PHASE 1 HABITAT SURVEY REPORT
at
Land south of Glebe Farm
Barnsley Road
Silkstone
S75 4JX

Client:
Spawforths

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JCA Ref:
13120b/DB

Version:
Planning Application

Date of Report:
20/10/2016



JCA Limited
Arboricultural & Ecological Consultants

Quality Assurance

Version	**Desktop Survey Completed:**		**Site Surveyed:**		**Report Completed:**		**Checked:**	
	Date	Name	Date	Name	Date	Name	Date	Name
Planning Application	18/10/16	David Bodenham	14/10/16	David Bodenham	20/10/16	David Bodenham	20/10/16	Freya Olsson

This report has been prepared and provided in accordance with the *British Standard 42020: Biodiversity – Code of practice for planning and development* and the *CIEEM's Code of Professional Conduct.*

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Summary

A report is required for **THE land south of Glebe Farm, Barnsley Road** to assess the ecological value of the site by documenting the habitat types present and the site's potential for supporting rare and protected species. The development proposed on this site is the construction of 3-4 residential properties

A desktop study has been undertaken in order to obtain any relevant ecological records that may be present within a 2km radius of the site. This includes protected and notable species records, as well as nature conservation designations. The Multi-Agency Geographic Information for the Countryside (MAGIC) website was used to locate any designated sites that may be present within 2km of the survey site, such as; Local Nature Reserves (LNR), Special Areas of Conservation (SAC) or Sites of Special Scientific Interest (SSSI).

A thorough site assessment was undertaken; following the guidelines set out in the JNCC's *Handbook for Phase 1 habitat surveys*. The entire site was walked over by an experienced consultant who mapped and described each habitat type that was present. The dominant floral species of each habitat was noted as well as any faunal species that were encountered. Whilst conducting the site walk-over, any features that may be of value to or have the potential to support protected species were noted, and photographic evidence taken. Such protected species include, but are not limited to; Badgers, Bats, Dormouse, Great Crested Newts, Nesting Birds, Otter, Reptiles, Water Vole, White-Clawed Crayfish.

After conducting a thorough site investigation and a detailed Desktop Study, we consider the **Land south of Glebe Farm, Barnsley Road** to contain habitats of medium ecological value. The habitats occurring on the site offer some opportunities for protected species. The scattered trees on site are of regional or national importance. The Desktop Study shows that there are records of a number of protected species within 2km of the site and the relative ecological value of the site means a development is likely to affect some of these protected species. The scattered trees found on site are likely to be used by both foraging and commuting bats, as well as nesting birds in summer. Silkstone Beck, which runs next to a small section of the proposed development site is likely to contain white-clawed crayfish. The site may also act as a 'soft border' for Silkstone Fall Woods, providing a buffer against disturbance to wildlife from human activities on the astern edge of Silkstone Village.

Based on the findings outlined in this report the following recommendations are made:

- It is likely that bats use the site for foraging and commuting. To mitigate any potential impact on the local bat population as the result of a development, suitable data needs to be collected to understand what species are present and how they use the site. **Activity Surveys** are used to assess the level of bat activity at a site. This can be done either by using equipment such as an AnaBat device, or manually walking around a site with a heterodyne detector, documenting the number of bat passes and interceptions. If it is confirmed that the site is important for foraging bats, a **Bat Mitigation Licence** may need to be applied for from Natural England, and a mitigation plan devised so

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development causes as little impact on local bat populations as possible. Because of the relative suitability for bats it is recommended that one activity transect is carried out per season (October, April and June). In addition, one automated bat detector will be left on site data will be collected over five consecutive nights per season.

- Removal of trees, scrub and vegetation should be scheduled outside of the breeding birds season (March to October). However, if this is not possible then a **Nesting Bird Survey** will be required in the week preceding their removal. See **Appendix 7** for a calendar showing the survey season for these additional surveys.

- All works are to occur within the field on the west side of the site. The small strip of land next to Silkstone Beck will not be developed and therefore no further action is needed in regards to white-clawed crayfish.

- Because of the relative proximity to Silkstone Fall Woods, Biodiversity Enhancement should be considered as part of the proposed development scheme. It is recommended that a **Biodiversity Enhancement Plan** should be prepared, to accompany plans for the proposed development, to retain the 'soft edge' effect the site currently displays in its position next to Silkstone Fall Woods.

JCA Ltd. can provide these and other ecological surveys if required, please do not hesitate to contact us for further information.

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1 Introduction and Terms of Reference

1.1 Purpose of the Report

1.1.1 A report is required for the **land south of Glebe Farm, Barnsley Road** to assess the ecological value of the site by documenting the habitat types present and the site's potential for supporting rare and protected species.

1.2 Terms of Reference

1.2.1 I am instructed by **Spawforths** to visit the site and prepare my findings in a report.

1.2.2 For this purpose I have been supplied with a brief of details of the proposal.

1.3 Scope of the Report

1.3.1 This survey was carried out in accordance with the Joint Nature Conservation Committee's (JNCC's) *Handbook for Phase 1 habitat survey - A technique for environmental audit* (2010).

1.3.2 This report is compiled in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM's) *Guidelines for Ecological Report Writing* (2015) and to the British Standard Institution's *Biodiversity – Code of Practice for Planning and Development* (2013).

1.4 Details of Proposed Development

1.4.1 The development proposed on this site is the construction of 3-4 residential properties.

1.5 Site Description

1.5.1 The **Land South of Glebe Farm, Barnsley Road** is situated approximately 5km west of Barnsley Town Centre, at grid reference: SE 2921805913.

1.5.2 The site is surrounded by predominantly agricultural land and woodland. To the west of the site is the village of Silkstone, an area of residential and commercial properties. To the north is Glebe Farm and agricultural land and interspersed with woodland and hedgerows. To the south is agricultural land and Silkstone Beck. To the east is Silkstone Woods, an area of semi-natural deciduous woodland.

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2 Methodology

2.1 Desktop Study Methodology

2.1.1 A desktop study has been undertaken in order to obtain any relevant ecological records that may be present within a 2km radius of the site. This includes protected and notable species records, as well as nature conservation designations.

2.1.2 The Multi-Agency Geographic Information for the Countryside (MAGIC) website was used to locate any designated sites, both statutory and non-statutory, such as; Local Wildlife Sites (LWS) Local Nature Reserves (LNR), Ramsar Sites, Special Areas of Conservation (SACs), Special Protected Areas (SPAs) or Sites of Special Scientific Interest (SSSI) that may be present within 2km of the survey site.

2.2 Site Assessment Methodology

2.2.1 A thorough site assessment was undertaken; following the guidelines set out in the JNCC's *Handbook for Phase 1 habitat surveys*.

2.2.2 The entire site was walked over by an experienced consultant who mapped and described each habitat type that was present. The dominant floral species of each habitat was noted as well as any faunal species that were encountered.

2.2.3 Whilst conducting the site walk-over, any features that may be of value to or have the potential to support protected species were noted, and photographic evidence taken (please refer to **Appendix 2**). Such protected species include, but are not limited to; Badgers, Bats, Dormouse, Great Crested Newts, Nesting Birds, Otter, Reptiles, Water Vole, White-Clawed Crayfish (please see **Appendix 5**).

2.2.4 Limitations: The survey was conducted at the optimal time of year. However, ome species may not have been visible at the time of the survey.

The site was also highly managed reducing sward length making identification of grassland species difficult. This limitation made floral identification difficult, meaning this report will not represent a comprehensive indication of the site's biodiversity. However, this constraint will not affect the overall conclusion of the report, as habitat types can still be classified and the potential for protected species can still be accurately assessed.

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3 Results

3.1 Desktop Study Results

3.1.1 Local Data Centre Records: Barnsley Biodiversity Trust has been commissioned to provide the records held for protected and notable species within a 2km radius of the survey site.

Legally protected species (those protected under the Wildlife and Countryside Act (1981), Countryside and Rights of Way Act (2000), Protection of Badgers Act 1992 and the EU's Habitats Directive). Below is a summary of protected species within 2km of the proposed development site:

Table 1: Protected species recorded within 2km of the site.

Taxon Group	Common Name	Scientific Name	Proximity and direction from site	Designation
Amphibian	Great Crested Newt	*Triturus cristatus*	394m SW	WACA Sch 5, UKBAP, NERC S.41
Bird	Brambling	*Fringilla montifringilla*	572m S	WACA Sch 1 Part 1
	Firecrest	*Regulus ignicapillus*	400m N	WACA Sch 1 Part 1
	Redwing	*Turdus iliacus*	1964m W	WACA Sch 1 Part 1
	Fieldfare	*Turdus pilaris*	1964m W	WACA Sch 1 Part 1
Crustacean	White-clawed Freshwater Crayfish	*Austropotamobius pallipes*	400m N	WACA Sch 5, UKBAP
Reptile	Adder	*Vipera berus*	558m S	WACA Sch 5 Sect 9.1 9.5, UKBAP, NERC S.41
Terrestrial Mammal	Natterer's Bat	*Myotis nattereri*	1073m S	WACA Sch 5, HabReg-Sch2
	Noctule	*Nyctalus noctula*	558m SSW	WACA Sch 5, HabReg-Sch2, HabDir-A4,UKBAP, Bern-A2 NERC S.41
	Common Pipistrelle	*Pipistrellus pipistrellus*	320m W	WACA Sch 5, HabReg-Sch2, HabDir-A4, Bern-A2 NERC S.41
	Brown Long-Eared Bat	*Plecotus auritus*	260m W	WACA Sch 5, HabReg-Sch2, HabDir-A4, UKBAP, Bern-A2 NERC S.41

There have been a number of protected species recorded within 500m of the site. Most notable are common pipistrelle and brown long-eared bat which were recorded west of the site in Silkstone itself. White clawed crayfish were found in Silkstone Beck 400m north of the site. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area. See **Appendix 3** for full desktop study results.

3.1.2 Nature Conservation Designations: Nature designations are split into two types; those

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that confer some form of statutory protection, and other designations. These designated sites are summarised in the table below:

Table 2: Statutory and non-statutory designated sites with 2km of the site.

Site Name	Designation	Level	Proximity and direction from site	Description
Statutory Designated Sites				
Pye Flatts Meadows	SSSI	National	1830m W-SW	Three meadows with a diverse plant assemblage; a product of long and constant period of traditional management.
Non-statutory Designated Sites				
Silkstone Fall Wood	Local Wildlife Site	Local	57m E	An area of semi-natural broadleaf woodland.
Hugset Wood	Local Wildlife Site	Local	1034m NE	An area of semi-natural broadleaf woodland.
North Wood	Local Wildlife Site	Local	1479m SW	An area of semi-natural broadleaf woodland.
Royd, Vicar, Lindley and Coates Great Wood	Local Wildlife Site	Local	1706m W	An area of semi-natural broadleaf woodland.

3.2 Site Assessment Results

3.2.1 The site was surveyed on 14/10/2016 2016 by David Bodenham *BSc Ind (Hons), MSc*. Survey conditions are summarised in **Table 3**.

Table 3: Survey times and weather conditions.

Survey date	Lead surveyor	Temp	Humidity	Wind speed/Direction		Cloud Cover	Precipitation
14/10/16	David Bodenham	15.6°C	49%	BF0	N/A	85%	None

3.2.2 Habitats Present

The site is a former pastoral field with a number of amenity trees planted within the field. A Phase 1 Habitat map showing all habitat types present can be found at **Appendix 1**.

The following habitat types are present at the **land south of Glebe Farm Barnsley Road** (in alphabetical order):

- Dense scrub
- Improved grassland
- Scattered trees

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- Tall ruderal

Dense Scrub: Several patched of Bramble (*Rubus fruticosus* agg.) could be found around the perimeter of the field, and at the base of trees. This contained a few species associated with woodland habitats including Wood Avens (*Geum urbanum*) and Ivy (*Hedera helix*).

Improved Grassland: The majority of the site was made up of this habitat. The sward was short, a result of regular grazing by livestock, and in some areas nearly bare because of heavy use. The dominant grass species included Perennial Rye-grass (*Lolium perenne*), Cocksfoot (*Dactylis glomerata*) and Meadow Foxtail (*Alopecurus pratensis*). Other species included Ribwort Plantain (*Plantago lanceolata*), Dandelion (*Taraxacum* sp.) and Nettle (*Urtica dioica*), typical of an over-grazed and nitrogen rich field.

Scattered Trees: A number of trees were found in the field itself, and along its eastern boundary with a track. These included Lime (*Tilia × europaea*), Ash (*Fraxinus excelsior*), and Hawthorn. Although some may have been planted as a hedgerow originally along the eastern boundary, other appear to have been planted for their amenity value, including Norway Maple (*Acer platanoides*) and Laurel (*Laurus nobilis*).

Tall Ruderal: Several patched of Nettle (*Urtica dioica*) were found along the western edge of the field. This was indicative of high nitrogen content in the soils as a result of livestock waste.

Table 4: Habitat importance according to Biodiversity Action Plans and the 'Species and Habitats Review'.

Habitat Type	UK BAP Priority Habitat	Local BAP	NERC Act Section 41	Is Habitat a Notable Consideration?
Dense Scrub	No	No	No	No
Improved Grassland	No	No	No	No
Scattered Trees	Yes	Yes	Yes	Yes
Tall Ruderal	No	No	No	No

3.2.3 Target Notes

Target Note 1: The remains of a fox kill (see **Appendix 2, Photo 8**).

Target Note 2: A wood pile left over from some tree maintenance (see **Appendix 2, Photo 9**).

Target Note 3: A bird box on a former telephone line post (see **Appendix 2, Photo 10**).

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3.2.4 **Fauna Species Encountered**

The following species were either seen, heard or evidence of their presence found during the site investigation:

- Magpie (*Pica pica*)
- Harlequin ladybird (*Harmonia axyridis*)

3.2.5 **Invasive Plant Species**

No invasive plant species were found at this site whilst conducting the site investigation.

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4 Discussion and Analysis of Results

4.1 Nature Conservation Designations

4.1.1 There are five designated conservation sites within 2km of the site. The closest to the proposed development site is Silkstone Fall Wood, an area of established semi-natural broadleaf woodland that is located 57m to the east of the site. This is most likely an important area for local wildlife and, in conjunction with Silkstone Beck, forms an important corridor of riparian habitat, connecting the wider landscape.

4.1.2 In turn, other designated sites in the area, along with privately held areas of woodland, form a rich network of habitat is the immediate area, and likely an important conduit for wildlife dispersal, foraging and shelter. The close proximity of the proposed development site, along with habitats found on site, mean that this land may act as an extension and 'soft edge' to this habitat network.

4.2 On-site Habitat

4.2.1 The majority of habitat on site is of low value. The majority of the proposed development site is covered in improved grassland, a habitat which is not listed under any biodiversity action plans or policy and therefore has no particular notable consideration. This habitat has also been heavily grazed, reducing the diversity of plant species and therefore the overall value of the site (see **Appendix 2, Photos 1,2 and 4**). The site also includes several patches of bramble and nettle, scattered through the grassland (see **Appendix 2, Photos 6 and 7**). Although these habitats do have some wildlife value, notably bramble which can be a source of food and shelter for a number of vertebrates and invertebrates, the relativity low density of these habitats means any net loss wouldn't have a significant effect on local wildlife.

4.2.2 The most notable habitat on site are the scattered trees and tree line along the western perimeter of the proposed development site (see **Appendix 2, Photo 3**). This class of habitat is listed on the UK Biodiversity Action Plan and the Local BAP, as well as the NERC Act Section 41. Although no veteran trees are present on site, some are semi-mature, and potentially are home to a wide range of species including insects, lichen and fungi. The trees themselves provide a myriad of microhabitats with increasing age, including hollows, rot holes and decaying wood. The trees present may also be important for protected species. (see **section 4.3**).

4.3 Potential for Protected Species

4.3.1 Amphibians: Great crested newts have been recorded within 500m of the site, from a pond in a back garden to the southwest in the village of Silkstone. The site itself offers little in the way of valuable terrestrial habitat for amphibians, with bramble and nettle patches along the boundary offering some cover from desiccation and habitat for foraging. No suitable aquatic habitat is found on site and it is unlikely great crested

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newts will be found here.

4.3.2 Badgers: No records or evidence of badger were found on site. It is unlikely the development will affect a local badger population.

4.3.3 Barn Owls: No records, suitable habitat or evidence of barn owls were found on site. It is unlikely the development will affect a local barn owl population.

4.3.4 Bats: Four species of bat have been recorded within 2km of the proposed development site, two of which are within 500m of the site; Common pipistrelle and brown long-eared bats recorded west of the site in Silkstone itself. The network of local woodlands, as well as the close proximity of the site to this network, local records and Silkstone Beck make it likely that bats use the site for foraging and commuting. No potential roosting features were found on site and all trees are of the wrong size and age to support bat roosting features.

4.3.5 Nesting Birds: Trees on site provide suitable habitat for nesting and foraging birds, and local records suggest a healthy population of 30+ bird species, including four protected bird species, are present in the area.

4.3.6 Reptiles: A single record of an adder was found 558m to the south. Habitat on site is unsuitable for this species, and the lack of mosaic of habitats on site make it unsuitable for other reptile species.

4.3.7 White Clawed Crayfish: White clawed crayfish have been found 400m north in Silkstone Beck. Silkstone Beck does flow next to a small section of the site and is most likely to support this protected species.

*The absence of any signs of or features considered valuable for supporting protected species, can **not** be considered evidence that these species are absent from a site, or that these species will not occupy the site in the future. It must therefore always be recommended that work be conducted with care and vigilance. Should any protected species be encountered during work (please see **Appendix 5**), work should stop immediately and JCA or Natural England contacted.*

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5 Conclusions and Recommendations

5.1 After conducting a thorough site investigation and a detailed Desktop Study, we consider the **Land south of Glebe Farm, Barnsley Road** to contain habitats of medium ecological value (please see **Section 3.2**).

5.2 The habitats occurring on the site offer some opportunities for protected species. The scattered trees on site are of regional or national importance. The Desktop Study shows that there are records of a number of protected species within 2km of the site and the relative ecological value of the site means a development is likely to affect some of these protected species. The scattered trees found on site are likely to be used by both foraging and commuting bats, as well as nesting birds in summer. Silkstone Beck, which runs next to a small section of the proposed development site is likely to contain white-clawed crayfish. The site may also act as a 'soft border' for Silkstone Fall Woods, providing a buffer against disturbance to wildlife from human activities on the astern edge of Silkstone Village.

5.3 Based on the findings outlined in this report the following recommendations are made:

- It is likely that bats use the site for foraging and commuting. To mitigate any potential impact on the local bat population as the result of a development, suitable data needs to be collected to understand what species are present and how they use the site. **Activity Surveys** are used to assess the level of bat activity at a site. This can be done either by using equipment such as an AnaBat device, or manually walking around a site with a heterodyne detector, documenting the number of bat passes and interceptions. If it is confirmed that the site is important for foraging bats, a **Bat Mitigation Licence** may need to be applied for from Natural England, and a mitigation plan devised so development causes as little impact on local bat populations as possible. Because of the relative suitability for bats it is recommended that one activity transect is carried out per season (October, April and June). In addition, one automated bat detector will be left on site data will be collected over five consecutive nights per season.

- Removal of trees, scrub and vegetation should be scheduled outside of the breeding birds season (March to October). However, if this is not possible then a **Nesting Bird Survey** will be required in the week preceding their removal. See **Appendix 7** for a calendar showing the survey season for these additional surveys.

- All works are to occur within the field on the west side of the site. The small strip of land next to Silkstone Beck will not be developed and therefore no further action is needed in regards to white-clawed crayfish.

- Because of the relative proximity to Sikstone Fall Woods, Biodiversity Enhancement should be considered as part of the proposed development scheme. It is recommended that a **Biodiversity Enhancement Plan** should be prepared, to accompany plan for the

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proposed development to retain the 'soft edge' effect the site currently displays in its position adjacent to Silkstone Fall Woods.

JCA Ltd. can provide these and other ecological surveys if required, please do not hesitate to contact us for further information.

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6 References

Guidelines for surveys and report writing:

British Standards Institute (BSI), (2013) *BS 42020:2013, Biodiversity - Code of practice for planning and development*. London.

Chartered Institute of Ecology and Environmental Management (CIEEM), (2015) *Guidelines for Ecological Report Writing*. Winchester.

Joint Nature Conservation Committee (JNCC), (2010) *Handbook for Phase 1 habitat survey: A technique for environmental audit*.

Websites:

Advice on protected species is consolidated at:
Environmental management: Wildlife and habitat conservation - GOV.UK (2016) *Gov.uk*. Available at: https://www.gov.uk/topic/environmental-management/wildlife-habitat-conservation (Accessed: 21 September 2016).

Magic Map Application (2016) *Magic.defra.gov.uk*. Available at: http://magic.defra.gov.uk/MagicMap.aspx (Accessed: 21 September 2016).

The RSPB (2016). Available at: http://www.rspb.org.uk/ (Accessed: 21 September 2016).

Surveys and mitigation plans: protected species - Detailed guidance (2015) *Gov.uk*. Available at: https://www.gov.uk/guidance/surveys-and-mitigation-plans-protected-species (Accessed: 21 September 2016).

Within this detailed guidance on surveys and mitigation information is available on the following protected species:

- Bats
- Natterjack toads
- Otters
- Reptiles
- Water voles
- White-clawed crayfish
- Wild birds
- Hazel dormice
- Great crested newts
- Badgers

Wildlife licences: when you need to apply - Detailed guidance (2014) *Gov.uk*. Available at: https://www.gov.uk/guidance/wildlife-licences (Accessed: 21 September 2016).

Within this detailed guidance on licensing information is available on licences for the following protected species:

- Bats
- Natterjack toads
- Otters
- Reptiles
- Water voles
- White-clawed crayfish
- Wild birds
- Hazel dormice
- Great crested newts
- Badgers

As well as:

- Non-native Bumblebee species
- Deer
- Freshwater fish
- Invertebrates
- Mink, coypu, muskrat and grey squirrel
- Plants

Species specific information:

Badgers:

Natural England, (2007) *Badgers and Development: A Guide to Best Practice and Licensing*.

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Bats:

Bat Conservation Trust, (2007) *Bats, Development & Planning in England*. London.

Mitchell-Jones, A. and McLeish, A. (ed.). (2004) *Bat Workers' Manual*. 3rd ed. JNCC.

Dormice:

Bright, P., Morris, P. and Mitchell-Jones, A. (1996) *The dormouse conservation handbook*. Peterborough: English Nature.

Great crested newts:

Langton, T., Beckett, C. and Foster, J. (2001) *Great Crested Newt Conservation Handbook*. Halesworth: Froglife.

Otters:

Natural England, (2007) *Species Information Note SIN006, Otter: European protected species*.

Reptiles and Amphibians:

Baker, J., Beebee, T., Buckley, J., Gent, T. and Orchard, D. (2011) *Amphibian Habitat Management Handbook*. 1st ed. Bournemouth: Amphibian and Reptile Conservation.

Edgar, P., Foster, J. and Baker, J. (2010) *Reptile Habitat Management Handbook*. 1st ed. Bournemouth: Amphibian and Reptile Conservation.

English Nature, (2004). *Reptiles: guidelines for developers*. Peterborough.

Gent, T. and Gibson, S. (ed.) (2003) *Herpetofauna Workers Manual*. Bournemouth: JNCC.

Water voles:

Natural England, (2008) *Water voles - the law in practice. Guidance for planners and developers*.

White-clawed crayfish:

Peay, S. (2002) *Guidance on Habitat for White-clawed Crayfish and its Restoration.* Kendal: English Nature

Relevant Legislation:

Wildlife and Countryside Act 1981, (c. 69) (as amended). Available at: http://www.legislation.gov.uk/ukpga/1981/69 (Accessed: 21 September 2016)

Countryside and Rights of Way Act 2000 (c.37). Available at: http://www.legislation.gov.uk/ukpga/2000/37/contents (Accessed: 21 September 2016)

The Conservation of Habitats and Species Regulations 2010 (No. 490). Available at: http://www.legislation.gov.uk/uksi/2010/490/contents/made (Accessed: 21 September 2016)

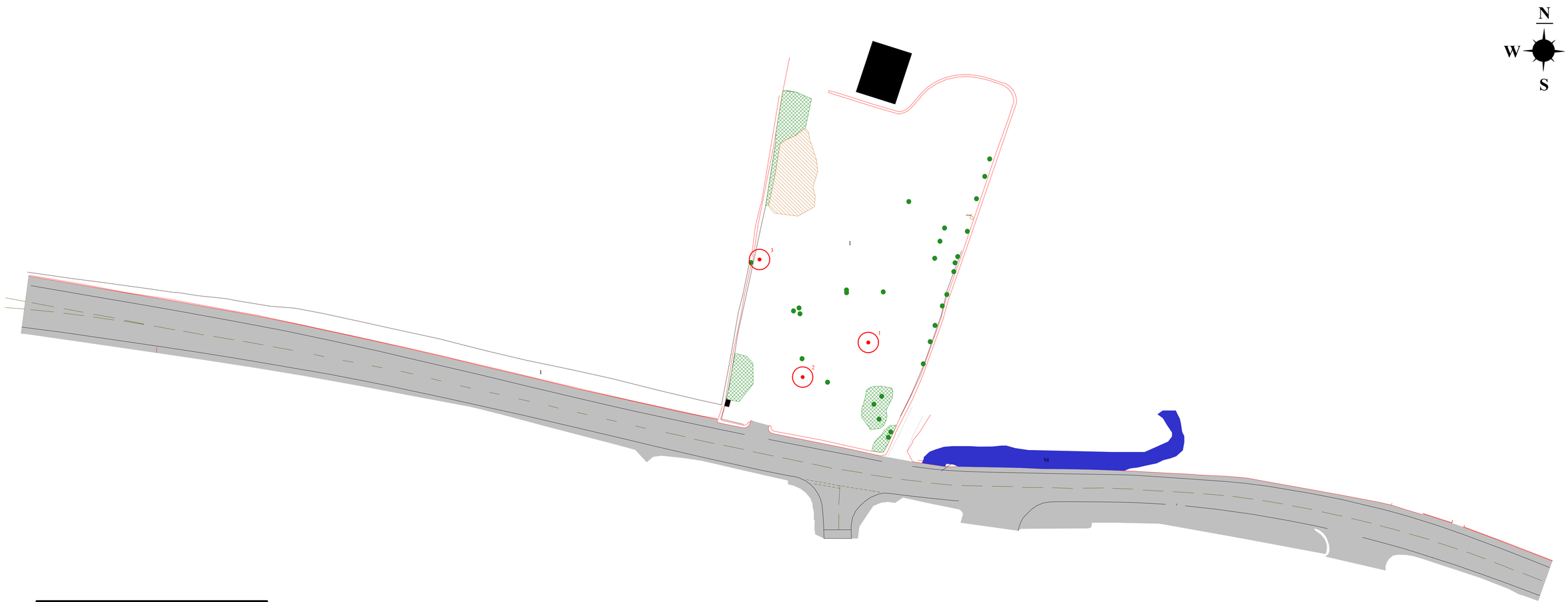
Conservation of natural habitats and of wild fauna and flora Council Directive (92/43/EEC) (The Habitats Directive) (as amended) Available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043 (Accessed: 21 September 2016)

Protection of Badgers Act 1992 (c. 51). Available at: http://www.legislation.gov.uk/ukpga/1992/51/contents (Accessed: 21 September 2016)

The Hedgerow Regulations 1997 (No. 1160). Available at: http://www.legislation.gov.uk/uksi/1997/1160/contents/made (Accessed: 21 September 2016)

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Appendices



Appendix 1: Phase 1 Habitat Map

Land south of Glebe Farm, Barnsley Road,
Silkstone, South Yorkshire, S75 4JX.
JCA Ref: 13131b/DB

NOT TO SCALE	PAPER SIZE : A1

KEY

- Dense/continuous scrub
- I — Improved grassland
- M — Mesotrophic
- Scattered broad-leaved trees
- Target note
- Tall ruderal
- Wall

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Appendix 2: Photographic Evidence

Photo 1: A view of the site looking north.



Photo 2: A view of the site looking south.

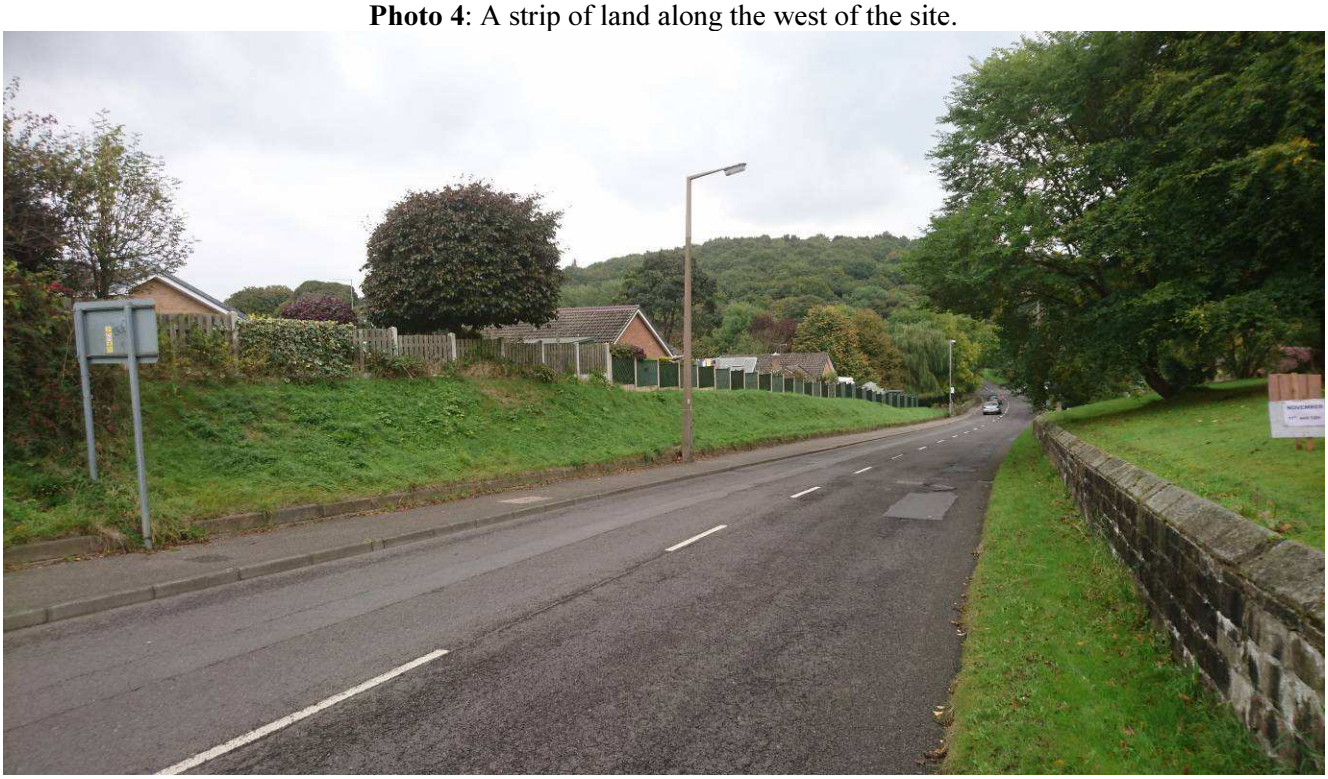


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Photo 3: A row of semi-mature trees at the southern boundary.



Photo 4: A strip of land along the west of the site.



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Photo 5: A strip of land including Silkstone Beck, along the west of the site.

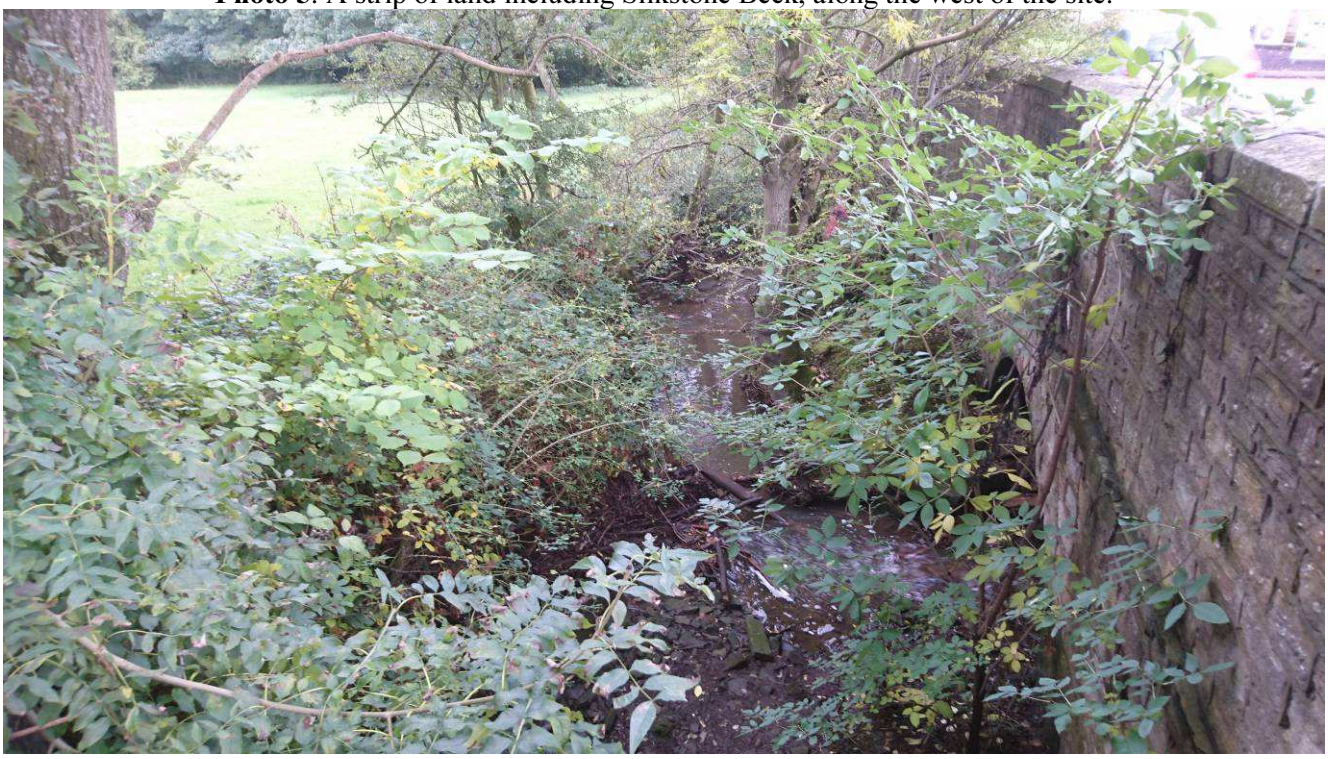


Photo 6: A patch of Bramble.



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Photo 7: A patch of Nettles.



Photo 8: Remains of a fox kill (Target Note 1).



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Photo 9: A pile of wood (Target Note 2).



Photo 10: A bird box on an old telephone pole (Target Note 3).



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Appendix 3: Data Search

Table 5: Barnsley Biodiversity Trust's records of protected and notable species within a 2km radius of the site.

Taxon Group	Common Name	Scientific Name	Number of Records	Latest Record
Amphibian	Common Frog	*Rana temporaria*	5	1999
	Great Crested Newt	*Triturus cristatus*	1	2010
Bird	Pink-Footed Goose	*Anser brachyrhyncus*	3	2015
	Meadow Pipit	*Anthus pratensis*	3	2011
	Tree Pipit	*Anthus trivialis*	2	1989
	Linnet	*Carduelis cannabina*	5	2012
	Goldfinch	*Carduelis carduelis*	7	2014
	Stock Dove	*Columba oenas*	1	2014
	Cuckoo	*Cuculus canorus*	1	1985
	House Martin	*Delichon urbica*	6	2015
	Lesser Spotted Woodpecker	*Dendrocopos minor*	1	2005
	Yellowhammer	*Emberiza citrinella*	10	2014
	Kestrel	*Falco tinnunculus*	16	2015
	Brambling	*Fringilla montifringilla*	2	2014
	Swallow	*Hirundo rustica*	6	2015
	Grey Wagtail	*Motacilla cinerea*	8	2015
	Yellow Wagtail	*Motacilla flava*	2	1988
	Spotted Flycatcher	*Muscicapa striata*	1	1985
	Curlew	*Numenius arquata*	1	1989
	Willow Tit	*Parus montanus*	10	2015
	House Sparrow	*Passer domesticus*	10	2014
	Tree Sparrow	*Passer montanus*	5	2013
	Grey Partridge	*Perdix perdix*	2	1994
	Wood Warbler	*Phylloscopus sibilatrix*	2	1989
	Willow Warbler	*Phylloscopus trochilus*	3	2014
	Green Woodpecker	*Picus viridis*	9	2015
	Dunnock	*Prunella modularis*	4	2013
	Bullfinch	*Pyrrhula pyrrhula*	13	2015
	Firecrest	*Regulus ignicapillus*	1	2016
	Goldcrest	*Regulus regulus*	16	2016
	Woodcock	*Scolopax rusticola*	4	2014
	Turtle Dove	*Streptopelia turtur*	1	1985
	Starling	*Sturnus vulgaris*	1	1999
	Redwing	*Turdus iliacus*	11	2015
	Blackbird	*Turdus merula*	8	2015
	Song Thrush	*Turdus philomelos*	9	2015
	Fieldfare	*Turdus pilaris*	10	2014

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Bird	Mistle Thrush	*Turdus viscivorus*	8	2015
	Lapwing	*Vanellus vanellus*	2	2011
Crustacean	White-clawed Freshwater Crayfish	*Austropotamobius pallipes*	2	2010
Insect - Lepidoptera	Wall	*Lasiommata megera*	1	2005
	White Letter Hairstreak	*Satyrium w-album*	22	2015
Reptile	Adder	*Vipera berus*	4	2009
Terrestrial Mammal	Bats	*Chiroptera*	7	2010
	Hedgehog	*Erinaceus europaeus*	9	2014
	Brown Hare	*Lepus europaeus*	45	2004
	Badger	*Meles meles*	14	1999
	Unidentified Bat	*Myotis*	1	2011
	Natterer's Bat	*Myotis nattereri*	4	2002
	Noctule	*Nyctalus noctula*	2	1993
	Pipistrelle	*Pipistrellus pipistrellus*	23	2013
	Brown Long-Eared Bat	*Plecotus auritus*	9	2010

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Appendix 4: Site Map

Figure 1: Google Maps image of **the land south of Glebe Farm, Barnsley Road**, showing the survey site in relation to the surrounding landscape and habitats.



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Appendix 5: Floral Species List

Table 6: Complete list of plant species encountered during survey.

Common Name	Scientific Name
Perennial Rye-grass	*Lolium perenne*
Ribwort Plantain	*Plantago lanceolata*
Broadleaf Plantain	*Plantago major*
Dandelion	*Taraxacum sp.*
Hogweed	*Heracleum sphondylium*
Nettle	*Urtica dioica*
Cow Parsley	*Anthriscus sylvestris*
Field Buttercup	*Ranunculus acris*
Daisy	*Bellis perennis*
Cocksfoot	*Dactylis glomerata*
Common Vetch	*Vicia sativa*
Rumex	*Rumex sp.*
White Deadnettle	*Lamium album*
Herb-Robert	*Geranium robertianum*
Bramble	*Rubus fruticosus agg.*
Hawthorn	*Crataegus monogyna*
Wood Avens	*Geum urbanum*
Elder	*Sambucus nigra*
Ash	*Fraxinus excelsior*
Water Avens	*Geum rivale*
Ivy	*Hedera helix*
Holly	*Ilex aquifolium*
Lime	*Tilia × europaea*
Willow	*Salix sp.*
Cherry	*Prunus avium*
Wych Elm	*Ulmus glabra*
Norway Maple	*Acer platanoides*
Laurel	*Laurus nobilis*
Bittercress	*Cardamine hirsuta*

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Appendix 6: Protected Species Information

The following species are protected under EU law, such as the Conservation (Natural Habitats, &c.) Regulations (2010):

- All UK bat species
- Dormouse
- Great Crested Newt and Natterjack Toad
- Large Blue Butterfly
- Otter
- Pine Marten
- Polecat
- Scottish Wild Cat
- Smooth Snake and Sand Lizard
- Various aquatic and plant species

These species are afforded the highest protection in the UK. Under this protection it is an offence to; deliberately capture, injure or kill any wild animal of a European protected species; deliberately disturb wild animal of any such species; deliberately take or destroy the eggs of such an animal, or damage or destroy a breeding site or resting place of such an animal.
In addition to this it is an offence to be in possession of, or to control, transport, sell or exchange, or to offer for sale or exchange, a European Protected species.

The following species are protected under UK law, such as the Wildlife and Countryside Act 1981:

- Badger
- Nesting birds
- Red Squirrel
- Reptiles (Adder, Common lizard, Grass snake, Slow worm)
- Water Vole
- White Clawed Crayfish
- Various bird species i.e. Barn Owl
- Various plant species

Therefore under this protection it is an offence to; kill, injure or take any of the above species.

Nesting birds are only protected during the breeding season whilst on their nest. In addition to the adults being protected, the eggs, young and nest itself whilst in use are protected.

The Wildlife and Countryside Act 1981 also contains measures to prevent the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9 in England and Wales (e.g. Japanese Knotweed and Himalayan Balsam).

Badgers are protected under The Protection of Badgers Act 1992. Under this legislation it is an offence to; take, injure, kill, or cruelly ill-treat a badger; interfere with a badger sett; sell or possess a live badger; or mark or ring a badger.

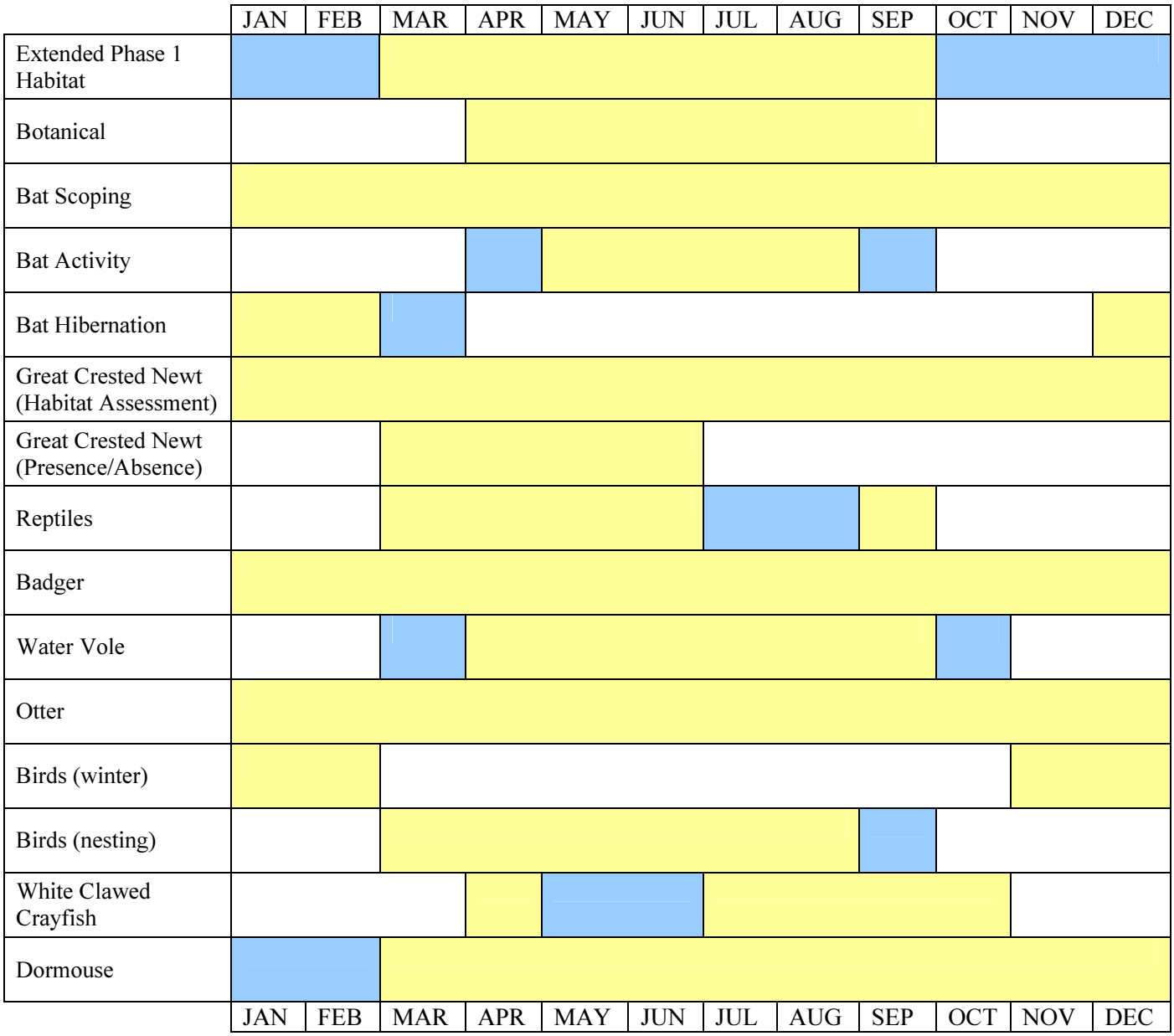
The following habitat types are protected under UK Law:

- Habitats that are used by protected species
- Habitats that fall within designated sites
- Hedgerows
- Individual trees/woods can be protected under Tree Preservation Orders

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Appendix 7: Survey Calendar

Figure 1: Survey calendar for protected species and habitat surveys.



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Appendix 8: Author Qualifications

Principal Consultant and Managing Director

Jonathan Cocking *F.R.E.S., Tech. Cert. (Arbor.A), PDipArb (RFS) FArborA CBiol MSB. MICFor.* Jonathan is a Registered Consultant and Fellow of the Arboricultural Association and sits on its Professional Committee. He has 31 years experience in the Arboricultural profession and served for eight years as Senior Arboriculturist with a large local authority before establishing JCA in 1997. Jonathan has since developed JCA's portfolio of services and its extensive client base. He is a Chartered Biologist, a Chartered Arboriculturalist and an Expert Witness with much experience of litigation work.

Technical Coordinator

Toby Thwaites *BSc (Hons), HND (Arboriculture).* Toby joined JCA in 1998 after graduating in Ecology at the University of Huddersfield and has since graduated in Arboriculture at the University of Central Lancashire. A former JCA team leader and Consulting Arboriculturist, Toby is now Technical Coordinator and oversees all office and on-site activities at JCA and is on hand to offer technical support and advice.

Consulting Staff: Arboriculture

Toby Parsons *Cert. Arb. (RFS), Tech. Cert. (Arbor.A).* Toby joined JCA after spending 6 years working as a senior climber for various Arboricultural contractors in the East Midlands and the South-West. He has gained the Level 2 Certificate in Arboriculture (RFS) and an Arboricultural Technicians Certificate. Toby is LANTRA certified in Professional Tree Inspection.

Scott Reid *ND* *(Arboriculture and Forestry).* Scott joined JCA after working with other consultancy companies in the south of England. He specialises in trees in relation to development and holds a National Diploma, various NPTC qualifications and is currently studying for his Level 4 Diploma in Arboriculture.

Andrew Bussey. Andrew joined JCA having spent 12 years working as a tree surgeon for various private companies and a Local Authority. He has various NPTC qualifications, is QTRA qualified and is currently studying for his Arboricultural Technicians Certificate.

Phil Humeniuk *FdSc (Arboriculture).* Phil joined JCA having spent 3 years working for various tree surgery companies and as a Tree Officer for a Local Authority. He also has several years experience working as a consultant both for JCA and for another consultancy. Phil obtained his foundation degree in Arboriculture at the University of Central Lancashire and has various NPTC's and is LANTRA certified in Professional Tree Inspection.

Emily Wilde *FdSc (Arboriculture).* Emily joined JCA having previously worked for various private tree surgery and consultancy companies over the past 8 years. She initially obtained a ND in Forestry & Arboriculture, followed by a FdSc in Arboriculture at Askham Bryan College, York. Emily has various NPTC certificates and is QTRA qualified.

Mick Eltringham *ND (Forestry).* Mick joined JCA after spending 12 years working in the industry for various private companies in the north and south of England. He has also spent the last five years working as a consultant for two canopy research projects in the Amazon Rainforest, working with Oxford University and the University of Arizona. He has various NPTC Qualifications.

Charles Cocking. Charles joined JCA in January 2014 as an Apprentice having previously worked for the company on a part time basis during 2013. In between his roles at JCA, Charles will be studying at Askham Bryan College, York, undertaking a two year course in order to obtain a Foundation Degree in Arboriculture (FdSc Arboriculture).

Consulting Staff: Ecology

David Bodenham *BSc Ind (Hons) Zoology, MSc Biodiversity and Conservation.* David joined JCA as an addition to the expanding ecology department. An advocate of evidence based conservation, he studied Zoology (Ind) at University and moved onto an MSc in Biodiversity and Conservation where he gained the myriad of skills needed as an ecologist. With over 7 years of experience, David specialises in bat and amphibian ecology.

David Ryder David joined JCA as our in-house ecologist. He brings with him over 8 years experience in the field of ecological consultancy. David holds a Natural England Licence to disturb and handle bats and is currently undergoing assessment for Chartered Institute of Ecology & Environmental Management (CIEEM) membership.

Josie Collier *BSc (Hons) Ecology.* Josie joined JCA's ecology department and brings with her a degree in Ecology and Environmental Biology from the University of Leeds. Josie has gained experience from working with a local authority and is a Graduate member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

Freya Olsson *BSc (Hons) Biology and Geography (within Natural Sciences).* Freya joined the Ecology department in July 2016 following a 6 week placement in the summer of 2015. Freya studied at Durham University gaining a degree in Biology and Geography (Joint Honours within Natural Sciences). She has extensive field and analytical experience, giving her the core skills required as an ecologist.

Administrative Staff

Sue Guest Administrative Team Leader.
Simeon Haigh *BSc (Hons).* IT Officer.
Lorraine Spink Administrative Assistant.
Yasmin Shahzad Administrative Assistant.
Catherine Cocking Accounts Manager.

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The information which we have prepared and provided is true, and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that the opinions expressed are our true and bona fide opinions.

Signed



.....

David Bodenham *BSc Ind (Hons), MSc*

20/10/2016

Proofread by



.....

Freya Olsson *BSc (Hons) Biology and Geography*

20/10/2016

For and on behalf of ***JCA Ltd***

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Ecological Pre-Planning Services

- Phase 1 Habitat Surveys
- Great Crested Newt eDNA Sampling
- Protected Species: Bat, Wintering and Nesting Bird, Badger, Amphibian, Otter, Water Vole, White-Clawed Crayfish, Dormice and Reptile Surveys.
- Preparation for Environmental Impact Assessment (EIA)
- Invasive Species Surveys
- Code for Sustainable Homes

Ecological Post-Planning Services

- Biodiversity Enhancement Plans
- Protected Species Mitigation
- Ecological Management (Bat and Bird box installation and inspection)



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