

**Whitcher Wildlife Ltd.
Ecological Consultants.**



81 SWALLOW HILL ROAD, MAPPLEWELL.

OS REF: SE 3249 0915.

ECOLOGICAL IMPACT ASSESSMENT.

Ref No: 240851 / 1.

Date: 22nd October 2024.

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1. INTRODUCTION.

1.1. A planning application is being submitted for the construction of a new dwelling on some land associated with 81 Swallow Hill Road, Mapplewell. To facilitate the development, there will be a requirement to demolish a small bungalow.

1.2. Whitcher Wildlife Ltd was commissioned to carry out a Preliminary Ecological Appraisal (PEA) of the site to establish whether there are any ecological issues that may affect the proposed development and provide a biodiversity net gain statement for the site.

1.3. The initial PEA was carried out on 15th August 2024. During that survey, a building on the site was assessed as offering moderate potential for roosting bats and a further two bat dusk emergence surveys were recommended. Those surveys were carried out on 22nd August and 17th September 2024.

1.4. This report is a final Ecological Impact Assessment (EcIA) that outlines the findings of all surveys, includes details of any mitigation measures that will be implemented and provides an overall assessment of the residual impacts. This report also includes a biodiversity net gain statement. Revision 1 of this document includes updated proposed site plans.

1.5. Appendices I to III of this report provides additional information on specific species and are designed to assist the reader in understanding the contents of this report.

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.

2.7.1. The PRA was carried out in line with Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*, with an assessment of the buildings suitability for roosting bats made in accordance with these guidelines.

2.7.2. The subsequent dusk emergence and dawn return surveys were also conducted in accordance with Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*.

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. All surveys were 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.

3. SURVEY RESULTS.

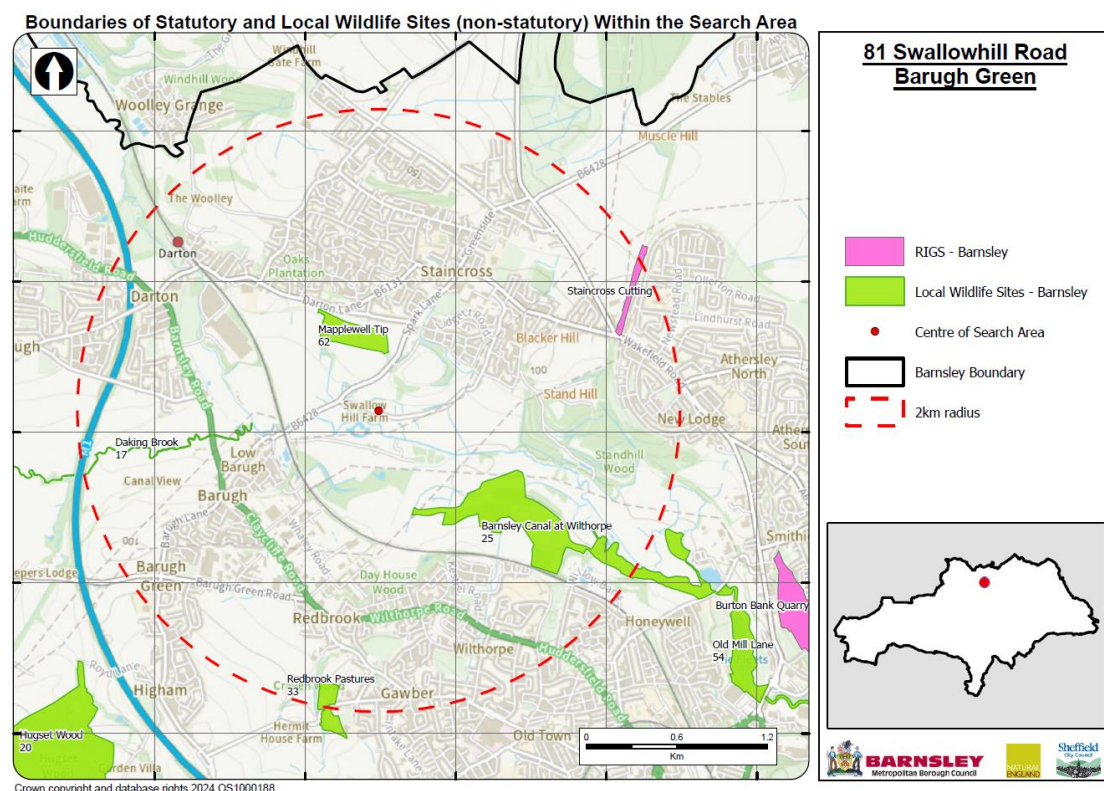
3.1. Data Search Results.

3.1.1. A data search for existing records of protected species and local designated sites within 2km of the surveyed area was submitted to the Barnsley Biological Record Centre (BBRC). In addition to this, the MAGIC website was consulted for any records of statutory designated sites, great crested newt licence return records and EPS licences held within 2km. The South Yorkshire Bat Group and South Yorkshire Badger Group were also consulted for any additional bat or badger records within 2km.

3.1.2. There are no statutory designated sites located within 2km of the survey area.

3.1.3 There are four Local Wildlife Sites (LWS) within 2km. The closest of these is Mapplewell Tip, which lies approximately 380m from the survey area. All four LWS have fragmented ecological connectivity between them and the survey area.

3.1.4. The map below shows an overview of the locations of these sites in relation to the survey area.



3.1.5. Various species records were returned within 2km. The most notable or relevant records are summarised below. A copy of the full data search results can be provided to the client upon request but should not be placed in the public domain.

3.1.6. There are no badger setts recorded within 2km of the survey area.

3.1.7. There are some records of water vole and otter along the River Dearne, again located in excess of 500m from the survey area.

3.1.8. Signal crayfish are recorded along the River Dearne, approximately 500m west of the survey area.

3.1.9. There are a number of great crested newt records within 2km of the survey area, with two records within 500m. These are located 415m and 455m south west. There is a record of a great crested newt EPS licence held for a residential development site approximately 900m from the survey area.

3.1.10. There are records of common toad associated with the River Dearne approximately 270m from the survey area.

3.1.11. Numerous bat records have been provided, however none relevant to the survey area. The records include common pipistrelle, soprano pipistrelle and noctule field records as close as 75m from the survey area, as well as a Daubentons roost approximately 1km from the survey area and a Leislars maternity bat roost 1.8km from the survey area.

3.1.12. There are various bird records, but again none relevant to the survey area.

3.1.13. There are no reptile records within 2km of the survey area.

3.1.14. Himalayan balsam and Japanese knotweed are recorded within 2km, but all in excess of 250m from the survey area.

3.2. The Surveyed Area.

3.2.1. The survey area is located in a rural location between the villages of Mapplewell and Barugh Green. It is surrounded by open grazing fields with small pockets of woodland and some tree lines. A road extends along the southern boundary of the site, with additional grazing and arable fields beyond, and the River Dearne flows across the landscape approximately 80m south.

3.2.2. The aerial map below shows the location of the survey area, indicated by the red arrow, and the surrounding area.



3.2.3. The survey area comprises a paddock, a small bungalow and associated garden habitat.

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



3.3. Survey Limitations.

There were no major limitations during the surveys. The timings of the bat dusk emergence surveys meant that a third dusk emergence survey was not carried out. However, this is not considered to affect the final assessment and proposed mitigation and has been factored into the proposed mitigation for this species.

3.4. Description of Habitats.

3.4.1. Appendix IV 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.

- g4 Modified grassland
- u1b Developed land, sealed surface
- u1b5 Buildings
- u1e Built up areas and gardens
- h2a6 Other native hedgerow
- u1e Built linear features

3.4.2. g4 Modified grassland.

Secondary code: 103 horse grazed, 108 frequently mown, 827 garden.

3.4.2.1. There are two areas of modified grassland within the survey area. There is a heavily horse grazed paddock on the western part of the survey area.



3.4.2.2. The species in this area are typical of high nutrient levels and high levels of modification. This included Yorkshire fog (*Holcus lanatus*), bent (*Agrostis* sp.), perennial ryegrass (*Lolium perenne*), white clover (*Trifolium repens*), dandelion (*Taraxacum* sp.), ribwort plantain (*Plantago lanceolata*), cats-ear (*Hypochaeris* sp.), creeping thistle (*Cirsium arvense*) and meadow buttercup (*Ranunculus repens*). Some additional species were identified in patches growing around the peripheries of the field, which were less intensively grazed. This includes red clover (*Trifolium pratense*), purple toadflax (*Linaria purpurea*), common ragwort (*Jacobaea vulgaris*), false oat grass (*Arrhenatherum elatius*), birds foot trefoil (*Lotus corniculatus*), nettle (*Urtica dioica*) and creeping cinquefoil (*Potentilla reptans*).

3.4.2.3. The other area of modified grassland is the frequently mown lawns around the bungalow.



3.4.2.4. Again, the species are indicative of high levels of modification through regular mowing and included Yorkshire fog (*Holcus lanatus*), perennial ryegrass (*Lolium perenne*), white clover (*Trifolium repens*), fescue (*Festuca* sp.), annual meadow grass (*Poa annua*), dandelion (*Taraxacum* sp.), ribwort plantain (*Plantago lanceolata*), cats-ear (*Hypochaeris* sp.), meadow buttercup (*Ranunculus repens*), birds foot trefoil (*Lotus corniculatus*), creeping thistle (*Cirsium arvense*) and broad leaved plantain (*Plantago major*).

3.4.3. u1b Developed land, sealed surface.

Secondary code: 804 car park.



There are some areas of hard standing drive way used for domestic car parking.

3.4.4. u1b5 Buildings.



There is a small unoccupied bungalow within the survey area. This is addressed in more detail in the bat survey results section of this report.

3.4.5. u1e Built up areas and gardens.

Secondary codes: 32 scattered trees, 827 garden, 846 flower bed, 847 introduced shrub.



3.4.5.1. There is a margin of flower bed with some ornamental shrubs along one edge of the garden habitat. This includes species such as poppy (*Papus* sp.), *Geranium* sp, hellebore (*Helleborus* sp.), redcurrant (*Ribes rubrum*), greater St. Johns wort

(*Hypericum calycinum*), ivy (*Hedera helix*), *Yucca* sp. and purple toadflax (*Linaria purpurea*).

3.4.5.2. There are two trees within this boundary, one rowan (*Sorbus aucuparia*) and one western red cedar (*Thuja plicata*). These are semi mature in size.

3.4.6. h2a6 Other native hedgerow.

Secondary code: 516 active management.



There is a well tended beech (*Fagus sylvatica*) hedgerow that extends along the roadside of the garden habitat.

3.4.7. u1e Built linear feature.

Secondary codes: 114 dry stone wall, 612 fence, 853 mortared wall.



There are a number of wall and fence boundaries around the site.

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 or adjacent to the survey area therefore there are no habitats on site suitable for water vole, otter or crayfish.

3.5.3. There are some wetland areas associated with the River Dearn corridor, but due to their proximity and connectivity to the River Dearn, as well as dispersal barriers to amphibians between the wetland and the survey area, it is considered as highly likely that great crested newts are present within the survey area.

3.5.3.1. There are records of great crested newts between 400m and 500m from the survey area, however the River Dearne acts as a dispersal barrier to newts between these ponds and the survey area.

3.5.4. There is one building within the survey area. This is a small bungalow that is built in an 'L shape', constructed from brick walls, with doors and windows that are well sealed. The roof comprises a series of pitched tiled roof and there are some small soffits around the tops of the walls. The photographs below demonstrate the nature of the building.



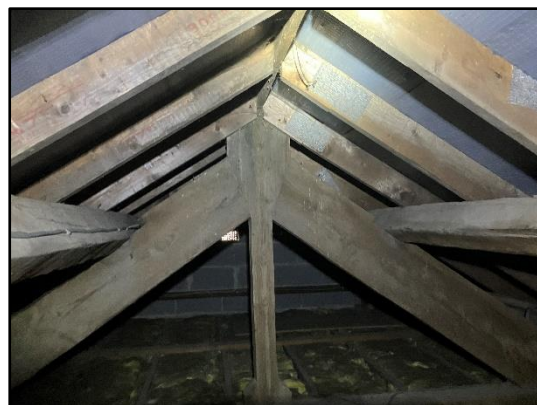


3.5.4.1. Internally, there are two loft spaces, one over each leg of the 'L shape'. The loft over the most northern section of the bungalow is approximately 2m in height from ridge to loft floor. It is lined with what appears to be a bitumen felt roof lining and is in very condition with no obvious gaps or access into the loft for bats.

3.5.4.2. The second loft, over the most southern section of the bungalow is similar in height and is lined with a modern breathable membrane. It is in good condition, although there is daylight shining through around the eaves where there are vents in the soffits allowing air flow through the loft.



North loft



Southern loft

3.5.4.3. The bungalow is generally in very good condition. There are a number of gaps under the roof tiles, as shown in the photograph below, which offer some potential for individual bats to access under. There are also gaps behind the soffits, however these lead directly into the loft spaces and a thorough inspection of the lofts found no bat field signs, suggesting that bats do not access into or utilise the lofts for any purpose. Only mouse droppings were identified throughout the lofts.



3.5.4.7. The walls were very well sealed and do not offer any potential for roosting bats. Overall, the building was assessed as offering moderate potential for roosting bats due to providing a number of features that offer potential for individual bats, but no potential for or evidence of a significant roost to be present.

3.5.5. There are two of trees on the site, both of these are assessed as negligible potential for roosting bats, with no suitable potential roost features present.

3.5.6. The survey area offers very limited value for foraging and commuting bats. It is a small site that is well managed and it located adjacent to an extensive landscape that has offers high value foraging and commuting habitat for bats. The survey area does not create any significant connective habitat to this.

3.5.7. There is potential for nesting birds across the survey area, including in the vegetation and potentially the bungalow. No active nests were identified during the site survey.

3.5.8. The survey area offers very low suitability for reptiles. Whilst there is some connectivity to the survey area via adjacent habitats, the site is generally intensively managed with very little in terms of potential refugia or cover for reptiles.

3.5.9. The survey area lies outside the natural range of hazel dormouse and with no introductions of the species in the area. Therefore, there are no hazel dormouse present within the survey area.

3.5.10. There are no habitats within the survey area suitable for red squirrel. The woodland is assessed as being unsuitable and no squirrel dreys were identified.

3.5.11. The site provides some suitability for hedgehogs, although there is very limited shelter for the species.

3.5.12. No invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act (1981) were identified within the survey area.

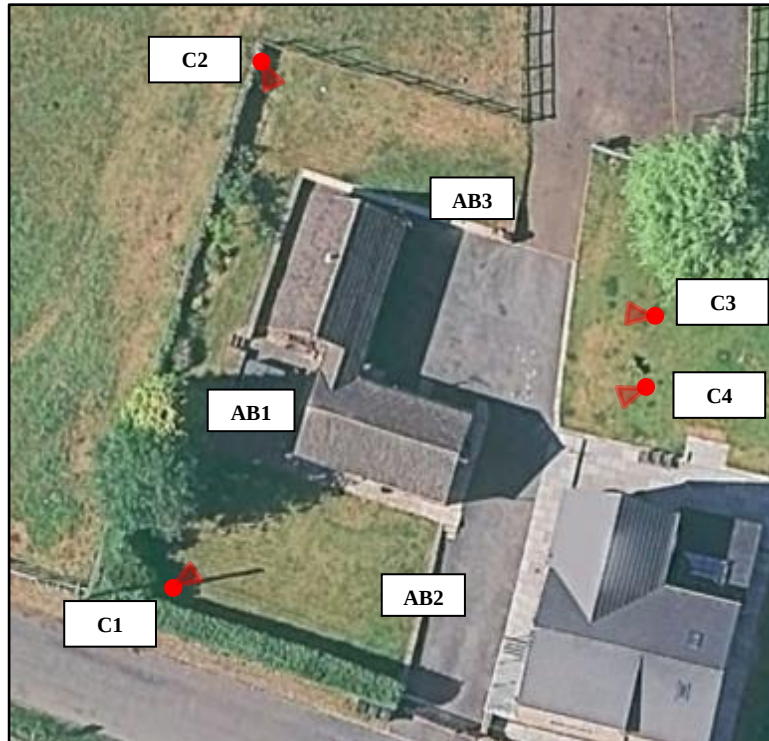
3.6. Dusk Emergence Survey – 22nd August 2024.

3.6.1. This survey was undertaken by a Ruth Georgiou BSc, MCIEEM, who holds a level two Natural England survey licence in respect of bats (2015-11823-CLS-CLS).

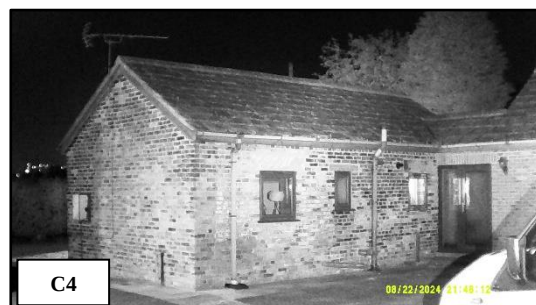
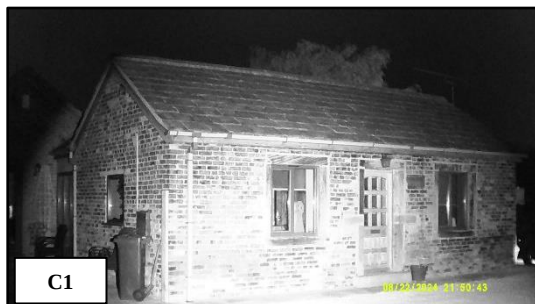
3.6.2. The survey was carried out on the 22nd August 2024. The evening was mild and relatively dry, with one light rain shower at 20:35. There was a temperature of 15°C at the start of the survey, which dropped to 14°C by the end of the survey and slight gusts that did not exceed BWS1. Sunset was at 20:18 and the survey lasted from 20:00 until 21:50.

3.6.3. The surveyor was equipped with a Batbox Duet detector. Three Anabat recorders were deployed around the site to record bat activity for subsequent computer analysis using Analook software.

3.6.4. Night Vision Aids (NVAs) were deployed covering all potential bat roosting features of the bungalow. In this case Whisker infrared camera, along with Nightfox XB5 850NM infrared torches were used. The aerial photograph below shows where the cameras and Anabats were positioned. The location and viewing angles of the NVAs are shown in red. The surveyor consistently patrolled the building to observe bat activity and monitor the NVA's.



3.6.5. The below photographs show the view of each camera and clear visibility at the conclusion of the survey.



3.6.6. During the survey the surveyor observed a potential emergence at 20:33 from the west end of the southern section of the bungalow. This was confirmed during subsequent camera analysis to be a bat emerging from under the end of a roof tile at the top of the gable end. The Anabat recordings confirmed this to be a common pipistrelle bat. The roost location is shown in the photographs and aerial map below.



3.6.7. No other bats were seen to emerge from the building during the subsequent camera analysis.

3.6.8. Anabat 3 failed to record during the survey. Anabats 1 and 2 collectively recorded thirty-eight common pipistrelle bat calls, five noctule calls and one soprano pipistrelle bat call.

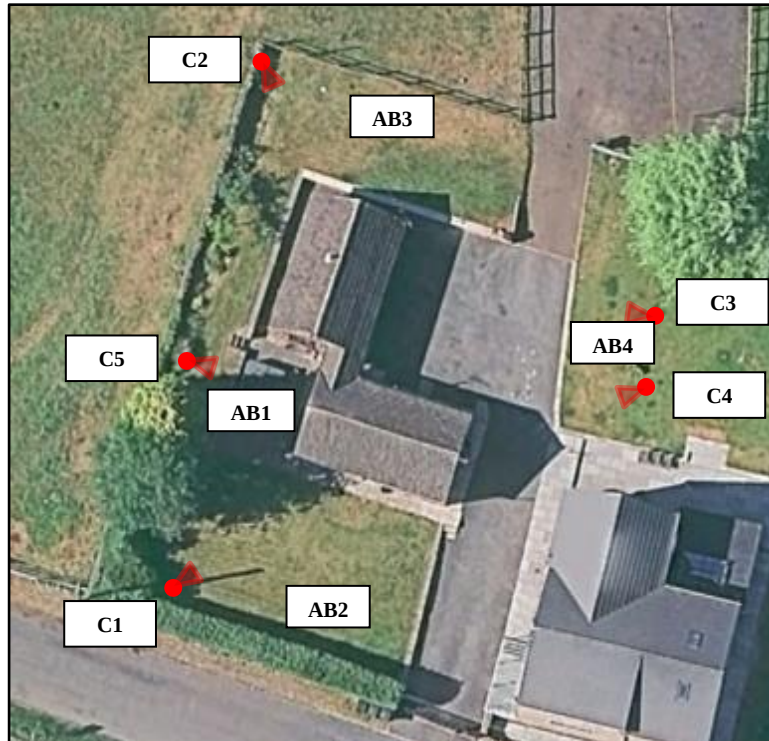
3.7. Dusk Emergence Survey – 17th September 2024.

3.7.1. This survey was undertaken by a Ruth Georgiou BSc, MCIEEM, who holds a level two Natural England survey licence in respect of bats (2015-11823-CLS-CLS).

3.7.2. The survey was carried out on the 17th September 2024. The evening was mild and dry. There was a temperature of 14°C at the start of the survey, which dropped to 12°C by the end of the survey with no wind. Sunset was at 19:16 and the survey lasted from 19:00 until 20:46.

3.7.3. The surveyor was equipped with a Batbox Duet detector. Four Anabat recorders were deployed around the site to record bat activity for subsequent computer analysis using Analook software.

3.7.4. Night Vision Aids (NVAs) were deployed covering all potential bat roosting features of the bungalow. In this case Whisker infrared camera, along with Nightfox XB5 850NM infrared torches were used. The aerial photograph below shows where the cameras and Anabats were positioned. The location and viewing angles of the NVAs are shown in red. The surveyor consistently patrolled the building to observe bat activity and monitor the NVA's.



3.7.5. The below photographs show the view of each camera and clear visibility at the conclusion of the survey.





3.7.6. During the survey the surveyor observed an emergence at 19:33 from the west gable end of the southern section of the bungalow, in the same location of the previous emergence. This was confirmed during subsequent camera analysis to be a bat emerging from under the end of a roof tile at the top of the gable end in the same locations as the first dusk emergence survey. The Anabat recordings confirmed this to be a common pipistrelle bat.

3.7.7. No other bats were seen to emerge from the building during the subsequent camera analysis.

3.7.8. The Anabats collectively recorded ninety eight common pipistrelle bat calls. No other bat species were recorded.

3.8. Hibernation Bat Roost Assessment.

Due to the nature and construction of the building, the roosting features identified are not ideal for hibernating bats, but the presence of individual bats over the winter months cannot be ruled out, especially with an individual bat emerging from the building during the summer surveys. It is assessed to have low potential for roosting bats as a non-classic hibernation site.

4. BIODIVERSITY NET GAIN STATEMENT.

Biodiversity net gain calculations have not been undertaken as the new development is a self build for the current land owner. The site is exempt from delivering any measurable biodiversity net gain in line with the guidance provided in current government guidance which can be found at:
<https://www.gov.uk/guidance/biodiversity-net-gain-exempt-developments#developments-below-the-threshold>.

5. ASSESSMENT, MITIGATION AND RESIDUAL EFFECTS.

5.1. Designated Sites.

5.1.1. Assessment.

5.1.1.1. The desktop data search shows that there are four LWS within 2km of the survey area, however due to the distance of these and lack of ecological connectivity to them, the development of the site will have no impact.

5.1.1.2. There are no statutory designated sites located within 2km of the survey area. Therefore there will be no impact on any statutory designated sites.

5.1.2. Mitigation.

No further mitigation is required.

5.1.3. Residual Effect.

There will be no negative residual effects on designated sites as a result of the proposed works.

5.2. Habitats.

5.2.1. Assessment.

There is one native hedgerow present within the survey area, which is a NERC Act priority habitat. This extends along the southern boundary of the site.

5.2.2. Mitigation.

The hedgerow will be retained as part of the development, with additional native hedgerow planting on the site.

5.2.3. Residual Effect.

With the planting of additional native hedgerows there will be a positive residual effect on any significant habitats at a site level.

5.3. Species – Roosting Bats.

5.3.1. Assessment.

5.3.1.1. The bungalow was initially assessed to provide moderate potential for roosting bats. Two subsequent dusk emergence surveys were carried out, and during each of those surveys a single common pipistrelle bat emerged from the same location, under the end of a roof tile on the west gable end of the southern section of the bungalow.

5.3.1.2. The demolition of the bungalow will therefore have a high negative impact on this bat roost at a site level.

5.3.2. Mitigation.

5.3.2.1. Although the survey findings have been consistent and an accurate conclusion has been drawn which has informed the mitigation strategy outlined below, one further dusk emergence survey will be carried out of the bungalow between May and July (inclusive) to ensure that a full sweep of bat surveys has been carried out. This will be carried out during the most recent survey season to when a Natural England EPS licence application is submitted to ensure that nothing on site has changed since these surveys. It is highly unlikely that the findings of that survey will change the mitigation proposed below.

5.3.2.2. As soon as full planning permission has been granted, a third dusk emergence survey has been carried out, but before any demolition works are carried out on the bungalow, a Natural England EPS Mitigation Licence will be prepared and submitted to Natural England. The mitigation outlined below will form the basis of the mitigation proposed under the licence.

5.3.2.3. Prior to any demolition works, a woodcrete or woodstone bat box will be fixed onto an adjacent building or tree. This will act as a temporary bat roost between the

demolition of the bungalow and the construction of a new permanent bat roost. This bat box will, however, be left in situ for a minimum of five years as this will be conditioned by the licence.

5.3.2.4. Once Natural England has issued the licence, depending on timings, one of the two methods will be followed:

5.3.2.5. Either; demolition of the bungalow will commence during either October to November (inclusive) or March / April. This will avoid the peak summer active months and the peak hibernation months. Firstly, the bat roost will be destroyed by soft demolition by hand carried out under direct supervision of the licenced ecologist or agent. The roof materials and wall in the vicinity of the roost will be demolished until the ecologist is satisfied that no bats remain in the roost.

5.3.2.6. Or; if demolition needs to commence between May and September, an exclusion of the bat roost will be carried out between in line with 'The Bat Workers Manual'. A one way exclusion device will be fitted to the roost access point, and left for a minimum of five consecutive nights with suitable weather conditions. Once the exclusion period has expired, the bat roost will be destroyed by soft demolition by hand carried out under direct supervision of the licenced ecologist or agent. The roof materials and wall in the vicinity of the roost will be demolished until the ecologist is satisfied that no bats remain in the roost.

5.3.2.7. In the event that a bat is found during the soft demolition of the roost, the ecologist will remove it by hand and place it into the bat box provided on the adjacent building.

5.3.2.8. The demolition works to the remainder of the bungalow will then be allowed to carry on as normal. All personnel working on site will remain vigilant and in the unlikely event that a bat is found elsewhere, all works will stop and the licenced ecologist will be contacted immediately .

5.3.2.9. When the new house is built, an integrated bat box will be installed into the wall of the house. This will be a Habibat bat box or similar with a custom facing to match the wall materials. No artificial lighting will be directed towards this bat box.

5.3.3. Residual Effects.

Through implementation of the above mitigation measures, there will be no negative impact on roosting bats at a site level.

5.4. Foraging and Commuting Bats.

5.4.1. Assessment.

5.4.1.1. The site offers very limited bat foraging and commuting potential, with higher value habitats present in the adjacent areas. Low levels of bat activity were observed during the dusk emergence surveys, limited mainly to common pipistrelle bats with the very occasional noctule and soprano pipistrelle bats.

5.4.1.2. There will be no loss/fragmentation of any bat foraging or commuting habitats.

5.4.2. Mitigation.

A sensitive lighting scheme will be implemented on the site to ensure that all lighting is downward directional and that there is no lighting directed towards any of the boundary vegetation features or new vegetation features.

5.4.3. Residual Effect.

With the above mitigation in place, there will be no negative residual effects on foraging and commuting bats at a local level.

5.5. Species – Nesting Birds.

5.5.1. Assessment.

There is potential for nesting birds throughout the survey area within the nesting bird season, which extends from March to August inclusive each year. Any vegetation or

site clearance carried out during the nesting bird season could potentially have a high negative impact on nesting birds on the site and there will be a long-term loss of nesting habitats.

5.5.2. *Mitigation.*

Any vegetation or site clearance works will be carried out outside the nesting bird season. Where this cannot be avoided, vegetation and/or site clearance will be immediately preceded by a nesting bird survey. If any active nests are found, they will be left undisturbed along with a suitable buffer around them until the young have fledged.

5.5.3. *Residual Effect.*

With the above mitigation in place there will be no negative residual effect on nesting birds at a site level.

5.6. Species – Reptiles.

5.6.1. *Assessment.*

The site is assessed to provide very low potential for reptiles. It is assessed as unlikely that there will be high numbers on the site, and therefore with suitable avoidance measures in place, there will be no negative impact on reptiles.

5.6.2. *Mitigation.*

To mitigate for any impacts on individual common reptile species that may be present on the site during the construction phase, precautions and avoidance measures will be put in place to ensure no harm or killing of these species. This will be broadly in line with the following:

- All personnel on site will be briefed on the identification of reptiles in line with the toolbox talk document provided at the end of this report.
- Personnel should be instructed that in the event any are found during the works, they should be left to escape the area unharmed before the works proceed.
- In the unlikely event that high numbers (5+) of reptiles or hibernating reptiles are found, professional advice should be sought immediately to advise how to proceed. Stricter precautions may need to be implemented.

- Prior to site clearance, all vegetation will first be cut to a minimum of 200mm above ground level and the arisings should be carefully removed from site. This will encourage any reptiles at ground level to vacate the area and will deter them from returning.

5.6.3. Residual Effect.

With the above mitigation in place there will be no negative residual impact on reptiles at a site level.

5.7. Species – Hedgehogs.

5.7.1. Assessment.

The site provides some limited suitability for hedgehog.

5.7.2. Mitigation.

5.7.2.1. The initial vegetation clearance to a level of 200mm will also mitigate for any hedgehogs that may be present on the site at that time.

5.7.2.2. Gaps, a minimum dimension of 13cm x 13cm will also create in any boundary fences to retain connectivity for hedgehogs across the site.

5.7.3. Residual Effect.

With the above mitigation in place there will be no negative residual impact on hedgehogs at a site level.

6. BIODIVERSITY ENHANCEMENT MEASURES.

6.1. In line with current NPPF guidelines, some biodiversity enhancements for fauna species will be provided on the site.

6.2. It is recommended that this is achieved by providing a minimum one pair of integrated swift boxes into the new building on the site, one integrated bat box and one integrated bee brick.

6.3. It is recommended that a planting scheme is implemented on the site that incorporates locally native species or species that are of benefit to wildlife, where feasible.

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Appendix I. BAT INFORMATION.

Ecology

There are currently 18 species of bat residing in Britain, 17 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 logs 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. ANNOTATED MAP OF THE SURVEY AREA.



Scale bar (1:200)

0m 4m 8m 12m 16m

2m 6m 10m 14m

 Prism Agriculture Ltd	Project Address 81 Swallow Hill Road Mapplewell, South Yorkshire				
	Client Mr P Needham				
	Project Proposed New Dwelling				
	Drawing Proposed Site Plan				
DRAWING NO. 400-FP-40	SCALE 1:200 @ A3	DRAWN AR	CHECK TW	DATE Sept 2024	REVISION ---

Toolbox Talk: Reptiles

Whitcher Wildlife Ltd

Ecological Consultants



Identification: Grass Snakes.

The grass snake can be up to 120cm long. It is generally dark green in colour but may occasionally appear grey with vertical black bars and spots that run along its sides. There is usually a yellow marking around the neck.



Other Reptiles.

In addition to the reptiles outlined on this document, there are also two other reptile species in Great Britain, the smooth snakes and the sand lizard. These reptiles are a lot less common than the four species covered with the smooth snake being predominantly found on heathland in southern England and the sand lizard found throughout Great Britain in coastal dune areas.

These species are also afforded a higher level of protection because they are European Protected Species.

Identification: Adders.

The adder is the only native species that is venomous, but it is rarely harmful to humans. Adult adders are generally up to 66cm long. Back ground colouration is a light shade of grey or brown with a black zigzag marking along the length of the back. As with all reptiles, colouration varies and becomes duller as sloughing (skin shedding) approaches.



Habitat.

Maintaining the right body temperature is vital to reptiles' survival. In the morning they find a warm basking site to heat up their bodies and then later they may move back into the shade so as not to overheat. Hence, reptiles require a habitat that provides a range of suitable refugia for shelter such as dense vegetation, rubble or log piles, or crevices and open areas for basking such as bare ground, rocks or railway ballast shoulders. During hot summers reptiles may be found in damper, cooler sites. Reptiles hibernate, spending the winter in burrows or under logs protected from the cold and predators.

Identification: Slow Worms.

Slow worms grow to around 45cm in length. The males and females display a marked difference in colour when fully grown. In general, the species displays colouring that varies from light brown, dark brown, grey, bronze or brick red with the females often displaying a dark vertebral stripe and both males and females displaying occasional markings on the flanks.



Identification: Common Lizards.

Common lizards grow to around 16cm. They are grey brown to dark brown, often with a darker streak that may run the entire length of the spine. A continuous dark band bordered by light yellow or white spots is often seen on either side of the body. The underside of the males is egg yolk yellow to orange spotted with black. Females are yellowish grey.



When disturbed in their natural habitat reptiles will usually move away quickly.

Legislation.

Reptiles are protected under Schedule 5 of the Wildlife and Countryside Act 1981. They received greater protection following reviews of the schedules published in 1988 and 1991. This means they are protected against intentional or recklessly killing and injuring and against sale or transporting for sale.

If reptiles are identified during works, stop all works and contact Whitcher Wildlife Ltd directly on 01226 753271 or at info@whitcher-wildlife.co.uk