Location | Zone A | 1 | |
| S2 | Pond area (m ²) | 12,000m ² | n/a | Approximate size estimated from satellite mapping. Score omitted as area > 2,000m ² |
| S3 | Years out of ten that pond dries out | Never dries | 0.9 | Pond unlikely to dry fully even in times of drought. |
| S4 | Water quality | Moderate | 0.67 | Invertebrate sampling identified low numbers of freshwater |

| | | | | |
|-----|---|---------------|------|---|
| | | | | shrimp, damselfly larvae, pond snails and water slaters. |
| S5 | Shade - % of 1m belt of pond within perimeter | 90% | 0.4 | Largely shaded by mature trees overhanging the water on all sides. |
| S6 | Waterfowl – #/1000m ² | Major | 0.01 | High numbers of mallard and Canada goose present. |
| S7 | Presence of fish | Major | 0.01 | A dense fish population is very likely to be present. |
| S8 | # ponds / km ² within 1km radius | 4/3.14 = 1.27 | 0.96 | Ordnance Survey online shows 4 ponds within 1km, excluding those separated by major barriers. |
| S9 | Quality of terrestrial habitat | Moderate | 0.67 | Permanent grassland, hedgerows, and woodland present in the surrounding area. |
| S10 | % macrophyte cover | 0–10% | 0.35 | Typha, watercress, foos watercress. |

$$\text{Score} = (S1 \times S2^* \times S3 \times S4 \times S5 \times S6 \times S7 \times S8 \times S9 \times S10)^{1/10} = 0.26$$

**omit this factor if pond is over 2000m², and calculate the 9th root*

Pond name / reference to key plan: P2.

10-fig grid ref, centre of pond: SO 89242 79901 (5m west of site boundary).

| HSI factor | Site assessment | HSI value | Explanatory notes / rationale | |
|------------|---|-------------------|-------------------------------|--|
| S1 | Location | Zone A | 1 | |
| S2 | Pond area (m ²) | <50m ² | 0.05 | Approximate size estimated from satellite mapping. Score omitted as area > 2,000m ² |
| S3 | Years out of ten that pond dries out | Dries annually | 0.1 | Pond unlikely to dry fully even in times of drought. |
| S4 | Water quality | Moderate | 0.67 | Grey water pond, part of treatment system |
| S5 | Shade - % of 1m belt of pond within perimeter | 5% | 1 | Largely unshaded. |
| S6 | Waterfowl – #/1000m ² | Absent | 1 | Absent |
| S7 | Presence of fish | Absent | 1 | Pond is unsuitable for fish. |
| S8 | # ponds / km ² within 1km radius | 4/3.14 = 1.27 | 0.96 | Ordnance Survey online shows 4 ponds within 1km, excluding those separated by major barriers. |

| | | | | |
|-----|--------------------------------|----------|------|---|
| S9 | Quality of terrestrial habitat | Moderate | 0.33 | Permanent grassland, hedgerows, and woodland present in the surrounding area. |
| S10 | % macrophyte cover | 100% | 0.8 | Common reed. |

$$\text{Score} = (S1 \times S2^* \times S3 \times S4 \times S5 \times S6 \times S7 \times S8 \times S9 \times S10)^{1/10} = 0.49$$

**omit this factor if pond is over 2000m², 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 | 10-fig grid ref | Surveyor | HSI score | HSI assessment | Further survey required |
|-----------------------------|------------|-----------------|----------|-----------|----------------|-------------------------|
| P1 | 15/02/2024 | SO8926779856 | ATW | 0.26 | Poor | No |
| P2 | 15/02/2024 | SO8924279901 | ATW | 0.49 | Poor | No |

Both ponds were assessed as 'Poor', indicating that they are unlikely to support great crested newts.

The former manure heap area provides a small amount of relatively low quality terrestrial habitat in the form of grass tussocks and other rough vegetation, however, is isolated within short grazed pasture that lacks structural complexity and does not provide suitable terrestrial habitat for great crested newts.

Overall, the lack of great crested newt records in the surrounding area, the unsuitability of the adjacent ponds for breeding, and the poor quality of the terrestrial habitat within the site make an offence highly unlikely.

Other amphibians

No amphibians were recorded during the survey. Pond P1 appears suitable as a breeding habitat for common toad, a UK Biodiversity Action Plan priority species, and both ponds may attract common frog and smooth newt.

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

As a precaution it is recommended that vegetation clearance is phased in the former manure heap area, first cut to a height of 10cm and left for 24 hours before soil stripping.

Reptiles

The short grazed pasture that occupies most of the development site lacks structural complexity and does not provide suitable terrestrial habitat for reptiles. The former manure heap area provides a small amount of relatively low quality terrestrial habitat in the form of grass tussocks and other rough vegetation, but connectivity with other suitable habitat is poor.

It is possible but unlikely that transient individuals of grass snake and slow-worm may occur. As a precaution it is recommended that vegetation clearance is phased in the former manure heap area, first cut to a height of 10cm and left for 24 hours before soil stripping.

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

Birds

The site contains no trees or scrub likely to be used by nesting birds.

Fish

No suitable habitat within the site boundary.

Invertebrates

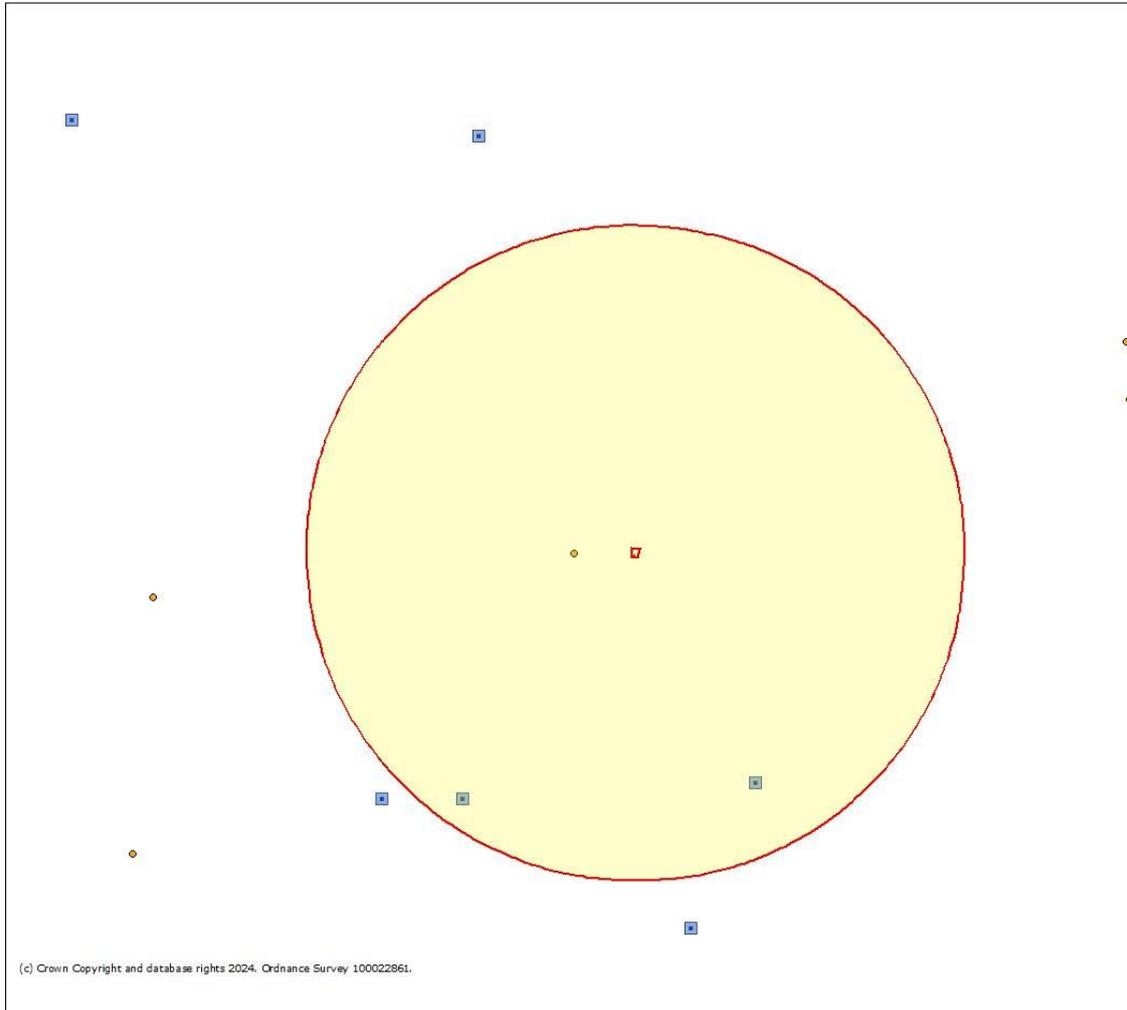
A full assessment of invertebrate assemblage is beyond the scope of this survey.

No habitats important to invertebrates were noted.

Protected and notable species records plans



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)

Great Crested Newt Pond Surveys 2017 - 2019

10 FIG present

10 FIG absent

10 FIG inconclusive

8 FIG present

6 FIG present

4 FIG present

4 FIG absent

4 FIG inconclusive

Projection = OSGB36
 xmin = 392600
 ymin = 277200
 xmax = 395100
 ymax = 283200

Map produced by MAGIC on 14 February, 2024.
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.



Invasive non-native species & pathogens

NNIS plants

None noted.

Weeds Act natives

Spear thistle, common ragwort.

INNS animals

None noted.

Serious plant diseases & pathogens

None noted

Serious animal diseases & pathogens

None noted.

Concluding remarks

On 15 February 2024, a Preliminary Ecological Appraisal was conducted of land at Brake Mill Farm, Hagley, DY8 2XY. A horse pasture extending to approximately 0.23 ha. OS Grid Reference SO 89257 79926 (approx. centre of area coverage). This report has been compiled in support of an application for the erection of a stable block and associated works.

There are no trees or structures on site that could support roosting bats. Grassland on site provides low quality foraging habitat. The ponds adjacent to the site, especially the 1.2ha tree-lined pond immediately to the south, are likely to be an important foraging resource for bats and mature trees around the pond may contain potential roost features.

Rabbit burrows and a fox earth were identified. No signs of badger were recorded, but it is likely that badgers are present in the wider area and use the site on occasion. Plans indicate that the proposed stable will be dug into the bank with a retaining wall. **Care must be taken during excavation to prevent harm to wildlife occupying nearby burrows and any excavations left overnight should be covered, backfilled or fitted with ramped means of escape to prevent the accidental trapping of wildlife during construction.**

To protect adjacent foraging habitat, commuting lines and potential roosts of bats, and foraging habitats of badgers and other nocturnal animals, lighting plans shall follow recommendations contained within: [Guidance Note 8 Bats and Artificial Lighting | Institution of Lighting Professionals \(theilp.org.uk\)](https://www.theilp.org.uk)

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

The site contains no suitable terrestrial or aquatic habitat for great crested newts. Three ponds are mapped within a 500m radius of the proposed development site, two of which are within 250m. Habitat Suitability Index assessments classified both ponds as 'Poor', indicating a low likelihood of occupancy by great crested newts. The lack of positive records in the surrounding area, the unsuitability of the adjacent ponds for breeding, and the poor quality of the terrestrial habitat within the site make an offence highly unlikely and no further surveys are recommended.

Rough vegetation in the location of the former manure heap has low potential to support common amphibians and widespread reptiles but is small in area and isolated within closely grazed grassland. As a precaution it is recommended that vegetation clearance is phased in this area, first cut to a height of 10cm and left for 24 hours before soil stripping.

As enhancement for bird and bat populations, two ceramic nest cups for swallows shall be installed beneath the overhang of the proposed stable block and one general purpose bat box (Beaumaris Woodstone Bat Box or suitable alternative) shall be installed on one of the mature trees at the edge of pond P1 at a height in excess of 3 metres.

Photographs

All photographs taken 15 February 2024.



Plate 1. Proposed development site as seen from the SW corner.



Plate 2. Former manure heap area within the site.



Plate 3. Former manure heap area, with pond P1 behind.



Plate 4. Rabbit burrow in the paddock.



Plate 5. Hole at the edge of the former manure heap, likely to have been dug by fox.

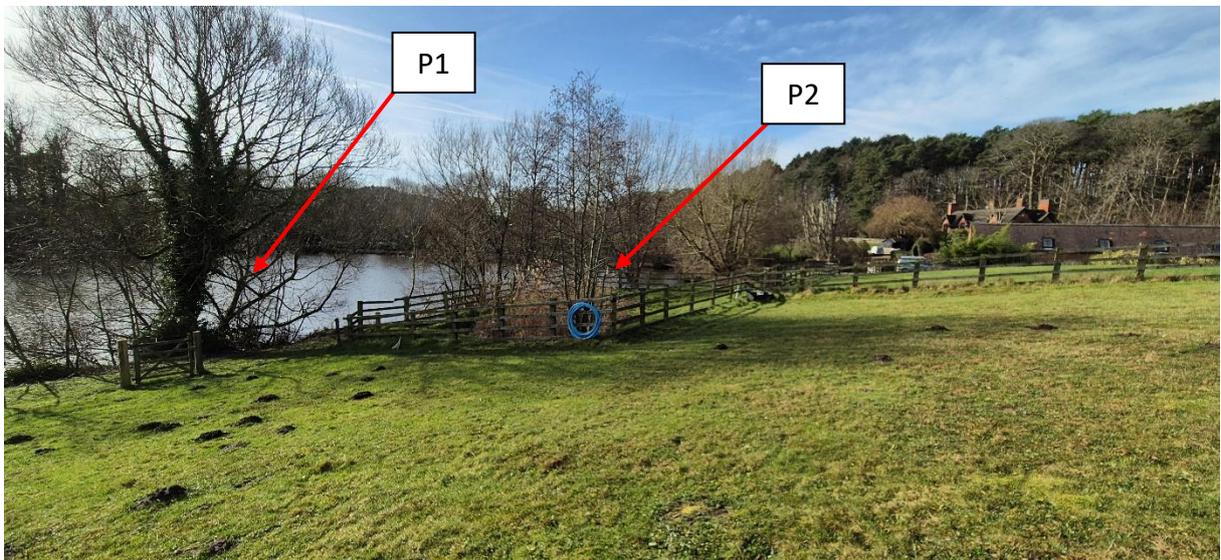


Plate 6. Site overview showing the position of ponds P1 and P2.



Plate 7. General view of offsite pond P1, showing surrounding mature trees.



Plate 8. General view of offsite pond P2, showing dense growth of common reed.

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.

References

- BS 42020:2013 Biodiversity — Code of practice for planning and development. The British Standards Institution.
- BS 5837:2012 Trees in relation to design, demolition, and construction – Recommendations. The British Standards Institution.
- The Hedgerows Regulations 1997: A Guide to the Law and Good Practice. DEFRA, London.
- Joint Nature Conservation Committee (2004). Handbook for Phase 1 Habitat Survey: a technique for environmental audit. JNCC, Peterborough.
- Institute of Environmental Assessment (1995). Guidelines for Baseline Ecological Assessment. Chapman and Hall, London.
- Chartered Institute of Ecology and Environmental Management (2012). Guidelines for Preliminary Ecological Appraisal 2nd edition. CIEEM.
- Bat Conservation Trust (2016). Bat Surveys for Professionals: Good Practice Guidelines, 3rd Edition. Bat Conservation Trust.
- Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). Bat Conservation Trust, London.
- Herpetological Journal, Vol. 10, pp. 143-155 (2000). R.S. Oldham *Et. Al.* Evaluating the Suitability of Habitat for the Great Crested Newt (*Triturus cristatus*). Department of Biological Sciences, De Montfort University, Leicester LE7 9SU, UK.
- ARG UK (2010). ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index. Amphibian and Reptile Groups of the United Kingdom.
- Eurobats publication series No.8 Guidelines for consideration of bats in lighting projects.
- Institute of Lighting Professionals and Bat Conservation Trust (2023). Guidance Note 08/23: Bats and artificial lighting at night, ILP, Warwickshire.
- Birds of Conservation Concern 5: <https://www.bto.org/our-science/publications/psob>
- <https://magic.defra.gov.uk/magicmap.aspx>
- <https://osmaps.ordnancesurvey.co.uk/>
- [Wild birds: protection and licences - GOV.UK \(www.gov.uk\)](http://www.gov.uk)
- [Bats: protection and licences - GOV.UK \(www.gov.uk\)](http://www.gov.uk)
- [Great crested newts: advice for making planning decisions - GOV.UK \(www.gov.uk\)](http://www.gov.uk)
- [Great crested newts: protection and licences - GOV.UK \(www.gov.uk\)](http://www.gov.uk)
- [Reptiles: advice for making planning decisions - GOV.UK \(www.gov.uk\)](http://www.gov.uk)
- [Hazel dormice: advice for making planning decisions - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

Quality Assurance

ATW Ecology Ltd. Registered in England, number 14937736. Registered office: 173 Brookfarm Drive, Malvern, Worcestershire, WR14 3SL.

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 Mem.RES* — **Director & 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 five 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.

Dr Giles King-Salter — **Ecologist**

Giles is an ecologist, botanist and entomologist. He studied botany at the University of Reading before completing a PhD on arbuscular mycorrhizal fungi in grasslands at University College Dublin. He has a particular interest in Coleoptera, recording water beetles as a member of the Balfour-Browne Club and carrying out surveys of saproxylic beetles in England and Northern Ireland. He is an experienced recorder of aquatic invertebrates and has a particular interest in Ice Age ponds. He holds a Natural England survey licence for great crested newts (level 1 class licence). He is an active member of national and local wildlife groups including the Botanical Society of Britain and Ireland, Herefordshire Mammal Group, Herefordshire Ornithological Club and Herefordshire Amphibian & Reptile Team.

NB. Whilst all due and reasonable care is taken in the preparation of reports we accept no responsibility whatsoever for any consequences of the release of this report to third parties. Clients are reminded that all work carried out is subject to our Terms of Trading which may be viewed at any time on our web site at www.tillson-willis.co.uk or can be provided on request. Please again be aware that site surveys inevitably miss species not apparent on the date of visit(s) by reason of seasonality, mobility, habits or chance. Results are indicative and given in good faith but they are not a guarantee of presence or absence of any particular taxa.

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.



**ATW
ECOLOGY**

Malvern Hills Science Park, Geraldine Road, Malvern, Worcestershire. WR14 3SZ.

07739072405 | hello@atwecology.com | www.atwecology.com