Whitcher Wildlife Ltd.
Ecological Consultants.

LAND OFF LESMOND CRESCENT, MIDDLECLIFF

OS REF: SE 43231 05030

PRELIMINARY ECOLOGICAL APPRAISAL.

Ref No: **210906.**

Date: **15th September 2021.**

Cliff Edge, Cliff Road, Darfield, Barnsley, S73 9HR.
Tel. 01226 753271.
info@whitcher-wildlife.co.uk www.whitcher-wildlife.co.uk
Company No. 4401613.

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1. INTRODUCTION.

1.1. J&K Builders are proposing to construct eight residential dwellings with parking and gardens on the land off Lesmond Crescent in the hamlet of Middlecliff at grid reference: SE 43231 05030. Aerial photograph with red line boundary shown below.

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 the 2nd of September 2021 and this report outlines the findings of that survey and makes appropriate recommendations.

1.4. Appendices III and 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.

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

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

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

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

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

2.7. The survey area was searched for trees and structures and where found these were checked for potential bat roosting sites in line with Collins, J. (ed.) (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. 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.

2.15. 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.

2.16. This Survey was conducted by Matthew Moore. Matthew is an Ecological Consultant with an array of experience in conducting surveys on a variety of flora and fauna in a professional capacity. Since 2015 Matthew has worked as an Ecological Clerk of Works and as a Consultant Ecologist. Matthew currently holds a Natural England Survey License for Great Crested Newts, has experience of undertaking bat surveys and is working towards gaining a Natural England survey license for bats.

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3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. Barnsley Metropolitan Borough Council.

3.1.1.1. Barnsley Metropolitan Borough Council were commissioned to undertake a data search of all designated sites and protected species with a 2km radius of the site.

3.1.1.2. Two non-statutory designated site was identified within 2km of the site. Broomhill Flash and Wombwell Ings Local Wildlife Site. was identified c.1.8 km to the southwest of the site and Dearne Valley Local Nature Reserve 900m to the south.

3.1.1.3. The site lies within the Dearne Valley Green Heart 'Nature Improvement Area'.

3.1.1.4. There were two records for badger within 2km of the site. The nearest record to the site was located c. 1km to the west of the site.

3.1.1.5. There were no recent records of water vole within 2km of the site. The most recent record was within a ditch c. 1.9km to the southwest of the site however this was in 2009 and nothing has been recorded more recently.

3.1.1.6. There was only one record of otter within 2km of the site within the last ten years. This record was identified c.1.9km to the southwest of the site within Broomhill Flash and Wombwell Ings LWS.

3.1.1.7. Ten recent records of bat were identified within 2km of the site. Common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), noctule (*Nyctalus noctula*), lesser noctule (*Nyctalus leisleri*) and myotis species were identified. The nearest record to site was of a Pipistrelle bat c.1.5km to the southeast.

3.1.1.8. There were three records for great crested newt within 2km of the site. The nearest record was of a GCN c.1.6 km to the northwest of the site.

3.1.1.9. There are six recent records of reptile within 2km of the site. All records are of grass snake (*Natrix helvetica*) of which the closest to site was c.500m to the south of the site.

3.1.1.10. There are records for three schedule 9 invasive plant species within 2km of the site. Records include Japanese knotweed (*Fallopia japonica*) c.800m to the southwest of the site, giant hogweed (*Heracleum mantegazzianum*) c. 900m west of the site and Himalayan balsam (*Impatiens glandulifera*) c. 850m to the west of the site.

3.1.2. South Yorkshire Badger Group.

South Yorkshire Badger Group was consulted with respect to badger sett records within 2km of the site. The group do hold records of setts to the northwest of the site, in excess of 1.5kim from the site. There are no other sett records in the area around the site.

3.2. The Surveyed Area.

The site comprised an area of c.0.24 hectares of land on the edge of Middlecliff hamlet. The site is surrounded by residential housing to its western and southern boundaries and arable agricultural land to the east and north.

3.3. Description of Habitats.

3.3.1. Appendix I of this report contains annotated maps marked up with the varying habitats that are cross referenced to target notes in Appendix II of this report. The habitats on and adjacent to the site are: -

- Amenity grassland
- Fence
- Hedgerow
- Short ephemeral
- Tall ruderal

3.3.2. Amenity grassland.

Amenity grassland was present along a narrow access track off Lesmond Crescent. Common daisy (*Bellis perennis*), dandelion (*Taraxacum officinale*), annual meadow grass (*Poa annua*) and Yorkshire fog (*Holcus lanatus*) were dominant species.

3.3.3. Fence.

A chain-link fence and a wooden feather-board fence were present along the western and southern boundaries of the site, backing onto neighbouring gardens on the adjacent land.

3.3.4. Hedgerow.

A species-poor hedgerow existed along the eastern boundary of the site. The hedgerow was dominated by hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*) and elder (*Sambucus nigra*). Ivy (*Hedera helix*) and Russian vine (*Fallopia baldschuanica*) were also present.

3.3.5. Short ephemeral.

Two small areas of short ephemeral habitat were present to the north and south of the site. This was dominated by redshank (*Persicaria maculosa*) white goosefoot (*Chenopodium album*) black medic (*Medicago lupulina*) and white clover (*Trifolium repens*).

3.3.6. Tall ruderal

The centre of the site was dominated by tall ruderal habitat. Dominant species were rosebay willowherb (*Chamaenerion angustifolium*), common nettle (*Urtica dioica*) common comfrey (*Symphytum officinale*), rough hawkbit (*Leontodon hispidus*), creeping thistle (*Cirsium arvense*) and bramble (*Rubus fruticosus*). The grasses

Yorkshire fog (*Holcus lanatus*), false-oat grass (*Arrhenatherum elatius*) and annual meadow grass (*Poa annua*) were also present, but the herbs were dominant.

3.3.7. Dense scrub

An area of dense bramble (*Rubus fruticosus*) was present at the southern end of the site. Hedge bindweed (*Calystegia sepium*) growth was also extensive within this habitat.

3.4. Description of Fauna.

3.4.1. No evidence of badger was identified during the survey.

3.4.2. No evidence of water vole was identified during the survey. No watercourses were present on or adjacent to the site that could support this species.

3.4.3. No evidence of otter was identified during the survey. No watercourses were present on or adjacent to the site that could support this species.

3.4.4. No evidence of white-clawed crayfish was identified during the survey. No watercourses were present on or adjacent to the site that could support this species.

3.4.5. No evidence of bats was identified during the survey. No structures or trees were present on or adjacent to the site where bats could roost.

3.4.6. No evidence of great crested newt was identified during the survey. There was a pond c.300m to the north of the site on private land and could not be assessed.

3.4.7. The survey was conducted outside of the bird nesting season March – August so no nesting birds were identified at the time. The hedgerow habitat and areas with dense bramble have the potential to support nesting birds.

3.4.8. No evidence of reptiles was identified and no potential reptile hibernacula were identified during the survey. The site is a small area of land situated between arable farm land and residential dwelling and therefore is assessed to be unsuitable for reptiles.

3.4.9. No evidence of dormice was identified during the survey and the site was outside of this species natural range.

3.4.10. No evidence of red squirrel was identified during the survey and this site is outside of this species known range.

3.4.10. No non-native invasive Schedule 9 plants were identified on or adjacent to the site during the survey

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4. EVALUATION OF FINDINGS.

4.1.1. The nearest designated site was Dearne Valley LNR. This is c.0.8 km away and will not be affected by the proposed works.

4.1.2. As the site lies within Dearne Valley Green Heart 'Nature Improvement Area' the proposed development will have to take this into consideration.

4.1.3. The following table outlines the Baseline Biodiversity value of area habitats on site.

Habitat	Area (Ha)	Condition	Connectivity	Biodiversity value
Amenity Grassland	0.01	Poor	N/A	0.97
Short Ephemeral	0.02	Moderate	Poor	0.09
Tall Ruderal	0.21	Moderate	Poor	0.02
Total				1.08

4.1.4. The following table outlines the Baseline Biodiversity value of linear habitats on the site.

Habitat	Length	Condition	Connectivity	Biodiversity value
Hedgerow	95m	Moderate	Poor	0.44
Total				0.44

4.1.5. No badger setts or field signs were identified during the survey and the nearest record was c. 1km away. There were no steep embankments on site that are the preferred habitat for badgers to dig when creating new setts. It is thought unlikely that badgers are present on the site or rely on the site as a key foraging resource.

4.1.6. No suitable habitat was present on or adjacent to site and there are no recent records of water vole within 2km. There is no risk that this species will be affected by the proposed works.

4.1.7. No suitable habitat was present on or adjacent to the site and there was only one recent record of otter c.1.9km away. There is no risk that this species will be affected by the proposed works.

4.1.8. No suitable habitat was present on or adjacent to site and there are no recent records of crayfish within 2km. There is no risk that this species will be affected by the proposed works.

4.1.9. There were no potential bat roosts on or directly adjacent to the site. The hedgerow habitat on site had the potential to provide a foraging resource for bats. There is another hedgerow off site running parallel to this separated by a trackway. The plans show that neither of these hedgerows will be removed and therefore there will be no loss of potential bat foraging resource. As the proposed development is for residential dwellings it is unlikely that there will be much in the way of light pollution affecting the hedgerow habitat.

4.1.10. The nearest potentially suitable pond for great crested newt was identified from Ordinance Survey mapping was more than 300m away and is separated from site by a busy road, arable fields and urban development. The bases of hedgerows and tall ruderal vegetation was sparse and offered no shelter for amphibians during their terrestrial phases. It is therefore anticipated that there will be no impact on great crested newts or other amphibians.

4.1.11. The hedgerow and bramble habitat on site has the potential to support nesting birds between March and August. It is anticipated that there is a risk of nesting birds being affected by the clearance or manipulation of these habitats on site if conducted during the bird nesting season.

4.1.12. Although there are potential habitats foraging habitats for reptiles present the site is very isolated from suitable reptile habitat in the wider landscape. The residential dwelling and arable landscape adjacent to the site are unsuitable. It is therefore anticipated that these works will have no impact on foraging reptiles.

4.1.13. There are no records of hazel dormice within 2 km of the site and the site is not connected to any woodlands or areas where this species is known to be present. The site is also outside of the main range for this species. These works will have no impact on hazel dormice.

4.1.14. There are no records of red squirrel within 2 km of the site and the site is not connected to any woodlands or areas where this species is known to be present. The site is also outside of the main range for this species. These works will have no impact on red squirrel.

4.1.15. No schedule 9 plant species were identified during the survey and the nearest records are all from species along a watercourse more than 800m from the site. It is not anticipated that there will be any risk of spreading any schedule 9 plants during these works.

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5. RECOMMENDATIONS.

5.1. This Preliminary Ecological Appraisal report is designed to advise the client of the initial survey results so that they may be considered within the site development plan.

5.2. During the conversion of this report into an EcIA, it is recommended that the landscaping proposals for the site are firmed up and a calculation undertaken to demonstrate no net loss of biodiversity. It is recommended that during that process, the number of native species planting on the site is maximised to achieve no net loss of biodiversity.

5.3. At present the tall ruderal and short ephemeral habitat is to be lost to urban/developed land. This would result in a loss of biodiversity value on site. It is recommended that native vegetation planting is added to the scope of the proposed development to fulfil the requirement of a minimum of 10% biodiversity net gain on site. The addition of native species hedgerows and native trees will greatly enhance the biodiversity value of the site.

5.4. The hedgerow situated to the east of the site is a potential resource for foraging bats. It is recommended that, if lighting is required for the proposal during the construction or post development phase, light spill must be contained within the site and not onto the adjacent hedgerow habitat.

5.5. It is recommended that any work to remove the bramble or manipulate the hedgerow habitat be conducted outside of the bird nesting season, which lasts from March till September. If this is not possible then the de-vegetation works must be preceded by a nesting bird check prior to being removed or manipulated.

5.6. As part of biodiversity enhancement, in line with the National Planning Policy Framework, it is recommended that bird and bat boxes be put up in suitable locations on the building to provide habitat for nesting birds and roosting bats.

5.7. As this site lies within the Dearne Valley Green Heart ‘Nature Improvement Area’ it is recommended that additional enhancements are added to the scope of the development. Additional hedgerow planting should be included to add biodiversity value to the linear features on site. Any walls or fences proposed should have 130mm

by 130mm holes left in them in places to allows hedgehogs to commute and forage across the site.

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Prepared by:	
Mathew Moore	Date: 15th September 2021.

Checked by:	
Derek Whitcher, BSc, MCIEEM, MCMI	Date: 16th September 2021.

6. REFERENCES.

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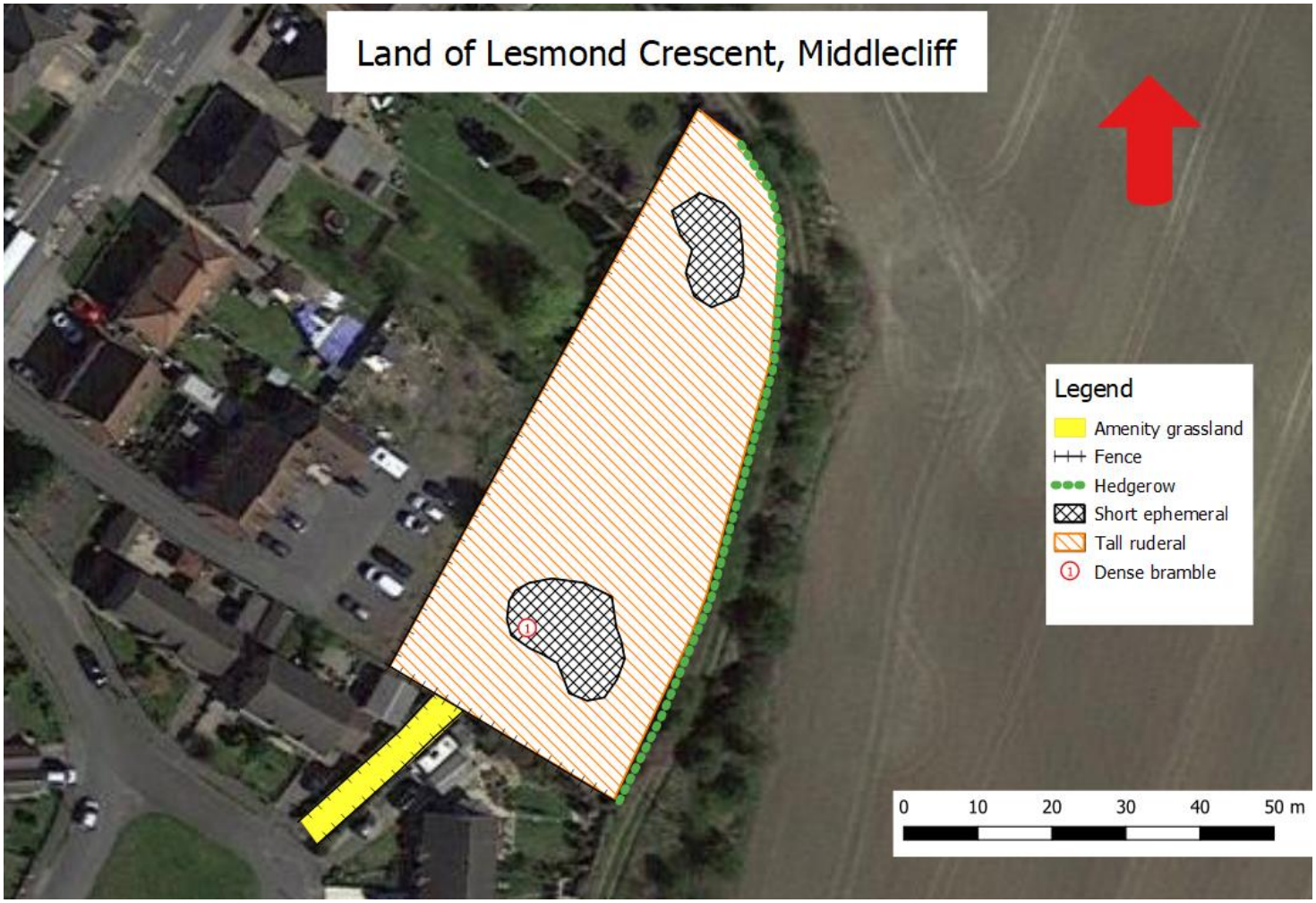
Appendix I. ANNOTATED MAP OF THE SURVEY AREA



Appendix II. TARGET NOTES.

Target Note 1. Dense Scrub (Bramble) habitat.

Appendix IV. BAT INFORMATION.

Ecology

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

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

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

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

Surveys

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

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

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

Legislation

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

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

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

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

Appendix V. 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”.