Whitcher Wildlife Ltd.
Ecological Consultants.

FOUNDRY STREET, ELSECAR.

OS REF: SE 38028 – 00217.

PRELIMINARY ECOLOGICAL APPRAISAL.

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1. INTRODUCTION.

1.1. The current owner of 46 Foundry Street, Elsecar is planning to submit a planning application to demolish the current bungalow and develop the gardens into a small housing estate.

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

1.3. The site survey was carried out on 24th January 2018 and this report outlines the findings of that survey and makes appropriate recommendations.

1.4. Appendices I to IV 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 50m in each direction were thoroughly searched for evidence of water vole (*Arvicola amphibius*) activity by looking for the following signs, in line with Rob Strachan, Tom Moorhouse and Merryl Gelling (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 mature trees and derelict buildings 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.

2.8. 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. Stevan Roebuck and Derek Whitcher.

Since 2011 Stevan has had experience carrying out great crested newt and bat surveys. Since 2013 Stevan has had experience in a professional capacity as a Wildlife Consultant carrying out ecology surveys, badger, great crested newt and bat surveys. Stevan holds a Natural England Survey License for Great Crested Newts and Bats and is currently working towards gaining further Natural England, NRW and SNH survey licences. Stevan is also a Qualifying Member of CIEEM.

The survey was undertaken by Derek Whitcher who has over twenty years experience of surveying for wildlife and has run his own wildlife consultancy since 1998. He has extensive experience of a wide variety of survey techniques for a variety of species of protected wildlife supplemented by attendance on a wide range of training courses through CIEEM, FSC and BCT. As a member of CIEEM he is committed to continuous professional development, a continual process of learning and career development, a condition of CIEEM membership. He holds current Natural England survey licences for barn owl, bat, great crested newt and white clawed crayfish.

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3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. Data searches were requested from Barnsley Biological Records Centre for records of protected species and designated sites, from South Yorkshire Bat Group for records of bats within the area and from South Yorkshire Badger Group for records of badgers in the area.

3.1.2. Barnsley Biological Records Centre provided:

- a single record of badger 425m to the south of the surveyed area.
- records of grass snakes with the closest being 800m to the east of the site.
- records of Daubenton's bat, Leisler, Noctule, Common Pipistrelle and an unidentified Myotis bat species with the closest records being Daubenton's and Leislers 800m to the south over Elsecar Reservoir.
- records of water voles 900m south of the site around Elsecar Reservoir.

3.1.3. Four Local Wildlife Sites (LWS) were identified on the data search with Elsecar Reservoir being the closest to the surveyed area, located approximately 600m to the south.

3.1.4. South Yorkshire Bat Group provided records of bats and bat roosts. The nearest record of a bat roost was recorded in 2006 and is located 630m from the survey area. There are four records of individual bats between 280 and 600m from the survey area but no records specific to the survey area.

3.1.5. South Yorkshire Badger Group hold no records of badgers within the area surrounding the site.

3.2. The Surveyed Area.

3.2.1. The surveyed area was 46 Foundry Street, Elsecar and the gardens that surround it. The aerial photograph below shows the surveyed area highlighted in red and the surrounding land, although the adjacent land to the north and west has been cleared since this Google image was taken.



3.2.2. The immediate surrounding area of the site consists of bare land to the north and west, which is currently being prepared for development. To the south of the site is farmland with residential properties to the east.

3.3. Description of Habitats.

3.3.1. Appendix V of this report contains annotated maps 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 the site are:-

- Introduced Shrubs
- Scattered Trees
- Scattered Scrub
- Defunct Hedge Species Poor
- Amenity Grassland
- Bare Ground
- Building
- Standing Water
- Running Water
- Fence

3.3.2. Introduced Shrubs.



3.3.2.1. There is a large area of ornamental planting in the centre of the site that extends to the southern site boundary. A further circular border is located in the centre of the amenity grassland. Occasional plants are also scattered around Pond 1 and along the fence boundaries.

3.3.2.2. Species include ornamental Bamboo *(Bambusa Vulgaris)*, Yucca *(Filamentosa)*, Bay *(Pimenta Racemosa)*, Laurel *(Laurus Nobilis)*, Photinia *(Photinia x Fraseri)*, Aucuba *(Aucuba Japonica)*, Cornus *(Cornus sp.)*, Elaeagnus *(Elaeagnus Ebbingei)*, Hebe *(Hebe Stricta)*, Japanese anemone *(Anemone Hypehensis)*, Hydrangea *(Hydrangea Macrophylla)*, Pyracantha *(Pyracantha Coccinea)*, Spirea *(Spiraea x Vanhouttei)* and ornamental conifers *(Pinophyta sp)*.

3.3.3. Scattered Trees

Within the site there are several trees including one mature walnut tree plus apple and cherry. Along the northern, southern and western site boundaries outside of the surveyed area, there are Ash *(Fraxinus)*, Hawthorn *(Crataegus)*, Elder *(Sambucas)* Walnut *(Juglans)*, Cherry *(Prunus sp)*, Apple *(Malus sp)* and Hazel trees *(Corylus Avellana)* covered in dense Ivy *(Hedera Helix)* and occasional Honeysuckle *(Lonicera)*.



3.3.4. Scattered Scrub.



In the southwest corner of the site, on the northern side of Pond Three, there is a small strip of scrub that includes Bramble *(Rubus fruticosus agg)*, Ivy *(Hedera helix)*, Nettle *(Urtica dioica)* and some short grasses.

3.3.5. Defunct Hedge Species poor.

Along the northern and north eastern site boundaries, laurel *(Laurus Nobilis)* has been planted to enhance the boundary fence for privacy.



3.3.6. Amenity Grassland.



This area is the lawn associated with 46, Foundry Street, for the most part, regularly mown throughout the growing season. The dominant species is Perennial Ryegrass *(Lolium perenne)* while other species include all the common lawn weeds including Meadow Buttercup *(Ranunculus acris),* Common Daisy *(Bellis perennis),* White Clover *(Trifolium repens),* Dandelion *(Taraxacum officinale),* Common sorrel *(Rumex acetosa)* and plantain (*Plantago major*).

3.3.7. Bare Ground

A small area of hard standing is located at the eastern end of the site. The area is a concrete drive used to park cars. On the western side of Building One there is an area of decorative pebbles and in the northwest corner there is an area of bare ground

where there used to be a vegetable garden. There are old foundations of a building in this area.



3.3.8. Building

3.3.8.1. There are three buildings on the site. Below is a brief description of each building.

3.3.8.2. Building One is the main bungalow on site and is constructed with brick and breeze block cavity walls. The walls are in a good condition with no gaps, cracks or missing mortar with all windows and doors being well sealed. The roof is pitched and covered with tight fitting, pre-fabricated, cement tiles with timber fascias and soffit boards. The roof is in a good condition with only one broken tile and no resultant gap. There are small areas of missing mortar beneath the tiles on the eastern gable end.



3.3.8.3. Building one is an occupied dwelling. There is a loft space with a roof supported by a timber frame and with a felt liner beneath the roof slates. No light could be seen through the liner, although there are occasional minor tears in the liner.



3.3.8.4. Building Two is a breeze block garage that has a sloping corrugated sheet roof. The garage is in a good condition with no gaps in the external walls and no opportunities for roosting bats.



3.3.8.5. Building Three is a timber and steel mesh dog kennel located towards the western boundary. The kennel is in good condition and has a felt covered roof and is currently used for storage. There are no opportunities for roosting bats.



3.3.9. Standing Water

3.3.9.1. Within the surveyed area there are three ponds. Pond one is located in the southeast corner of the site. The pond is an ornamental fish pond and is heavily stocked with large Koi Carp.



3.3.9.2. Pond Two is located in the northeast corner of the site and is very small with pond vegetation growing within it.



3.3.9.3. Pond Three is located in the southwest corner of the site and is heavily overgrown with reeds and rushes and dries annually. The pond was used to stock trout, but all of the fish have been removed, the pond has been neglected and overgrown with reeds, sedges and weeds and is reported to dry annually, early in the season.



3.3.10. Running Water

Outside of the surveyed area, there is a small ditch that flows west to east approximately 5m outside the southern site boundary. The water flow was approximately 1m wide and fast flowing at the time of this survey due to recent heavy rain although the ditch could not be thoroughly accessed at the time of this survey as it is separated from the site by a fence and a row of trees. No other running water was identified within the surveyed area.



3.3.11. Fence

The site boundary is a chain link mesh fence with metal posts that runs around the full perimeter of the site except for a metal gate that gives access to the property on the eastern boundary.

3.4. Description of Fauna.

3.4.1. No badger setts or any badger field signs were identified within the surveyed area.

3.4.2. No watercourses with the potential to provide any suitable habitat for water voles, otters or fresh water white clawed crayfish were identified within the site boundary. A small drainage ditch flows some 5m outside the site, beyond the southern boundary. However, the proposed works will have no impact on that ditch.

3.4.3. Three buildings were identified within the surveyed area. Building One provides a very low potential habitat for a small number of crevice dwelling bats to roost as the roof is lined and there are small gaps beneath the roof tiles on the eastern gable end. Building One has been Target Noted in Appendix VI. No bats or bat field signs were identified internally or externally during this survey. The photograph below shows an area of the roof with the missing mortar beneath the tiles.



3.4.3.1. Buildings Two and Three do not provide any suitable habitat for roosting bats.

3.4.4. None of the trees within the surveyed area, or bordering the site boundaries, provide any suitable features for roosting bats.

3.4.5. The surveyed area may provide a low suitable habitat for foraging and commuting bats, although the proposed works will have no impact on any suitable foraging or commuting features.

3.4.6. Three ponds were identified within the site boundary with no other ponds identified within 500m of the site, either during the survey or by studying Ordnance Survey maps of the surrounding area.

3.4.6.1. The three ponds have been target noted in Appendix VI. Only Pond Two within the site may provide a suitable habitat for great crested newts, although this pond is very small and is likely to dry out. Pond One is an ornamental pond and is heavily stocked with fish. Ducks were present on the pond during this survey making this pond unsuitable for the species. Pond Three dries annually and is unlikely to provide any suitable habitat for the species. The table below shows the Habitat Suitability Index (HSI) for each of the ponds.

HSI		**Pond 1**	**Pond 2**	**Pond 3**
SI1	Location	1	1	1
SI2	Pond Area	0.2	0.1	0.4
SI3	Pond Drying	0.9	0.5	0.1

SI4	Water Quality	0.33	0.67	0.33
SI5	Shade	1	1	0.8
SI6	Fowl	0.67	1	0.67
SI7	Fish	0.01	1	1
SI8	Ponds	0.7	0.7	0.7
SI9	Terrestrial Habitat	0.33	0.33	0.33
SI10	Macrophytes	0.3	0.9	0.9
Total score		0.35	0.61	0.52
Presence		Poor	Average	Below Average

3.4.7. The vegetation within the surveyed area will provide a suitable habitat for various species of bird during the nesting bird season, which extends from March to September each year.

3.4.8. The surveyed area is highly unlikely to provide any suitable habitat for reptiles as there is no suitable refugia on the site to provide reptiles with shelter. The surrounding area of the site is also unlikely to provide any suitable habitat for reptiles.

3.4.9. The surveyed area does not provide any suitable habitat for hazel dormice or red squirrels.

3.4.10. No alien invasive species of plant listed on Schedule 9 of the Wildlife and Countryside Act 1981 were identified within the surveyed area.

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4. EVALUATION OF FINDINGS.

4.1. Four Local Wildlife Sites (LWS) were identified on the data search with Elsecar Reservoir being the closest to the surveyed area and is located approximately 600m to the south. No other designated sites were identified within 2km of the surveyed area. Therefore, the proposed works will have no impact on any Local Wildlife Sites or any other designated sites.

4.2. No badger setts or other badger field signs were identified within the surveyed area. Therefore, there will be no impact on badgers during the proposed works.

4.3. No watercourses that may provide a suitable habitat for water voles, otters or fresh water white clawed crayfish were identified within the surveyed area. The ditch outside of the site adjacent to the southern boundary will remain unaffected by the proposed works. Therefore, there will be no impact on habitats suitable for these species during the proposed works.

4.4. Building One may provide a low suitable habitat for roosting bats as the roof is lined and there are gaps beneath the roof tiles on the eastern gable end. No bats or bat field signs were identified internally or externally during this survey. Therefore, any works to the building may have a high impact on roosting bats if they are present within the building.

4.4.1. Buildings Two and Three do not provide any suitable habitat for roosting bats. Therefore, the proposed works will have no impact on bats roosting within these two buildings.

4.5. None of the trees within the surveyed area or bordering the site boundaries provide any suitable features for roosting bats. Therefore, there will be no impact on bats roosting within trees during the proposed works.

4.6. The surveyed area may provide a low suitable habitat for foraging and commuting bats, although the proposed works will have no impact on any suitable foraging or commuting features. Therefore, the proposed works will have no impact on foraging or commuting bats.

4.7. Three ponds were identified within the site boundary. However, no other ponds were identified within 500m of the site by looking at Ordnance Survey maps of the

surrounding area that may provide a suitable habitat for great crested newts. Only Pond Two within the site may provide a low suitable habitat for great crested newts, although this pond is very small and is likely to dry out. Pond One is an ornamental pond and is heavily stocked with fish. Ducks were present on the pond during this survey making this pond unsuitable for the species. Pond Three dries annually and is unlikely to provide any suitable habitat for the species. Therefore, the proposed works are unlikely to have any impact on great crested newts if suitable precautionary measures are put into place.

4.8. The vegetation within the surveyed area will provide a suitable habitat for various species of bird during the nesting bird season, which extends from March to September each year. Therefore, the proposed works may have a high impact on any birds nesting within the surveyed area if the vegetation is cleared during the nesting bird season.

4.9. The surveyed area is unlikely to provide any suitable habitat for reptiles as there is no suitable refugia on the site to provide reptiles with shelter. The surrounding area of the site is also unlikely to provide any suitable habitat for reptiles. Therefore, the proposed works will have no impact on reptiles if suitable precautionary measures are put into place.

4.10. The surveyed area does not provide any suitable habitat for hazel dormice or red squirrels. Therefore, there will be no impact on these species during the proposed works.

4.11. No alien invasive species of plant listed on Schedule 9 of the Wildlife and Countryside Act 1981 were identified within the surveyed area. Therefore, the proposed works will have no impact on spreading such species.

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5. RECOMMENDATIONS.

5.1. It is recommended that a further bat dusk emergence survey is carried out on Building One before the works commence to determine if bats use the building as a roosting site.

5.2. Bat dusk emergence surveys must be carried out within the main bat activity period, which extends from May to August each year. If a bat is found to be roosting within the building, further surveys may be required, and a Natural England EPS licence will have to be applied for and a suitable mitigation strategy put into place before the works commence.

5.3. Due to the potential but highly unlikely presence of great crested newts and reptiles on the site, it is recommended that suitable precautions are put in place to ensure that there is no impact upon them during the proposed works. The precautions should include:

- All personnel should be briefed on the identification of great crested newts and reptiles. A toolbox talk on great crested newts and reptiles has been included at the end of this report to aid in this matter.
- Vegetation clearance should be cleared to no lower than 150mm above ground level to leave the ground undisturbed.
- Logs should be chipped or removed from the site and not stored for short periods of time, potentially attracting newts, other amphibians or reptiles.
- Access should be via existing hard standing access tracks where possible.
- Work must cease if great crested newts are identified and further advice should be sought from the author of this report.
- Work must cease if more than 5 reptiles are identified within the worksite and further advice should be sought from the author of this report.
- Any debris moved from the ground must be carefully lifted and not dragged along the ground to prevent harm to any amphibians or reptiles that may be sheltering beneath.

5.4. It is recommended that any vegetation clearance work carried out on the site is carried out outside of the nesting bird season, which extends from March to September each year.

5.5. If any vegetation clearance work is carried out during the nesting season the work must be immediately preceded by a thorough nesting bird survey carried out by a

suitably experienced person. Any nests identified must remain undisturbed until the young have fledged from the nest.

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Prepared by:	
Stevan Roebuck	Date: 2nd February 2018.

Checked by:	
Jenny Whitcher Roebuck MCIEEM.	Date: 2nd February 2018.

6. REFERENCES.

Anon. 1995. ***Biodiversity: the UK Steering Group report. Vol 2: Action Plans.*** HMSO, London.

Bright P, Morris P,Mitchell-Jones T. 2006. ***The Dormouse Conservation Handbook*** 2nd edition. English Nature, Peterborough.

Chanin P. 2003(a). ***Ecology of the European Otter.*** Conserving Natura 2000, Ecology Series No.10. English Nature, Peterborough.

Chanin P. 2003(b) ***Monitoring the Otter Lutra lutra.*** Conserving Natura 2000 Rivers Monitoring Series No. 10. English Nature, Peterborough.

Chartered Institute of Ecology and Environmental Management. 2013. ***Guidelines for Preliminary Ecological Appraisal.*** CIEEM, Hampshire.

Collins J. (ed.) 2016. ***Bat Surveys for Professional Ecologist: Good Practice Guidelines.*** 3rd ed. The Bat Conservation Trust, London.

Harris S, Cresswell P and Jefferies D. 1989. ***Surveying Badgers.*** Mammal Society. London.

Joint Nature Conservation Committee. 2004. ***Common Standards Monitoring Guidance for Birds.*** 2004 ed. JNCC, Peterborough.

Joint Nature Conservation Committee. 2004 (ed.). ***Common Standards Monitoring Guidance for: Reptiles and Amphibians.*** JNCC, Peterborough.

Joint Nature Conservation Committee. 2004 (ed.). ***Handbook for Phase 1 habitat survey: A technique for environmental audit.*** JNCC, Peterborough.

Joint Nature Conservation Committee. 1996. ***UK Strategy for Red Squirrel Conservation.*** JNCC, Peterborough.

Langton T, Beckett C, Foster J. 2001. ***Great Crested Newt: Conservation Handbook.*** Froglife, Suffolk.

Nobel DG, Bashford RI and Baille SR. 2000. ***Breeding Bird Survey 1999.*** British Trust for Ornithology.

Peay S. 2003. ***Monitoring the White-Clawed Crayfish Austropotamobius pallipes.*** Conserving Natura 2000 Rivers Monitoring Series No. 1. English Nature, Peterborough.

Sutherland WJ, Newton I and Green RE. 2004. ***Bird Ecology and Conservation: A Handbook of Techniques.*** Oxford University Press, Oxford.

Strachan R, Moorhouse T, Gelling M. 2011. ***Water Vole Handbook***. 3rd edition. WILDCRU (Wildlife Conservation Research Unit), Oxford.

Sutherland WJ, Newton I and Green RE. 2004. ***Bird Ecology and Conservation: A Handbook of Techniques.*** Oxford University Press, Oxford.

1979. ***Convention on the Conservation of European Wildlife and Natural Habitats.*** *http://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/104* (accessed 18/02/16)

2000. ***Countryside and Rights of Way Act.*** *http://www.legislation.gov.uk/ukpga/2000/37/contents* (accessed 18/02/16)

2010. ***The Conservation of Habitats and Species Regulations.*** *http://www.legislation.gov.uk/uksi/2010/490/contents/made* (accessed 18/02/16)

1979. ***The Convention on the Conservation of Migratory Species of Wild Animals.*** *http://www.cms.int/* (accessed 18/02/16)

1981. ***Wildlife and Countryside Act.*** *http://www.legislation.gov.uk/ukpga/1981/69* (accessed 18/02/16)

1982. ***Protection of Badgers Act.*** *https://www.legislation.gov.uk/ukpga/1992/51/contents* (accessed 05/12/17)

Appendix I. BAT INFORMATION.

Ecology

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

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

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

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

Surveys

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

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

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

Legislation

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

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

The UK has designated maternity and hibernacula areas as Special Areas of Conservation (SAC's) under the Habitats Directive. Implementation of the UK Biodiversity Action Plan also includes action for a number bat species and the habitats which support them.

Where development proposals are likely to affect a bat roost site, a licence is required from Natural England.

Appendix II. GREAT CRESTED NEWT INFORMATION.

Ecology

Great Crested Newts breed in ponds and other water bodies. They can begin to migrate to their breeding ponds as early as the first frost-free days in late January with the majority reaching their breeding ponds by mid-March. Timing will be influenced by several factors, primarily evening temperatures above 5^{o}C and rainfall.

The peak egg-laying period is from mid-March to mid-May. The newts will lay their eggs individually, mainly on the leaves of submerged plants. The larva hatch after three weeks and then take another 2-3 months to complete larval development. Adult newts generally leave their breeding ponds from late May onwards.

Once the larvae have completed metamorphosis (the transition from aquatic larvae, efts, to land-adapted juveniles), they emerge from the pond. This emergence begins in late August and generally continues until late October. It takes 2-4 years to reach sexual maturity, during which time the newts will be land based.

Adults and immature newts spend the winter in places that afford protection from frost and flooding. This will generally be underground amongst tree roots, in mammal burrows, or under suitable refuges above ground like deadwood or rubble piles. Hibernation may last from October to February.

Whilst on land, outside the hibernation period, great crested newts will forage at night, taking a wide range of invertebrate prey.

Great Crested Newts therefore spend the majority of their time on land and only visit the ponds for breeding purposes.

Great Crested Newts will travel large distances between ponds and terrestrial refuges. It is recommended that anywhere within 500m of a pond should be treated as potential Great Crested Newt habitat.

Surveys

Walkover surveys will identify the suitability of any ponds within the area for Great Crested Newts by using a HSI assessment. The terrestrial habitat and their links will also be assessed.

Aquatic surveys of newts can be carried out through the trapping of ponds in suitable weather conditions during the breeding season, although these surveys do not provide accurate population estimates.

Terrestrial surveys and exclusions can be conducted between March and September when newts are moving out of breeding ponds.

An experienced surveyor must carry out the surveys and must be in possession of an appropriate Natural England Great Crested Newt survey license.

It is essential that Great Crested Newt surveys are planned well in advance of any development and ideally before Planning Consent is sought. Surveys can only be carried out at the appropriate time of year and repeat surveys are essential.

Legislation

Great Crested Newts are protected under Appendix II of the BERN Convention (1982), Schedule 5 of the Wildlife and Countryside Act (1981), Annex II and IV of the Habitats Directive, Annex II of the Conservation and Wildlife Regulations (2010) and are 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 kill, injure or take any Great Crested Newt, to interfere with any place used for shelter or protection, or to intentionally disturb any animal occupying such a place.

If Great Crested Newts are to be effected by any development, a thorough assessment of the population is essential followed by the design of a comprehensive mitigation package. Only when this has been done can a license application be submitted to Natural England for approval. It takes 30 working days for a license application to be determined and the period that mitigation measures take can be measured in months. It is therefore essential to plan well in advance of development commencing.

Appendix III. NESTING BIRD INFORMATION.

Ecology

The nesting season will vary according to the weather each year but generally commences in March, peaks during May and June and continues until September. It is also worth remembering that some birds nest in trees and scrub but others are ground nesting or prefer man- made structures or buildings.

Surveys

Nesting bird surveys search for potential nest sites in vegetation, buildings etc. Potential nesting sites are observed over a suitable period of time for bird movements or calling male birds that would indicate the presence of a nest. The presence of a nest can be identified from the field signs without the necessity to see the nest itself, thereby avoiding any disturbance of the nests. The best way to avoid this issue is to plan for vegetation clearance to be carried out outside the bird-nesting season.

Legislation

Nesting birds are protected under The Wildlife and Countryside Act 1981.

Part 1.-(1) Of the Act states that:- If any person intentionally:- kills, injures or takes any wild bird; takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or takes or destroys an egg of any wild bird, he shall be guilty of an offence.

Part 1.-(5) of the Act states that:- If any person intentionally:- disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on, or near a nest containing eggs or young; or disturbs young of such a bird, he shall be guilty of an offence and liable to a special penalty.

The Countryside and Rights of Way Act 2000 amends the above by inserting after “intentionally” the words “or recklessly”.

Appendix IV. 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

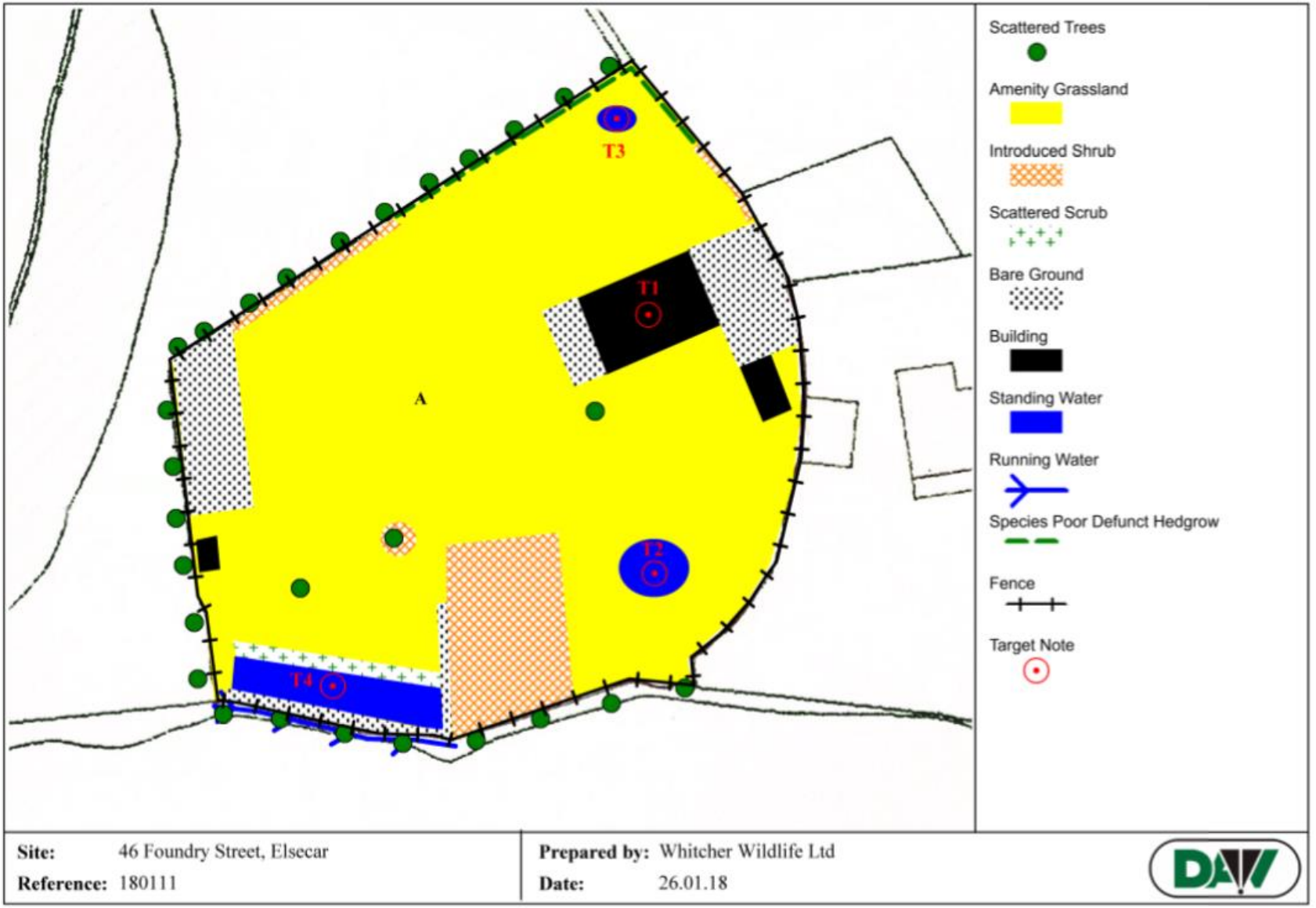
Reptile surveys involve the searching of refuge such as logs and stones for any animal sheltering below. Artificial refuge may be laid out on site for the purpose of reptile surveys.

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 V. ANNOTATED MAP OF THE SURVEY AREA.



Appendix VI. TARGET NOTES.

Target Note Reference:	Description:
T1	Building One
T2	Pond One
T3	Pond Two
T4	Pond Three

Appendix VII. SPECIES LISTS.

Scattered Trees.

Species.	DAFOR Assessment.
Ash *(Fraxinus)*	F
Hawthorn *(Crataegus)*	F
Elder *(Sambucas)*	F
Walnut *(Juglans)*	R
Cherry *(Prunus sp)*	R
Apple *(Malus sp)*	R
Hazel *(Corylus Avellana)*	O

Amenity Grassland.

Species.	DAFOR Assessment.
Perennial Ryegrass *(Lolium perenne)*	D
Meadow Buttercup *(Ranunculus acris)*	F
Common Daisy *(Bellis perennis)*	O
White Clover *(Trifolium repens)*	O
Dandelion *(Taraxacum officinale)*	R
Common sorrel *(Rumex acetosa)*	O
plantain (*Plantago major*).	O

Introduced Shrub.

Species.	DAFOR Assessment.
Bamboo *(Bambusa Vulgaris)*	O
Yucca *(Filamentosa)*	O
Bay *(Pimenta Racemosa)*	O
Laurel *(Laurus Nobilis)*	O
Photinia *(Photinia x Fraseri)*	O
Aucuba *(Aucuba Japonica)*	O
Cornus *(Cornus sp.)*	O
Elaeagnus *(Elaeagnus Ebbingei)*	O
Hebe *(Hebe Stricta)*	O
Japanese anemone *(Anemone Hypehensis)*	O
Hydrangea *(Hydrangea Macrophylla)*,	O
Pyracantha *(Pyracantha Coccinea)*	O

Spirea *(Spiraea x Vanhouttei)*	O
Ornamental Conifers	F

Species Poor Defunct Hedgerow.

Species.	DAFOR Assessment.
laurel *(Laurus Nobilis)*	D

Scrub

Species.	DAFOR Assessment.
Bramble *(Rubus fruticosus agg)*	F
Ivy *(Hedera helix)*	F
Nettle *(Urtica dioica)*	O
Short Grasses.	O

Toolbox Talk : Bats

Whitcher Wildlife Ltd

Ecological Consultants

18 species of bat have been recorded in Britain, 17 of which are known to breed here.



Identification.

Some species can be extremely difficult to identify in the hand and even more so in flight.

Species such as the Brown Long Eared bat pictured above can be more easily identified in the hand. Whereas, the Common Pipistrelle and Soprano Pipistrelle are more difficult to identify.

Bats are more easily identified by field signs such as droppings or feeding remains.





Habitat.

Bats are highly specialised creatures and require a relatively narrow range of suitable conditions in order to sustain a viable population. Bats require an abundant supply of flying insect food in places where they can easily be caught and they need safe and reliable roosting sites, particularly during breeding and hibernation.

Bats are heavily dependent on buildings and trees for their roost sites and therefore extremely susceptible to disturbance from human activities. Development schemes can also isolate bat populations and sever roost sites from favoured feeding areas by removing hedgerows or other features used as commuting routes.

Bats are susceptible to disturbance and have been known to abandon roost sites after instances of disturbance. The effects of disturbance are more pronounced at different times of year. Serious disturbance during breeding can result in the breeding females being killed or the abandonment and subsequent starvation of dependant young. Repeated disturbance during winter hibernation can result in the death of adult animals from starvation.

The level of protection afforded to bats in the UK and European legislation reflects the fact that it is now generally accepted that bats have declined substantially, maybe by as much as 60%, over recent years. Most species are declining and vulnerable with all species being protected.

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 occasionally the roofs of buildings.

Certain species, particularly Pipistrelle, can quickly adapt to manmade structures and will readily use these to roost and to rear their young.

Legislation.

Bats and their roosts are fully protected at all times (whether the bats are currently present or not). This protection comes from the Wildlife & Countryside Act 1981 (updated by the Countryside Rights of Way Act 2000) and the Habitats Regulations 1994. Under this legislation it is an offence to intentionally or recklessly kill, injure, capture or disturb bats or to damage, destroy or obstruct access to any place used by bats for shelter or protection.

Under the Habitats Regulations, where bats may be affected by development proposals, a licence is required from Natural England. Natural England's published guidelines on the licence procedure indicate that if, on the basis of survey information and specialist knowledge of the species concerned, the proposed activity is reasonably likely to result in an offence then a licence is required. If, on the other hand the proposed activity is reasonably unlikely to result in an offence, then a licence is not required.

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

Toolbox Talk : Great Crested Newts

Whitcher Wildlife Ltd

Ecological Consultants

The great crested newt population has suffered a major decline in Britain over the last century. Numerous ponds have been lost, unmanaged ponds have become silted up and over-shaded, development has destroyed ponds and associated terrestrial habitat and caused fragmentation of populations. The loss of grassland, scrub and woodland has resulted in fewer opportunities for foraging, dispersal and hibernation.

Identification: Great Crested Newts.

Great crested newts are dark, nearly black in colour with a speckled belly, distinctly orange in colour and with orange stripes across their toes. Great crested newts can grow up to 15cm in length.





Identification: Smooth and Palmate Newts.

Smooth newts are predominantly lighter in colour although their colour may vary from sandy coloured to very dark. Smooth newts also have a speckled orange belly but the orange colour fades to pale.





Palmate newts are similar to smooth newts but with a pinker belly and wedded feet.

Habitat.

Great crested newts live predominantly on land but breed in ponds between March and June.

Great crested newts may be found on land almost all year round. They spend the daytime under rocks or logs, in cracks, crevices or holes, or anywhere that is moist and cool and emerge at night to forage. During the winter months great crested newts hibernate deep down away from frost.

When disturbed in terrestrial habitats newts will usually be very sluggish and will take time to move away.

Legislation.

The great crested newt is listed on Schedule 5 of the Wildlife and Countryside Act 1981, recently modified by the Countryside Rights of Way Act 2000. The great crested newt is therefore subject to the provisions of Schedule 9, which make it an offence to:

- Intentionally kill, injure or take a great crested newt.
- Possess or control any live or dead specimen or anything derived from a great crested newt.
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt.
- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose.

The great crested newt is also listed on Annex II and Annex IV of The Conservation (Natural Habitats & C) Regulations 1994. Regulation 39 makes it an offence to:

- Deliberately capture or kill a great crested newt.
- Deliberately disturb a great crested newt.
- Deliberately take or destroy the eggs of a great crested newt.
- Damage or destroy a breeding site or resting place of a great crested newt.

The legislation applies to all life stages of great crested newts.

The maximum fine on conviction of offences under Section 9 and Regulation 39 currently stands at £5,000. The CroW Act 2000 amendment also allows for a custodial sentence of up to six months instead of, or in addition to, a fine. In addition, items, which may constitute evidence of the commission of an offence, may be seized and detained.

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

Toolbox Talk : Nesting Birds

Whitcher Wildlife Ltd

Ecological Consultants

The bird nesting season varies according to the weather each year but generally commences in March, peaks during May and June and continues until September.

A bird's nest is the place in which a bird lays and icubates its eggs. Some species build a nest structure while other species lay their eggs directly onto the ground or on a rocky ledge. Nests can be constructed from a variety of materials and are usually lined with feathers or fur.

Identification.

Some birds construct nests in an area where it can be seen while others construct nests that are hidden from view and are more difficult to identify.

The photograph to the right shows a Moorhen nest which can easily be seen.





Nests can also be identified from field signs without the necessity to see the nest itself. The presence of a nest can be identified by seeing the adult birds leaving and returning to the nest regularly with food to feed the chicks.

The photograph to the left shows a Wren's nest in overhanging tree roots, which is almost impossible to see.

Care should be taken at any time during the nesting season particularly when regular bird activity is seen or birds can be heard calling.





Habitat.

Birds regularly nest in a variety of places with some species nesting in buildings or vegetation and others nesting on the ground or on water. However, birds may nest in any habitat or situation if they identify a suitable nest site.







Legislation.

Part 1.-(1) of the Wildlife and Countryside Act 1981 states that:

If any person intentionally or recklessly:

- 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 or recklessly:

- 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.

If a nest or potential nesting activity is identified during works, stop all works and contact Whitcher Wildlife Ltd directly on 01226 753271 or at info@whitcher-wildlife.co.uk

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 back zig-zag 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 then 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