Whitcher Wildlife Ltd.
Ecological Consultants.

PADDOCK ROAD, STAINCROSS.

OS REF: SE 33411 10311.

ECOLOGICAL IMPACT ASSESSMENT.

Ref No: **200748/EcIA/REV1.**

Date: **31st August 2022.**

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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 28th 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 12th 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 29th March 2021.

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

1.6. 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 (3rd 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 (3rd 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.

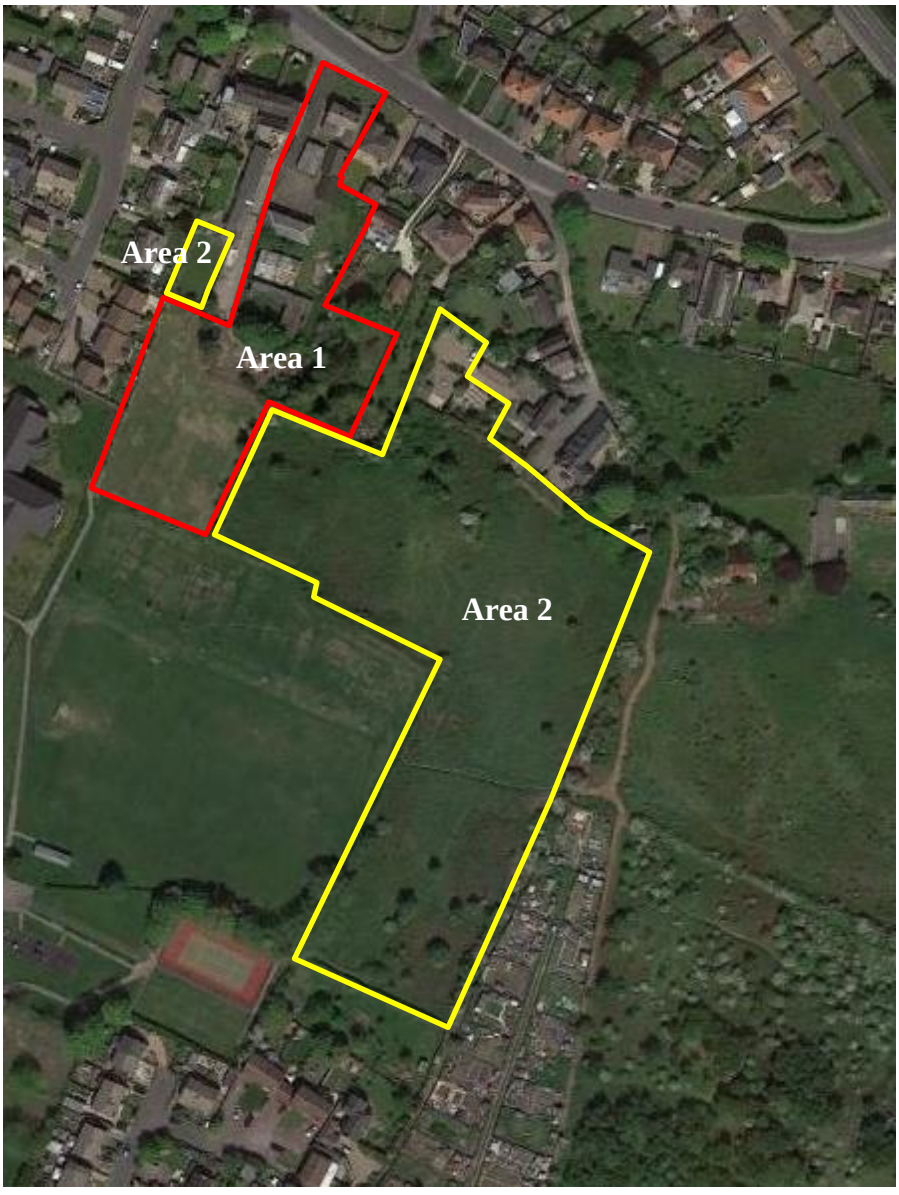
There are no records of badgers within or adjacent to the survey area.

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 *(Symphoricarpus 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	**Condition Achieved (Y/N)**
1 – Species per m2	N
2 – Sward height	N
3 – Scattered scrub cover	Y
4 – Physical damage	Y
5 – Bare ground	Y
6 – Bracken cover	Y
7 – Non-native species	Y
Condition Assessment Result	**Condition Assessment Score**
Passes 6 or 7 of 7 criteria including passing essential criterion 1	Good (3)
Passes 4 or 5 of 7 criteria including passing essential criterion 1	Moderate (2)
Passes 0, 1, 2 or 3 of 7 criteria; OR 4, 5 or 6 of criteria but failing criterion 1	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 perenial 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	**Condition Achieved (Y/N)**
1 – Native species	N
2 – Tree canopy	N
3 – Mature/veteran trees	N
4 – Anthropogenic activities	N
5 – Micro-habitats	N
6 – Ground vegetation	N

Condition Assessment Result	Condition Assessment Score
Passes 5 or 6 of 6 criteria	Good (3)
Passes 3 or 4 of 6 criteria	Moderate (2)
Passes 0, 1 or 2 of 6 criteria	Poor (1)

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 remining 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, which is mainly privet *(Ligustrum Vulgare)* with occasional small elder *(Sambucus nigra)* growing.

3.3.8.2. 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.

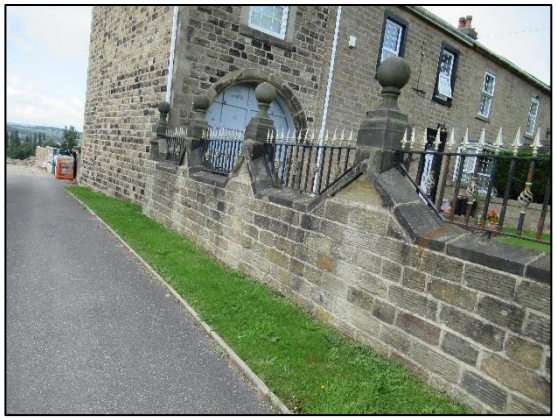
3.3.9. Hedgerow, Defunct, Species Poor

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. 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	**Condition Achieved (Y/N)**
1 – Representative of UKHab description	N
2 – Age range	N
3 – Non-native species	Y
4 – Edge vegetation	N
5 – Clearings, glades or rides	N
Condition Assessment Result	**Condition Assessment Score**
Passes 5 of 5 criteria	Good (3)
Passes 3 or 4 of 5 criteria	Moderate (2)
Passes 0, 1 or 2 of 5 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	**Condition Achieved (Y/N)**
1 – Native species	Y
2 – Tree canopy	N
3 – Mature/veteran trees	N
4 – Anthropogenic activities	Y
5 – Micro-habitats	N
6 – Ground vegetation	N
Condition Assessment Result	**Condition Assessment Score**
Passes 5 or 6 of 6 criteria	Good (3)
Passes 3 or 4 of 6 criteria	Moderate (2)
Passes 0, 1 or 2 of 6 criteria	Poor (1)

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. 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	**Condition Achieved (Y/N)**
1 – Native species	Y
2 – Tree canopy	Y
3 – Mature/veteran trees	Y
4 – Adjacent vegetation	N
5 – Tree health	N
Condition Assessment Result	**Condition Assessment Score**
Passes 5 of 5 criteria	Good (3)
Passes 3 or 4 of 5 criteria	Moderate (2)
Passes 0, 1 or 2 of 5 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)*.


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.

Attributes and functional groupings	**Condition Achieved (Y/N)**				
	H1	**H3**	**H4**	**H5**	**H6**
A1 – Height	N	N	Condition assessment not applicable as these are ornamental hedgerows		
A2 – Width	Y	Y			
B1 – Gap – hedge base	Y	Y			
B2 – Gap – hedge canopy	Y	Y			
C1 – Undisturbed ground and perennial vegetation	N	N			
C2 – Undesirable perennial vegetation	N	N			
D1 – Invasive neophyte species	N	Y			
D2 – Current damage	N	N			
Condition categories for hedgerows without trees					
Category	**Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table TS1-2**				
Good	No more than 2 failures in total; AND No more than 1 in any functional group.				
Moderate	No more than 4 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & C2 = Moderate condition).				H3

Poor	Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).	H1

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.

Attributes and functional groupings	**Condition Achieved (Y/N)**	
	H2	**H7**
A1 – Height	Y	Y
A2 – Width	Y	N
B1 – Gap – hedge base	N	N
B2 – Gap – hedge canopy	Y	N
C1 – Undisturbed ground and perennial vegetation	N	N
C2 – Undesirable perennial vegetation	N	Y
D1 – Invasive neophyte species	N	N
D2 – Current damage	Y	Y
Condition categories for hedgerows without trees		

Category	**Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table TS1-2**	
Good	No more than 2 failures in total; AND No more than 1 in any functional group.	
Moderate	No more than 4 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & C2 = Moderate condition).	
Poor	Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).	H2, H7

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.

3.4. Description of Fauna (Areas 1 and 2).

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

3.4.2. 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.

3.4.3. 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.

3.4.4. 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.

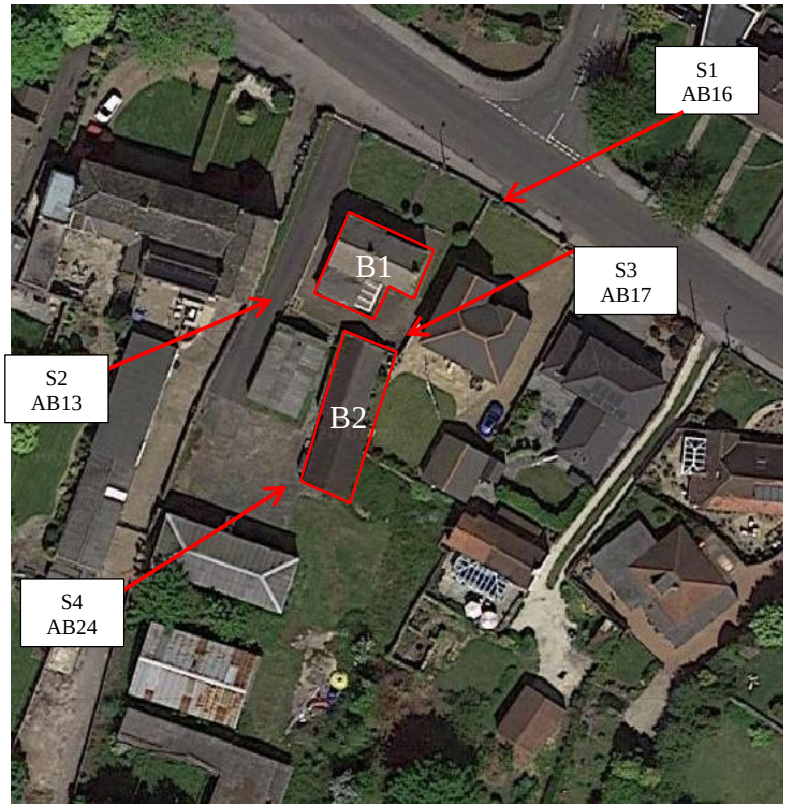
3.4.5. Building 1 is assessed as having **low** potential for roosting bats due to occasional small gaps in the pointing at the gable ends and missing pointing under ridge tiles. No bat field signs were found around the interior or the exterior of the building during this survey.

3.4.5.1. 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.

3.4.5.2. A dusk emergence bat survey of the buildings was carried out of by four surveyors on 12th 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.

3.4.5.3. 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.

3.4.5.4. 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.



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

3.4.5.5.1. 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.

3.4.5.5.2. 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.

3.4.5.5.3. 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.

3.4.5.5.4. 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.

3.4.5.6. 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.

3.4.5.7. 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.

3.4.5.8. 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.

3.4.6. 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.

3.4.7. 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.

3.4.8. 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.

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

3.4.10. 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.

****

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 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. 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 3.1. The baseline for the site was calculated at 14.06 habitat Biodiversity Units (Bu) and 1.39 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/derelict land/ bareground	0.15	Low	Poor	0.30
Developed land; sealed surface	0.28	V.Low	N/A - Other	0.00
Vegetated garden	0.12	Low	Condition Assessment N/A	0.24
Modified grassland	0.26	Low	Moderate	1.04
Urban Tree	0.01	Medium	Poor	0.04

Mixed scrub	0.01	Medium	Poor	0.04
Total	**2.37**			**14.06**

	Hedgerow Type	**Length (km)**	**Distinctiveness**	**Condition Assessment**	**Biodiversity units**
H1	Native Hedgerow	0.15	Low	Poor	0.32
H2	Native Hedgerow	0.06	Low	Poor	0.30
	Line of Trees	0.03	Low	Moderate	0.24
H3	Hedge Ornamental Non Native	0.05	V.Low	Moderate	0.12
H4	Hedge Ornamental Non Native	0.01	V.Low	Poor	0.05
H5	Hedge Ornamental Non Native	0.01	V.Low	Poor	0.01
H6	Native Hedgerow	0.01	Low	Poor	0.01
H7	Native Hedgerow	0.05	Low	Poor	0.02
H8	Native Hedgerow	0.03	Low	Moderate	0.20
H9	Native Hedgerow	0.15	Low	Moderate	0.12
	Total	**0.56**			**1.39**

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 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 were 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, 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 will be 3.79 Bu. This equates to an overall loss of 10.27 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 3.10 Bu. This will provide a gain of 1.71 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	1.20
Other neutral grassland (wildflower meadow)	0.13	Medium	Fairly Good	1.01
Modified grassland (species rich amenity)	0.06	Low	Good	0.28
Other neutral grassland (wet grassland)	0.07	Medium	Moderate	0.47
Traditional orchards	0.03	High	Moderate	0.18
Mixed scrub	0.01	Medium	Moderate	0.07
Ponds (Non- Priority Habitat)	0.01	Medium	Moderate	0.07
Urban Tree	0.16	Medium	Moderate	0.49
Rain garden	0.01	Low	Fairly Poor	0.03
Total	**2.53**			**3.79**

Hedgerow Type	Length (km)	Distinctiveness	Condition Assessment	Biodiversity units
Retained:				
H1 Native Hedgerow	0.16	Low	Poor	0.32
H3Native Hedgerow	0.06	Low	Moderate	0.24
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
Native Hedgerow	0.01	Low	Poor	0.02
Enhanced:				
H2 Native Hedgerow	0.15	Low – Low	Poor - Moderate	0.57
Created:				
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
Total	**0.53**			**3.10**

4.2.2.4. Once the on site proposals have been approved, off site mitigation will be sought and agreed with the local authority to achieve a no net loss.

4.2.3. Residual Effect.

It is assessed that there will be a **low negative residual effect on the habitats on the site at a site level,** but off site compensation will be sought to achieve a **no residual impact 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.

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+) 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.

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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. Integrated bat boxes will be 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 integrated bird boxes will be provided in the form of integrated sparrow terraces, similar to that shown adjacent. These will again be positioned in the gable end walls the new bungalows. These will be positioned at least 3m above ground level, 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: 7th December 2021.
Revision 1:	
Ruth Georgiou. BSc, MCIEEM.	Date: 31st August 2022.

Checked by:	
Alexandrea White BSc MSc ACIEEM.	Date: 2nd September 2022.

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Appendix I. BAT INFORMATION.

Ecology

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

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

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

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

Surveys

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

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

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

Legislation

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

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

The UK has designated maternity and hibernacula areas as Special Areas of Conservation (SAC's) under the Habitats Directive. Implementation of the UK Biodiversity Action Plan also includes action for a number 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 longs where they are protected from the cold and predators, emerging from February onwards as the weather warms up.

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

Surveys

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

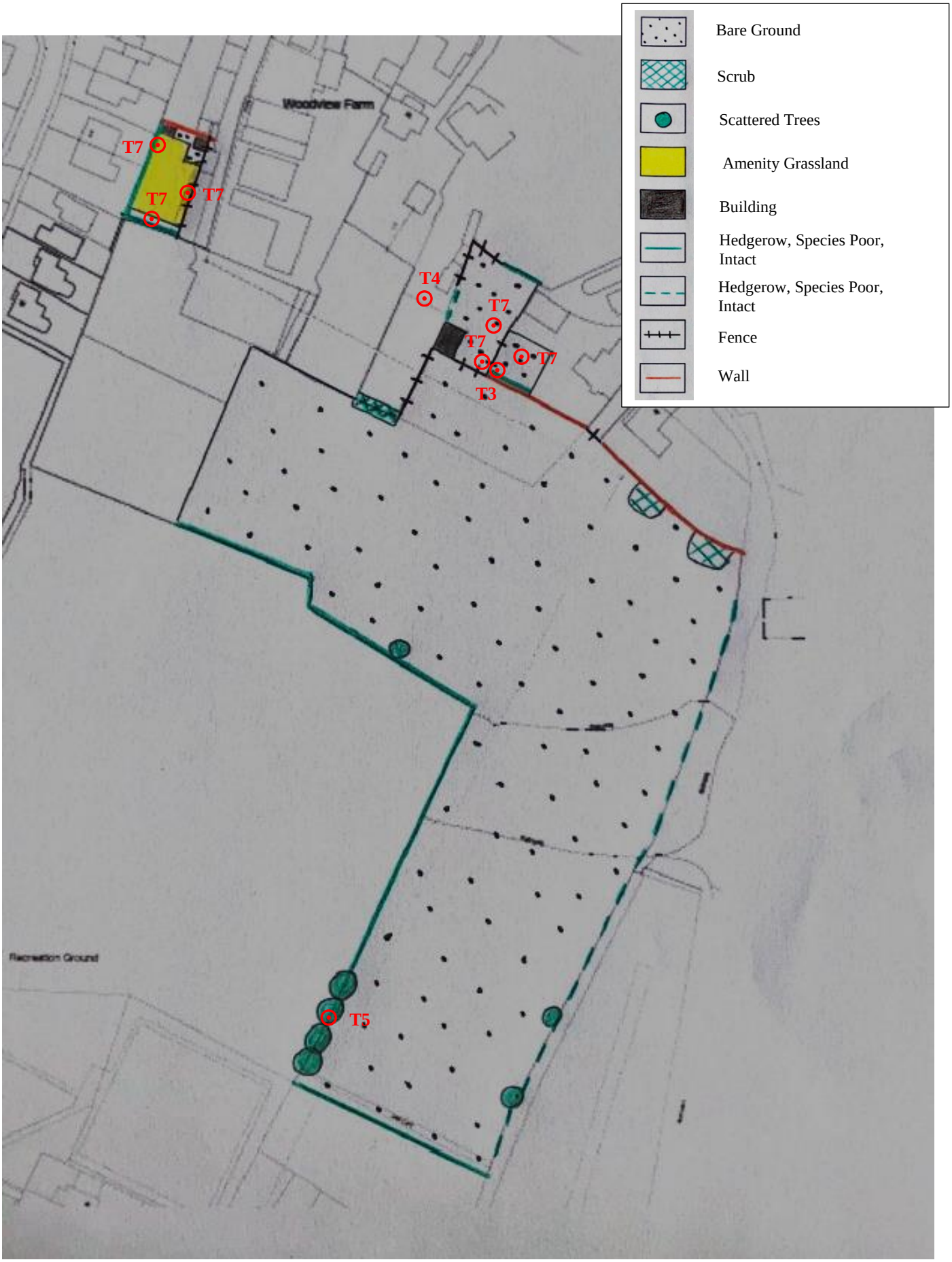
Legislation

Reptiles are protected under Appendix II (sand lizards) and Appendix III (common lizard, slow worms, smooth snake, grass snake and adders) of the BERN Convention (1982), partially protected under Schedule 5 of the Wildlife and Countryside Act (1981), Annex IV of the Habitats Directive and are all listed under section 41 of the Natural Environment and Communities Act (2006) making them a species of principal importance.

This makes it an offence to disturb any reptile while it is occupying a structure or place it uses for shelter or protection or to obstruct access to such a place.

Appendix IV. ANNOTATED MAP OF AREA 1.

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.

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 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.

Offside Native Woodland

In order to maximise potential biodiversity gains, maximise east to west wildlife connectivity and to visualy enhance both the development and Mapwell Park, a 5-10m wide belt of native woodland is proposed between the site and Mapwell Park to help contain the site, increase habitat potential and to help establish east to west Green Infrastructure connectivity. Planting in this location would significantly reinforce the existing landscape and habitat structure of the area.

This land is owned by Barnsley Council and is part of Mapwell Park and as such further negotiations regarding the acceptability of this planting will be necessary. The applicant proposes to implement this planting and pay a commuted sum for its ongoing management.

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.

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.

Identification: Slow Worms.

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

Identification: Common Lizards.

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

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.

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.

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

Legislation.

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

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