

**Whitcher Wildlife Ltd.  
Ecological Consultants.**



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**PADDOCK ROAD, STAINCROSS.**

**OS REF: SE 33411 10311.**

**ECOLOGICAL IMPACT ASSESSMENT.**

**Ref No: 200748/EcIA/REV2.**

**Date: 3<sup>rd</sup> August 2023.**

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# **1. INTRODUCTION.**

1.1. An application has been prepared for a residential development on the land off and adjacent to Woodview Farm on Paddock Lane in Staincross.

1.2. Whitcher Wildlife Ltd was commissioned to carry out a Preliminary Ecological Appraisal of the site to establish whether there are any issues that may affect the proposed works. An initial survey of the site was commissioned and carried out on 28<sup>th</sup> July 2020. That survey identified low bat roost potential in two buildings and recommended a further bat dusk emergence survey.

1.3. Whitcher Wildlife Ltd was commissioned to carry out the bat dusk emergence survey and this survey was carried out on 12<sup>th</sup> August 2020.

1.4. Subsequent to those surveys, the plans for the site were extended and a Preliminary Ecological Appraisal was commissioned to cover the additional areas that will be developed. That survey was carried out on 29<sup>th</sup> March 2021.

1.5. Following pre-app advice from the local authority and ongoing discussions since the initial surveys, in conjunction with this development baseline habitat surveys were carried out of some land off site to utilise for off site habitat creation to ensure that the development delivers a biodiversity net gain. These surveys were carried out on 19<sup>th</sup> and 28<sup>th</sup> July 2023. The baseline assessments of these habitats are provided in the survey results of this report.

1.6. Upon completion of all surveys Whitcher Wildlife Ltd were subsequently commissioned to prepare an Ecological Impact Assessment (EcIA) to support the planning application.

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

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## 2. SURVEY METHODOLOGY.

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

2.2. The survey area was walked where access was agreed and public rights of way were used where no access was agreed. All habitats within and immediately around the survey area were documented and the dominant species within that habitat listed in line with the JNCC Handbook for Phase 1 Habitat surveys.

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: - (2011). *Water Vole Handbook: Third Edition*: -

- \* Water vole burrows.
- \* Water vole faeces and latrines.
- \* Water vole feeding stations.
- \* Water vole runs.
- \* Water vole prints in areas of soft mud.
- \* Water vole lawns.
- \* Predator field signs.

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

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

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

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

- \* Holes, cracks or crevices.
- \* Bat Droppings.

2.7.1. The subsequent dusk emergence survey was also conducted in accordance with Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3<sup>rd</sup> edition)*. It was conducted by a sufficient number of surveyors to cover all areas of roosting potential, in suitable weather conditions from fifteen minutes before sunset to at least an hour and half after.

2.7.2. All surveyors were equipped with Batbox Duet bat detectors, or similar. The use of static recording devices such as Anabat SD2's and video cameras with infrared lights were also utilised were appropriate.

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. The first survey and subsequent bat activity survey was carried out by Jenny Whitcher Roebuck MCIEEM. Since 2001 Jenny has had experience in a professional capacity as a Wildlife Consultant carrying out Ecology Surveys and Phase 1 Habitat surveys. Jenny holds Natural England Survey Licences in respect of bats (2015-10244-CLS-CLS), great crested newts, crayfish and barn owls, NRW and SNH Survey Licences in respect of bats and great crested newts. She has also successfully completed several courses run by the Chartered Institute of Ecology and Environmental Management (CIEEM), the Bat Conservation Trust (BCT) and the Field Studies Council (FSC) in the relative protected species, plant species and in carrying out Phase 1 Habitat Surveys. As a full member of CIEEM she is committed to continuous professional development, a continual process of learning and career development, a condition of CIEEM membership.

2.15. The second survey was also carried out by Ruth Georgiou BSc MCIEEM. Since 2004 Ruth has had experience in a professional capacity as a Wildlife Consultant carrying out ecology surveys and phase I habitat surveys. As a full member of CIEEM Ruth is subject to peer review on an annual basis. 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 licences for badgers, great crested newts and bats. 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, carrying out phase I habitat surveys and BREEAM assessments.

### **3. SURVEY RESULTS.**

#### **3.1. Data Search Results.**

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

##### *3.1.2. Barnsley Biological Records Centre.*

3.1.2.1. There are no records of protected species within or adjacent to the survey area. The nearest relevant record is of water voles on the golf course 800m from the survey area. There are further records of water vole but all in excess of 1.7km from the survey area.

3.1.2.2. There are records of great crested newts within 2km of the survey area. These records are all located over 1.75km from the survey area. There are no other relevant protected species records.

3.1.2.3. There are no records of designated sites within or adjacent to the survey area. The nearest designated site is the Barnsley Canal at Wilthorpe Barnsley Wildlife Site, which lies over 1.8km to the south.

##### *3.1.3. South Yorkshire Bat Group.*

3.1.3.1. The nearest records are two records of call outs to injured bats, one located 400m from the survey area, recorded in 2003 and one located 500m from the survey area, recorded in 2016.

3.1.3.2. All other records are over 825m from the survey area and the nearest roost record is located over 1.4km from the site and is a small day roost.

##### *3.1.4. South Yorkshire Badger Group.*

There are no records of badgers within or adjacent to the survey area.

3.1.5. The data searches are available to the client on request but must not be placed in the public domain.

### 3.2. The Surveyed Area.

3.2.1. The survey area is Woodview Farm and adjacent land off Paddock Road in Staincross.

3.2.2. The aerial photograph below shows the survey area. The area outlined in red (Area 1) is the area surveyed during 2020. The areas outlined in yellow (Area 2) were surveyed during 2021. The aerial map below shows a number of buildings on the site but there were only two buildings remaining, the main house and the outbuilding to the south of the house, on the eastern boundary. All others had been demolished prior to the second survey.



3.2.3. The site is bordered by residential houses on the north, east and west with an area of playing fields to the south and residential houses beyond this. The aerial photograph below shows the approximate location of the survey area, circled in red, and the wider surrounding area.



### **3.3. Area 1 - Description of Habitats.**

3.3.1. Appendix V of this report contains an annotated map marked up with the varying habitats that are cross referenced to target notes in Appendix VI of this report. The habitats on and adjacent to Area 1 are: -

- Tall Ruderal
- Improved Grassland
- Amenity Grassland
- Scattered Tree
- Bare Ground
- Building
- Hedgerow, Intact, Species Poor
- Hedgerow, Defunct, Species Poor
- Wall
- Fence

### 3.3.2. Tall Ruderal

3.3.2.1. Where the buildings have been demolished and there is bare earth, there are tall ruderal species growing. These are also beginning to spread into other areas of bare ground. The main species present are teasel (*Dipsacus sylvestris*), thistle (*Cirsium sp(p)*), ox-eye daisy (*Leucanthemum vulgare*), common poppy (*Papaver rhoeas*), mugwort (*Artemisia vulgaris*), nettle (*Urtica dioica*), creeping buttercup (*Ranunculus repens*), foxglove (*Digitalis purpurea*), herb Robert (*Geranium robertianum*), dock (*Rumex sp.*), cleavers (*Galium aparine*), bramble (*Rubus fruticosus*), sow thistle (*Sonchus oleraceus*), broad-leaved willowherb (*Epilobium montanum*), great willowherb (*Epilobium hirsutum*), rosebay willowherb (*Chamerion angustifolium*), groundsel (*Senecio vulgaris*), sun spurge (*Euphorbia helioscopia*), greater plantain (*Plantago major*), weld (*Reseda luteola*), white clover (*Trifolium repens*), ragwort (*Senecio jacobaea*) and woundwort (*Stachys sylvatica*) with some perennial rye grass (*Lolium perenne*), annual meadowgrass (*Poa annua*), Yorkshire fog (*Holcus lanatus*), sapling cherry (*Prunus sp(p)*), fern (*Pteridophyte sp.*), ivy (*Hedera helix*) and snowberry (*Symphoricarpos albus*).



3.3.2. Due to this being limited to small patches of habitat amongst cleared ground this has been classified under the vacant/derelict land/bare ground category for the purpose of the BNG assessment. There is no condition assessment applicable to this habitat.

### 3.3.3. Improved Grassland

At the southern end of the site is what was a paddock but has now been left to grow long and is beginning to become overgrown with tall ruderal species. Google Earth aerial images show that this paddock was managed and cut in 2019. The main species

present are perennial rye grass (*Lolium perenne*), Yorkshire fog (*Holcus lanatus*), annual meadowgrass (*Poa annua*), timothy (*Phleum pratense*) with dock (*Rumex sp.*), thistle (*Cirsium sp(p)*), ragwort (*Senecio jacobaea*), sow thistle (*Sonchus oleraceus*), nettle (*Urtica dioica*), cow parsley (*Anthriscus sylvestris*), yarrow (*Achillea millefolium*), meadow buttercup (*Ranunculus acris*), great willowherb (*Epilobium hirsutum*), dandelion (*Taraxacum officinale*), white dead nettle (*Lamium album*) and white clover (*Trifolium repens*).



Condition Assessment Criteria		Criterion passed (Yes or No)
A	There are 6-8 vascular plant species per m <sup>2</sup> present, including at least 2 forbs (this may include those listed in Footnote 1). <b>Note - this criterion is essential for achieving Moderate or Good condition.</b>  Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m <sup>2</sup> (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	N
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	N
C	Some scattered scrub (including bramble <i>Rubus fruticosus</i> agg.) may be present, but scrub accounts for less than 20% of total grassland area.  Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Y
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Y
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) <sup>2</sup> .	Y
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Y
G	There is an absence of invasive non-native plant species <sup>3</sup> (as listed on Schedule 9 of WCA <sup>4</sup> ).	Y
<b>Essential criterion achieved (Yes or No)</b>		
<b>Number of criteria passed</b>		
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved ×/✓
Passes 6 or 7 criteria including passing essential criterion A	Good (3)	

Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)	
Passes 3 or fewer criteria; OR Passes 4 – 6 criteria (excluding criterion A)	Poor (1)	✓

### 3.3.4. Amenity Grassland

3.3.4.1. At the northern end of the site, associated with the main house are areas of well-tended lawn. There is a large area at the front of the house and two small areas, one down the western side of the drive and one at the rear of the house. The main species present are perennial rye grass (*Lolium perenne*), white clover (*Trifolium repens*), dandelion (*Taraxacum officinale*), ragwort (*Senecio jacobaea*), common daisy (*Bellis perennis*), thistle (*Cirsium sp(p)*) and groundsel (*Senecio vulgaris*).



3.3.4.2. This habitat has been classified as part of the existing developed area that has been split 70% developed land/sealed surface and 30% vegetated garden. There is no condition assessment applicable to this habitat.

### 3.3.5. Scattered Tree

There is one tree on the site, located in the front lawn adjacent to the boundary wall. this is a small ornamental conifer.



Condition Assessment Criteria		Criterion passed (Yes or No)
A	The tree is a native species (or at least 70% within the block are native species).	N
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	N
C	The tree is mature (or more than 50% within the block are mature).	N
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	N
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	N
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	N
<b>Number of criteria passed</b>		<b>0</b>
Condition Assessment Result (out of 6 criteria)	Condition Assessment Score	Score Achieved x/✓
Passes 5 or 6 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	
Passes 2 or fewer criteria	Poor (1)	✓
Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.		

### 3.3.6. Bare Ground

3.3.6.1. There are large areas of bare ground within the survey area. These include the tarmac drive and block paving around the house. To the rear of the house are areas of concrete and large areas of bare earth where the buildings on the site have been demolished.





3.3.6.2. This habitat has been classified as part of the existing developed area that has been split 70% developed land/sealed surface and 30% vegetated garden. There is no condition assessment applicable to this habitat.

### 3.3.7. Building

3.3.7.1. There are only two buildings on the site, the rest have been demolished within the last year. The aerial photograph below shows the two remaining buildings and each has been given a number of the purpose of this report.



3.3.7.1. Building 1.



3.3.7.1.1. This is the main house, which is currently occupied. The house is two storey and constructed with brick cavity walls with a pitched, pan tile roof. There is also a small single storey extension and small conservatory on the rear of the house.

3.3.7.1.2. Internally there is one large loft space, which is felt lined below the tiles and well-sealed.

3.3.7.1.4. There are soffits around the outside of the main house and fascia boards around the flat roof extension.

### 3.3.7.2. Building 2.

3.3.7.2.1. This is a large outbuilding, which is single storey and constructed with stone walls, which are rendered at the north and south ends. The roof is at two different levels. The southern half of the roof is covered with corrugated sheets on both sides of the pitch. The northern half of the roof is covered with corrugated sheets on the western side and slates on the eastern side.

3.3.7.1.3. Internally the building is one large room, which is used as storage and a workshop. All windows and doors are in place and sealed. The ceiling is boarded forming a loft space above but there is no hatch so there is no access to the loft. It is therefore not known if the underside of the roof is lined.





3.3.7.3. This habitat has been classified as part of the existing developed area that has been split 70% developed land/sealed surface and 30% vegetated garden. There is no condition assessment applicable to this habitat.

### 3.3.8. Hedgerow, Intact, Species Poor

3.3.8.1. Along part of the eastern boundary of the site is a hedgerow (H8), which is mainly privet (*Ligustrum Vulgare*) with occasional small elder (*Sambucus nigra*) growing.



3.3.8.2. As this was an ornamental non-native hedgerow a condition assessment was not applicable.

### 3.3.9. Hedgerow, Defunct, Species Poor

3.3.9.1. On the southern boundary, at the eastern side of the site, is a short section of hedgerow that has gaps and is unmanaged (H9). The hedgerow consists of hawthorn (*Crataegus monogyna*) and elder (*Sambucus nigra*) with some ivy (*Hedera helix*) at the eastern end.



3.3.9.2. BNG was not applicable at the time of the original survey therefore a condition assessment was not carried out of this hedgerow. During subsequent surveys of the site this hedgerow was found to have been removed. For the purpose of the BNG assessment, the condition of this hedgerow has been estimated as ‘moderate’ condition.

### 3.3.10. Wall

There are numerous stone walls around the boundary of the site and within the site itself. There is a new section of wall that is partly built on the western boundary with the footings in place for the rest of the wall to be built on.



### 3.3.11. Fence

There are fences surrounding the southern part of the site including wooden panel garden fences, wooden post and rail and Heras fencing. There is also Heras fencing around the garden of the private garden to the east.



### **3.4. Area 2 - Description of Habitats.**

3.4.1. Appendix VI of this report contains an annotated map marked up with the varying habitats that are cross referenced to target notes in Appendix VII of this report. The habitats on and adjacent to Area 2 are: -

- Bare Ground
- Scrub
- Scattered Trees
- Amenity Grassland
- Building.
- Hedgerow, Intact, Species Poor
- Hedgerow, Defunct, Species Poor
- Fence
- Wall

#### **3.4.2. Bare Ground.**

3.4.2.1. There are various areas of bare ground across Area 2. The most part of the site had been recently stripped of topsoil at the time of this survey and was therefore bare soil with soil bunds piled around the site, as shown in the photographs below.



3.4.2.2. There are some small areas of bare ground associated with adjacent properties that are included within the survey area. The bare ground in these areas includes patio and gravel driveways/paths as shown in the photographs below.



3.4.2.3. This habitat has been classified as part of the existing developed area that has been split 70% developed land/sealed surface and 30% vegetated garden. There is no condition assessment applicable to this habitat.

3.4.3. Scrub.



There are some occasional small patches of scrub around the edges of the site. These include blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*) and bramble (*Rubus fruticosus*).

Condition Assessment Criteria		Criterion passed (Yes or No)
A	The scrub is a good representation of the habitat type it has been identified as, based on its UKHab description (where in its natural range). The appearance and composition of the vegetation closely matches the characteristics of the specific scrub type.  At least 80% of scrub is native, and there are at least three native woody species <sup>1</sup> , with no single species comprising more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	N
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran <sup>2</sup> ) shrubs are all present.	N
C	There is an absence of invasive non-native plant species <sup>3</sup> (as listed on Schedule 9 of WCA <sup>4</sup> ) and species indicative of sub-optimal condition <sup>5</sup> make up less than 5% of ground cover.	Y
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Y
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	N
<b>Number of criteria passed</b>		
Condition Assessment Result (out of 5 criteria)	Condition Assessment Score	Score Achieved ×/✓
Passes 5 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	
Passes 2 or fewer criteria	Poor (1)	✓

#### 3.4.4. Scattered Trees.



3.4.4.1. There are some occasional scattered trees, including ash (*Fraxinus excelsior*) in and amongst the hedgerow boundaries. These are semi mature in size and nature.

Condition Assessment Criteria		Criterion passed (Yes or No)
A	The tree is a native species (or at least 70% within the block are native species).	Y
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	N
C	The tree is mature (or more than 50% within the block are mature).	N
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Y
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	N
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	N
Number of criteria passed		2
Condition Assessment Result (out of 6 criteria)	Condition Assessment Score	Score Achieved x/✓
Passes 5 or 6 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	
Passes 2 or fewer criteria	Poor (1)	✓
Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.		

3.4.4.2. There are also some mature willow (*Salix sp*) trees on the boundary at the southern end of the site, between the survey area and the adjacent amenity grassland (TL1). These appear to be healthy trees but have some broken limbs. These have been categorised as a 'line of trees' for the purpose of the BNG assessment of the site.

Condition Assessment Criteria		Criterion passed (Yes or No)
A	At least 70% of trees are native species.	Y
B	Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.	Y
C	One or more trees has veteran features and or natural ecological niches for vertebrates and invertebrates, such as presence of standing and attached deadwood, cavities, ivy or loose bark.	Y
D	There is an undisturbed naturally-vegetated strip of at least 6 m on both sides to protect the line of trees from farming and other human activities (excluding grazing). Where veteran trees are present, root protection areas should follow standing advice <sup>2</sup> .	N
E	At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	N
Number of criteria passed		
Condition Assessment Result (out of 5 criteria)	Condition Assessment Score	Score Achieved x/✓
Passes 5 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	
Passes 2 or fewer criteria	Poor (1)	✓

### 3.4.5. Amenity Grassland.



3.4.5.1. There is one small area of amenity grassland that is a lawn associated with an adjacent property. This is closely mown and well maintained as can be seen in the photograph above. It contains grass species that are common in garden lawns including annual meadow grass (*Poa annua*), perennial ryegrass (*Lolium perenne*) and fescue (*Festuca sp.*).

3.4.5.2. There is some ornamental planting associated with this garden, but due to the areas being so small this is target noted separately in the map at the end of this report.

3.4.5.3. This habitat has been classified as part of the existing developed area that has been split 70% developed land/sealed surface and 30% vegetated garden. There is no condition assessment applicable to this habitat.

### 3.4.6. Building.

3.4.6.1. There are three buildings within Area 2. One of these is a large timber garden shed, one is a small wooden and glass summer house and the third is a glass greenhouse. These are shown in the photographs below.



3.4.6.2. This habitat has been classified as part of the existing developed area that has been split 70% developed land/sealed surface and 30% vegetated garden. There is no condition assessment applicable to this habitat.

3.4.7. Hedgerow, intact, species poor.

3.4.7.1. There are hedgerows along much of the southern boundaries of Area 2 (H1 and H3). These are managed hedgerows that lie between the site and adjacent private garden and amenity grassland areas. These hedgerows are predominantly hawthorn (*Crataegus monogyna*) with some elder (*Sambucus nigra*). There is one tree associated with H1 and therefore this hedgerow has been assessed under the ‘Hedgerow with trees’ condition criteria.



3.4.7.2. There are also some short lengths of hedgerow boundaries around the two private gardens that were included in this survey (H4, H5 and H6). These comprise coniferous hedgerow and privet (*Lingustrum vulgare*) hedgerow. Again, these are managed hedgerows. No condition assessment has been carried out of these hedgerows as they are ornamental hedgerows.



Attributes and functional groupings (A, B, C, D and E)		Criteria - the minimum requirements for 'favourable condition'	Description	Criterion passed (Yes or No)	
Core groups - applicable to all hedgerow types				H1	H3
A1.	Height	>1.5 m average along length	<p>The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees.</p> <p>Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).</p> <p>A newly planted hedgerow does not pass this criterion (unless it is &gt;1.5 m height).</p>	N	N
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees.		

			<p>Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are &gt;0.5 m in height.</p> <p>Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).</p>	Y	Y
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	<p>This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth.</p> <p>Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).</p>	Y	Y
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	<p>This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small).</p> <p>Access points and gates contribute to the overall 'gappiness' but are not subject to the &gt;5 m criterion (as this is the typical size of a gate).</p>	Y	Y
C1.	Undisturbed ground and perennial vegetation	<p>&gt;1 m width of undisturbed ground with perennial herbaceous vegetation for &gt;90% of length:</p> <ul style="list-style-type: none"> <li>· Measured from outer edge of hedgerow; and</li> <li>· Is present on one side of the hedgerow (at least).</li> </ul>	<p>This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow.</p> <p>Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow.</p> <p>This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.</p>	N	N
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	N	N
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA <sup>3</sup> ) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website <sup>4</sup> , as well as the BSBI website <sup>5</sup> where the 'Online Atlas of the British and Irish Flora' <sup>6</sup> contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website <sup>7</sup> .	N	Y
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	<p>This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes.</p> <p>This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g., excessive hedgerow cutting).</p>	N	N
<b>Additional group - applicable to hedgerows with trees only</b>					

E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient <sup>8</sup> ), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.	N	N/A
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	Y	N/A
The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the metric. The scores for each are set out in the tables below.					

Condition categories for hedgerows without trees			
Category	Category Requirements	Metric Score	
Good	No more than 2 failures in total; <b>AND</b> No more than 1 failure in any functional group.		
Moderate	No more than 4 failures in total; <b>AND</b> <u>Does not fail both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 and C2 = Moderate condition).		✓
Poor	Fails a total of more than 4 attributes; <b>OR</b> <u>Fails both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 and B2 = Poor condition).		
<b>Score achieved:</b>			
Condition categories for hedgerows with trees			
Category	Category Requirements	Metric score	
Good	No more than 2 failures in total; <b>AND</b> No more than 1 failure in any functional group.		
Moderate	No more than 5 failures in total; <b>AND</b> <u>Does not fail both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1, C2 and E1 = Moderate condition).		

Poor	Fails a total of more than 5 attributes; <b>OR</b> Fails <u>both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 and B2 = Poor condition).	✓	
<b>Score achieved:</b>		Poor	Moderate

### 3.4.8. Hedgerow, defunct, species poor.



There is a length of unmanaged defunct hedgerow along the eastern boundary of Area 2 and another short length of hedgerow along one of the private gardens that was included in this survey. These are predominantly hawthorn (*Crataegus monogyna*) hedgerows with some elder (*Sambucus nigra*) and bramble (*Rubus fruticosus*) growing in and amongst. There are also some trees associated with H2 and therefore this hedgerow has been assessed under the ‘Hedgerow with trees’ condition criteria.

Attributes and functional groupings (A, B, C, D and E)		Criteria - the minimum requirements for ‘favourable condition’	Description	Criterion passed (Yes or No)	
Core groups - applicable to all hedgerow types				H2	H7
A1.	Height	>1.5 m average along length	<p>The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees.</p> <p>Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).</p> <p>A newly planted hedgerow does not pass this criterion (unless it is &gt;1.5 m height).</p>	Y	Y

A2.	Width	>1.5 m average along length	<p>The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees.</p> <p>Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are &gt;0.5 m in height.</p> <p>Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).</p>	Y	N
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	<p>This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth.</p> <p>Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).</p>	N	N
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	<p>This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small).</p> <p>Access points and gates contribute to the overall 'gappiness' but are not subject to the &gt;5 m criterion (as this is the typical size of a gate).</p>	Y	N
C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: · Measured from outer edge of hedgerow; and · Is present on one side of the hedgerow (at least).	<p>This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow.</p> <p>Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow.</p> <p>This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.</p>	N	N
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	<p>The indicator species used are nettles <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.</p>	N	Y
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA <sup>3</sup> ) and recently introduced species.	<p>Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website<sup>4</sup>, as well as the BSBI website<sup>5</sup> where the 'Online Atlas of the British and Irish Flora'<sup>6</sup> contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website<sup>7</sup>.</p>	N	N
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	<p>This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes.</p> <p>This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g., excessive hedgerow cutting).</p>	Y	Y
<b>Additional group - applicable to hedgerows with trees only</b>					

E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient <sup>8</sup> ), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.	N	N/A
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	Y	N/A
The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the metric. The scores for each are set out in the tables below.					

Condition categories for hedgerows without trees			
Category	Category Requirements	Metric Score	
Good	No more than 2 failures in total; <b>AND</b> No more than 1 failure in any functional group.		
Moderate	No more than 4 failures in total; <b>AND</b> <u>Does not fail both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 and C2 = Moderate condition).		
Poor	Fails a total of more than 4 attributes; <b>OR</b> <u>Fails both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 and B2 = Poor condition).		✓
<b>Score achieved:</b>			
Condition categories for hedgerows with trees			
Category	Category Requirements	Metric score	
Good	No more than 2 failures in total; <b>AND</b> No more than 1 failure in any functional group.		
Moderate	No more than 5 failures in total; <b>AND</b> <u>Does not fail both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	✓	

Poor	Fails a total of more than 5 attributes; <b>OR</b> Fails <u>both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 and B2 = Poor condition).		
<b>Score achieved:</b>		Poor	Moderate

### 3.4.9. Fence.



There are wooden fence boundaries around the adjacent private properties.

### 3.4.10. Wall.



There are some stone wall boundaries around the adjacent private properties.

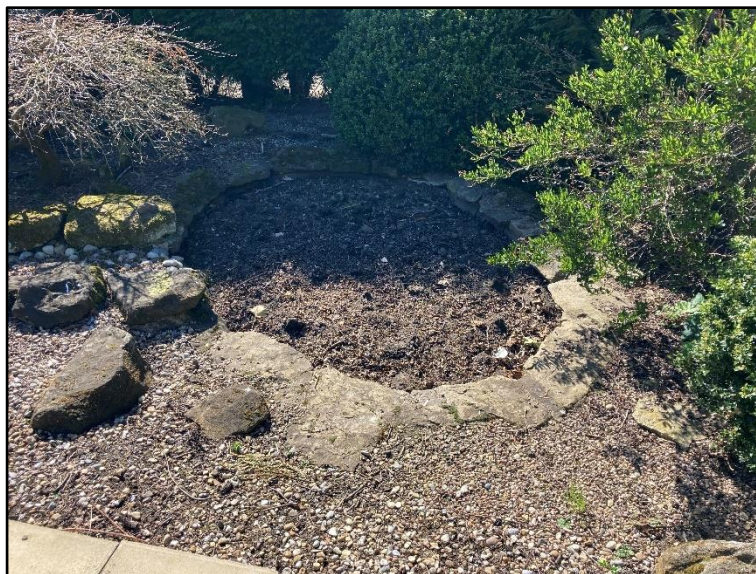
### 3.5. Description of Fauna (Areas 1 and 2).

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

3.5.2. No watercourses were identified within the survey areas. Therefore, there is no habitat for water voles, otters or white clawed crayfish within the survey area.

3.5.3. There are no ponds shown on maps within 500m of the survey area, however a garden pond was identified in an adjacent property, target noted as T4. This is an ornamental pond and large fish could be seen in the pond therefore this is assessed to be unsuitable habitat for great crested newts.

3.5.4. There are the remains of an ornamental pond within one of the private gardens that were included in this survey. This is target noted as T3 and is shown in the photograph below. This is a very small pond with pump fittings visible at the side of the pond. It is assessed that this pond would have not been suitable habitat for great crested newts. Therefore, there is no potential for great crested newts within the survey area.



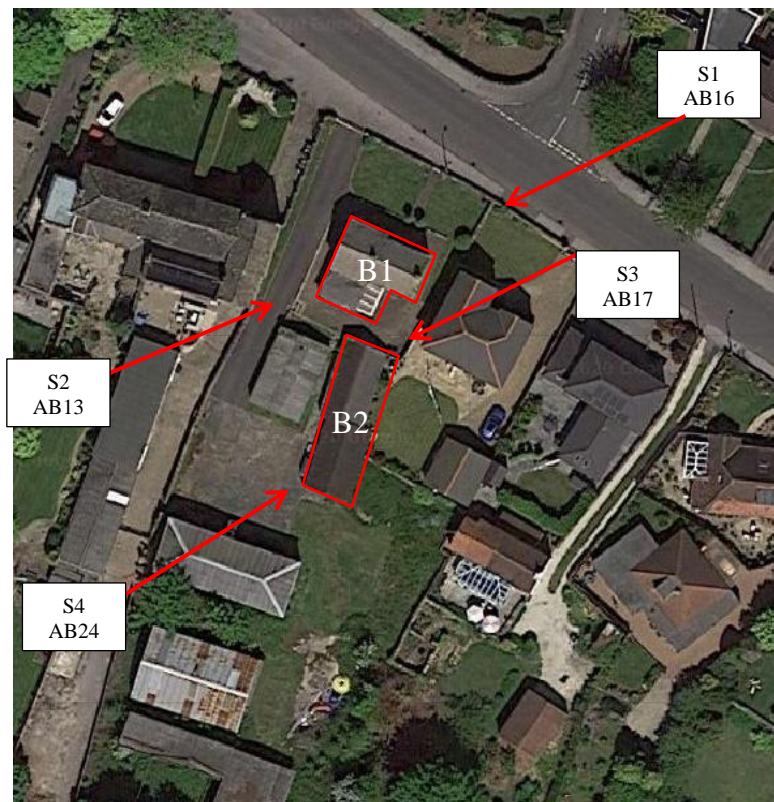
3.5.5. Building 1 is assessed as having **low** potential for roosting bats due to occasional small gaps in the pointing at the gable ends and missing pointing under ridge tiles. No bat field signs were found around the interior or the exterior of the building during this survey.

3.5.5.1. Building 2 is assessed as having **low** potential for roosting bats due to occasional small gaps at the gable ends and occasional lifted slates. No bat field signs were found around the interior or the exterior of the building during this survey, although there was no access available to the loft space of the building.

3.5.5.2. A dusk emergence bat survey of the buildings was carried out of by four surveyors on 12<sup>th</sup> August 2020. Two of the surveyors hold a Natural England bat survey licence and the other two are experienced surveyors. All were equipped with a Batbox Duet bat detector, a two-way radio for communication and a static Anabat detector.

3.5.5.3. The weather at the time of the survey was fine and clear with a light breeze to 1BWS. There was a temperature of 25°C recorded at 20:30 and a temperature of 22°C was recorded at the end of the survey. Sunset on the day of the survey was at 20:40.

3.5.5.4. The positions of the surveyors and Anabat detectors during the survey are shown on the below plan marked by S, a surveyor and AB, an Anabat.



3.5.5.5. A brief outline of the findings from each of the surveyors and the Anabat detectors are included below.

#### **3.5.5.5.1. Surveyor 1.**

- 21:11– Common Pipistrelle flew past the site from south to north.
- 21:17– Common Pipistrelle heard pass in the distance, not seen.

Anabat 16 with Surveyor 1 recorded one Common Pipistrelle call at 21:11.

#### **3.5.5.5.2. Surveyor 2.**

- 21:10– Common Pipistrelle flew east to west.
- 21:17– Common Pipistrelle flew from south to west.
- 21:22– Common Pipistrelle flew west to south.
- 21:32– Common Pipistrelle flew south to east.

Anabat 13 with Surveyor 2 recorded two Common Pipistrelle calls at 21:17 and 21:22.

#### **3.5.5.5.3. Surveyor 3.**

- 21:11– Common Pipistrelle flew south to north past the site.
- 21:17– Common Pipistrelle heard briefly in the distance, not seen
- 21:32– Soprano Pipistrelle heard briefly in the distance, not seen.

Anabat 17 with Surveyor 3 recorded four Common Pipistrelle calls between 20:57 and 21:25 and eighteen short and distant Soprano Pipistrelle calls between 21:07 and 21:26.

#### **3.5.5.5.4. Surveyor 4.**

- 21:09– Common Pipistrelle flew from east to west.
- 21:22– Common Pipistrelle flew from west to east.
- 21:32– Common Pipistrelle heard briefly in the distance, not seen.

Anabat 24 with Surveyor 4 recorded three Common Pipistrelle calls between 21:09 and 21:32 and one brief Noctule call at 21:02.

3.5.5.6. No bats were seen to emerge from the buildings during this survey. Low levels of Common Pipistrelle activity were recorded passing the site. Soprano Pipistrelle bats were recorded in the distance by the Anabat with Surveyor 3

suggesting these were in the gardens to the east. These bats did not come onto the site. One Noctule passed by the site.

3.5.5.7. The buildings in Area 2 comprise a wooden garden shed, a small wood and glass summerhouse and a glass greenhouse. These are all in excellent condition and are provide no potential for roosting bats.

3.5.5.8. The willow (*Salix sp*) trees identified at the southern end of the survey area, target noted as T5 have some broken limbs and loose bark. None of these features appear to provide an opportunity for bats to roost deep into the tree structures but do provide some potential for occasional opportunistic bats. These are therefore assessed to provide **low** potential for roosting bats.



3.5.6. The survey area in its current state comprises predominantly bare ground that provides low potential for foraging and commuting bats, with potential limited to the hedgerow boundaries. The site may have provided good value foraging habitat for bats before the area was cleared. However, the dusk emergence survey of the buildings showed no foraging in Area 1, just low numbers of Common Pipistrelle bats passing the site.

3.5.7. The vegetation within the survey area provides opportunities for nesting birds during the nesting season, which extends from March to September each year. However, no active nests were identified during this survey.

3.5.8. The survey area provides some potential habitat for reptiles due to rubble piles and topsoil bunds on the site. However, these piles have only been present within the last year. No reptiles were identified during this survey.

3.5.9. No suitable dormouse habitat was identified during this survey. The survey area is also outside the natural range of this species.

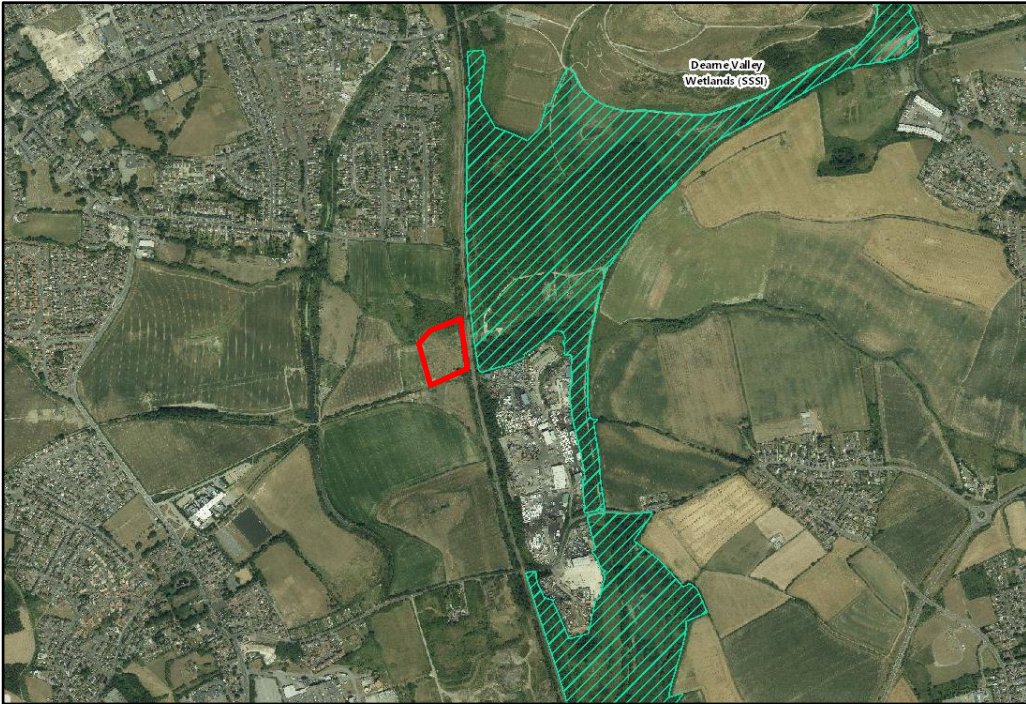
3.5.10. No red squirrels or red squirrel field signs were identified during this survey and there is no suitable habitat within the survey area. The survey area is also outside the natural range of this species.

### ***3.6. Baseline Habitat Assessments for Land to be Used for Biodiversity Offsetting.***

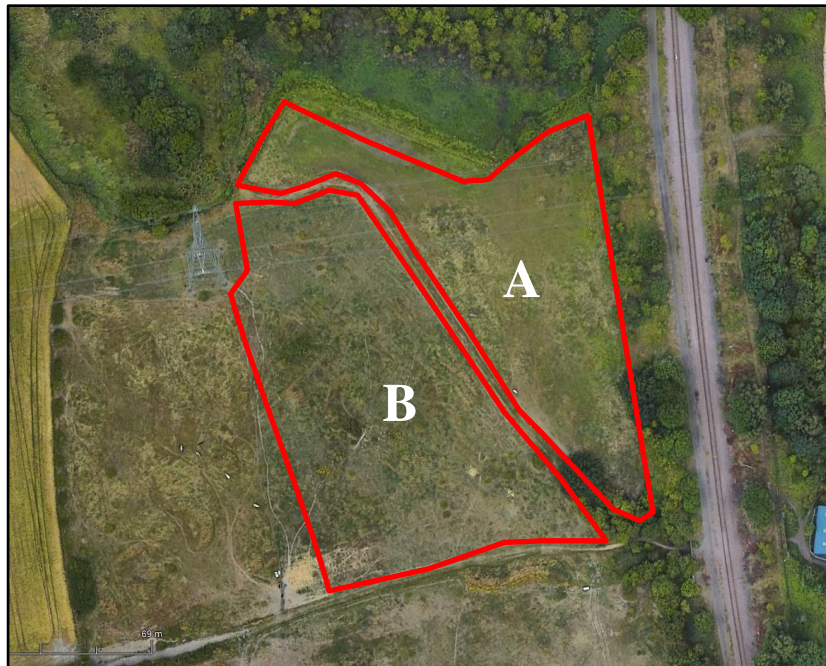
3.6.1. To achieve a 10% biodiversity net gain, off site mitigation will be required. Two grassland areas will be enhanced to achieve this. These two areas of grassland are located near Carlton, and are within the Barnsley borough. They are two areas that lie immediately parallel, separated by a public footpath.

3.6.2. Central grid references for the grasslands are SE 3737 1083 and SE 3732 1079. The location of the areas of grassland in a wider context are shown in the aerial map below. They are surrounded by horse grazed paddocks and arable. A railway line extends along the eastern boundary of the grasslands and a drain with a wide margin of scrub vegetation extends along the northern boundary. This drain is loosely connected to the Barnsley Canal further to the west. The Dearne Valley Wetlands SSSI is located very close to the east of the grasslands, on the immediate opposite side of the railway corridor. For these reason, the site is in an ecologically desirable location as it links into the SSSI, the railway corridor habitat and the Barnsley Canal.

3.6.3. The aerial map below shows the location of these offsite area, outlined in red, and the surrounding habitats. The Dearne Valley Wetlands SSSI is also shown on the map.



3.6.4. The aerial map below shows the boundaries of the two areas of grassland to be utilised. These are labelled A and B for the purpose of this report. Area A measures at 0.61ha and Area B at 0.8ha.



3.6.5. Area A is a horse grazed field, although the horses have only grazed short, selected areas of the field, resulting in a variation of the sward length. Along the northern boundary of the site there are some wet areas, but the red line boundary

skirts around and is not included in this assessment. The photographs below show the general nature of Area A.



3.6.6. The dominant species recorded across this area are Yorkshire fog (*Holcus lanatus*), perennial ryegrass (*Lolium perenne*), common bent (*Agrostis capillaris*), white clover (*Trifolium repens*) and creeping buttercup (*Ranunculus repens*). Other species found throughout include cocksfoot (*Dactylis glomerata*), false oat grass (*Arrhenatherum elatius*), meadow foxtail (*Alopecurus pratensis*), common couch (*Elymus repens*), fescue (*Festuca sp*), creeping thistle (*Cirsium arvense*), lesser knapweed (*Centaurea nigra*), autumn hawkbit (*Scorzoneroides autumnalis*), ribwort plantain (*Plantago lanceolata*), tufted vetch (*Vicia cracca*), common ragwort (*Jacobaea vulgaris*), broadleaf plantain (*Plantago major*), red bartsia (*Odontites vernus*), bird's-foot trefoil (*Lotus corniculatus*), common hogweed (*Heracleum sphondylium*), spear thistle (*Cirsium vulgare*), bramble (*Rubus fruticosus*), nettle (*Urtica dioica*), cow parsley (*Anthriscus sylvestris*), selfheal (*Prunella vulgaris*), dandelion (*Taraxacum officinale*) and broad leaf dock (*Rumex obtusifolius*). Some individual true sedge (*Carex sp.*) species and jointed rush (*Juncus articulatus*) were also found growing towards the northern end of the site, adjacent to the wetter areas.

3.6.7. Some very occasional stands of dog rose (*Rosa canina*) were identified growing in Area A.

3.6.8. Despite the number of species found throughout the grassland, there was an average of 7.8 species per square metre. Based on this and the dominant species being indicative of modification through intensive grazing, this area is assessed as modified grassland.

3.6.9. Area B is another horse grazed field where the horses have only grazed short selected areas of the field, resulting in a variation of the sward length. To the north west of this area is a wet area of this habitat, but again, the red line boundary skirts around and is not included in this assessment. The photographs below show the general nature of Area B.



3.6.10. The dominant species recorded across this area are Yorkshire fog (*Holcus lanatus*), perennial ryegrass (*Lolium perenne*), common bent (*Agrostis capillaris*), cocksfoot (*Dactylis glomerata*), false oat grass (*Arrhenatherum elatius*), timothy (*Phleum pratense*) and white clover (*Trifolium repens*). Other species found throughout include fescue (*Festuca* sp.), soft brome (*Bromus hordeaceus*), sweet vernal grass (*Anthoxanthum odoratum*), annual meadow grass (*Poa annua*), tufted hair grass (*Deschampsia cespitosa*), creeping thistle (*Cirsium arvense*), lesser knapweed (*Centaurea nigra*), autumn hawkbit (*Scorzoneroides autumnalis*), creeping buttercup (*Ranunculus repens*), ribwort plantain (*Plantago lanceolata*), common ragwort (*Vulgaris jacobaea*), broadleaf plantain (*Plantago major*), red bartsia (*Odontites vernus*), bird's-foot trefoil (*Lotus corniculatus*), spear thistle (*Cirsium vulgare*), nettle (*Urtica dioica*), selfheal (*Prunella vulgaris*), broad leaf dock (*Rumex obtusifolius*), small flowered geranium (*Geranium pusillum*), Oxford ragwort (*Senecio squalidus*), curled dock (*Rumex crispus*), fringed willowherb (*Epilobium cilatum*), black medick (*Medicago lupulina*) and common centaury (*Centaureum erythraea*).

3.6.11. Some very occasional stands of scrub were identified growing across Area B.

3.6.12. Despite the number of species found throughout the grassland, there was an average of 6.29 species per square metre. Based on this and the dominant species

being indicative of modification through intensive grazing, this area is again assessed as modified grassland.

3.6.13. A condition assessment is provided below of both Areas A and B to inform the BNG assessment. Both areas of grassland are of a ‘Good’ condition.

Condition Assessment Criteria		Criterion passed (Yes or No)	
		Area A	Area B
A	There are 6-8 vascular plant species per m <sup>2</sup> present, including at least 2 forbs (this may include those listed in Footnote 1). <b>Note - this criterion is essential for achieving Moderate or Good condition.</b>	Yes	Yes
	Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m <sup>2</sup> (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.		
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	Yes	Yes
C	Some scattered scrub (including bramble <i>Rubus fruticosus</i> agg.) may be present, but scrub accounts for less than 20% of total grassland area.	Yes	Yes
	Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.		
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	No	No
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) <sup>2</sup> .	Yes	Yes
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Yes	Yes
G	There is an absence of invasive non-native plant species <sup>3</sup> (as listed on Schedule 9 of WCA <sup>4</sup> ).	Yes	Yes
Essential criterion achieved (Yes or No)		Yes	Yes
Number of criteria passed		6	5
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved ×/✓	
Passes 6 or 7 criteria including passing essential criterion A	Good (3)	✓	✓
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)		
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)		

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## **4. IMPACT ASSESSMENT, MITIGATION AND RESIDUAL EFFECTS.**

### **4.1. Designated Sites.**

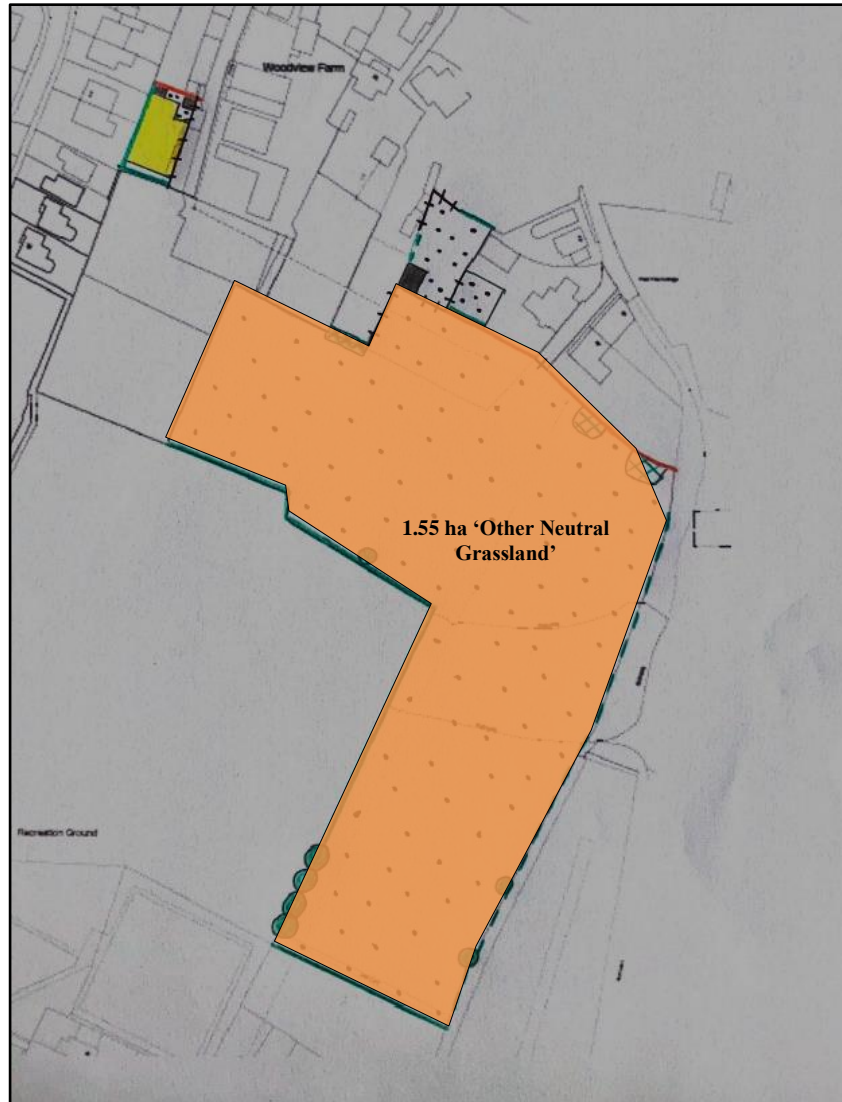
#### ***4.1.1. Impact Assessment.***

No designated sites were identified within or adjacent to the survey area. Therefore, there will be no impact on designated sites.

### **4.2. Habitats.**

#### ***4.2.1. Impact Assessment.***

4.2.1.1. The most part of the site was found to have been cleared during the second survey, therefore, as agreed with BMBC ecologist during the pre-app consultation stage, the original habitats on the site have been assessed in retrospect using local knowledge, historical maps and an ecological report provided by Barnsley MBC. This only applies to the large part of the bare ground in Area 2, and the map below shows an orange shaded area, which is the area that is currently bare ground, but is classified as 'Other Neutral Grassland' for the purpose of the BNG assessment. All boundary hedgerows still remain in place.



4.2.1.2. Biodiversity calculations were initially carried out using the DEFRA Metric 2.0. These calculations have been upgraded in line with the biodiversity metric 4.0, including the condition assessments provided in the habitat descriptions. The baseline for the site was calculated at 13.42 habitat Biodiversity Units (Bu) and 2.52 hedgerow Bu as shown in the tables below.

Habitat Type	Extent (ha)	Distinctiveness	Condition Assessment	Biodiversity units
Other neutral grassland	1.55	Medium	Moderate	12.40
Vacant or derelict land	0.15	Low	Poor	0.30
Developed land; sealed surface	0.34	V.Low	N/A - Other	0.00
Vegetated garden	0.06	Low	Condition Assessment N/A	0.12
Modified grassland	0.26	Low	Poor	0.52
Urban tree	0.01	Medium	Poor	0.04
Mixed scrub	0.01	Medium	Poor	0.04
<b>Total</b>	<b>2.38</b>			<b>13.42</b>

	Hedgerow Type	Length (km)	Distinctiveness	Condition Assessment	Biodiversity units
H1	Native Hedgerow with Trees	0.16	Medium	Poor	0.64
H2	Native Hedgerow with Trees	0.15	Medium	Moderate	1.20
H3	Native Hedgerow	0.06	Low	Moderate	0.24
TL1	Line of Trees	0.03	Low	Moderate	0.12
H4	Hedge Ornamental Non-native	0.05	V.Low	Poor	0.05
H5	Hedge Ornamental Non-native	0.01	V.Low	Poor	0.01
H6	Hedge Ornamental Non-native	0.01	V.Low	Poor	0.01
H7	Native Hedgerow	0.01	Low	Poor	0.02
H8	Native Hedgerow	0.05	Low	Moderate	0.20
H9	Hedge Ornamental Non-native	0.03	V.Low	Poor	0.03
	<b>Total</b>	<b>0.56</b>			<b>2.52</b>

4.2.1.3. The loss of habitats on the site will have a **moderate negative impact at a site level**.

4.2.1.4. The native hedgerows around the boundaries of the site are Priority Habitats under the NERC Act 2006. All but three hedgerows will be retained. **There will therefore be a low negative impact on any NERC habitats at a site level.**

#### ***4.2.2. Mitigation.***

4.2.2.1. The proposed landscaping for the site utilises the areas of public open space and areas that are designated for biodiversity purposes to maximise the biodiversity value of the site. The primary habitat that has been lost on the site is grassland habitat therefore the proposed landscaping incorporates various types of high value grassland habitats where possible. Some scrub was also known to be present on the site therefore some pockets of scrub planting have also been incorporated. One area of grassland habitat will also be planted with fruit trees to create a traditional orchard habitat. Proposed street trees will be planted to allow the canopies to help create green bridges between green spaces. Rain gardens will be provided around the bases of the street trees to maximise use of the space available.

4.2.2.2. The landscaping proposals, including the planting of hedgerows where feasible and enhancement of one of the retained hedgerows, maintain connectivity across the site between adjacent grassland and scrub habitat to the east and the green open space to the west. The landscaping proposals have been provided in Appendix VII at the end of this report.

4.2.2.3. The total number of habitat Bu that will be delivered on site will be 4.67 Bu. This equates to an overall loss of 8.75 (-65.20%) Bu. 0.32km of the existing hedgerows will be retained and 0.15km of the existing hedgerows will be enhanced. The hedgerow Biodiversity units that will be delivered is 3.80 Bu. This will provide a gain of 1.28 (+50.97%) Bu. The tables below demonstrate the retained / enhanced / created habitats and hedgerow provided on the site.

Habitat Type	Extent (ha)	Distinctiveness	Condition Assessment	Biodiversity units
Developed land; sealed surface	1.43	V.Low	N/A - Other	0.00
Vegetated garden	0.62	Low	Condition Assessment N/A	1.10
Other neutral grassland (wildflower meadow)	0.13	Medium	Fairly Good	1.43
Modified grassland (species rich amenity)	0.06	Low	Good	0.42
Other neutral grassland (wet grassland)	0.07	Medium	Moderate	0.07
Traditional orchards	0.03	High	Moderate	1.00
Mixed scrub	0.01	Medium	Moderate	0.01
Ponds (Non- Priority Habitat)	0.01	Medium	Moderate	0.07
Urban Tree	0.16	Medium	Moderate	0.55
Rain garden	0.01	Low	Fairly Poor	0.02
<b>Total</b>	<b>2.53</b>			<b>4.67</b>

Hedgerow Type	Length (km)	Distinctiveness	Condition Assessment	Biodiversity units
<b>Retained:</b>				
H1 Native Hedgerow with Trees	0.16	Medium	Poor	0.64
H3 Native Hedgerow	0.06	Low	Moderate	0.2
Line of Trees	0.03	Low	Moderate	0.12
H4 Hedge Ornamental Non-native	0.05	V.Low	Poor	0.05
H5 Hedge Ornamental Non-native	0.01	V.Low	Poor	0.01
H7 Native Hedgerow	0.01	Low	Poor	0.02
<b>Enhanced:</b>				
H2 Native Hedgerow with Trees	0.15	Medium – Medium	Moderate – Good	1.72

<b>Created:</b>				
Native Hedgerow	0.13	Low	Moderate	0.44
Native Hedgerow	0.02	Low	Moderate	0.07
Native Hedgerow	0.02	Low	Moderate	0.07
Native Hedgerow	0.02	Low	Moderate	0.07
Native Hedgerow	0.01	Low	Moderate	0.03
Native Hedgerow	0.06	Low	Moderate	0.20
Native Hedgerow	0.02	Low	Moderate	0.07
Native Hedgerow	0.01	Low	Moderate	0.03
Native Hedgerow	0.09	Low	Moderate	0.30
Native Hedgerow	0.01	Low	Moderate	0.03
Native Hedgerow	0.03	Low	Moderate	0.10
Native Hedgerow	0.03	Low	Moderate	0.10
Native Hedgerow	0.01	Low	Moderate	0.03
Native Hedgerow	0.01	Low	Moderate	0.03
Native Hedgerow	0.01	Low	Moderate	0.03
Native Hedgerow	0.03	Low	Moderate	0.10
Native Hedgerow	0.02	Low	Moderate	0.07
<b>Total</b>	<b>0.53</b>			<b>1.77</b>

4.2.2.4. The proposals do not allow for any more biodiversity units to be generated on site due to other targets outside of ecology that have to be met. Therefore, offsite off-setting will be undertaken to ensure a 10% biodiversity net gain utilising the two areas of existing modified grassland, Areas A and B

4.2.2.5. The baseline habitat units for these areas are a total of 9.73 Bu. This is demonstrated in the table below.

<b>Habitat Type</b>	<b>Extent (ha)</b>	<b>Distinctiveness</b>	<b>Condition Assessment</b>	<b>Biodiversity units</b>
Modified grassland	0.61	Low	Good	4.21
Modified grassland	0.8	Low	Good	5.52
<b>Total</b>	<b>1.41</b>			<b>9.73</b>

4.2.2.6. Both Areas A and B will be purchased by the developer and will be enhanced through seeding and a robust management regime to enhance them into lowland meadows. This will include the removal of the horses from the land. The

enhancement of these two areas will deliver 20.27 Bu to use towards the loss of BNG on the development site. This is demonstrated in the table below.

Change in Habitat	Extent (ha)	Distinctiveness	Condition Assessment	Biodiversity units
Modified grassland to Lowland Meadow	0.61	V.High	Good	8.77
Modified grassland to Lowland Meadow	0.8	V.High	Good	11.50
<b>Total</b>	<b>1.41</b>			<b>20.27</b>

4.2.2.7. By delivering all mitigation measures listed above, the trading rules of the biodiversity metric 4.0 will be met.

#### **4.2.3. Residual Effect.**

With the above mitigation measures in place, there will be residual biodiversity net gain of 1.79 habitat Bu and 1.28 hedgerow Bu, which is equivalent to a net gain of 13.33% in area habitats and 50.97% in hedgerow Bu. Overall, this will have a **high positive residual effect at a local level.**

### **4.3. Species – Bats.**

#### **4.3.1. Impact Assessment.**

4.3.1.1. The willow trees at the southern end of the site have been assessed to provide **low** potential for roosting bats. These trees will be retained during the development therefore there will be **no negative impact at a site level on roosting bats.**

4.3.1.2. The survey area in its current state provides some foraging potential for bats along hedgerow boundaries. The dusk emergence survey showed no foraging within Area 1, just low numbers of Common Pipistrelle bats passing the site. The hedgerow boundaries will be retained therefore there will be **no negative impact at a site level on foraging and commuting bats.**

### 4.3.2. Mitigation.

4.3.2.1. Additional hedgerow boundaries will be planted along with other vegetation features to provide connective routes for foraging and commuting bats, in particular from east to west. These will mitigate for the loss of any habitats on the site. These are demonstrated in the plan below. It should be noted that the woodland planting to the south of the site is not included as this lies outside the site boundary.



### 4.3.3. Residual Effect.

It is assessed that there will be **no negative residual effect** on foraging and commuting bats.

#### **4.4. Species – Nesting Birds.**

##### ***4.4.1. Impact Assessment.***

The vegetation within the survey area provides opportunities for nesting birds during the nesting season, which extends from March to September, inclusive, each year. Vegetation clearance within the nesting bird season could potentially have a **high negative impact on nesting birds at a site level.**

##### ***4.4.2. Mitigation.***

Where possible site clearance or vegetation clearance will be carried out outside the nesting bird season. Where it is necessary to undertake such works within the nesting bird season, these works will be immediately preceded by a nesting bird survey. Any active nests found, as well as a suitable buffer around them, will be left undisturbed until the young have fledged from the nest.

##### ***4.4.3. Residual Effects.***

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

#### **4.5. Species – Reptiles.**

##### ***4.5.1. Impact Assessment.***

The survey area provides low potential habitat for reptiles. The rubble piles and topsoil bunds on the site provide refugia but these have only been present short term. The works will have a low impact on any reptiles within the area.

##### ***4.5.2. Mitigation.***

4.5.2.1. All personnel working on site will be briefed on the identification of reptiles in accordance with the toolbox talk document provided at the end of this report.

4.5.2.2. In the unlikely event that any reptiles are found during the works they will be left to safely move away of their own accord before the works in that area proceed.

4.5.2.3. If high numbers of reptiles (5+), or hibernating reptiles are found works will stop and Whitcher Wildlife Ltd will be contacted for further advice.

4.5.2.4. When the rubble piles are moved this will be done with care and stones will be lifted clean off the ground, not dragged to allow any reptiles or other animals that may be sheltering to escape.

4.5.2.5. Any vegetation clearance will initially be carried out to a minimum height of 150mm to avoid harming any reptiles present at ground level and to encourage them to escape the area before high impact works are carried out.

***4.5.3. Residual Effect.***

With the mitigation in place there will be **no negative residual impact** on reptiles as a result of the proposed works.

\*\*\*\*\*

## 5. BIODIVERSITY ENHANCEMENT MEASURES.

5.1. In line with the NPPF some biodiversity enhancements for fauna species will be provided on the site.

5.2. This will be achieved by providing integrated bird and bat boxes into at least 10% of the new bungalows on the site.

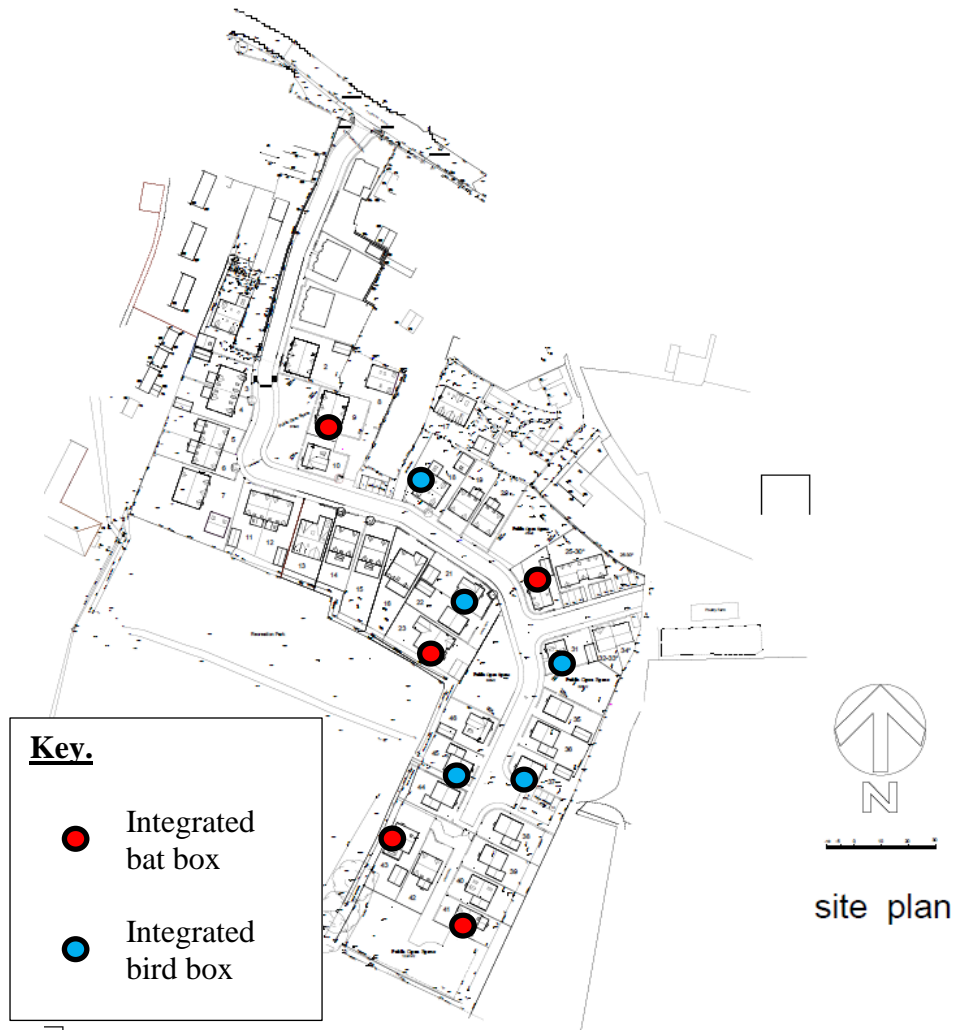
5.3. Five integrated bat boxes will be provided in the form of the Habibat Bat Box – Custom Facing, similar to shown adjacent. Five of these will be incorporated into gable ends of the new bungalows, at least 3m above ground level where they are away from any direct artificial light interference.



5.4. Five pairs of integrated swallow boxes will be provided across the site, similar to that shown adjacent. These will again be positioned in the gable end walls of the new bungalows. These will be positioned at least 3m above ground level as close to the eaves as possible, away from any regular disturbance and not above windows or doors to prevent a build-up of droppings on the cills.



5.5. The plan below shows the locations of each integrated bat and bird box to be provided.



\*\*\*\*\*

Prepared by:	
Ruth Georgiou. BSc, MCIEEM.	Date: 7 <sup>th</sup> December 2021.
Revision 1:	
Ruth Georgiou. BSc, MCIEEM.	Date: 31 <sup>st</sup> August 2022.
Revision 2:	
Ruth Georgiou. BSc, MCIEEM.	Date: 3 <sup>rd</sup> August 2023.

Checked by:	
Mitchel Greenhalgh, BSc, ACIEEM.	Date: 4 <sup>th</sup> August 2023.

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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 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 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.

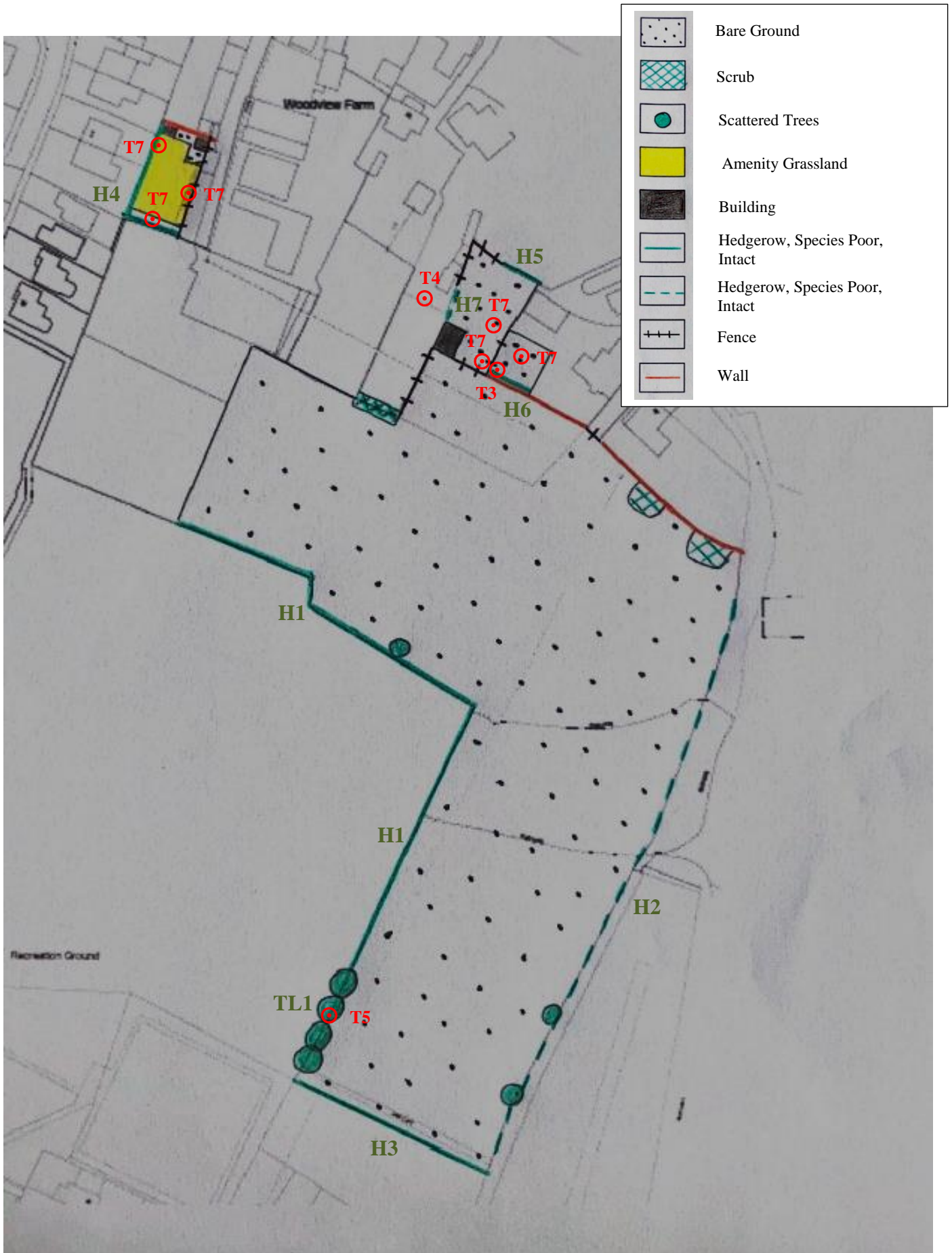
### *Legislation*

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 V. ANNOTATED MAP OF AREA 2.



## **Appendix VI. TARGET NOTES.**

**T1** – Piles of stone and rubble from the old, demolished buildings.

**T2** – A pile of wood and plant debris.

**T3** – The filled in ornamental pond identified on site.

**T4** – The ornamental fish pond identified in an adjacent garden.

**T5** – The willow trees that were identified as providing low potential for roosting bats.

**T6** – Indicates the locations of ornamental planting in the private gardens. These areas contain ornamental species.

# Appendix VII. PROPOSED LANDSCAPING PLAN (PREPARED BY URBAN WILDERNESS).

## Landscape Strategy

The Landscape Strategy illustrated to the right aims to create green corridors, maximise biodiversity and create usable spaces for people.

### Native Hedgerows

Existing and proposed native hedgerows will line site boundaries and penetrate into the site alongside key properties creating east to west and north to south corridors through the site. Home owners purchasing housing with hedged boundaries will be required to maintain hedge planting. A legal mechanism to ensure occupiers retain and maintain boundaries and on plot trees is currently being explored. Existing hedgerows will be gapped up and supplemented with specimen hedgerow trees.

Where fencing is planned gaps will be provided for hedgehog movement between gardens,

### Community Orchard

A community orchard (priority habitat) is proposed to the north west of the Site. This will provide relief to the urban form of the development, it will punctuate the street scene and help create a sense of arrival and welcome to the development. Fruit trees will be under planted with wild flower meadow. The orchard will provide nesting and foraging habitat as well as an early source of nectar in the spring for pollinators.

### Bin Collection Point

The bin collection point for the upper portion of the site has been relocated to the south eastern corner of the orchard (see plan point A). This is to minimise its visual impact from the road as people enter the site.

### Street Trees

Proposed trees will enhance the appearance of the streetscape, soften the visual impacts of buildings and will positively contribute towards establishing a green network through the development. Trees will mainly be planted outside the curtilage of new homes to help safeguard them from being removed by future residents. Each will be planted within a rain garden capturing and attenuating surface water run off.

In strategic locations, and where space allows, a larger specimen capable of growing to a wider spread such as Oak, for example, will be planted to create local hop overs. These specimens will, in time support bat migration through the site. In locations that are restricted by space and closer to buildings smaller, columnar trees, such as columnar Oak varieties will be specified.

### Play Area

A local play space is proposed to the north of the Site. This area will comprise natural play in the form of boulders, logs and changes in landforms. Some fixed play equipment may also be appropriate. This area will be surrounded by trees and grassland to create a bio-diverse area where children can explore and interact with the landscape,

### Wildlife Pond

A proposed wildlife pond set within green space to the centre of the Site is also proposed. This feature will be well overlooked for safety, it will feature shallow side slopes to enable easy egress along with reed planting and an area of open water. Interpretative signage will identify this as a wildlife pond.

### Grasslands/Wild Flower Verges

Grasslands are a key habitat for a variety of species and are assumed to be the main habitat type to have existed on the site. It is important to incorporate these habitats into design where feasible. These are proposed to occupy the community orchard, play area and open space in the south.



## 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.



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

### 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.



### 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](mailto:info@whitcher-wildlife.co.uk)