Whitcher Wildlife Ltd.
Ecological Consultants.

28 TIVY DALE DRIVE, CAWTHORN.

OS REF: SE 27979 07637.

PRELIMINARY ECOLOGICAL APPRAISAL.

Ref No: **260331 / PEA /1 1.**

Date: **30th March 2026.**

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1. INTRODUCTION.

1.1. A planning application is being submitted for the demolition of the existing property at 28 Tivy Dale Drive, Cawthorn and the construction of a new property in its place, along with landscaping of the private garden.

1.2. Whitcher Wildlife Ltd has been commissioned to carry out a Preliminary Ecological Appraisal of the site to establish whether there are any ecological issues that may affect the proposed development.

1.3. The client has advised that the development is exempt from Statutory Biodiversity Net Gain (BNG) as it is to be a self build application. Baseline BNG calculations have been provided in this report for information purposes only.

1.4. That survey was carried out on 10th March 2026. This report outlines the findings of that survey and makes appropriate recommendations.

1.5. Appendices I to IV of this report provides additional information on specific 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.

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: -

* 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.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th 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. All surveys were carried out in line with the Chartered Institute of Ecological and Environmental Management (CIEEM) survey standards and advice.

2.14. This document is prepared in line with The National Planning Policy Framework (NPPF). This sets out the government policy on biodiversity and nature conservation and places a duty on Planning Authorities to give material consideration to the effect of a development on legally protected species when considering planning applications. The NPPF and the Planning Practice Guidance on "Natural Environment" also promote sustainable development by ensuring that developments take account of the role and value of biodiversity and that it is conserved and enhanced within the development.

2.15. This report is prepared in line with the Natural Environment and Rural Communities (NERC) Act that came into force on 1st Oct 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England.

2.16. This survey was carried out by Ruth Georgiou BSc MCIEEM. Since 2004 Ruth has had experience in a professional capacity as a Wildlife Consultant carrying out a variety of surveys including ecology surveys, phase I habitat surveys, preliminary ecological appraisals and species-specific surveys. She also holds a degree in Environmental Science (BSc) and has successfully completed a number of courses run by CIEEM, BCT and FSC in the relative protected species and other aspects of ecology. Ruth is also experienced and trained in Biodiversity Net Gain and is accredited to undertake river condition assessments utilising the MoRPh methodology. Ruth holds Natural England survey licences in respect of bats, great crested newts and white clawed crayfish and has held her own or has been named ecologist on site specific mitigation licences for badgers, great crested newts and bats. As a full member of CIEEM Ruth is subject to peer review on an annual basis.

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3. SURVEY RESULTS.

3.1. Data Search Results.

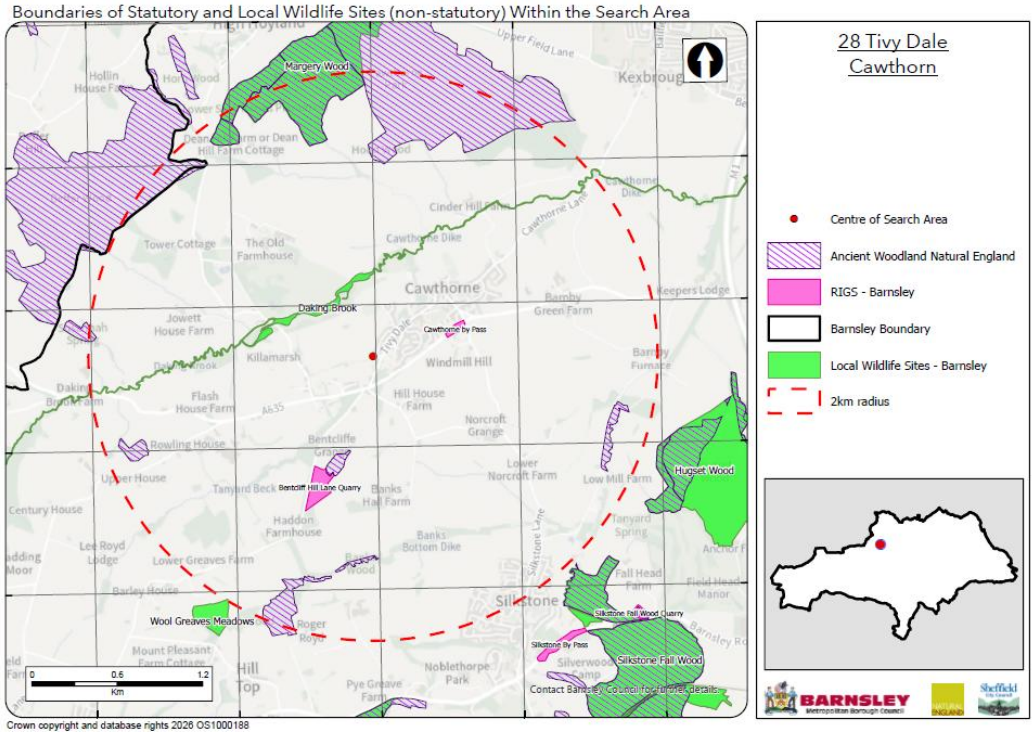
3.1.1. Data searches covering a 2km radius around the site have been undertaken utilising the following data sources:

- Barnsley Biological Records Centre (BBRC) for records of protected species and locally designated sites.
- South Yorkshire Bat Group (SYBG) for records of bats and bat roosts.
- MAGIC website for locations of statutory designated sites, great crested newt pond surveys and licencing data, and EPS mitigation licences.

3.1.2. BBRC returned information on the locations of non statutory designated sites within 2km of the survey area. This included two Local Wildlife Sites (LWS), the closest of which is Daking Brook that flows through Cannon Hall Country Park approximately 430m from the survey area.

3.1.3. Two Regionally Important Geographic Sites and five ancient woodlands were also highlighted within 2km, although the distances of these meant that they are irrelevant to this survey.

3.1.4. The map below shows an overview of the non statutory designated sites within 2km of the survey area.



3.1.5. The MAGIC website shows that there are no statutory designated within 2km of the survey area. The survey area does fall within an Impact Risk Zone (IRZ) for habitat sites, but the on site proposals do not meet the requirements that requires consultation with Natural England.

3.1.6. BRBC also provided numerous protected species records, although very few that are of any relevance to the survey area. The main records of relevance are consistent with the relevant records provided by the SYBG, which is of a maternity brown long eared bat roost at 16 – 18 Tivy Dale Close, approximately 25m from the current property within the survey area. There are a number of records that relate to this roost, with the most recent dated November 2021, when thousands of brown long eared bat droppings were found in the roof space. The location of this roost, indicated by the yellow star, is shown in relation to the survey area, outlined in red, on the map below.

3.1.7. BRBC provided records of great crested newts at Cannon Hall Country Park and the MAGIC website also provides records of positive class licence returns for great crested newts in some ponds at Cannon Hall, in excess of 1.5km from the survey area.

3.1.8. BRBC provided records of badger, but no records that are close enough to be of any relevance, and numerous records of hedgehogs in the area.

3.1.9. BRBC and SYBG provided a number of other bat records, none of any direct relevant, but they included records of Daubentons, natterers, noctule, common pipistrelle and soprano pipistrelle bats at Cannon Hall Country Park, other bat roosts recorded on Tivy Dale which were small whiskered and common pipistrelle bat roosts.

3.1.10. The data search results can be provided to the client on request but should not be placed in the public domain.

3.2. The Surveyed Area.

3.2.1. The survey area is located on the edge of Cawthorn village and is surrounded by Cawthorn Village on one side and open fields with Cannon Hall Country Park beyond.

3.2.2. The aerial map below shows the location of the survey area, marked in red, and the surrounding area.

3.2.3. The survey area comprises 28 Tivy Dale Drive, including both the residential property and garage as well as it's associated garden and hard landscaped areas.

3.2.4. The limits of the survey area are outlined in red in the aerial map overleaf.

3.3. Survey Limitations.

There were no significant survey limitations. The timing of the survey outside of the growing season may mean that some plant species were missed, however, as it is a residential property and garden this is not considered to be of any significant constraint to the survey findings and recommendations going forward.

3.4. Description of Habitats.

3.4.1. Appendix V of this report contains an annotated map marked up with the varying habitats across the site. The primary habitats on the site are listed below, followed by descriptions of each habitat.

- u1 Built up areas and gardens
- u1b Developed land; sealed surface
- u1b5 Buildings
- h2a6 Native hedgerow
- h2b Non native and ornamental hedgerow

3.4.2. u1 Built up areas and gardens.

Secondary codes: 524 invasive non-native species, 612 fence 828 vegetated garden, 829 unvegetated garden, 846 flower bed, 847 introduced shrubs, 853 mortared wall.

3.4.2.1. This habitat refers to the garden of the property including both the vegetated and unvegetated features including garden lawn, flower beds, ornamental shrubs, gravel and paved pathways around the property.




3.4.2.2. The rear garden lawn contains typical lawn species including perennial ryegrass (*Lolium perenne*), annual meadowgrass (*Poa annua*), common bent (*Agrostis capillaris*) and springy turf-moss (*Rhytidiadelphus squarrosus*).

3.4.2.3. To the front and rear there are flower and shrub beds, with ornamental species growing including Norway spruce (*Picea abies*), *Rhododendron* sp., evergreen spindle (*Euonymus japonicus*), box (*Boxus sempervirens*), wall cotoneaster (*Cotoneaster horizontalis*), laurustinus (*Viburnum tinus*), red osier dogwood (*Cornus sericea*), Japanese laurel (*Aucuba japonica*), wood spurge (*Euphorbia amygdaloides*), daffodil (*Narc*issus sp.), grape hyacinth (*Muscari armeniacum*), snow drop (*Galanthus nivalis*),

Serbian bellflower (*Campanula poscharskyana*), red valerian (*Centranthus ruber*), glory-of-the-snow (*Scila forbesii*) and ornamental grasses.

3.4.3. u1b Developed land; sealed surface.

The driveway of the property comprises block paving.

3.4.4. u1b5 Buildings.

Secondary code; 818 residential building.

There are three buildings / structures within the survey area, one being a large bungalow, one a garden shed and one being a covered seating area. These are dealt with in more detail further on in this report.

3.4.5. h2a6 Other native hedgerow

There are two low and short sections of box (*Buxus sempervirens*) hedgerow at the front of the bungalow. These are very tidy and well managed.


3.4.6. Non-native and ornamental hedgerow.

3.4.6.1. Hedgerow 1 (H1).

H1 is a length of hedgerow that extends around the south and east sides of the property. It includes franchet's cotoneaster (*Cotoneaster franchetii*), laurel (*Prunus laurocerasus*), holly (*Ilex aquifolium*) and beech (*Fagus sylvatica*).




3.4.6.2. Hedgerow 2 (H2).

H2 is a short length of beech (*Fagus sylvatica*) hedgerow along the western boundary of the property.

3.5. Description of Fauna.

3.5.1. No badger setts or badger field signs were identified within the survey area.

3.5.2. There are no watercourses within the survey area and therefore no potential habitats to support species such as water voles, otter and crayfish.

3.5.3. There are no ponds shown on maps within 500m of the survey area, therefore, great crested newts are considered to be absent from the site.

3.5.4. Bats.

3.5.4.1. There are three buildings on the site, the main bungalow, the shed and a covered seating area. A Preliminary Roost Assessment (PRA) was carried out of these buildings, and the results are provided below.

3.5.4.2. The Bungalow.

3.5.4.2.1. The bungalow is a dormer bungalow with a single storey garage attached to it.

3.5.4.2.2. It is constructed from cavity brick walls with a small section of stone wall and a pitched, interlocking tiled covered roof. There are composite soffits around the bungalow and composite window frames and doors.

3.5.4.2.3. The attached garage is a single storey brick garage with a flat felt roof and an up-and-over door with composite surrounds and soffits.

3.5.4.2.4. Whilst the bungalow as a whole is in very good condition, the walls display no cracks, gaps or holes and the roof tiles are generally tightly fitted and the soffits are generally well sealed to the walls, a small number of defects were found that offer potential for individual or very low numbers of roosting bats to utilise. This includes a small number of roof tiles that are slightly lifted, a hole at the top of one wall where it meets the soffit that appears to be a redundant cable feed hole and lifted lead flashing around the chimney and one side of the dormer. No evidence of roosting bats such as droppings or staining was visible around these features, although these could only be inspected from ground level utilising a torch and binoculars. The photographs below demonstrate some of these features.

3.5.4.2.5. There is no loft space in the bungalow as it is a dormer bungalow with rooms built into the loft space, although there are voids along the bottom of each side of the pitched roof that have been boarded out with access into them internally to utilise for storage. These are very low, approximately 1 in height and a width of approximately 1m at loft floor level. These are not suitable voids for bats to utilise as there is no access into them for bats and they are very much part of the internals of the bungalow that would be subject to disturbance. No bats or bat field signs were found anywhere in these voids. Examples of these voids are shown in the photographs below.


3.5.4.2.7. Although a small number of features were identified around the exterior of the bungalow, it is assessed that the potential is limited to individual or low numbers of roosting bats. There is no loft space available for bats in the property, therefore, the potential is limited to crevice dwelling bats such as pipistrelle bats. The bungalow is assessed as low potential for roosting bats. The photographs below highlight the locations of all potential roosting features identified during the PRA.




3.5.4.3. The Shed.

3.5.4.3.1. The shed is a metal garden shed, that is completely unsuitable for roosting bats. The photograph below shows the garden shed.

3.5.4.4. Covered Seating Area.

There is an outdoor seating area that has a wooden canopy over it. The design and construction of this is totally unsuitable for roosting bats. This is shown in the photograph below.

3.5.4.5. There were some small ornamental trees within the survey area, but these were in very good condition and small and offer no potential features suitable for roosting bats. They are all assessed as negligible potential.

3.5.4.6. The survey area offers moderate value for foraging and commuting bats. The vegetated garden habitat is linked to other vegetated gardens, albeit they will be exposed to some level of disturbance from noise and lighting. There is also a well establish hedgerow that links into the southern tip of the garden, that links into Cawthorn Country Park, which comprises mature trees, Dakin Brook and wooded corridors along the brook.

3.5.5. There is potential for nesting birds across the survey area, mainly within the vegetation, although birds could potentially take advantage of the features identified around the bungalow.

3.5.6. The survey area offers limited suitability for reptiles. Whilst the habitats themselves could be suitable, with cover under the garden shrubs and open lawn for basking, the survey area is a domestic garden and has been used as such up to recent times. It is also surrounded by other domestic gardens with high levels of human disturbance, intensive management and domestic animals utilising the gardens. Therefore, the potential for reptiles is assessed to be limited to very low numbers of common reptile species at the most.

3.5.7. The survey area lies outside of the natural range of hazel dormouse and red squirrel; therefore, these species have not been considered as part of this assessment.

3.5.8. The site provides good suitability for hedgehogs. The garden planting provides good cover and commuting corridors for hedgehogs between gardens. Hedgehogs are well adapted to urban environments and will happily commute across roads. Therefore, the smaller residential streets will not act as a barrier to the movement of hedgehogs across the area.

3.5.9. Multiple cotoneaster (*Cotoneaster horizontalis*) plants and a rhododendron (*Rhododendron ponticum*) plant were identified growing the garden. These are invasive non-native plant species listed on Schedule 9 of the Wildlife and Countryside Act (1981). The photographs overleaf show some of these plants found.

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4. BASELINE BIODVISRITY NET GAIN.

4.1. Baseline biodiversity calculations have been carried out using the Statutory Metric tool, the current metric at the time of writing this report. The calculations have been completed for habitat and hedgerow units.

4.2. Habitat Units.

The area habitat calculations include all habitats that lie within the red line boundary of the site. The habitats baseline on the site was calculated at 0.07 biodiversity units as demonstrated in the tables below.

Habitat Type	Extent (ha)	Distinctiveness	Condition Assessment	Biodiversity units
Developed land; sealed surface	0.033	V.Low	Poor	0.00
Vegetated garden	0.035	Low	Poor	0.07
Total	**0.68**			**0.07**

4.3. Hedgerow Units.

The area hedgerow calculations include all linear hedgerows that lie within the red line boundary of the site. The hedgerows baseline on the site was calculated at 0.09 biodiversity units as demonstrated in the tables below.

Hedgerow Type	Length (km)	Distinctiveness	Condition Assessment	Biodiversity units
Native hedgerow	0.013	Low	Poor	0.03
Non-native and ornamental hedgerow	0.061	V.Low	Poor	0.06
Total	**0.74**			**0.09**

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5. EVALUATION OF FINDINGS.

5.1. The MAGIC website does not show any statutory designated sites within 2km of the survey area, and although the survey area lies in an IRZ, the proposals do not meet the criteria that require further consultation with Natural England.

5.2. There are a number of non statutory designated sites within 2km of the survey area but all lie sufficient distance away that they will not be negatively impact by the proposed development works.

5.3. No badger setts or badger field signs were identified within the survey area and therefore, there will be no impact on badgers.

5.4. There are no habitats on the site suitable for water vole, otter or white clawed crayfish. Therefore, the development of the site will have no impact on these species.

5.5. There are no ponds shown on publicly available maps within 500m of the survey area, therefore, the proposed works will have no impact on great crested newts.

5.6. There are three buildings within the survey area. The bungalow is assessed as low potential for roosting bats, and therefore, the demolition of this building could result in the destruction of bat roost(s) and could potentially cause harm to any bats present at that time. The shed and the covered seating area are assessed as negligible potential and therefore the demolition of these will have no impact on roosting bats.

5.7. A large maternity roost was highlighted in the data search results located close to the survey area, approximately 25m south east from the development area. The roost will be well buffered by the lie of the land, hedgerow and garden planting. It is assessed as highly unlikely that the proposed development will cause any indirect impacts that would cause disturbance to the maternity roost. For context, the photograph below was taken stood to the rear of 28 Tivy Dale bungalow, looking towards the roost, indicated by the red arrow.

5.8. There are several small trees within the survey area, all of which are assessed as negligible potential for roosting bats. There are no plans to impact on any of these, but regardless, there will be no impact on roosting bats in trees.

5.9. The survey area is assessed to provide moderate value habitat for foraging and commuting bats. The proposed works will retain most of the garden planting, but regardless, due to the small size of the garden area and the larger expanse of garden habitats around, any impacts from temporary losses of the vegetated garden will easily be absorbed in the surrounding habitats and will be an impact at site level only, causing no fragmentation of foraging or commuting routes.

5.10. There is potential for nesting birds throughout the survey area during the nesting bird season, which extends from March to August inclusive each year. Any vegetation clearance or works to the buildings carried out during the nesting bird season could potentially have a high negative impact on nesting birds on the site.

5.11. The survey area is assessed to provide very limited potential for reptiles. Any impacts would be limited to very low numbers of common reptile species.

5.12. The survey area lies outside of the natural range of hazel dormouse and red squirrel and therefore the proposed works will have no impact on these species.

5.13. The site provides good suitability for hedgehog. The proposed works has potential to disturb or harm individual hedgehogs taking refuge in the garden areas.

5.14. Multiple cotoneaster (*Cotoneaster horizontalis*) plants and a rhododendron (*Rhododendron ponticum*) plant were identified growing within the survey area. These are invasive non-native plant species listed on Schedule 9 of the Wildlife and Countryside Act (1981). Cotoneaster (*Cotoneaster horizontalis*) spreads via seeds in the berries, which are normally on the plant during the autumn / winter months. Rhododendron (*Rhododendron ponticum*) mainly spread by lateral layering and root suckers. Therefore, any works that directly interferes with these plants or the soils directly around them could cause the plants to spread.

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6. RECOMMENDATIONS.

6.1. This report is designed to advise the client of the initial survey results so that they may be considered within the site development plan.

6.2. Once all recommendations of the PEA have been considered, any necessary further surveys have been completed and the development plans have been finalised, there will be a requirement for this report to be converted into an Ecological Impact Assessment (EcIA) where details of further survey results, mitigation measures and ecological enhancements are included, to arrive at an assessment of the residual impacts of the proposed development.

6.3. In line with current guidelines, it is recommended that one bat dusk emergence survey is carried out of the bungalow. This can only be carried out during suitable weather conditions between May and August (inclusive). In the event that a bat roost is identified, there will be a requirement to undertake further surveys to gather sufficient information to allow a full assessment of the impacts on the bat roost(s). This includes classification of the type of roost, species, numbers, access points and extent of the roosts. This will then need to inform a mitigation strategy that will be written into the final EcIA for submission to the local authority.

6.4. Where feasible, it is recommended that any vegetation clearance or building works are carried out outside the nesting bird season. Any of these works carried out during the nesting bird season should be preceded by a nesting bird survey and any active nests that are found should be left undisturbed until the young have fledged.

6.5. To mitigate for any impacts on individual common reptile species and hedgehogs, it is recommended that a Construction Environmental Management Plan (CEMP) is drawn up with suitable avoidance measures in for these species.

6.6. It is recommended that gaps, a minimum dimension of 13cm x 13cm are also maintained in any new boundary fences along the boundaries of the site to retain connectivity for hedgehogs between gardens.

6.7. In line with the National Planning Policy Framework, there will be an expectation to provide biodiversity enhancements for fauna species on the site. It is recommended that at least one integrated bat box and a pair of integrated swift boxes are provided in the new dwelling on the site.

6.8. It is the responsibility of the client to ensure that sufficient evidence is submitted to the local authority to demonstrate that the development will be exempt from the statutory BNG requirements.

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Revision 1 prepared by:	
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Derek Whitcher, BSc, MCIEEM, MCMI	Date: 31st March 2026.

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Appendix I. 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 II. 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 III. REPTILE INFORMATION.

Ecology

There are five main species of reptile that reside in the UK; Common or Viviparous Lizard (*Lacerta vivipara*); Sand Lizard (*Lacerta agilis*); Slow Worm *(Anguis fragilis*); Grass Snake (*Natrix natrix*) and Adder (*Vipera berus*). The Adder is the only native species that is venomous although this is rarely harmful to humans.

Reptiles occupy a wide range of habitats including woodland, marshes, heathland, moors, sand dunes, hedgerows and bogs. Sand Lizards are confined to moorland and coastal sand dunes where they lay their eggs in the warm sand. The range of the Sand Lizard in the UK is therefore very limited. Slow Worms can be found in a wide variety of habitats throughout Britain and is the most likely reptile to be found in urban and suburban environments.

Maintaining the right body temperature is vital to reptiles' survival. In the morning, they find a warm basking site to heat up their bodies, then later they may move back into the shade because they do not sweat and have to be careful not to overheat. During hot summers, Adders will try to move to damper, cooler sites.

Over winter reptiles will hibernate in burrows or under longs where they are protected from the cold and predators, emerging from February onwards as the weather warms up.

Reptiles generally begin to mate April to May with young born in late July to September. The Common Lizard gives birth to live young, hence the term viviparous, meaning live bearing.

Surveys

Reptile surveys involve the searching of refuge such as logs and stones for any animal sheltering below. Artificial refuge may be laid out on site for the purpose of reptile surveys.

Legislation

Reptiles are protected under Appendix II (sand lizards) and Appendix III (common lizard, slow worms, smooth snake, grass snake and adders) of the BERN Convention (1982), partially protected under Schedule 5 of the Wildlife and Countryside Act (1981), Annex IV of the Habitats Directive and are all 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 disturb any reptile while it is occupying a structure or place it uses for shelter or protection or to obstruct access to such a place.

Appendix IV. HEDGEHOG INFORMATION.

Ecology

The hedgehog was a common species once widespread throughout the country but it has suffered a major decline due to loss of habitat. They are now found distributed across the UK, but the population increases to the south and east. Hedgehogs are rare in Scotland, Wales and Northern Ireland.

The hedgehog is a small, spiny mammal around 20cm long with a long snout. The back and sides of the hedgehog are covered in 25mm (1") long spines. These are absent from the face, legs and underside, which are covered with coarse, grey-brown fur.

Hedgehogs are highly active and range widely. They need to be able to move freely through a well-connected range of habitats to find food, mates and areas to nest. Studies show that hedgehogs can travel around 2km in a night in urban areas and 3km a night in rural landscapes. A viable population of urban hedgehogs is thought to need 0.9km^2 of well-connected habitat.

Hedgehogs nest year-round and produce different types of nest for daytime resting, breeding and hibernation. Daytime nests are a retreat during the active season, and are often temporary, flimsy and found in areas of rough grassland, loose leaf piles or garden vegetation. Breeding nests are made by females and are used to raise young. They tend to be more robust, like hibernation nests. Winter nests can be used for several months to hibernate through periods of cold weather and low food availability. The sturdiest nests rely on medium-sized deciduous leaves and a structure to hold the leaves in place. Bramble patches, log piles and open compost heaps are common locations for breeding and hibernation.

Hedgehogs are omnivores, but the bulk of their diet consists of macro-invertebrates such as beetles, worms, slugs, earwigs, caterpillars and millipedes. In urban areas, supplementary food in the form of cat, dog or formulated hedgehog food can make up a significant part of their diet. Access to water is also very important.

Surveys

Hedgehogs are nocturnal animals, so despite their spiny appearance they are often difficult to find.

All surveys should be conducted between May and November when hedgehogs are active.

Droppings can be found in grassland, farmland and in gardens. The droppings are crinkly, often studded with shiny fragments due to their diet of insects. They are variable in size, 15-50mm long and 8-10mm thick, blue/black in colour and sweet smelling with a hint of linseed oil.

Footprint tunnels and camera traps can also be used to survey for hedgehogs.

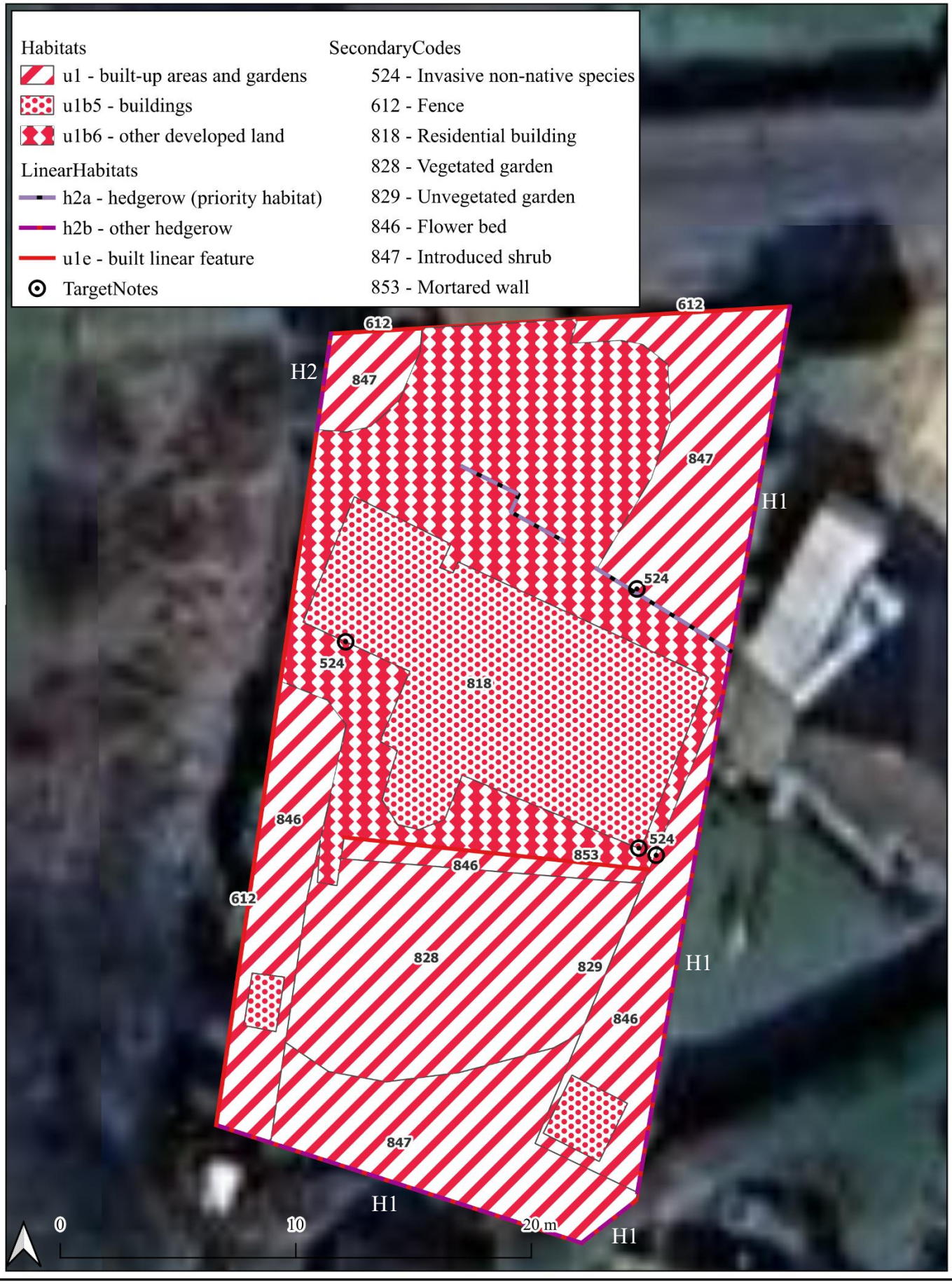
Further survey techniques can also be used to survey for hedgehogs, but these require a survey licence to carry out surveys involving trapping and torch or spotlight searches.

Legislation

The hedgehog is considered an endangered species, but it benefits only from general protection under the Wildlife and Countryside Act 1981. They are listed under Schedule 6 of the Act, which makes it illegal to kill, trap or capture wild hedgehogs, with certain methods listed. They are also listed under the Wild Mammals Protection Act (1996), which prohibits cruel treatment of hedgehogs and they are a species of 'principal importance' under the NERC Act, which confers a 'duty of responsibility to public bodies'.

However, none of these deal with the issues that are a threat to the hedgehog. The main threat is the increasing loss of habitat, the increasing traffic on our roads and the increasing use of herbicides, in particular those used to kill garden slugs.

Appendix V. HABITATS MAP.



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