

**Whitcher Wildlife Ltd.
Ecological Consultants.**



60 CORONATION DRIVE, BIRDWELL.

OS REF: SE 34796 02234.

**PRELIMINARY ECOLOGICAL APPRAISAL
AND BIODIVERSITY NET GAIN ASSESSMENT.**

Ref No: 241141.

Date: 15th December 2024.

Unit 34, The Business Village, Cudworth, Barnsley
info@whitcher-wildlife.co.uk www.whitcher-wildlife.co.uk
Company No. 4401613.

TABLE OF CONTENTS.

1. INTRODUCTION.....	3
2. SURVEY METHODOLOGY.....	4
3. SITE DESCRIPTION.....	8
3.1. The Surveyed Area.....	8
3.2. Survey Limitations.....	9
3.3. Data Search Results.....	9
3.4. Description of Habitats.....	12
3.5. Description of Fauna.....	16
4. BIODIVERSITY NET GAIN ASSESSMENT.....	19
4.1. Baseline Biodiversity Values.....	19
4.2. Post Development Biodiversity Values.....	19
4.3. Summary of impact of development on habitat BU.....	20
5. EVALUATION.....	21
5.1. Designated Sites and Habitats.....	21
5.2. BNG.....	21
5.3. Protected species.....	22
5.4. Invasive non-native plant species.....	23
6. RECOMMENDATIONS.....	24
6.7. BNG.....	25
6.8. Biodiversity Enhancements.....	26
7. REFERENCES.....	27
APPENDIX I. HABITAT MAP.....	29
APPENDIX II. PROPOSED DEVELOPMENT.....	30
Appendix III. BAT INFORMATION.....	31
Appendix IV. NESTING BIRD INFORMATION.....	33
Appendix V. REPTILE INFORMATION.....	34

1. INTRODUCTION.

1.1. Planning permission is being sought to develop a 2-storey detached house and associated vegetated garden and hard landscaping on an area of land within the property of 60 Coronation Drive, Birdwell, Barnsley (proposed development can be seen in [Appendix II](#)).

1.2. Whitcher Wildlife Ltd were therefore commissioned to undertake a Preliminary Ecological Appraisal (PEA) and Biodiversity Net Gain (BNG) assessment of the site.

1.3. The site survey was carried out on the 28th November 2024, with a desk-based data search also conducted. This report outlines the findings of these and makes appropriate recommendations.

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

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

2. SURVEY METHODOLOGY.

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

2.2. A data search for existing records of protected species and designated sites within 2 km of the survey area was also submitted to [Barnsley Biological Records Centre \(BBRC\)](#).

2.3. The survey area was walked with access agreed by the landowner.

2.4. All habitats within the survey area were documented and the characteristic species within each habitat listed in line with the UK Habitat Classification version 2.0 methodology to identify the primary habitat types throughout the survey area. The minimum mappable area habitat unit is 25m². The minimum mappable linear habitat unit is 5 m. All primary habitats are accompanied by secondary codes which are used to add further specific details where necessary. Each primary habitat and unique set of secondary codes is shown individually in the annotated map of [Appendix I](#).

2.5. The Statutory Biodiversity Metric baseline biodiversity value for the site was calculated for each habitat based on the habitats area, distinctiveness, condition assessment, and strategic significance. Strategic significance is based on the [Barnsley Biodiversity Action Plan \(BAP\)](#), because the Local Nature Recovery Strategy for South Yorkshire has not yet been published. The Barnsley BAP has [local habitat action plans \(HAPs\) for built up areas and gardens](#). Thus, all vegetative garden habitat will be considered of high strategic significance in the Statutory Biodiversity Metric calculations and given a strategic significance multiplier value of 1.15, i.e. 'Formally identified in local strategy'.

2.6. 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.

2.7. The survey area was searched for watercourses and where found all watercourses within the survey area and for approximately 100m in each direction were thoroughly searched for evidence of water vole (*Arvicola amphibius*) activity by looking for the following signs, in line with Dean M, Strachen R, Gow D and Andres R (2016). *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series)*. Eds Fiona Mathews and Paul Chanin. The mammal Society, London: -

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

2.8. 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.

2.9. 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*.

2.10. The survey area was searched for trees and structures and where found these were checked for potential bat roosting sites in line with Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)* by looking for the following signs: -

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

2.11. 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.

2.12. The area within 500 m 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.

2.13. 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.

2.14. 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*.

2.15. 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.

2.16. This report was prepared in line with the Chartered Institute of Ecological and Environmental Management (CIEEM) survey standards and advice.

2.17. This report is prepared in line with the Natural Environment and Rural Communities (NERC) Act that came into force on 1st Oct 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England.

2.18. This document is prepared in line with The National Planning Policy Framework (NPPF). This sets out the government policy on biodiversity and nature conservation and places a duty on Planning Authorities to give material consideration to the effect of a development on legally protected species when considering planning applications. The NPPF and the Planning Practice Guidance on “Natural Environment” also promote sustainable development by ensuring that developments take account of the role and value of biodiversity and that it is conserved and enhanced within the development.

2.19. The botanical surveying was carried out by Dr Steven Paul Sylvester PhD MSc BSc. Steven has over 19 years of experience in ecological surveys in Britain and abroad, both in capacity as a university lecturer training PhD, MSc and BSc students, as well as working within ecological consultancies performing Biodiversity Net Gain, UKHab, NVC, Phase 1 surveys etc. Steven is a specialist in botany and has produced 24 scientific publications focused on plant taxonomy and has described 34 new taxa to science, including 2 genera, 25 species, 3 subspecies, and 4 varieties. He is expert in grass taxonomy, producing 14 peer-reviewed taxonomic treatments on grasses. Steven holds a first-class BSc (Hons) degree in Ecology from University of Wales Bangor, an MSc in Biodiversity and Taxonomy of Plants with distinction from the University of Edinburgh, and a PhD in Ecology and Plant Taxonomy from the University of Zurich. Steven has produced a total of 37 scientific publications in peer-reviewed journals, including 18 papers as first author and 11 papers as second author. Steven is currently applying to be a full member of CIEEM.

3. SITE DESCRIPTION.

3.1. The Surveyed Area.

3.1.1. The survey area is located in a suburban location, surrounded by residential areas, cemeteries, agricultural fields, and playing fields. The wider surrounding area comprises a mosaic of similar residential areas and agricultural fields, as well as woodland. The aerial map below shows the location of the survey area, indicated by the red arrow, and the surrounding area:



3.1.2. The survey area comprised a residential garden and driveway with boundaries on the south and east comprised of stone wall. The limits of the survey area are outlined in red in the aerial map below:



3.2. Survey Limitations.

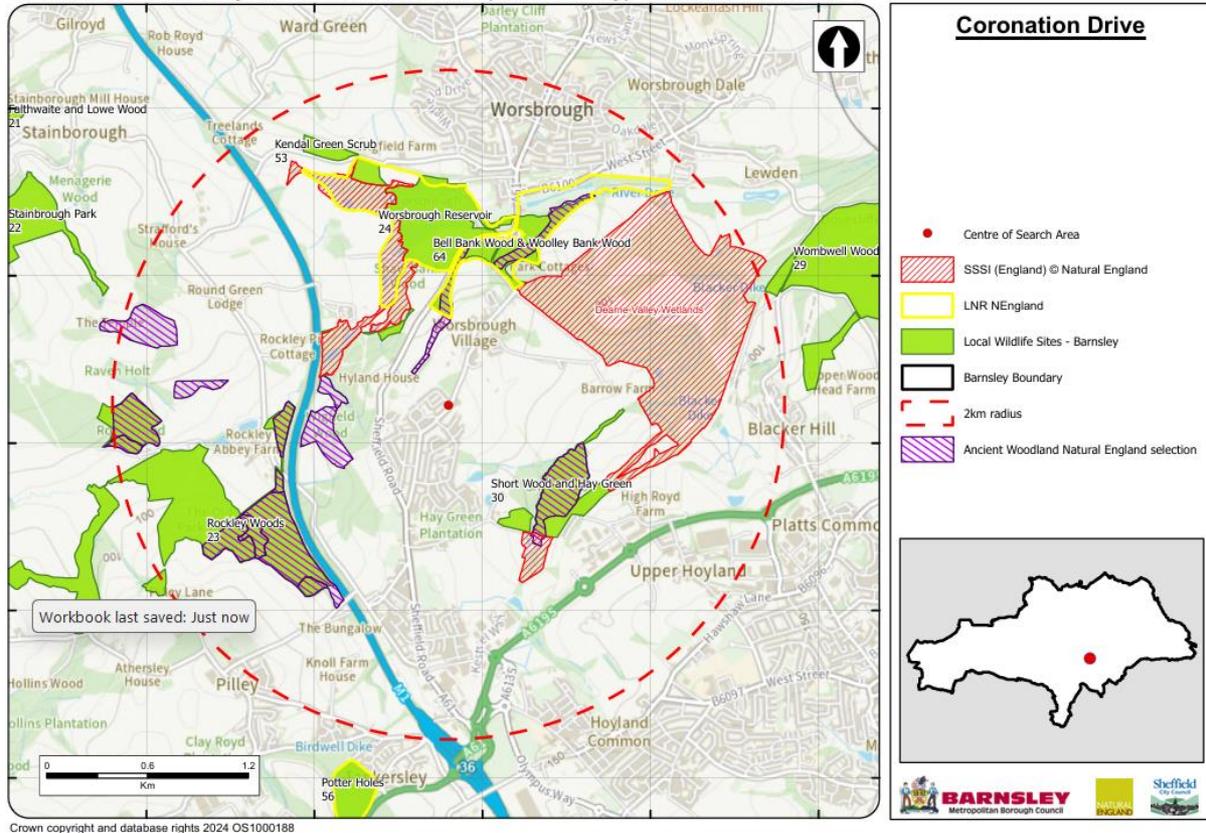
3.2.1. No limitations were encountered for botanical surveying. While this survey was carried out in autumn, the habitats encountered on site have condition assessments that do not focus on spring-flowering, ephemeral, or annual species of flora, which possibly could be missed.

3.2.2. No limitations were encountered for faunal surveying.

3.3. Data Search Results.

3.3.1. The results found numerous designated sites within 2 km of the survey area, that include one Site of Special Scientific Interest (SSSI), one Local Nature Reserve (LNR), six Local Wildlife Sites (LWS), and 10 ancient woodlands, as can be seen in the map below.

Boundaries of Statutory and Local Wildlife Sites (non-statutory) Within the Search Area



3.3.2. The SSSI found within a 2 km radius of the site is the Dearne Valley Wetlands, which is split into different areas to the northwest, northeast and southeast of the survey area, the closest being 700 m to the northwest. The survey area is within the SSSI impact risk zone, but the proposed development does not match any of the criteria that would necessitate consulting Natural England.

3.3.3. The LNR found within a 2 km radius of the site is the Worsborough Mill Country Park LNR, which forms a large area to the north of the survey area, the closest being 510 m to the north.

3.3.4. Of the six LWS found within a 2 km radius of the site, the closest to the survey area are Bell Bank Wood and Woolley Bank Wood located 510 m to the north, Short Wood and Hay Green LWS located ~600 m to the southeast, and Rockley Woods LWS located ~1100 m to the southwest.

3.3.5. Of the 10 ancient woodlands found within a 2 km radius of the site, the closest to the site were an ancient woodland 265 m to the northwest, an ancient woodland 600m to the west, an ancient woodland 700 m to the southeast, and an ancient replanted woodland 650 m to the west, as can be seen in the map below.



3.3.6. The data search returned relatively few recent records of protected species within 2 km of the site.

3.3.7. No records of great crested newts were returned within 500 m of the survey area. Three records of great crested newts were returned ranging in date from 1987 to 2011 that were within 1 km of the survey area. Two of these were from Worsborough reservoir LWS in 2002 and 2011. One record was from Rockley Dike, on the other side of the M1 motorway, from 1987.

3.3.8. Many records of reptiles were returned by the data search, but only one record was found within 500 m of the site, this being a dead grass snake found near Pit Road, Birdwell in 2014.

3.3.9. Many recent records of hedgehogs were returned by the data search, but only one recent record was found that was relevant to the survey area, this being a hedgehog found in a garden (SE 34700 02200) ~80 m northwest from the site in 2014.

3.3.10. Many recent records of badger were returned by the data search, but none that were within 500 m of the survey area.

3.3.10. Many recent records of bats were returned by the data search, but only two historic records from 1981 and 2001 were within 500 m of the survey area.

3.3.11. The data search returned recent records of hare, water vole and bird species. None of which are directly relevant to the survey area.

3.3.12. The data search must not be put into the public domain but may be provided to the client upon request.

3.4. Description of Habitats.

3.4.1. [Appendix I](#) of this report contains an annotated map marked up with the habitats within the site. The primary habitats within the site are listed below, followed by descriptions of each habitat with the vascular plant species and their abundances mentioned, and a baseline condition assessment of the habitats within the boundary for the purpose of the Statutory Biodiversity Metric baseline assessment of the site (covered separately in [section 4](#)): -

- Area habitats:
 - u1b Developed land; sealed surface
 - u1d Suburban mosaic of developed and natural surface (Vegetated garden)
- Linear habitats:
 - u1e Built linear feature

3.4.2. u1b Developed land; sealed surface.

An asphalted driveway was found on the northwest of the site with no potential for biodiversity. No condition assessment is required for this habitat.



3.4.3. u1d Suburban mosaic of developed and natural surface (Vegetated garden).

Secondary Code: 10 Scattered scrub; 16 Tall forbs; 32 Scattered trees; 518 Neglected; 523 Non-native; 524 Invasive non-native species.

3.4.3.1. The vegetated garden covered the majority of the survey area and was comprised of two levels being split by a low wall, 20 cm high, which ran through the garden in its northern half. The garden was generally neglected and overgrown. No condition assessment is required for this habitat.

3.4.3.2. The northwest portion of the garden was dominated by the non-native subshrub winter heath (*Erica carnea*), with a dense and tall non-native western red cedar (*Thuja plicata*) shrub composed of many stems ~5 cm diameter at breast height (dbh) and a small ash (*Fraxinus excelsior*) tree of 14 cm dbh (denoted as 'T1' in the annotated map of [Appendix I](#)) on the eastern edge by the wall. The tree was not included in BNG calculations as rules of the statutory metric state that only medium sized or larger trees can be recorded within vegetated garden habitat. The tree was given a 'moderate' condition score as it passed four criteria, failing on their being noticeable pruning and their being minimal natural ecological niches for vertebrates and invertebrates. The pruning is necessary due to the proximity of the tree to the sidewalk. The ground flora also included abundant false oat-grass (*Arrhenatherum elatius*) and occasional or infrequently encountered species such as bramble (*Rubus fruticosus* agg.), creeping thistle (*Cirsium arvense*), field bindweed (*Convolvulus arvensis*), ivy (*Hedera helix*), ragwort (*Jacobaea vulgaris*) and wood avens (*Geum urbanum*).



3.4.3.3. The southeast portion of the garden was dominated by a mixture of grasses, with shrubs planted around the eastern and southern margins. The sward held abundant false oat-grass (*Arrhenatherum elatius*) and red fescue (*Festuca rubra*), with frequent sweet vernal-grass (*Anthoxanthum odoratum*), and occasional cocksfoot (*Dactylis glomerata*), common bent (*Agrostis capillaris*), and Yorkshire fog (*Holcus lanatus*). The margins held occasional wood avens (*Geum urbanum*) and dog violet (*Viola riviniana*), with bramble (*Rubus fruticosus* agg.) rarely encountered. The area adjoining the driveway with sealed surface held abundant tall forbs of nettle (*Urtica dioica*).



3.4.3.4. The eastern and southern edges of the southeast portion of the vegetated garden held rose (*Rosa* spp.; possibly *Rosa majalis*) shrubs and the Schedule 9 invasive non-native species Himalayan cotoneaster (*Cotoneaster simonsii*), which was found on the central eastern edge of the site by the wall.



3.4.3.5. The western edge of the southern section of the vegetated garden was significantly damper and held abundant reed canary-grass (*Phalaris arundinacea*).



3.4.4. u1e Built linear feature.

Secondary Code: 523 Non-native.

A stone wall bounded the southern and eastern part of the site. The wall was partially covered with mainly forbs and woody subshrubs or climbers. The native ivy (*Hedera helix*) was found dominating the northern section of wall, while non-native forbs and woody subshrubs mainly covered the southern sections, including bearberry cotoneaster (*Cotoneaster dammeri*), which is not considered a Schedule 9 invasive non-native species. Other non-natives include red valerian (*Centranthus ruber*) and purple toadflax (*Linaria purpurea*).



3.5. Description of Fauna.

3.5.1. No badger setts or field signs were identified within the survey area. There were no signs of foraging badger within the survey area, such as snuffle holes.

3.5.2. There are no watercourses within the survey area to provide any habitat for water voles, otters or crayfish.

3.5.3. A review of Ordnance Survey maps and aerial imagery found one large pond within 500 m of the site, located ~430m southeast of the site. Nevertheless, this pond was separated from the survey area by residential development and a main road. Therefore, the species is assessed as absent from the survey area.



3.5.4. There were no buildings within the survey area and thus, no habitat for roosting bats within buildings.

3.5.5. The single ash (*Fraxinus excelsior*) tree found on site (denoted as 'T1' in the annotated map of [Appendix I](#)) was small and had no features that may be used by roosting bats. The dense western red cedar (*Thuja plicata*) shrub next to the tree also had no features that may be used by roosting bats.

3.5.6. The large majority of the site comprises low-lying vegetation that does not provide optimal habitat for foraging and commuting bats, however it is a vegetated garden that is part of a wider mosaic of suburban habitat that includes interconnected vegetated garden habitats, and therefore falls under the definition of moderate value habitat for foraging and commuting bats in the Bat Conservation Trust good practice guidelines, Edition 4.

3.5.7. There is very limited potential for nesting birds within the vegetation of the survey area, with this being principally within the tree and shrubs.

3.5.8. The survey area is very irregularly mowed with a sward of variable height and with tall dense vegetation in patches, making it somewhat suitable for common reptile species due to the presence of basking opportunities and places to shelter among debris. However, there are very few recent records of reptile species within 2 km of the survey area. Therefore, potential is assessed to be limited to a low number of common reptile species at the very most.

3.5.9. The survey area lies outside the known UK distribution of hazel dormouse and therefore, the species is assessed as absent from the site.

3.5.10. The small tree and shrubs on the site do not provide suitable habitat for red squirrel, and no dreys or field signs were found within the survey area and there are no records of red squirrel within 2 km of the site. As such, red squirrel are assessed as absent from the survey area.

3.5.11. The site is likely to support hedgehogs due to the dense, tall, and unmanaged sward.

4. BIODIVERSITY NET GAIN ASSESSMENT.

4.1. Baseline Biodiversity Values.

The below tables show the baseline Biodiversity Unit (BU) value for all habitats that lie within the red line boundary of the site. This is designed to give an indication of the biodiversity value of the site prior to any development. The total baseline of the site was calculated at 0.04 BU for area habitats, as demonstrated in the table below. No linear habitats were encountered on site. Rules of the statutory metric state that only medium sized or larger trees can be recorded within vegetated garden habitat, and thus the small tree T1 was not included.

Area Habitat Type	Extent (ha)	Distinctiveness	Condition Assessment	Strategic Significance multiplier	Biodiversity units (BU)
Vegetated garden	0.0171	Low	N/A	1.15	0.04
Developed land; sealed surface	0.0042	V.Low	N/A - Other	1	0
Total	0.0213				0.04

4.2. Post Development Biodiversity Values

A new residential building with associated hard landscaping will be created that will cover 0.0106 ha. 0.0107 ha of the vegetated garden will be retained post-works.

Area Habitat Type	Extent (ha)	Distinctiveness	Condition	Biodiversity units
<i>Retained</i>				
Vegetated garden	0.0107	Low	N/A	0.03
<i>Created</i>				
Developed land, sealed surface	0.0106	V.Low	NA	0
Total				0.03

4.3. Summary of impact of development on habitat BU.

The proposed development will result in a net loss of 37.43%, i.e. 0.01 BU lost of the total 0.04 area habitat BU on the site. There will be a BU deficit of 0.02 BU. There will be no linear habitat BU loss or gain.

FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)		<i>Habitat units</i>	-0.01	
		<i>Hedgerow units</i>	0.00	
		<i>Watercourse units</i>	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)		<i>Habitat units</i>	-37.43%	
		<i>Hedgerow units</i>	0.00%	
		<i>Watercourse units</i>	0.00%	
Trading rules satisfied?		No - Check Trading Summaries ▲		
Area created must match area lost for both onsite and offsite ▲				
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
<i>Habitat units</i>	10.00%	0.04	0.04	0.02
<i>Hedgerow units</i>	10.00%	0.00	0.00	0.00
<i>Watercourse units</i>	10.00%	0.00	0.00	0.00

5. EVALUATION.

5.1. Designated Sites and Habitats.

5.1.1. The data search found that the survey area is not within, or adjacent to, any designated sites or habitats and as such, the proposed development will have no impact on such sites. In addition, the proposed development does not match any of the criteria that would necessitate consulting Natural England with regards possible impacts on the SSSI impact risk zone.

5.1.2. The survey area comprises habitats of low ecological value, largely covered by vegetated garden. Nevertheless, the Barnsley BAP has [local habitat action plans \(HAPs\) for built up areas and gardens](#). The works will have no negative impact on habitats of principle important listed on the NERC Act 2006.

5.2. BNG.

5.2.1. With the current proposals, the scheme will not achieve above the overall 10% net gain (i.e. 0.044 BU) and meet the trading rules, which is required to support the planning application.

5.2.2. The current proposals show that an on-site uplift of >10% in BU will be achieved, which is a statutory requirement (i.e. if the baseline is 0.04 BU and an overall value of 0.044 BU is required to achieve an overall 10% BNG, at least 0.004 BU must be delivered on site and the shortfall can be offset off-site). This will be from the retained 0.0107 ha of vegetated garden that hold 0.02 area habitat BU.

5.2.3. With the current proposals, there will be a shortfall of 0.02 area habitat BU which must be offset off-site. This is because the proposed development will be entirely private property and, thus, it is not possible to legally secure any enhanced or created habitats within the property unless these are registered with a responsible body through a Conservation Covenant, which is unfeasible for the scale of the development.

5.2.4. For 'vegetated garden' low distinctiveness area habitat, which holds all the area habitat BU, the trading rule states it can be replaced by any habitat of the same distinctiveness band or a better habitat.

5.3. Protected species.

5.3.1. No badger setts or evidence of badger was found within the survey area; therefore, the development of the site will have no impact on badger.

5.3.2. There is no watercourse within or adjacent to the survey area and therefore, the proposed development of the site will have no impact on otter, water vole or white clawed crayfish.

5.3.3. There is one large pond within 500 m of the site, located ~430m southeast of the site. Nevertheless, this pond was separated from the survey area by residential development and a main road. Therefore, the species is assessed as absent from the survey area and therefore the proposals will therefore have no impact on great crested newts.

5.3.4. There are no buildings or structures within the survey area and therefore the proposed development will have no impact on bats roosting in buildings or structures.

5.8. The single small ash (*Fraxinus excelsior*) tree and other shrubs found on site had no features that may be used by roosting bats.

5.3.5. The scale and nature of the site means there will be no negative impact on foraging and commuting bats, and new vegetated garden will be provided that will form part of a wider mosaic of suburban habitat that includes interconnected vegetated garden habitats offering connectivity to the wider landscape.

5.3.6. There is limited potential for nesting birds within the shrubs and tree of the survey area throughout the nesting bird season, which extends from March to August inclusive each year. The site is highly unlikely to host any ground nesting bird species due to its small size and disturbance, albeit this is infrequent. Therefore, it is assessed that any impacts on nesting birds is limited to impacts on common bird species as a result of any site clearance during the nesting bird season.

5.3.7. The site is assessed to be somewhat suitable for reptile species due to the infrequent mowing disturbance and sward of variable height and with tall dense vegetation in patches, with the presence of basking opportunities and places to shelter among debris. However, there are very few recent records of reptile species within 2 km of the survey area. Therefore, provided that suitable precautionary measures are in place, the development of the site is assessed to have little impact on reptile species.

5.3.8. The site lies outside the known UK distribution of hazel dormouse and as such, the proposed works will have no impact on hazel dormice.

5.3.9. No red squirrel dreys or field signs were found within the survey area. There are no records of the species within 2 km of the site. Therefore, the proposed development will have no impact on red squirrel.

5.3.10. The site has potential for hedgehog due to the tall unmanaged sward and this is corroborated by the data search retrieving one recent record of a hedgehog in garden from a property very close to the site. Therefore, there is a risk that the development could impact on any individual hedgehogs present on the site at that time.

5.4. Invasive non-native plant species

Himalayan cotoneaster (*Cotoneaster simonsii*), an invasive non-native plant species listed on Schedule 9 of the Wildlife and Countryside Act (1981), was found present within the vegetated garden habitat of the survey area. Therefore, the development of the site may facilitate the spread of this species.

6. RECOMMENDATIONS.

6.1. This Preliminary Ecological Appraisal (PEA) report is designed to advise the client of the survey results and baseline BNG assessment so that any potential ecological constraints identified can be considered within the site development plan.

6.2 Once development plans are finalised, this report should be converted into an Ecological Impact Assessment (EcIA), suitable for submission to planning. This will include a finalised Biodiversity Net Gain calculation for the site.

6.3. It is recommended that a sensitive lighting scheme is implemented as part of the development to ensure that all lighting is downward directional.

6.4. It is recommended that any vegetation or site clearance works are carried out outside the nesting bird season. If this is not possible, it is recommended that the clearance works are immediately preceded by a nesting bird survey. Any active nests found plus a suitable buffer around them, must be left undisturbed until the young have fledged.

6.5. As a precaution, it is recommended that measures are put in place to ensure no harm is caused to any hedgehogs and reptiles. This should include the following measures:

- Prior to site clearance, all vegetation should be cut to a minimum of 200 mm above ground level and the arisings should be carefully removed from site. This will encourage any reptiles or hedgehogs at ground level to vacate the area and will deter them from returning.
- Any stored materials on site should be lifted cleanly off the ground and not dragged to avoid any harm to small mammals taking refuge underneath.
- Any clearance of potential refugia, such as grass cuttings or piles or brash should not be undertaken over winter, when the species may be hibernating.
- No excavations should be left open overnight, if necessary, these should be left with a mammal ramp to allow the escape of any fauna that may use the site.

6.6. The Schedule 9 invasive non-native species Himalayan cotoneaster (*Cotoneaster simonsii*) must be physically removed or treated with herbicide to prevent further spread. Large established cotoneasters with extensive root systems may need a professional to assist. Plant material needs to be burned or chipped on site, or removed to a licensed landfill as controlled waste.

6.7. BNG.

6.7.1. There is a statutory requirement to provide an overall biodiversity net gain on the site, with at least 10% of this net gain being delivered on site (i.e. as the baseline is 0.04 area habitat BU, at least 0.004 area habitat BU must be delivered on site). This applies to area habitat units and the linear habitat units separately, and as only area habitat units are found on site, these should be focused on for delivering the 10% on-site net gain. It is not possible to use created linear habitats (e.g. hedgerow) to deliver a 10% biodiversity net gain and offset the loss of the vegetated garden area habitat. There is also a requirement to meet the trading rules of the Statutory Metric.

6.7.2. It is not possible to use on-site created habitats (e.g. newly planted trees) or enhanced habitats (e.g. nurturing tree T1 to reach a moderate size for inclusion in Statutory Biodiversity Metric calculations) to deliver additional biodiversity units. This is because it is not possible to legally secure any created or enhanced habitats within a private property unless these are registered with a responsible body through a Conservation Covenant, which is unfeasible for the scale of the development. Thus, the minimum of 10% of the baseline of area habitat BU (i.e. 0.004 BU) that must be delivered on site must come from retained habitats within the property.

6.7.3. Retaining 0.0107 ha of the vegetated garden will achieve the required 10% on-site net gain for area habitats, by delivering 0.02 area habitat BU on site. This area of garden must not be removed or damaged by construction machinery or storing materials to facilitate the new construction.

6.7.4. With the current proposed development there will be a 0.02 area habitat BU deficit in meeting overall 10% BNG. Shortfalls in BU required to meet the overall 10% BNG, plus meet the trading rules, will need to be offset by the developer. This can be done by the developer either sourcing their own land that they can utilise to create the BU required (although this would need to be legally secured in the S106 agreement for a minimum of 30 years and accompanied by a Habitat Management and Monitoring Plan (HMMP)), or alternatively the BU can be purchased through off site providers, e.g. habitat banks or offsite registers. As a last resort, statutory credits can be purchased but they are very costly.

6.7.5. Offsetting is very feasible as the trading rules for 'vegetated garden' state that it can be replaced by any habitat of the same low distinctiveness band or a better habitat.

6.8. Biodiversity Enhancements.

6.8.1. There will be an expectation to provide some biodiversity enhancements for fauna species on the site. It is recommended that integrated bat and bird boxes are included in the final design of the buildings on site, as well as a bee brick in each new property.

6.8.2. 13 cm x 13 cm gaps should be left at the bases of garden fences, and gates should be raised at least 15 cm, to allow for the passage of small mammals.

Prepared by:	
Steven Paul Sylvester PhD MSc BSc	Date: 15 th December 2024.

Checked by:	
Ruth Georgiou. BSc, MCIEEM.	Date: 15 th December 2024.

7. REFERENCES.

- Amphibian and Reptile Groups of the United Kingdom (2010) *ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index*. ARGUK.
- Baker, J., Beebee T., Buckley, J., Gent, A. and Orchard, D. (2011). *Amphibian Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth.
- Bat Tree Habitat Key (2018) *Bat Roosts in Trees: a guide for identification and assessment for tree-care and ecology professionals*. Pelagic Publishing, Exeter
- Bird Survey & Assessment Steering Group (2023). *Bird Survey Guidelines for assessing ecological impacts, v.1.1.1*. Available at <https://birdsurveyguidelines.org> (Accessed 15/04/2024)
- Bright, P., Morris, P. & Mitchell-Jones, T. (2006) *The Dormouse Conservation Handbook*. English Nature, Peterborough.
- Chanin, P. (2003) *Ecology of the European Otter*. Conserving Natura 2000 Rivers Ecology Series No.10. English Nature, Peterborough.
- Chanin, P. (2003) *Monitoring the Otter Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No.10. English Nature, Peterborough.
- CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.
- CIEEM (2017) *Guidelines on Ecological Report Writing*. Chartered Institute of Ecology and Environmental Management, Winchester.
- Cresswell, P., Cresswell, W.J., and Woods, M. (1993) *The Country Life Guide to Artificial Badger Setts*. Country Life, London.
- Collins J. (ed.) 2023. *Bat Surveys for Professional Ecologist: Good Practice Guidelines (4th Edition)*. The Bat Conservation Trust, London.
- Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016) *The Water Vole Mitigation Handbook* (Mammal Society Mitigation Guidance Series). Eds Fiona Mathews and Paul Chanin. Mammal Society, London.
- Department for Environment, Food & Rural Affairs (2024) *Biodiversity Net Gain*. Available at <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides> (Accessed: 15/04/2024).
- Department for Environment, Food & Rural Affairs (2024) *Statutory Net Biodiversity Metric User Guide*. Available at <https://www.gov.uk/government/collections/biodiversity-net-gain> (Accessed: 15/04/2024).
- Department for Levelling Up, Housing and Communities (2023) *National Planning Policy Framework (NPPF)*. Available at <https://www.gov.uk/government/publications/national-planning-policy-framework--2> (Accessed: 15/04/2024).
- Edgar, P., Foster, J. and Baker, J. (2010) *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth.
- English Nature (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough.
- Froglife (1999) *Froglife Advice Sheet 10: reptile survey*. Froglife, London.
- Gurnell, J., & Lurz, P. (2012) *Red Squirrel*. In: Cresswell, W.J., Birks, J.D.S., Dean, M., Pacheco, M., Trehwella, W.J., Wells, D. and Wray, S. (2012). *UK BAP Mammals: Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation*. The Mammal Society, Southampton.
- Harris, S., Cresswell, P. and Jefferies D. (1989) *Surveying Badgers*. Occasional Publication No 9, The Mammal Society, London.
- Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001), *Great Crested Newt Conservation Handbook*, Froglife, Halesworth.
- Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines*. English Nature, Peterborough.
- Natural England (2022) *Hazel Dormice: Advice for making planning decisions*. Available at <https://www.gov.uk/guidance/hazel-dormice-advice-for-making-planning-decisions> (Accessed: 15/04/2024)
- Natural England (2014) *Protected species and development: advice for local planning authorities*. (updated 2021) Available at: <https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications> (Accessed: 05/03/2021).
- Natural Environment and Rural Communities Act 2006* Available at <https://www.legislation.gov.uk/ukxi/2019/579/contents/made> (Accessed: 15/04/2024).
- Peay, S. (2003) *Monitoring the White-clawed Crayfish Austropotamobius pallipes*. Conserving Natura 2000 Rivers Monitoring Series No. 1. English Nature, Peterborough.

Stanbury, A. et al (2021) *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114: 723-747.* Available at <https://britishbirds.co.uk/content/status-our-bird-populations> (Accessed 15/04/2024)

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

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 Available at <https://www.legislation.gov.uk/uksi/2019/579/contents/made> (Accessed: 15/04/2024).

The Protection of Badgers Act 1992 Available at <https://www.legislation.gov.uk/ukpga/1992/51/contents> (Accessed: 15/04/2024).

The Wildlife and Countryside Act 1981 (as amended). Available at <http://www.legislation.gov.uk/ukpga/1981/69> (Accessed: 15/04/2024).

UKHab Ltd (2023) *UK Habitat classification Version 2.0* Available at <https://www.ukhab.org>. JNCC, Peterborough.

APPENDIX I. HABITAT MAP



Site: 60 CORONATION DRIVE, BIRDWELL

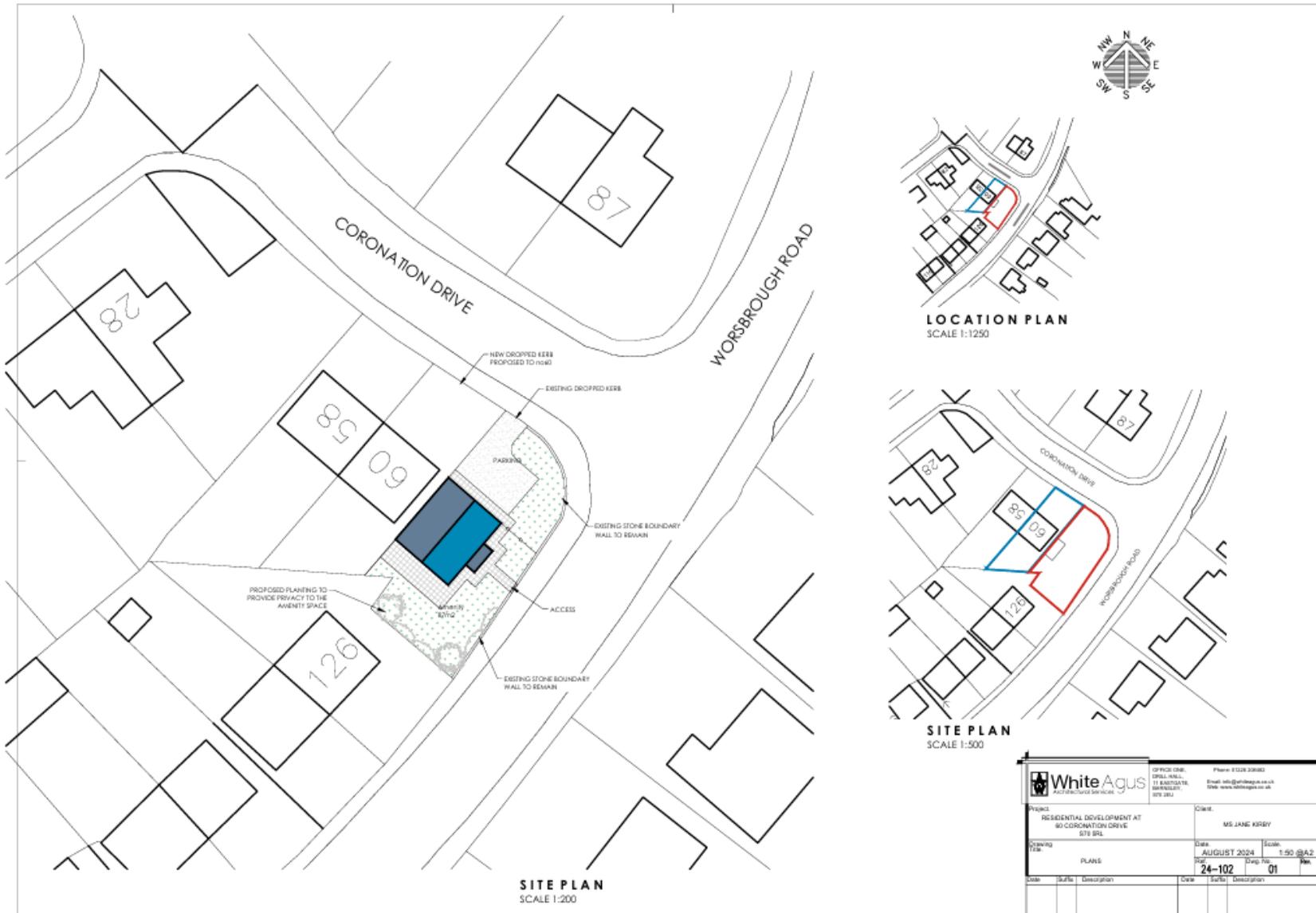
Date: 29.11.2024

Reference: 241141

Produced by: Steven Paul Sylvester



APPENDIX II. PROPOSED DEVELOPMENT



White Agus Architectural Services		Office: 081 822 3311 11 BENTLEY MIDLANDS S10 2BJ	Phone: 01226 208802 Email: info@whiteagus.co.uk Site: www.whiteagus.co.uk
Project: RESIDENTIAL DEVELOPMENT AT W/ CORONATION DRIVE SITE 281		Client: MS JANE KIRBY	
Working File: PLANS	Date: AUGUST 2024	Scale: 1:50 @A2	Drawn: 01
Site	Scale	Description	Drawn

Appendix III. BAT INFORMATION.

Ecology

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

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

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

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

Surveys

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

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

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

Legislation

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

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

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

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

Appendix IV. 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 V. REPTILE INFORMATION.

Ecology

There are five main species of reptile that reside in the UK; Common or Viviparous Lizard (*Lacerta vivipara*); Sand Lizard (*Lacerta agilis*); Slow Worm (*Anguis fragilis*); Grass Snake (*Natrix natrix*) and Adder (*Vipera berus*). The Adder is the only native species that is venomous although this is rarely harmful to humans.

Reptiles occupy a wide range of habitats including woodland, marshes, heathland, moors, sand dunes, hedgerows and bogs. Sand Lizards are confined to moorland and coastal sand dunes where they lay their eggs in the warm sand. The range of the Sand Lizard in the UK is therefore very limited. Slow Worms can be found in a wide variety of habitats throughout Britain and is the most likely reptile to be found in urban and suburban environments.

Maintaining the right body temperature is vital to reptiles' survival. In the morning, they find a warm basking site to heat up their bodies, then later they may move back into the shade because they do not sweat and have to be careful not to overheat. During hot summers, Adders will try to move to damper, cooler sites.

Over winter reptiles will hibernate in burrows or under logs where they are protected from the cold and predators, emerging from February onwards as the weather warms up.

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

Surveys

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

Legislation

Reptiles are protected under Appendix II (sand lizards) and Appendix III (common lizard, slow worms, smooth snake, grass snake and adders) of the BERN Convention (1982), partially protected under Schedule 5 of the Wildlife and Countryside Act (1981), Annex IV of the Habitats

Directive and are all listed under section 41 of the Natural Environment and Communities Act (2006) making them a species of principal importance.

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