

**Whitcher Wildlife Ltd.
Ecological Consultants.**



SHEFFIELD ROAD, BIRDWELL.

OS REF: SE 34680 00479.

PRELIMINARY ECOLOGICAL APPRAISAL.

Ref No: 260251.

Date: 23rd March 2026.

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1. INTRODUCTION.

1.1. There are plans to develop an area of land off Sheffield Road in Birdwell. The development includes the creation of ten residential plots; a proposed layout plan can be found in Appendix VIII.

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.

1.3. The site survey was carried out on 2nd March 2026. This report outlines the findings of that survey and makes appropriate recommendations.

1.4. 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.

1.5. This report will be accompanied by a statutory metric and condition assessment sheets.

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

2.12. 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.

2.13. 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.

2.14. The survey conducted from track level was carried out by Alexandra White BSc (Hons) MSc ACIEEM MIEEnvSc CEnv. Alex has worked as a consultant since 2013 carrying out array of different habitat and species surveys. Alex holds Natural England Survey Licences for Great Crested Newts, Bats, Hazel Dormice, White Clawed Crayfish and Barn Owls. She also holds Scottish Natural Heritage Licences for bats and great crested newts and Natural Resources Wales Licence for Great Crested Newts, Bats and Hazel Dormice. She holds an undergraduate honours degree in Zoology and a Masters degree in Environmental Management (Landscape and Wildlife Conservation). She has successfully completed courses run by the Chartered Institute of Ecology and Environmental Management (CIEEM), Field Studies Council and the Mammal Society to further her knowledge of protected species and plant identification. Alex is an Associate member of CIEEM, a full member of IES and a Chartered Environmentalist.

3. SURVEY RESULTS.

3.1. Data Search Results.

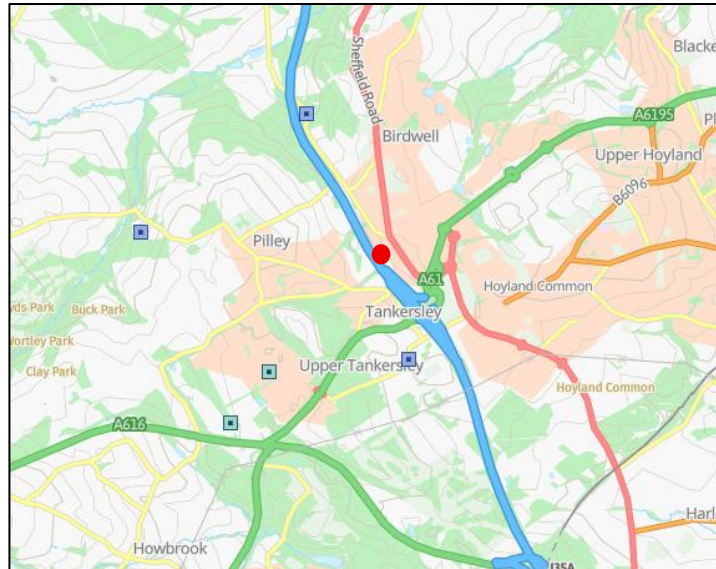
3.1.1. Barnsley Biological Records Centre, the South Yorkshire Badger Group and South Yorkshire Bat Group were contacted for data searches of designated sites and protected species within 2km of the survey area.

3.1.2. The following recent (2016 – present) relevant records were returned:

- Fifty one records of great crested newts, within four separate locations, from 2017; the closest was approximately 1.5km southwest of the survey area.
- Thirty five records of smooth newts were recorded between 2017 and 2020 within 2km of the survey area, the closest record being 0.7km northeast.
- Twelve records of hedgehog were recorded with the closest approximately 0.7km southeast of the survey area in 2019.
- Numerous records of different bat species comprising of common pipistrelle, soprano pipistrelle, pipistrelle sp. brown long-eared, natterer's, whiskered, noctule, *Nyctalus* sp. and *Myotis* sp. were recorded between 2017 and 2025. Six of these records are for roosting bats the closest being approximately 0.7km from the survey site.
- One record of grass snake which was recorded approximately 1.3km northeast of the survey area in 2016.
- There were records of badgers within 2km of the survey site; none of which were close to or related to the site. No further information will be provided due to the sensitive nature of these records.
- There is one record of a barn owl within 2km of the search area recorded in 2011.

3.1.3. There are historic records of various protected species although given the age of these records they are not thought to accurately represent the current species distribution.

3.1.4. In addition to the fauna records above, the Magic Maps website was searched for the presence of granted European Protected Species (EPS) Mitigation Licences and great crested newt records within close proximity to the survey area. The map below highlights the location of the survey area in red, the blue dots represent granted EPS licences for bats and the green shows EPS licenses for great crested newts. The closest licence was for bats and was approximately 0.7km south of the survey area.



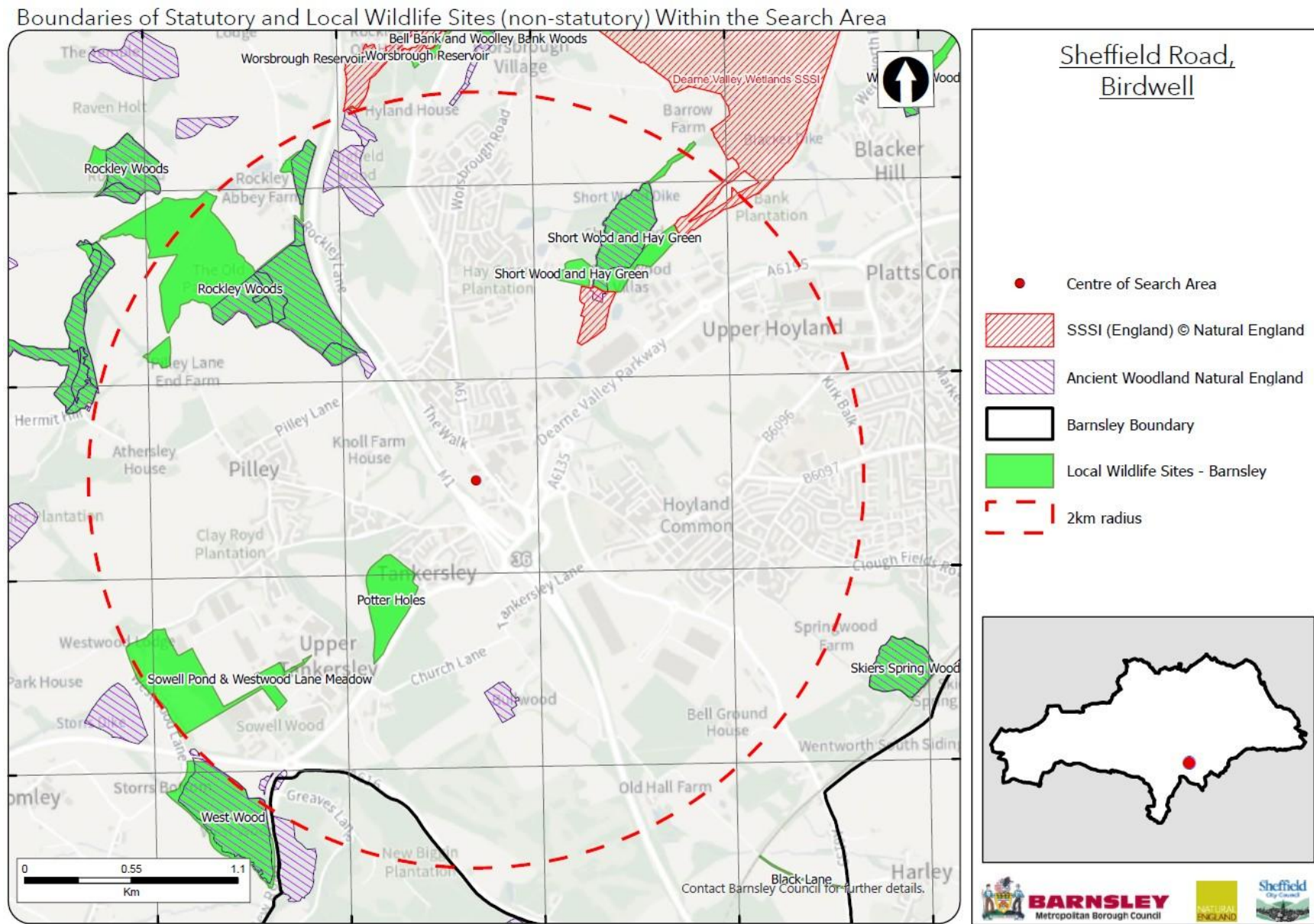
3.1.5. The details of the closest bat licence are shown below.

Granted European Protected Species Applications (England)	
CASE_REF	2020-48285-EPS-MIT
SPECIES_GR	Bat
SPECIES_DE	BLE,C-PIP,WHISK
SITE_COUNT	South Yorkshire
LICENCE_ST	31/07/2020
LICENCE_EN	30/11/2025
AFFECTS_BR	N
DAMAGE_BRE	N
DAMAGE_RES	Y
DESTROY_BR	N
DESTROY_RE	N
AFFECTS_HI	Unknown
NERC_AGREE	Unknown

3.1.6. The following statutory and non-statutory sites were identified within 2km of the survey area:

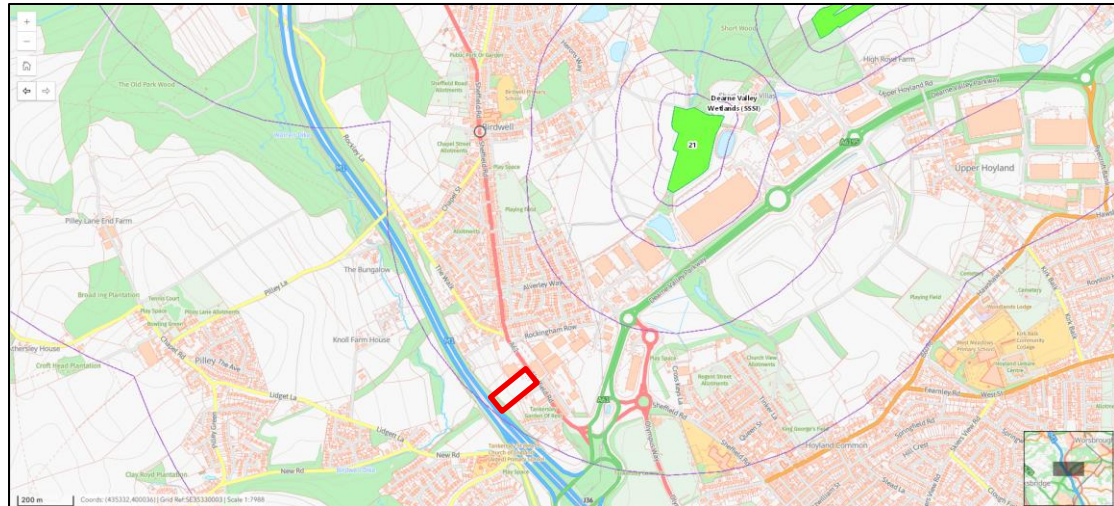
- Dearne Valley Wetlands Site of Special Scientific Interest (0.8km, northeast)
- Rockley Woods Local Wildlife Site situated approximately (0.7km, northwest)
- West Wood Local Wildlife Site (2km, southwest)
- Potter Holes Local Wildlife Site (0.5km, southwest)
- Sowell Pond & Westwood Lane Meadow Local Wildlife Site (1.1km, southwest)
- Short Wood and Hay Green Local Wildlife Site (1.1km, northeast)

3.1.7. The map below highlights the survey area with 2km buffer and the distribution of designated sites.



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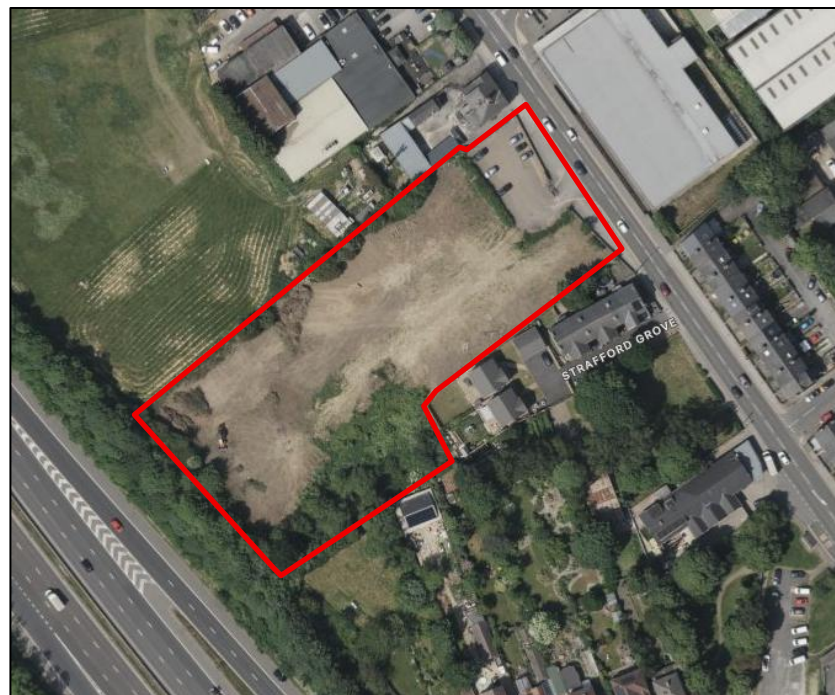
3.1.8. The site was within the Dearne Valley Wetland SSSI Impact Risk Zones, as shown on the map below although the proposed development does not fall within a category that requires further consultation.



3.1.9. The data searches can be made available to the client upon request but must not be distributed into the public domain.

3.2. The Survey Area.

3.2.1. The survey area included an area of land off Sheffield Road in Birdwell. The aerial photograph below highlights the survey area in red.

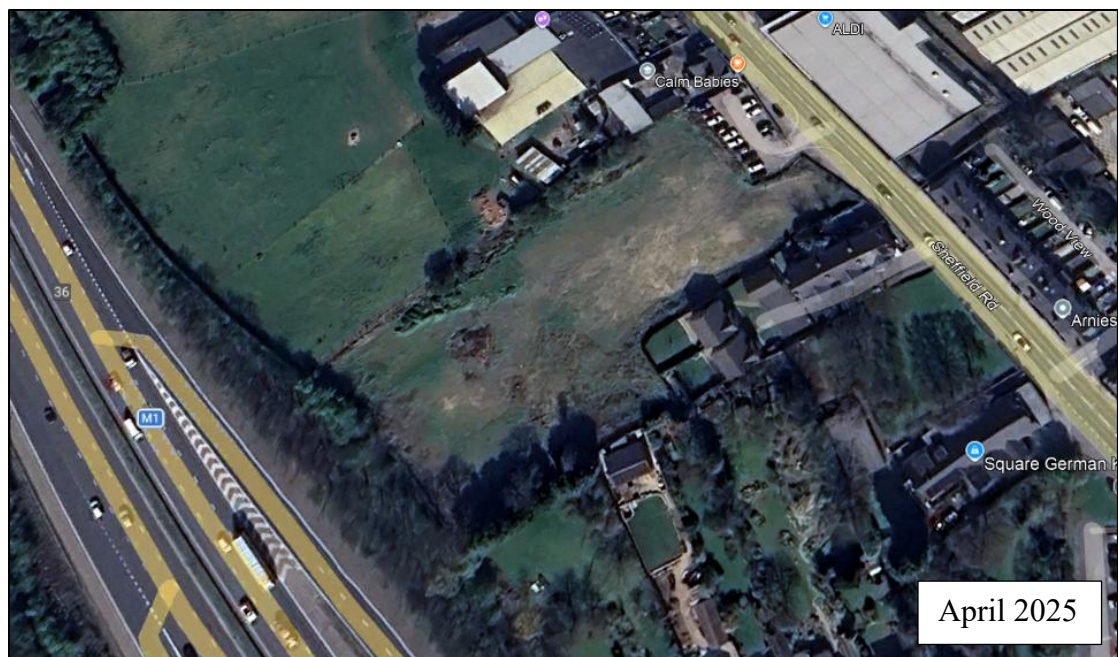


3.2.2. The survey area comprises of grassland and scrub with occasional scattered trees and a small length of hedgerow. There is a car parking area and access road within the northeastern extent of the site. The photographs below show the current status of the site.



3.2.3. It has been noted that the site has been cleared in June 2023 which impacts upon the overall Biodiversity Net Gain Assessment. Whilst historic imagery does show occasional disturbance, especially through the centre of the site, the general mix of habitats appears to be dense scrub and grassland. The aerials below highlight the key dates which include pre-clearance, site clearance and post-clearance habitats.





2.3.4. The site is surrounded by commercial and residential properties to the north, east and southeast. The M1 and pastureland with associated hedgerows and woodland pockets are to the south, and west of the survey area. The aerial map overleaf highlights the location of the survey area within the wider landscape.



3.3. Survey Limitations.

This survey was undertaken at a sub-optimal time of year for botanical surveys and as such plant species are likely to have been missed although given the habitats on site it is considered unlikely this would have significant impact upon the findings of the survey and habitat classification.

3.4. Description of Habitats.

3.4.1. Appendix VI of this report contains an annotated map marked up with the varying primary habitats across the site. Target notes relating to these habitats can be found in Appendix VII. The habitats on site are listed below, followed by descriptions of each habitat.

- g3c – Other Neutral Grassland
- h3 – Dense Scrub
- u1b – Developed Land; Sealed Surface
- u1c – Artificial unvegetated; Unsealed Surface

- h2a – Native Hedgerow
- u1e – Built Linear Feature

3.4.2. g3c Other Neutral Grassland

Secondary Codes: 10 Scattered Scrub, 81 Ruderal or ephemeral, 206 Felled

3.4.2.1. The main habitat within the survey area was grassland. The species recorded included: tufted hair grass *Deschampsia cespitosa*, cock's foot *Dactylis glomerata*, annual meadowgrass *Poa annua*, false oat grass *Arrhenatherum elatius*, creeping bent *Agrostis stolonifera*, Yorkshire fog *Holcus lanatus*, perennial ryegrass *Lolium perenne*, teasel *Dipsacus fullonum*, bristly oxtongue *Helminthotheca echioides*, colt's foot *Tussilago farfara*, cleavers *Galium aparine*, common nettle *Urtica dioica*, dandelion *Taraxacum officinale*, common mouse-ear *Cerastium fontanum*, ribwort plantain *Plantago lanceolata*, greater plantain *Plantago major*, hoary plantain *Plantago media*, red clover *Trifolium pratense*, white clover *Trifolium repens*, smooth sow thistle *Sonchus oleraceus*, smooth cat's ear *Hypochaeris glabra*, mullein *Verbascum thapsus*, weld *Reseda luteola*, wood avens *Geum urbanum*, bush vetch *Vicia sepium*, common vetch *Vicia sativa*, snowdrop *Galanthus nivalis*, daffodil *Narcissus* sp., common sorrel *Rumex acetosa*, bird's foot trefoil *Lotus corniculatus*, dove's-foot cranesbill *Geranium molle*, lesser celandine *Ficaria verna*, creeping buttercup *Ranunculus repens*, broadleaved dock *Rumex obtusifolius*, curled dock *Rumex crispus* and common knapweed *Centaurea nigra*. A full species list can be found in Appendix V.

3.4.2.2. The two parcels of land have been split due to a clear difference in their conditions although both had a similar species composition.

3.4.2.3. Parcel A was closest to Sheffield Road and at the higher level of the site. This grassland was shorter in sward, featured more bare ground and less scrub. The condition assessment for this parcel of habitat was assessed as having a 'moderate' condition.



3.4.2.4. Parcel B was on the lower section of the site and featured less disturbance and more variety in the sward height. The condition assessment for this parcel of habitat was assessed as having a 'moderate' condition.



3.4.2.5. There was a large brash pile within this habitat from previous clearance works (T1).



3.4.2.6. There is a large mound on the western aspect of the site, within the grassland habitat. This appears to have been from previous site clearance and is shown on the map as T2.

3.4.2.7. There was one small, felled tree present within the grassland habitat, close to the access.



3.4.3. *h3 Dense Scrub*

Secondary Code: 32 Scattered Trees

3.4.3.1. There was dense scrub around the boundaries of the survey area which was dominated by bramble *Rubus fruticosus* but also featured ash *Fraxinus excelsior*, blackthorn *Prunus spinosa*, dog rose *Rosa canina*, elder *Sambucus nigra*, ivy *Hedera helix*, common mugwort *Artemisia vulgaris*, common hogweed *Heracleum sphondylium* and rosebay willowherb *Chamaenerion angustifolium*.



3.4.3.2. The condition assessment for this habitat was 'moderate'.

3.4.3.3. There were five scattered trees within this habitat which comprised of sycamore *Acer pseudoplatanus*, sessile oak *Quercus petraea*, willow *Salix* sp. and silver birch *Betula pendula*.



3.4.3.4. The condition assessment for these trees was ‘moderate’ for three and ‘Good’ for two trees.

3.4.3.5. A full species list can be found in Appendix V.

3.4.4. U1c Artificial Unvegetated Unsealed Surface

Secondary Code: 804 Car Park

3.4.4.1. An area of car parking was available immediately off Sheffield Road, this is for the adjacent commercial businesses.



3.4.4.2. This habitat does not require a condition assessment.

3.4.5. u1b Developed Land; Sealed Surface

Secondary Code: 800 Road

The access to the site was off a main road, Sheffield Road. This was tarmacked and led to the car park.



3.4.6. h2a Native Hedgerow

Secondary Code: 521 Unmanaged.

3.4.6.1. There was a short length of unmanaged hedgerow. The species included hawthorn *Crataegus monogyna*, elder *Sambucus nigra* and grey willow *Salix cinerea*.



3.4.6.2. The condition of this hedgerow was assessed as being 'good'.

3.4.7. *u1e Built Linear Feature*

Secondary Code: 114 Dry stone wall, 612 Fence, 853 Mortared Wall.

There were a variety of fences and walls around, and within, the site.



3.5. Description of Fauna.

3.5.1. No badger setts or their field signs were identified within the survey area. There were mammal paths through the grassland habitat and evidence of rabbit (T3). It is also considered likely that some of the mammal paths are from cats from adjacent properties.

3.5.2. There are no watercourses within the survey area and therefore, no suitable habitat for water vole, otter or white clawed crayfish.

3.5.3. There were no buildings on site and therefore no potential for roosting bats within buildings.

3.5.4. All trees both individual and within the mature hedgerow were assessed for their bat roosting potential.

3.5.4.1. All individual trees were assessed as having negligible bat roosting potential as they lack the features necessary to support roosting bats.

3.5.4.2. There was a rotten elder within the hedgerow that was assessed as having PRF – I in line with the current survey guideline as this feature could be ‘suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.’ This feature is shown in the photographs below and Target noted as T4 on the map.



3.5.5. The survey area was assessed as having moderate potential for foraging and commuting bats. No full assessment for bat activity was carried out during the daytime survey of the site.

3.5.6. A review of Ordnance Survey maps and aerial photography highlighted no ponds or other water bodies identified within 500m of the survey area. There is therefore, no suitable habitat for breeding great crested newts.

3.5.7. The vegetation on site provides opportunities for nesting birds during the nesting season, which extends from March to August each year. No evidence of nesting birds was identified during the survey although no full nesting bird survey was carried out as this survey has a short validity period.

3.5.8. The habitat within the survey area offers limited suitability for reptiles as there is a lack of habitat mosaic and the site is within an urban location.

3.5.9. The habitat within the survey area is unsuitable for hazel dormouse and there were no substantial areas of woodland to support this species. Furthermore, the site lies outside of their known natural home range and there are no reintroduction schemes within this county.

3.5.10. The survey area lies outside of the known UK range of red squirrel and therefore this species will not be considered further.

3.5.11. The survey area provides suitable habitats for hedgehogs and there are multiple records of hedgehog within the data search. No evidence of this species was identified on site during the preliminary ecological appraisal.

3.5.12. No invasive, non-native plant species listed on schedule 9 of the Wildlife and Countryside Act (1981) were identified within the survey area.

4. BIODIVERSITY NET GAIN (BNG).

4.1. Baseline biodiversity calculations have been carried out using the Statutory Metric tool, the current metric at the time of writing this report.

4.2. *Habitat Units.*

4.2.1. As there has been damage in this habitat, post 2020, the baseline needs to be altered to reflect this.

4.2.2. The clearance is unlikely to have impacted the condition assessment of the grassland, and areas of grassland appear to be similar in composition to what can be seen on Streetview and the moderate condition is considered an appropriate baseline.

4.2.3. However, it is unclear whether the scrub within the site would have made a good condition and therefore, impacted upon the baseline calculation. It is deemed likely, from aerial imagery and the brash on site that the conditions A, B and E may well have been passed. Therefore, in line with the current guidance this habitat has been changed from a 'poor' to 'good' condition assessment.

Condition Assessment Criteria		Criterion passed (Yes or No)
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). ¹ - At least 80% of scrub is native, - There are at least three native woody species ² , - No single species comprises more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> (only in its restricted native range), or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	No
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran ³) shrubs are all present.	No
C	There is an absence of invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) and species indicative of suboptimal condition ⁶ make up less than 5% of ground cover.	Yes
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Yes
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	No

4.2.4. There is a felled tree on site and this has been added as one small tree in a moderate condition as this appears to be similar in condition and maturity to the other two within the northern extent of the site.

4.2.5. The split between grassland and scrub appears to be similar between the pre-clearance and current mapping so the areas have remained the same.

4.2.6. The baseline area habitat calculations include all habitats that lie within the red line boundary of the survey area. The scores for each habitat and a total are shown below.

Habitat Type	Extent (ha)	Distinctiveness	Condition Assessment	Biodiversity units
Other Neutral Grassland	0.5827	Medium	Moderate	4.66
Mixed Scrub	0.1358	Medium	Good	1.63
Artificial unvegetated, unsealed surface	0.0504	V. Low	N/A	0
Developed land; sealed surface	0.016	V. Low	N/A	0
Urban tree	0.0163	Medium	Moderate	0.13
Urban tree	0.0204	Medium	Good	0.24
Total (Excluding Trees)	0.25			1.69

4.3. Linear Units.

The units for the small length of hedgerow present on site are shown below.

Habitat Type	Extent (km)	Distinctiveness	Condition Assessment	Hedgerow Units
Native Hedgerow	0.042	Low	Good	0.25
Total	0.042			0.25

4.4. Watercourse Units.

There are no watercourses within 10m of the survey area; therefore, no calculations have been made.

5. EVALUATION OF FINDINGS.

5.1. There are no statutory or non-statutory designated sites within, or adjacent to, the survey area. Therefore, no such sites will be impacted by the proposed works.

5.1.1. The survey area was within the Dearne Valley Wetlands SSSI Impact Risk Zone although the proposals do not fall within a category that requires further consideration and consultation.

5.2. No badger setts or their field signs were identified within the survey area; therefore, the works will have no impact on badger setts. However, badgers could venture on to site during construction, from the surrounding land pasture and motorway, both of which are suitable for this species. Any badgers utilising the site at this time may become trapped.

5.3. There are no watercourses on, or near to, the site to offer habitat to otter, water vole or white-clawed crayfish. Therefore, the works will have no impact on these species.

5.4. All individual trees were assessed as having negligible bat roosting potential as they lacked the necessary features. There was an elder within the hedgerow which was assessed as having PRF-1. Therefore, no further surveys are required although precautions are recommended in Section 6 to ensure there is no impact on roosting bats.

5.5. There were no structures within the survey area that would support roosting bats, therefore, no roosting bats within buildings will be affected by the proposed works.

5.6. The site was assessed as having moderate suitability for foraging and commuting bats and the garden habitats will provide replacement habitat as these will also be assessed as having moderate suitability. Additional lighting, both during the works and after, could have a long-term impact on foraging and commuting bats.

5.7. A review of Ordnance Survey maps and aerial photography highlighted no ponds within 500m of the survey area which could provide suitable habitat for great crested newts. Therefore, no great crested newts will be affected by the proposed works.

5.8. The vegetation within the survey area was assessed as suitable for nesting birds. Any de-vegetation works carried out during the nesting bird season could have a high impact on nesting birds.

5.9. The survey area offers very limited suitability for reptiles due to lack of habitat mosaic and it is situated in an urban location. It is therefore assessed that the proposals will have no impact on reptiles.

5.10. The survey area is outside of the known UK range of hazel dormouse and red squirrel. Therefore, neither species will be affected by the proposals.

5.11. The survey area is suitable for hedgehogs, and the boundary vegetation is suitable to support hibernating or sheltering individuals. Therefore, hedgehogs could be affected by the proposals both in the initial site clearance, long-term loss of habitat and fragmentation.

5.12. No non-native invasive plant species listed on schedule 9 of the Wildlife and Countryside Act (1981), were identified within the survey area. Therefore, no such species will be spread by the proposed works.

6. RECOMMENDATIONS.

6.1. This Preliminary Ecological Appraisal 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 the development plans have been finalised, the report must be converted into an Ecological Impact Assessment (EcIA) where details of mitigation and ecological enhancements are included, to arrive at an assessment of the residual impact of the proposed development. This format will be suitable to submit to the Local Authority.

6.3. It is recommended that works are undertaken outside of the nesting bird season, which extends from March to August each year.

6.4. If any work commences between March and August, these should be immediately preceded by a thorough nesting bird survey carried out by a suitably experienced person. Any nests identified must remain undisturbed until the young have fledged from the nest.

6.5. If the elder assessed as having PRF – I is to be affected by the proposed works then an ecologist, with a Natural England class 2 survey licence for bats, should check this with an endoscope before any works to this tree occur. Once this survey has been undertaken, the tree should be soft felled from the top down and left in situ for a period of 24 hours.

6.6. Any additional lighting should be downlit and directed away from any boundary vegetation to prevent disturbance for foraging and commuting bats.

6.7. Due to the potential presence of hedgehogs within the survey area, any site clearance, within the dense scrub habitat, should be undertaken with care and the clearance should be done in a two-stage strip with the first cut being down to 200mm. This should be left for a period of 24 hours before ground level clearance can be undertaken.

6.8. In order to prevent mammals, including badgers, from becoming trapped during construction, all excavations should be covered overnight or profiled in a way to allow mammals to escape. Pipe ends should also be capped at the end of each shift.

6.9. To comply with the NPPF, it is recommended that biodiversity enhancements are incorporated into the buildings.

6.10. It is therefore recommended that 50% of the buildings includes an integrated bat box as shown below, or equivalent. This can be ordered to match the outer skin of the new building and should be incorporated high in a gable end wall (if possible) where it is not over a door or window.



6.11. It is also recommended that a pair of integrated swift boxes are installed 50% of the buildings. The example below or equivalent should be used.



6.12. Hedgehog access points, at least 13cm x 13cm, should also be installed at various points in any new boundary fences. This will also allow for the access and egress of the mammals already utilising the site.

6.13. It is recommended that one bee brick is built into an external wall of each of the proposed properties.

6.14. Biodiversity Net Gain (BNG).

6.14.1. There is a requirement to provide an overall biodiversity net gain on the site. There will be a statutory requirement to deliver a net gain of at least 10% biodiversity units. There will also be a requirement to meet the trading rules of the Statutory Metric.

6.14.2. To help achieve a net gain, as recommended above, in the first instance it in line with the mitigation hierarchy, is recommended that as much of the existing habitats as possible are retained. Consideration should also be given to enhancing retained habitats where possible.

6.14.3. Where habitat is to be lost, larger areas of the same value habitats or of higher value habitats are required. Other neutral grassland and scrub is the main habitat that will be lost to facilitate this development and therefore it is recommended that other neutral grassland and native scrub planting is provided as mitigation, with tree planting to offset any loss of trees on site. The client could enhance the condition of these habitat already on site in the area to the south of the site, which is to be retained, although any commitment to enhancement and maintenance of these habitats would need to be realistic and achievable for the developer.

6.14.4. It is recommended that a copy of the draft landscaping proposals for the site is provided once they are drawn up so that the biodiversity calculations can be completed.

6.14.5. Information on what species will be planted in the landscaped areas will need to be provided. It is recommended that locally native species are planted where possible and that any grass mixes that are of benefit to wildlife are considered with a relaxed mowing regime. Particular attention should be paid to maintaining connective corridors around and through the site to maintain connectivity where possible. Any habitats within private ownership will have to be assessed as 'vegetated gardens' which scores extremely low on the BNG assessment.

6.14.6. If the landscaping plans provided do not provide a 10% biodiversity net gain, then discussions will need to be had to try and maximise the number of biodiversity units that can feasibly be achieved on the site.

6.14.7. Once all options have been considered and the provision of BNG on the site has been maximised, offsite compensation will then need to be considered to deliver any shortfalls.

6.14.8. Any on site, or off site, habitats that are retained, enhanced or created for the purpose of the biodiversity net gain for the site, outside of private ownership, will have to be legally secured and will require a thirty-year management and maintenance plan.

Prepared by:	
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Checked by:	
Ruth Georgiou BSc MCIEEM	Date: 26 th March 2026.

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Appendix I. BADGER INFORMATION.

Ecology

Badgers are territorial animals who live in social groups called 'clans'. The territory of these clans can vary in size from 0.2 km² to 1.5 km² with anywhere between two and twenty Badgers present. In areas where two clans meet territorial boundaries become well-defined, marked by a series of dung pits called latrines. In areas with relatively low Badger populations there will be less competition for territory and the number of territorial markings will be low or even non-existent.

Badgers use paths around their territory repeatedly, following a scent trail from previous use; thus, Badger paths become well worn. These paths are important to the Badgers and obstruction to these paths will interfere with the Badger's movement around their territory.

Badger setts are any structure or place which displays signs of current or seasonal use by a Badger. Within a Badger clan territory there can be several Badger setts which are categorised in the following ways:

- **Main Sett.** *There will normally be one main sett in a territory. This will generally be the largest sett in the territory, typically with five or more entrances, will be permanently occupied throughout the year and used as the breeding sett.*
- **Outlying Sett.** *These are the smallest setts with generally only one or two entrances. They are intermittently occupied and there can be any number in a territory.*
- **Annex Sett.** *A sett of intermediate size, located close to the main sett and connected by well-defined paths. These are occupied for prolonged periods and may be used as a second breeding sett if there are two breeding sows in the clan.*
- **Subsidiary Sett.** *A sett of intermediate size, similar to an annex sett but located at some distance from the main sett and not connected to the main sett by defined paths.*

Badgers can mate at any time of year but delayed implantation controls the time of birth. Most cubs are born between January and March but they can be born at any time

between December and June. An average of two to three Badger cubs are born to each sow and will initially be totally dependent on their mother. Cubs do not appear above ground until during April or May when they are 8 – 10 weeks old and are not fully weaned until at least June of each year.

Badgers are omnivorous but their preferred food source is worms and insects. Worms are most abundant in well-grazed pastureland while mixed woodland is a good source of insects and grubs. Badgers have a soft and supple nose with which they snuffle into the ground to find insects. When they do this, they leave distinct round holes known as snuffle holes or grubbings. Badgers easily find worms on the surface of well-grazed pastureland and often leave no visible indications of this foraging.

Surveys

Walkover surveys can be conducted to identify the presence of Badgers within an area. This will identify the presence of any setts, dung pits, paths or foraging activity.

Bait marking techniques can be used to survey Badger territories. This involves feeding Badgers at each sett pellets of different colours over a period of at least two weeks. The colour of pellet found in dung pits and territorial latrines shows what areas each clan of Badgers is occupying.

Legislation

Badgers are protected under Schedule 6 of the Wildlife and Countryside Act (1981) and the Protection of Badgers Act (1992).

This makes it an offence to take, kill or injure a Badger, cruelly ill-treat a badger, use Badger tongs or firearms in the killing or taking (or attempt) of a Badger. It is also an offence to damage, destroy, obstruct access to, or any entrance of, a Badger sett, to cause a dog to enter a Badger sett or disturb a Badger while it is occupying a sett.

Appendix II. 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 of 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. 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 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 0.9km² 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. SPECIES LISTS.

Other Neutral Grassland	
Scientific Name	Vernacular
<i>Deschampsia cespitosa</i>	Tufted hair grass
<i>Dactylis glomerata</i>	Cock's foot
<i>Poa annua</i>	Annual meadowgrass
<i>Arrhenatherum elatius</i>	False oat grass
<i>Agrostis stolonifera</i>	Creeping bent
<i>Holcus lanatus</i>	Yorkshire fog
<i>Lolium perenne</i>	Perennial ryegrass
<i>Dipsacus fullonum</i>	Teasel
<i>Helminthotheca echinoides</i>	Bristly oxtongue
<i>Tussilago farfara</i>	Colt's foot
<i>Galium aparine</i>	Cleavers
<i>Urtica dioica</i>	Common nettle
<i>Taraxacum officinale</i>	Dandelion
<i>Cerastium fontanum</i>	Common mouse-ear
<i>Plantago lanceolata</i>	Ribwort plantain
<i>Plantago major</i>	Greater plantain
<i>Plantago media</i>	Hoary plantain
<i>Trifolium pratense</i>	Red clover
<i>Trifolium repens</i>	White clover
<i>Sonchus oleraceus</i> ,	Smooth sow thistle
<i>Hypochaeris glabra</i>	Smooth cat's ear
<i>Verbascum thapsus</i>	Mullein
<i>Reseda luteola</i>	Weld
<i>Geum urbanum</i>	Wood avens
<i>Vicia sepium</i> ,	Bush vetch
<i>Vicia sativa</i>	Common vetch
<i>Galanthus nivalis</i>	Snowdrop
<i>Narcissus sp.</i>	Daffodil
<i>Rumex acetosa</i>	Common sorrel
<i>Lotus corniculatus</i>	Bird's foot trefoil
<i>Geranium molle</i>	Dove's-foot cranesbill
<i>Ficaria verna</i>	Lesser celandine
<i>Ranunculus repens</i>	Creeping buttercup
<i>Rumex obtusifolius</i>	Broadleaved dock
<i>Rumex crispus</i>	Curled dock
<i>Centaurea nigra</i>	Common knapweed
<i>Digitalis purpurea</i>	Foxglove
<i>Epilobium tetragonum</i>	Square stemmed willowherb
<i>Veronica arvensis</i>	Field speedwell
<i>Cardamine hirsuta</i>	Hairy bittercress
<i>Stellaria media</i>	Chickweed
<i>Juncus effusus</i>	Soft rush
<i>Carex pendula</i>	Drooping sedge

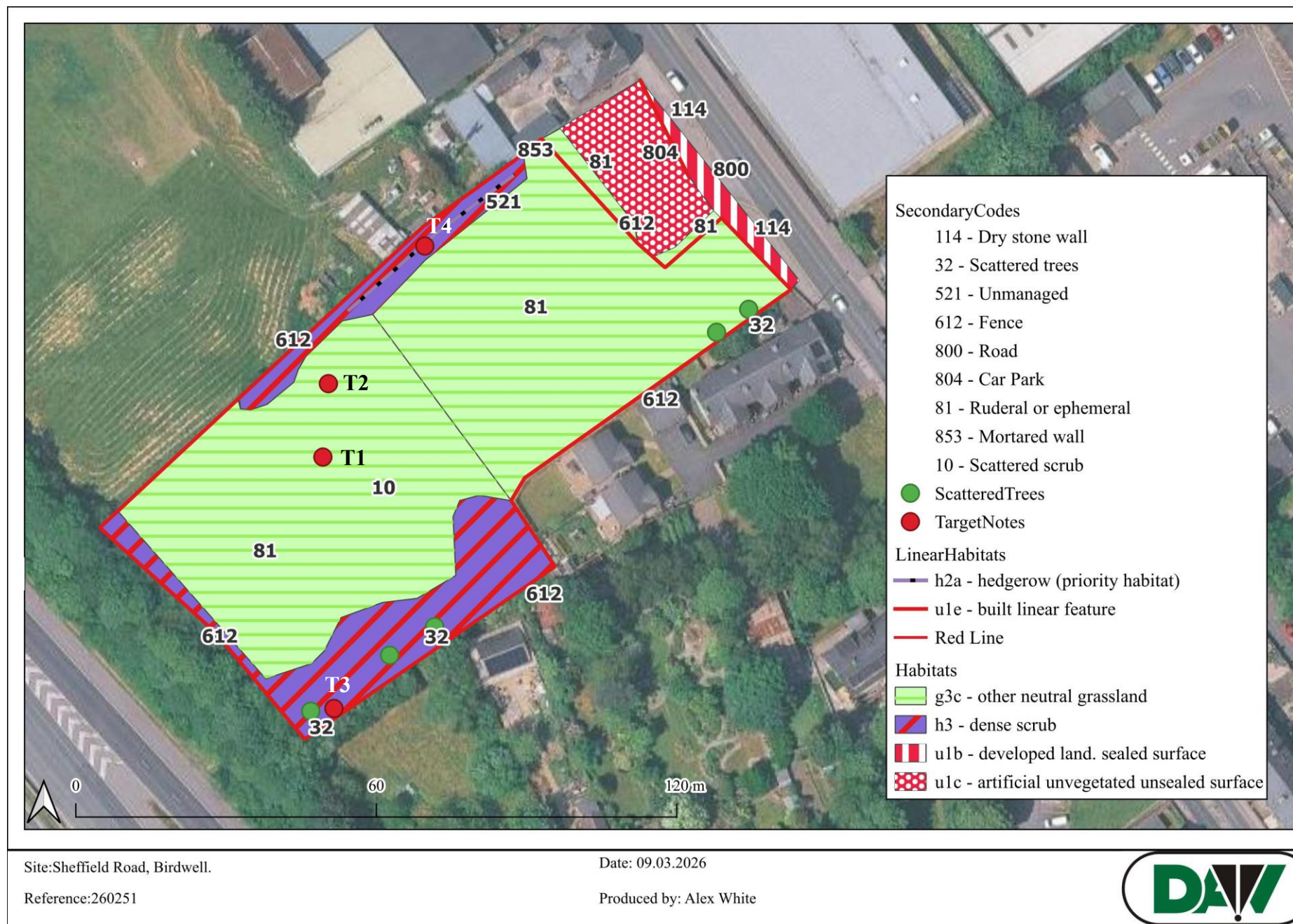
<i>Artemisia vulgaris</i>	Common mugwort
<i>Heracleum sphondylium</i>	Common hogweed
<i>Chamaenerion angustifolium</i>	Rosebay willowherb
<i>Rubus fruticosus</i>	Bramble

Dense Scrub	
<i>Scientific Name</i>	Vernacular
<i>Rubus fruticosus</i>	Bramble
<i>Fraxinus excelsior</i>	Ash
<i>Prunus spinosa</i>	Blackthorn
<i>Rosa canina</i>	Dog rose
<i>Sambucus nigra</i>	Elder
<i>Hedera helix</i>	Ivy
<i>Artemisia vulgaris</i>	Common mugwort
<i>Heracleum sphondylium</i>	Common hogweed
<i>Chamaenerion angustifolium</i>	Rosebay willowherb

Scattered Trees	
<i>Scientific Name</i>	Vernacular
<i>Acer pseudoplatanus</i>	Sycamore
<i>Quercus petraea</i>	Sessile oak
<i>Salix</i> sp.	Willow
<i>Betula pendula</i>	Silver birch

Native Hedgerow	
<i>Scientific Name</i>	Vernacular
<i>Crataegus monogyna</i>	Hawthorn
<i>Sambucus nigra</i>	Elder
<i>Salix cinerea</i>	Grey willow
<i>Hedera helix</i>	Ivy
<i>Rubus fruticosus</i>	Bramble
<i>Urtica dioica</i>	Common nettle
<i>Galium aparine</i>	Cleavers

Appendix VI. ANNOTATED MAP OF THE SURVEY AREA.



Appendix VII. TARGET NOTES.

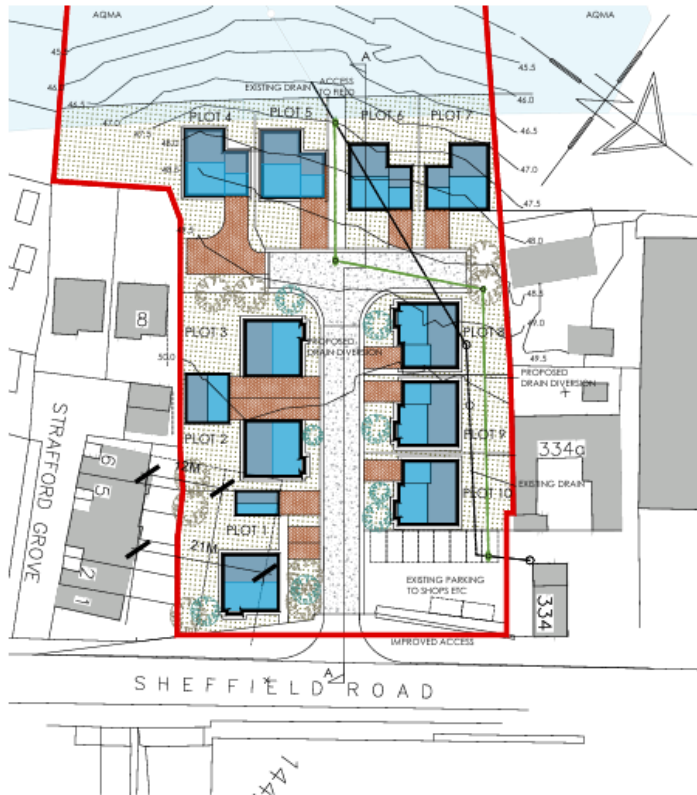
T1. Large brash pile.

T2. Earth mound.

T3. Two small rabbit burrows.

T4. Elder assessed as having PRF – I.

Appendix VIII. PROPOSED LAYOUT PLAN.



The HS&T Land at Sheffield Road, Birdwell
The development will be expected to:
Respect the historic and listed status of the Mine Rescue Station immediately adjacent by the use of appropriate site layout, sympathetic design that reflects the setting, appropriate scaling, massing, details and materials; and
Avoid development in the Air Quality Management Area affected by the M1 and satisfy the requirements of Local Plan Policy AQ1 Development in Air Quality Management Areas.

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Project: RESIDENTIAL DEVELOPMENT AT SHEFFIELD ROAD, BIRDWELL, BARNLEY (SITE HS&T)		Client: GATES HOMES			
Drawing Title: SITE PLAN		Date: JAN 25		Scale: 1:500 @ A2	
Ref: 24-057		Dwg. No: 01		Rev: B	
Date: 24-05-24		Description: NEW DESIGN & H&A ASD			