Whitcher Wildlife Ltd.
Ecological Consultants.

23 BAR LANE, STAINCROSS.

OS REF: SE 33718-09799.

PRELIMINARY ECOLOGICAL APPRAISAL.

Ref No: **230810.**

Date: **15th November 2023.**

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1. INTRODUCTION.

1.1. Plans are to be summited for the demolition and development of an existing property and the immediate surrounding land. The property was located at 23 Bar Lane, Staincross.

1.2. Whitcher Wildlife Ltd has been commissioned to carry out a Preliminary Ecological Appraisal of the site to establish whether there are any issues that may affect the proposed works. During this survey the house was assessed as having a low potential for roosting bats and therefore a dusk emergence survey was recommended.

1.3. The initial site survey was carried out on 17th August 2023 and the bat dusk emergence survey was carried out on the 19th August 2023 and this report outlines the findings of these surveys and makes appropriate recommendations.

1.4. Appendices I and III of this report provide additional information on protected species and are designed to assist the reader in understanding the contents of this report.

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2. SURVEY METHODOLOGY.

2.1. Prior to visiting the site, the survey area was cross referenced to maps and aerial photographs to give a general idea of the habitats and potential issues within the area and to identify potential access and walking routes.

2.2. The survey area was walked where access was agreed and public rights of way were used where no access was agreed. All habitats within and immediately around the survey area were documented and the dominant species within that habitat listed in line with the UK Habitat Classification methodology to identify the primary habitat types throughout the survey area. All primary habitats are accompanied by secondary codes which are used to add further specific details where necessary. Each primary habitat and unique set off secondary codes will be shown individually in the appended annotated map. The new secondary codes are used in this report. However, the corresponding GIS shape files have not yet been produced.

2.3. The survey area and immediate surrounding area was thoroughly searched for evidence of badger (*Meles meles*) activity by looking for the following signs in line with Harris S, Cresswell P and Jefferies D (1989). *Surveying Badgers*. Mammal Society: -

* Badger setts.
* Badger latrines or dung pits.
* Badger snuffle holes and evidence of foraging.
* Badger paths.
* Badger prints in areas of soft mud.
* Badger hairs caught on fencing.

2.4. The survey area was searched for watercourses and where found all watercourses within the survey area and for approximately 100m in each direction were thoroughly searched for evidence of water vole (*Arvicola amphibius*) activity by looking for the following signs, in line with Dean M, Strachen R, Gow D and Andres R (2016). *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series).* Eds Fiona Mathews and Paul Chanin. The mammal Society, London: -
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* Water vole burrows.
* Water vole faeces and latrines.
* Water vole feeding stations.
* Water vole runs.
* Water vole prints in areas of soft mud.
* Water vole lawns.

* Predator field signs.

2.5. The survey area was searched for watercourses and where found all watercourses within the survey area and for approximately 50m in each direction were thoroughly searched for evidence of otter (*Lutra lutra*) activity by looking for the following signs in line with the P Chanin (2003). *Monitoring the Otter* and *Conserving Natura 2000 Rivers: Monitoring Series No10 Guidelines: -*

* Otter prints in soft mud.
* Otter spraints.
* Otter Holts.

2.6. The survey area was searched for watercourses and waterbodies. Where found, and where safe to enter the water, all were thoroughly searched for the presence of crayfish, for approximately 50m in each direction of the site, by searching under rocks and logs. Where stated, crayfish traps were also deployed into the watercourse. All survey work was carried out in accordance with the *Conserving Natural 2000 Rivers Monitoring Series No 1, Protocol for Monitoring the White Clawed Crayfish*.

2.7. The survey area was searched for trees and structures and where found these were checked for potential bat roosting sites in line with Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition)* by looking for the following signs: -

* Holes, cracks or crevices.
* Bat Droppings.

2.8. The land immediately adjacent to the survey area was assessed for bat roosting potential and bat foraging potential. Connective routes and flight lines were also assessed whilst on site and using maps of the area.

2.9. The area within 500m of the survey site was cross referenced to maps to highlight all ponds close to the site. Where possible, all ponds identified were accessed using agreed access or public rights of way to assess the potential for great crested newts (*Triturus cristatus*) to be present.

2.10. The survey area was assessed for the potential for reptiles and suitable reptile habitats. Where applicable the area was also searched for the presence of reptiles.

2.11. Where appropriate, the habitat within and surrounding the survey area was searched for species such as hazel, oak, honeysuckle, bramble and other species which may provide potential habitat for hazel dormice (*Muscardinus avellanarius*). Field signs such as feeding remains and nests were also searched for where possible,

in line with P Bright, P Morris and T Mitchell-Jones *The Dormouse Conservation Handbook 2nd Edition*.

2.12. Where appropriate, the area within and surrounding the survey area was assessed for its potential to house habitat for red squirrels. Field signs of red squirrels were searched for at least every 50m, looking for any dreys, feeding signs or sightings of red squirrels.

2.13. The survey area was searched for all alien invasive plant species as listed on Schedule 9 of the Wildlife and Countryside Act 1981. The location of all plants identified were recorded and listed within the survey report along with appropriate recommendations to avoid causing the plants to spread in the wild. All species were searched for, but the main species generally found under this category are Japanese knotweed, Giant hogweed, Himalayan balsam, Cotoneaster, Rhododendron and Japanese Rose.

2.14. All surveys were carried out in line with the Chartered Institute of Ecological and Environmental Management (CIEEM) survey standards and advice.

2.15. This survey was carried out by James Campbell MCIEEM. Since 2003 James has had experience in a professional capacity as a Wildlife Consultant carrying out Ecology Surveys and Phase 1 Habitat surveys and is a full member of CIEEM. James holds licences with several licensing bodies including: -

- Natural England Survey Licences in respect of bats, great crested newts, white clawed crayfish and barn owls.
- Scottish Natural Heritage Licences in respect of bats and great crested newts.
- Countryside Council for Wales Licences in respect of bats and great crested newts.

He has also successfully completed numerous courses run by CIEEM, BCT and FSC regarding protected species and in carrying out Phase 1 Habitat surveys. He is also confined spaces trained and qualified to NVQ Level 2 in tree climbing and aerial rescue.

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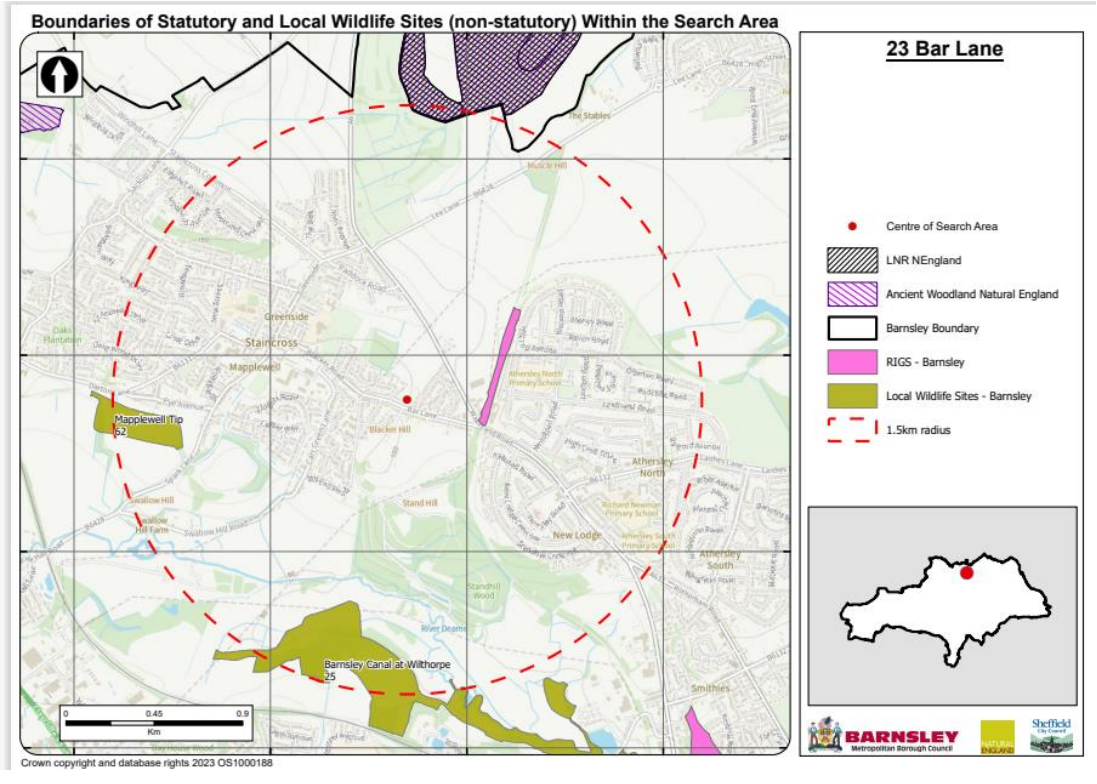
3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. A data search has been submitted to Sheffield Biological Records Centre, South Yorkshire Badger Group and South Yorkshire Bat Group for records of protected species and designated sites within 2km of the survey area.

3.1.2. Sheffield Biological Records Centre returned records of Otter, Common Pipistrelle bats, Soprano Pipistrelle bats, Noctule bats and water vole within 2km of the survey area. Great Crested Newt records were also identified in Barnsley Canal at Wilthorpe, which is over 1.7km form the survey area.

3.1.3. Sheffield Biological Records Centre returned records of Mapplewell Tip LWS and Barnsley Canal at Wilthorpe LWS located 1.7km of the survey area. The map below shows the location of the two LWS's, the 2km boundary and the survey area.



3.1.4. South Yorkshire Bat Group returned records of Common Pipistrelle bats, Nathusius Pipistrelle bats, Daubenton's bats, Myotis bats and Noctule bats. With the nearest record being an injured Common Pipistrelle bat identified 0.25km from the survey area.

3.1.5. South Yorkshire Badger Group returned records of no badger setts within 2km of the survey area.

3.2. The Surveyed Area.

3.2.1. The survey area comprised a residential property with stables, garages, existing hardstanding drive and modified grassland. The aerial photograph below shows the survey area marked in red and the immediate surrounding area.

3.2.2. The photographs below show the property and the grazing land.

3.2.3. The immediate surrounding area comprised residential housing, arable land and a busy road.

3.3. Description of Habitats.

Appendix IV of this report contains annotated maps marked up with the varying habitats that are cross referenced to target notes in Appendix VI of this report. The habitats on and adjacent to the site are: -

- g4 Modified Grassland
- u1b5 Buildings
- u1b Developed Land; Sealed Surface
- u1e Built Linear Features
- h2 Native Hedgerow.
- c1e Intensive Orchard.
- h3 Dense Scrub.
- u1 Built Up Areas and Gardens.

3.3.1. ***g4 Modified Grassland***

Secondary codes:
828 Vegetated Garden.

3.3.1.1. There were two areas of modified grassland within the survey area.

Area 1 was the garden to the south of the survey area around the residential property, which is regularly mown. The species within the grassland were creeping buttercup (*Ranunculus repens*), white clover (*Trifolium repens*), common thistle (Cirsium vulgare), yarrow (*Achillea millefolium*), broad leafed dock (*Rumex obtusifolius*), autumn hawkbit (*Scorzoneroidies autumnalis*), spiny sowthistle (*Sonchus asper*), ribwort plantain (*Plantago lanceolata*), common nettle (*Urtoca dioica*), perennial ryegrass (*Lolium perenne*), cocksfoot (*Dactylus glomerata*) and Yorkshire fog (Holcus lanatus).

3.3.1.2. **Area 2** was the area of grazing land to the north of the survey area where horses have been kept for a long period of time. The flowering species were mainly identified around the field edges. The species within the grassland were dandelion (*Taraxacum officinalis*), broad leafed dock (*Rumex obtusifolius*), spiny sowthistle (*Sonchus asper*), lady's thumb (*Persicaria maculosa*), prostrate knotweed (*Polygonum aviculare*), common nettle (*Urtoca dioica*), common thistle (Cirsium vulgare), lesser burdock (*Arctium minus*), red campion (*Silene dioica*), red dead nettle (Lamium *pupureum*), ragwort (*Jacobaea vulgaris*), mugwort (*Artemisia vulgaris*), hedge mustard (*Sisymbrium officinale*), pineapple weed (*Matricaria discoidea*), honesty (*Lunaria annua*), birdeye speedwell (*Veronica persica*), yarrow (*Achillea millefolium*), cocksfoot (*Dactylus glomerata*) and Yorkshire fog (*Holcus lanatus*).

3.3.2. **u1b5 Buildings**

Secondary codes:
818 Residential Building.

There were numerous buildings within the survey area including a residential property, numerous stables and garages.

3.3.3. **u1b Developed Land; Sealed Surface**

There were areas of concrete and concrete paving slabs currently used as a driveway, access track and patio area.

3.3.4. **u1e Built Linear Features**

Secondary codes:
612 Fence, 853 Mortared Wall.

All the boundaries to the site were either fenced with post and wire or post and panel with some internal fencing and the remainder were mortared stone walls.

3.3.5. h2a Native Hedgerow.

There were hedgerows on three of the site boundaries. However, the hedgerows all comprised the same species including sycamore (*Acer pseudoplatanus*) saplings and more mature specimens, hawthorn (*Crataegus monogyna*), elder (*Sambucus nigra*), common ivy (*Hedera helix*), ash sap (*Fraxinus excelsior*), bramble (*Rubus fruticosus*) and holly (*Ilex aquifolium*).

3.3.6. c1e Intensive Orchard.

An area of fruit trees including apple *sp* (*Malus domestica*) were identified growing to the north of the survey area. The trees were small and heavily pruned as part of yearly maintenance and subject to grazing animals in the grassland.

3.3.7. h3 Dense Scrub.

Areas of dense scrub were located to the north of the survey area. The species included elder (*Sambucus nigra*) and bramble (*Rubus fruticosus*).

3.3.8. u1 Built Up Areas and Gardens.

Secondary codes: 847 Introduced Shrub.

An area of introduced shrubs and garden was identified along the edge of the drive Rose sp (*Rosa*), lily (*Lilium*), plum sp (*Prunus domestica*) and St Johns Wort (*Hypericum perforatum*).

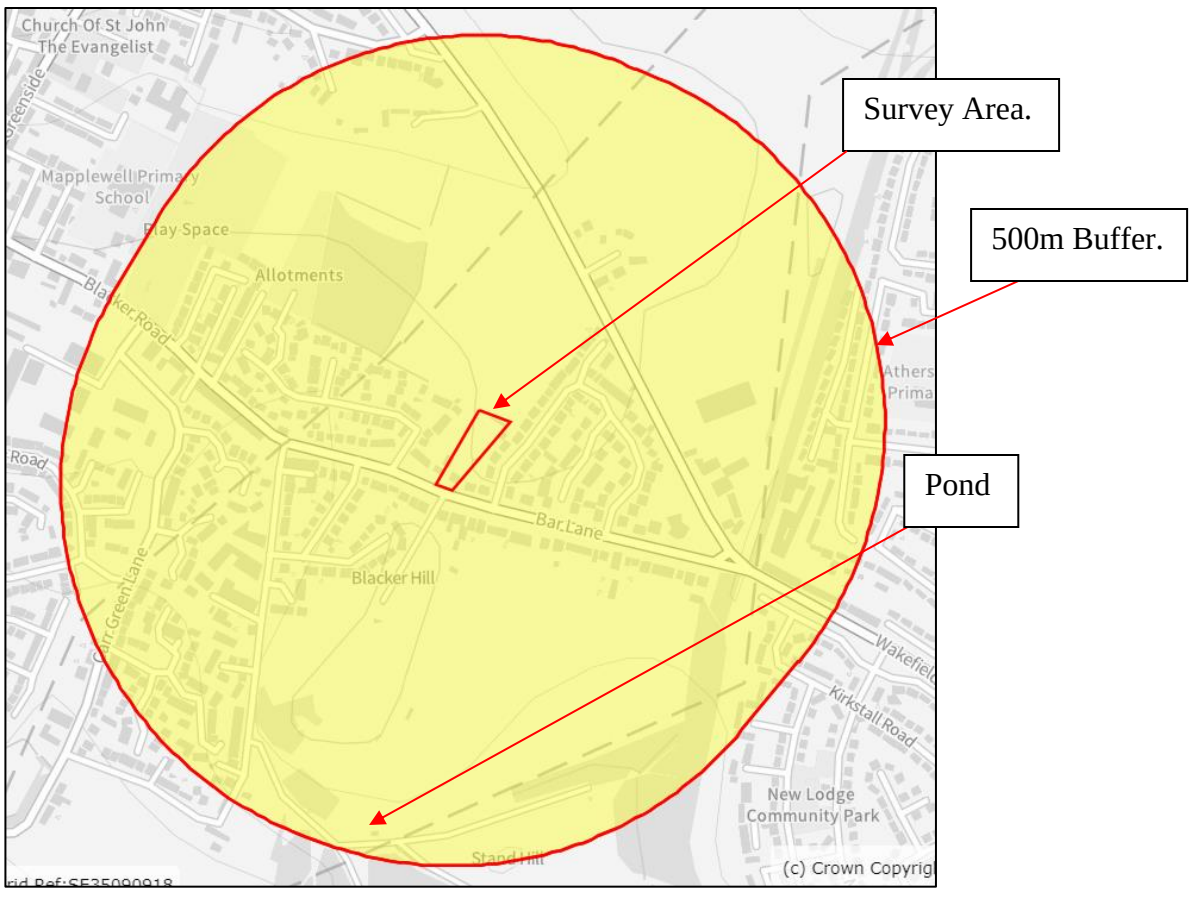
3.4. Description of Fauna.

3.4.1. No badger setts or badger field signs were identified within the survey area during this survey.

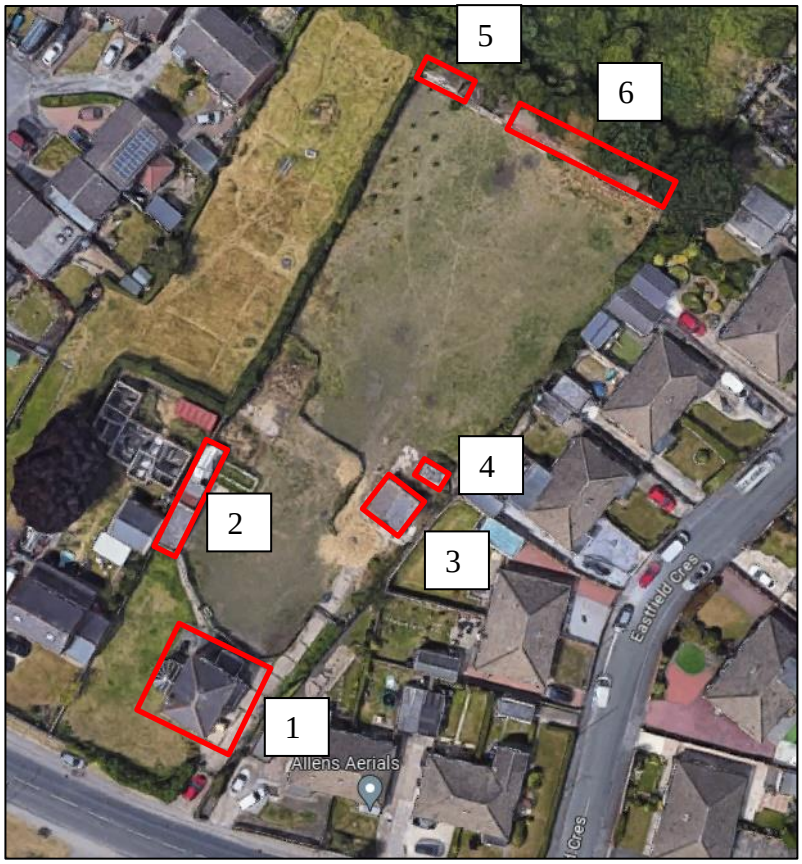
3.4.2. No watercourses were identified within the survey area. Therefore, there was no suitable habitat for water voles, otters or white clawed crayfish and no records were identified during the data search.

3.4.3. There was one pond identified within 500m but located 450m away from the survey area. There is a large amount of terrestrial habitat between the pond and the site, which would provide a much more suitable habitat. There was also a busy main road between the pond and the site. The nearest record of great crested newt was 1.7km to the south of the survey area. Therefore, it is very unlikely that great crested newts will be present on the site.

3.4.3.1. The map below shows the location of the site, the pond and 500m around the survey area.



3.3.4. There were six buildings identified within the survey area. The aerial photograph below shows the surveyed buildings.



3.3.4.1. **Building 1** was a brick and stone residential property two storey in height. There were single storey brick extensions, a bay window and a conservatory on all elevations of the building. The walls were well pointed with no gaps or crevices suitable for roosting bats.

3.3.4.1.1. The roof was hipped and covered with slate and ceramic ridge tiles and a chimney with lead flashings with no visible gaps or crevices. Inside the loft there were wooden rafter and purlins with no lining as shown in the photograph below. There were wooden box soffits with wooden fascia's around the eaves. However, there were some small gaps behind the soffits where bats could access the building as shown in the photograph below.

3.3.4.1.2. No evidence of bat roosts or bat field signs were identified during this survey. The building was assessed as providing a **low potential** for roosting bats.

3.3.4.2. **Building 2** was a single storey brick stable. The walls were well pointed with no gaps or crevices suitable for roosting bats and the roof had a single pitch and was covered with corrugated cement sheets.

3.3.4.2.1. There were no suitable features for roosting bats in the walls or the roof and no bat roosts or bat field signs were identified during this survey. The building was assessed as providing a **negligible potential** for roosting bats.

3.3.4.3. **Building 3** as a single storey brick garage. The walls were well pointed with no gaps or crevices suitable for roosting bats and the roof had a single pitch and was covered with corrugated cement sheets.

3.3.4.3.1. There were no suitable features for roosting bats in the walls or the roof and no bat roosts or bat field signs were identified during this survey. The building was assessed as providing a **negligible potential** for roosting bats.

3.3.4.4. **Building 4** was a single storey brick storage building full of wood. The walls were well pointed with no gaps or crevices suitable for roosting bats and the roof had a single pitch and was covered with corrugated cement sheets.

3.3.4.4.1. There were no suitable features for roosting bats in the walls or the roof and no bat roosts or bat field signs were identified during this survey. The building was assessed as providing a **negligible potential** for roosting bats.

3.3.4.5. **Building 5** was a single storey prefabricated concrete panel garage. The walls were well pointed with no gaps or crevices suitable for roosting bats and the roof had a single pitch and was covered with corrugated cement sheets.

3.3.4.5.1. There were no suitable features for roosting bats in the walls or the roof and no bat roosts or bat field signs were identified during this survey. The building was assessed as providing a **negligible potential** for roosting bats.

3.3.4.6. **Building 6** was a single storey brick stable. The walls were well pointed with no gaps or crevices suitable for roosting bats and the roof had a single pitch and was covered with corrugated cement sheets.

3.3.4.6.1. There were no suitable features for roosting bats in the walls or the roof and no bat roosts or bat field signs were identified during this survey. The building was assessed as providing a **negligible potential** for roosting bats.

3.3.4.7. There were no trees identified within the survey area during this survey that would provide suitable roosting potential for roosting bats and the trees that there were there were assessed as having negligible potential.

3.3.4.8. A comprehensive evaluation of the bat foraging habitat on the site could not be undertaken during this daytime survey although, surrounding linear boundaries provided very limited potential for foraging habitat.

3.3.4.9. Bat Dusk Emergence Survey – 19th August 2023.

3.3.4.9.1. The dusk emergence survey was carried out of Building 1 by two surveyors on the evening of 19th August 2023. One surveyor holds a current Natural England class licence for surveying bats (James Campbell 2015-10823-CLS-CLS) and the other surveyor was an experienced assistant.

3.3.4.9.2. The surveyors were positioned strategically to cover all aspects of the building. Each surveyor was equipped with a Batbox Duet detector and a two-way radio for communications. In addition, two static Anabat recorders were deployed to record bat activity for subsequent computer analysis using Analook software. The positions of the surveyors (S) and the Anabat recorders (AB) were as shown below.

3.3.4.9.3. The evening was clear and dry with a light breeze. There was a temperature of 16ºC at 20:12 which dropped to 13°C at the end of the survey. Sunset was at 20:27, therefore the survey commenced at 20:12 and terminated at 22:00.

3.3.4.9.4. Throughout the survey no bat activity was heard, seen or recorded until 20:55, when a Common Pipistrelle bat passed over from the north to the south around the western side of Building 1. Six Common Pipistrelle bats were recorded by the surveyors in total either flying over the site or foraging for a short period of time before moving away from the site.

3.3.4.9.5. The Anabats recorded Noctule bats and Common Pipistrelle bats. **Anabat 1** recorded eleven Common Pipistrelle calls between 20:56 and 21:01 and one Noctule call at 21:06. **Anabat 2** recorded two Common Pipistrelle calls between 20:04 and 20:18 and two Noctule calls at 21:12 and 21:26.

3.3.4.9.6. No bats were seen by either surveyor to emerge from the building and there were generally very low levels of bat activity across the site.

3.3.5. The buildings and vegetation within the survey area will provide a suitable habitat for nesting birds during the nesting season, which extends from March to August. However, no disused nests or current nests were identified during this survey.

3.3.6. The survey area provides limited suitable habitat for reptiles as there was very little refugia. The site is also regularly disturbed as the land is still regularly used by people and animals. No reptiles were identified.

3.3.7. The site does not provide a suitable habitat for hazel dormice as there was a lack of suitable connective habitat and the site lies outside their natural range.

3.3.8. The site does not provide a suitable habitat for red squirrel as there was a lack of suitable connective vegetation. There were no red squirrels or red squirrel field signs identified within the survey area.

3.3.9. There were no invasive plants listed on Schedule 9 of the Wildlife and Countryside Act 1981 identified within the survey area.

3.3.10. The site will provide a suitable habitat for hedgehogs as there was suitable refugia under the hedgerows. No field signs were identified during this survey.

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4. EVALUATION OF FINDINGS.

4.1. There will be no impact on the two Local Wildlife Sites located 1.7km to the south of the survey area during the proposed works. There were no other designated sites identified within 2km of the survey area.

4.2. The survey area was generally locally common habitats with locally common species although generally the buildings do provide some value for roosting bats and nesting bird species.

4.3. Biodiversity calculations were carried out using the Small Sites Biodiversity Metric 4.0 of the habitats that lie within the red line boundary. The baseline on the site was calculated at 1.5102Bu Habitat Biodiversity Units (Bu) and 0.6160Bu Hedgerow Biodiversity Units (Bu) as shown in the tables below.

Habitat Type	Extent (m2)	Distinctiveness	Condition Assessment	Biodiversity units
Modified Grassland (South)	378	Low	Moderate	0.15
Modified Grassland (North)	2094	Low	Moderate	0.84
Mixed Scrub	588	Medium	Moderate	0.47
Intensive Orchard	255	Low	N/A	0.05
Developed land; sealed surface (Building 4)	8	V.Low	N/A	0.00
Developed land; sealed surface (Building 3)	36	V.Low	N/A	0.00
Developed land; sealed surface (Building 2)	58	V.Low	N/A	0.00
Developed land; sealed surface (Concrete)	9	V.Low	N/A	0.00
Developed land; sealed surface (Concrete)	278	V.Low	N/A	0.00

Vegetated Garden (South)	16	Low	N/A	0.00
Vegetated Garden (East)	14	Low	N/A	0.00
Developed land; sealed surface (Building 1)	113	V.Low	N/A	0.00
Developed land; sealed surface (Building 5)	16	V.Low	N/A	0.00
Developed land; sealed surface (Building 6)	94	V.Low	N/A	0.00
Total	**3927**			**1.5102**

Hedgerow Type	**Length (m)**	**Distinctiveness**	**Condition Assessment**	**Biodiversity units**
Native Hedgerow	154	Low	Moderate	0.6160
Total				**0.6160**

4.4. The native hedgerows on the site boundaries are Habitats of Principal Importance under the NERC Act 2006. Therefore, the proposed works could have a **high impact** on these NERC habitats.

4.5. The proposed works will have **no direct impact** on any of the protected fauna species identified during the data search.

4.6. No badger setts or badger field signs were identified within the survey area during this survey. There will be **no impact** on badgers during the proposed works.

4.7. No watercourses were identified within the survey area. Therefore, there was no suitable habitat for water voles, otters or white clawed crayfish. The proposed works will have **no impact** on any watercourse's or any of the above species.

4.8. There was one pond identified 450m to the south of the survey area. However, the nearest great crested newt records were 1.7km from the survey area to the south. However, there was much more suitable habitat to the south of the survey area and a very busy main road between the records and the survey area. Therefore, it is very

unlikely that great crested newts will be present on the site. Therefore, the proposed works will have **no impact** on great crested newts.

4.9. There were six buildings identified within the survey area. Building 1 will provide some small areas where bats could roost between the wall and the box soffits. The building was assessed as having a **low potential** for roosting bats. Therefore, a bat dusk emergence survey was recommended and carried out on the 19th August 2023. This survey identified low levels of foraging and commuting bats within the survey area. However, none were seen to emerge from the building and therefore the proposed works will have **no impact** on roosting bats.

4.9.1. Buildings 2, 3, 4, 5 and 6 were all assessed as having **negligible potential** for roosting bats and the proposed works will have **no impact** on roosting bats.

4.9.2. There were no trees identified within the survey area during this survey. Therefore, there will be no potential habitat for roosting bats and **no impact** on bats during the proposed works.

4.9.3. The site was estimated to provide a **very low value** bat foraging habitat but the boundaries provide a moderate potential, although only a the low number of bats were identified foraging along the boundaries during the dusk emergence survey. If the hedgerows are retained, there will be **no impact** on foraging bats.

4.10. The buildings and vegetation within the survey area will provide suitable habitat for various species of bird during the nesting season, which extends from March to September each year. No disused nests were identified. However, the proposed works will potentially have a **high impact** on nesting birds during the nesting season and a **no impact** on nesting birds outside the nesting bird season.

4.11. The survey area provides limited suitable habitat for reptiles as there was very little refugia and very little foraging habitat. The site is also regularly disturbed as the land is still used No reptiles were identified. Therefore, the proposed works will have **no impact** on reptiles.

4.12. The site was outside the natural range of hazel dormice and there are no connective routes between the site and other suitable dormouse habitat. Therefore, there will be **no impact** on hazel dormice during the proposed works.

4.13. The site provides no suitable habitat for red squirrel. There will be **no impact** on red squirrel during the proposed works.

4.14. There were no Schedule 9 invasive plant species listed on the Wildlife and Countryside Act 1981 identified within the survey area during this survey. There will be **no impact** on any Schedule 9 invasive plant species during the proposed works.

4.15. The site will provide a suitable habitat for hedgehogs under the surrounding hedgerows. Without precautions in place, the proposed works could potentially have a **high impact** on hedgehogs and their habitat.

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5. RECOMMENDATIONS.

5.1. This Preliminary Ecological Appraisal report is designed to advise the client of the initial survey results so that they may be considered with the proposed development.

5.2. Once any further surveys have been completed, all recommendations of this report have been considered and the plans have been finalised, the report must be converted into an Ecological Impact Assessment (EcIA) where details of further survey results, mitigation and biological enhancements are included, to arrive at an assessment of the residual impact of the proposed works. This should include biodiversity calculation to demonstrate no net loss of biodiversity as a result of the development. The EcIA format will be suitable to submit to the Local Authority.

5.2.1. Even though no bats were seen to emerge from the building individual bats can seek temporary shelter almost anywhere. Therefore, all personnel should be briefed on the identification of bats and a toolbox talk on bats has been included at the end of this report to provide further information. The works should be carried out with care and in the unlikely event a bat is found during the works, the bat should be carefully covered and protected, work should cease at that location and the undersigned should be contacted for further advice.

5.2.2. The hedgerows to the north of the site should be retained where possible as they provide suitable commuting and foraging route for bats. If they cannot be retained a bat transect survey will be required during the spring/summer months.

5.3. The buildings and vegetation within the survey area will provide a suitable habitat for nesting birds. All vegetation clearance should be carried out outside the nesting bird season which extends from March to September. No disused nests were identified within the buildings. However, no current nests or nesting activity was identified during this survey. If the buildings are to be affected during the nesting bird season the works should be preceded by a thorough nesting bird survey carried out by a suitably experienced person. If an active nest is identified during this survey the nest should be left undisturbed until the young have fledged.

5.4. There is a requirement to provide an overall biodiversity net gain on the site. The local authority may require a net gain of at least 10% biodiversity units. Initially, it is

recommended that as much of the existing habitats on the site as possible are retained to minimise the number of biodiversity units lost in the first instance.

5.5. In addition to ensuring a net gain of biodiversity units is achieved on the site, there will be an expectation to provide some biodiversity enhancements for fauna species on the site. This can be achieved by providing integrated bird and bat boxes into any new buildings on the site.

5.6. It is recommended that precautionary measures are put in place for hedgehogs by clearing vegetation to a minimum of 200mm in the first instance before clearing to ground level. This will encourage any hedgehogs on the site to vacate the area and will deter them from returning before any works on site commence.

5.7. It is recommended that provisions are put in place for hedgehogs post development by creating gaps along the bottom of any boundary fences that are a minimum of 13cm x 13cm.

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Prepared by:	
James Campbell MCIEEM.	Date: 15th November 2023

Checked by:	
Ruth Georgiou. BSc, MCIEEM.	Date: 16th November 2023

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Appendix I. NESTING BIRD INFORMATION.

Ecology

The nesting season will vary according to the weather each year but generally commences in March, peaks during May and June and continues until September. It is also worth remembering that some birds nest in trees and scrub, but others are ground nesting or prefer man- made structures or buildings.

Surveys

Nesting bird surveys search for potential nest sites in vegetation, buildings etc. Potential nesting sites are observed over a suitable period of time for bird movements or calling male birds that would indicate the presence of a nest. The presence of a nest can be identified from the field signs without the necessity to see the nest itself, thereby avoiding any disturbance of the nests. The best way to avoid this issue is to plan for vegetation clearance to be carried out outside the bird-nesting season.

Legislation

Nesting birds are protected under The Wildlife and Countryside Act 1981.

Part 1. -(1) Of the Act states that: - If any person intentionally: - kills, injures or takes any wild bird; takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or takes or destroys an egg of any wild bird, he shall be guilty of an offence.

Part 1. -(5) of the Act states that: - If any person intentionally: - disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on, or near a nest containing eggs or young; or disturbs young of such a bird, he shall be guilty of an offence and liable to a special penalty.

The Countryside and Rights of Way Act 2000 amends the above by inserting after “intentionally” the words “or recklessly”.

Appendix II. BAT INFORMATION.

Ecology

There are currently 18 species of bat residing in Britain, 17 of which of which are known to breed here. They are extremely difficult to identify in the hand and even more so in flight.

All appear to be diminishing in numbers, probably due to habitat change and shortage of food, caused by pesticides, as insects are their sole diet.

As their diet consists solely of insects, bats hibernate during the winter when their food source is at its most scarce. They will spend the winter in hollow trees, caves, mines and the roofs of buildings.

Certain species, particularly the pipistrelle (the commonest and most widespread British bat) can quickly adapt to man-made structures and will readily use these to roost and to rear their young.

Surveys

During walkover surveys, bat roosts can be identified by looking for:

- Suitable holes, cracks and crevices within any building, tree or other structure.
- Bat droppings along walls, window cills, or on the ground.
- Prey remains, such as insect wings.

Further investigations can be made using endoscopes, by carrying out aerial inspections of trees or by conducting bat activity surveys during dusk and dawn over summer months.

Legislation

Bats are protected under Appendix II and III of the Bern Convention (1982), Schedule 5 and 6 of the Wildlife and Countryside Act (1981), Annex IV of the Habitats Directive (some species under Annex II), Annex II of the Conservation of Habitats and Species Regulations (2010) and EUROBATS agreement. Numerous species are also listed under section 41 of the Natural Environment and Rural Communities Act (2006) making them species of principal importance.

All bats and their roosts are therefore protected in the UK. This makes it an offence to kill, injure or take any bat, to interfere with any place used for shelter or protection, or to intentionally disturb any animal occupying such a place.

The UK has designated maternity and hibernacula areas as Special Areas of Conservation (SAC's) under the Habitats Directive. Implementation of the UK Biodiversity Action Plan also includes action for a number bat species and the habitats which support them.

Where development proposals are likely to affect a bat roost site, a licence is required from Natural England.

Appendix III. GREAT CRESTED NEWT INFORMATION.

Ecology

Great Crested Newts breed in ponds and other water bodies. They can begin to migrate to their breeding ponds as early as the first frost-free days in late January with the majority reaching their breeding ponds by mid-March. Timing will be influenced by several factors, primarily evening temperatures above 5^{o}C and rainfall.

The peak egg-laying period is from mid-March to mid-May. The newts will lay their eggs individually, mainly on the leaves of submerged plants. The larva hatch after three weeks and then take another 2-3 months to complete larval development. Adult newts generally leave their breeding ponds from late May onwards.

Once the larvae have completed metamorphosis (the transition from aquatic larvae, efts, to land-adapted juveniles), they emerge from the pond. This emergence begins in late August and generally continues until late October. It takes 2-4 years to reach sexual maturity, during which time the newts will be land based.

Adults and immature newts spend the winter in places that afford protection from frost and flooding. This will generally be underground amongst tree roots, in mammal burrows, or under suitable refuges above ground like deadwood or rubble piles. Hibernation may last from October to February.

Whilst on land, outside the hibernation period, great crested newts will forage at night, taking a wide range of invertebrate prey.

Great Crested Newts therefore spend the majority of their time on land and only visit the ponds for breeding purposes.

Great Crested Newts will travel large distances between ponds and terrestrial refuges. It is recommended that anywhere within 500m of a pond should be treated as potential Great Crested Newt habitat.

Surveys

Walkover surveys will identify the suitability of any ponds within the area for Great Crested Newts by using a HSI assessment. The terrestrial habitat and their links will also be assessed.

Aquatic surveys of newts can be carried out through the trapping of ponds in suitable weather conditions during the breeding season, although these surveys do not provide accurate population estimates.

Terrestrial surveys and exclusions can be conducted between March and September when newts are moving out of breeding ponds.

An experienced surveyor must carry out the surveys and must be in possession of an appropriate Natural England Great Crested Newt survey license.

It is essential that Great Crested Newt surveys are planned well in advance of any development and ideally before Planning Consent is sought. Surveys can only be carried out at the appropriate time of year and repeat surveys are essential.

Legislation

Great Crested Newts are protected under Appendix II of the BERN Convention (1982), Schedule 5 of the Wildlife and Countryside Act (1981), Annex II and IV of the Habitats Directive, Annex II of the Conservation and Wildlife Regulations (2010) and are listed under section 41 of the Natural Environment and Communities Act (2006) making them a species of principal importance.

This makes it an offence to kill, injure or take any Great Crested Newt, to interfere with any place used for shelter or protection, or to intentionally disturb any animal occupying such a place.

If Great Crested Newts are to be affected by any development, a thorough assessment of the population is essential followed by the design of a comprehensive mitigation package. Only when this has been done can a license application be submitted to Natural England for approval. It takes 30 working days for a license application to be determined and the period that mitigation measures take can be measured in months. It is therefore essential to plan well in advance of development commencing.

Appendix IV. ANNOTATED MAP OF THE SURVEY AREA.

Appendix V. TARGET NOTES.

Target Note 1. Surrounding residential housing to the east.

Target Note 2. Surrounding residential housing to the west.

Target Note 3. Bar Lane to the south of the survey area.

Target Note 4. Scrub land to the north of the survey area.

Appendix VI. DEVELOPMENT PLAN.