PHASE 1 HABITAT SURVEY REPORT
at
St Johns Primary School
High Street
Penistone
South Yorkshire
S36 6BS

Client:
AHR Global

Client Address:
7 Brewery Place
Leeds
LS10 1NE

Client Contact:
0113 3858787 (Tel)

JCA Ref:
13452a/JoC

Date of Report:
5th April 2017

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	31st March 2017	Rens Verlhurst	27th March 2017	Josie Collier	5th April 2017	Josie Collier	5th April 2017	Toby Thwaites

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.*

© JCA Limited 2017

Summary

A report is required for **St Johns Primary School, High Street** 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 an extension to the school.

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. 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. 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.

After conducting a thorough site investigation and a detailed Desktop Study, we consider **St Johns Primary School, High Street** to contain habitats of low ecological value (please see **Section 3.2**).

The site is not situated within influencing distance of any nature conservation sites of either statutory or non-statutory designation.

The site is already heavily developed, containing school buildings, large areas of hard standing and amenity grassland. This significantly lowers the ecological value of the site. The trees, scrub and pond on site have some potential to support protected species such as nesting birds and amphibians, though the development could likely occur without affecting these habitats.

The pond on site is known to support common frog, which receives partial protection under the Wildlife and Countryside Act 1981. This pond should therefore be retained within the development.

Should the removal of any vegetation be required, this should occur outside of the nesting bird period. If work within the nesting bird period is unavoidable, a nesting bird survey must first be carried out to ensure no birds are currently nesting and that any young have fledged. The nesting season is typically March – September inclusive.

The removal of any vegetation should be mitigated through an appropriate planting scheme post-development. This should incorporate locally native shrubs and trees.

© JCA Limited 2017

Contents

1 Introduction and Terms of Reference 5
1.1 Purpose of the Report 5
1.2 Terms of Reference 5
1.3 Scope of the Report 5
1.4 Details of Proposed Development 5
1.5 Site Description 5
2 Methodology 6
2.1 Desktop Study Methodology 6
2.2 Site Assessment Methodology 6
3 Results 7
3.1 Desktop Study Results 7
3.2 Site Assessment Results 8
4 Discussion and Analysis of Results 10
4.1 Nature Conservation Designations 10
4.2 On-site Habitat 10
4.3 Potential for Protected Species 10
5 Conclusions and Recommendations 12
6 References 13

Appendix 1: Phase 1 Habitat Map 16
Appendix 2: Photographic Evidence 17
Appendix 3: Data Search 20
Appendix 4: Site Map 23
Appendix 5: Floral Species List 24
Appendix 6: Protected Species Information 25
Appendix 7: Survey Calendar 26
Appendix 8: Author Qualifications 27

© JCA Limited 2017

1 Introduction and Terms of Reference

1.1 Purpose of the Report

1.1.1 A report is required for **St Johns Primary School, High Street** 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 **AHR Global** to visit the site and prepare my findings in a report.

1.2.2 For this purpose I have been supplied with a site map (drawing: **2016.00267.SU1**) and brief 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) by Josie Collier, *BSc (Hons), GradCIEEM.*

1.4 Details of Proposed Development

1.4.1 The development proposed on this site is an extension to the school.

1.5 Site Description

1.5.1 **St Johns Primary School, High Street** is situated approximately 10km west-southwest of Barnsley town centre, at grid reference: SE244029.

1.5.2 The site comprises of a school building with associated play area, grassland and footpaths.

1.5.3 The site is surrounded by predominantly residential properties, with agricultural farmland and scattered woodland copses beyond this. A map of the site in relation to the surrounding habitats can be seen at **Appendix 4.**

© JCA Limited 2017

2 Methodology

2.1 Desktop Study Methodology

2.1.1 A desktop study was undertaken on 31st March 2017 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. For this information, Barnsley Biological Records Centre was contacted.

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 Nature Reserves (LNRs), Ramsar Sites, Special Areas of Conservation (SACs), Special Protection Areas (SPAs) or Sites of Special Scientific Interest (SSSIs) that may be present within 2km of the survey site.

2.2 Site Assessment Methodology

2.2.1 A thorough site assessment was undertaken on 27th March 2017 by Josie Collier, *BSc (Hons), gradCIEEM*, 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 were 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, Dormice, Great Crested Newts, Nesting Birds, Otters, Reptiles, Water Voles, White-Clawed Crayfish (please see **Appendix 6**).

2.2.4 Limitations: The survey was conducted during the sub-optimal time for botanical surveys. Therefore, many of the plant species encountered were either not in flower/leaf or were dead. 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.

© JCA Limited 2017

3 Results

3.1 Desktop Study Results

3.1.1 Local Data Centre Records: Barnsley Biological Records Centre has been commissioned to provide the records held for protected and notable species within a 2km radius of the survey site. The results have been summarised below. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area. Please see **Appendix 3** for full desktop study results.

Legally Protected Species

3.1.2 Legally protected species are those protected under EU and UK legislation such as the Wildlife and Countryside Act (1981), Countryside and Rights of Way Act (2000), Protection of Badgers Act 1992 and the EU's Habitats Directive.

3.1.3 Amphibians: The data search revealed records of common frog within the pond on site. Other records of common frog and of common toad were also present within 2km of the site.

3.1.4 Badgers: The data search revealed records of badgers within 2km of the site. No records were obtained from within 500m.

3.1.5 Bats: The data search revealed records of common pipistrelle within 500m of the site. There are also records of Brandt's bat, Daubenton's bat, whiskered bat and noctule within 2km of the site.

3.1.6 Nesting Birds: The data search revealed a number of bird species within 2km of the site, with records of linnet, goldfinch, house martin, yellowhammer, swallow, house sparrow, dunnock, starling, blackbird, song thrush and lapwing obtained from within 500m.

3.1.7 Water Voles: The data search revealed a single record of a water vole within 2km of the site. This record was obtained in 1982 and was not obtained from within 500m of the site.

Notable Species

3.1.8 Notable species are those listed in the UK BAP, local BAP, NERC Act (2006) S.41 or any other relevant policies.

3.1.9 Invertebrates: The data search revealed numerous records of butterfly and moth species within 2km of the site.

3.1.10 Mammals: The data search revealed records of both hedgehog and brown hare within 500m of the site.

© JCA Limited 2017

Statutory Nature Conservation Sites

3.1.11 There are no statutory nature conservation sites within 2km of the site.

3.2 Site Assessment Results

3.2.1 The site was surveyed on 27th March 2017 by Josie Collier, *BSc (Hons), GradCIEEM*.

3.2.2 The site comprises a school building with associated playground, grassland and footpaths. There is an access road and car park to the north and a pond within the school grounds to the west.

Habitats Present

3.2.3 The following habitat types are present at St Johns Primary School, High Street (in alphabetical order):

- Amenity grassland
- Buildings
- Dense scrub
- Hard standing
- Scattered broad-leaved trees
- Standing water

3.2.4 Amenity grassland: A large portion of the site is comprised of amenity grassland. This is used as playing fields and as landscaping areas around the buildings. The sward here is kept short, which makes species identification more difficult, although grass species typical of this type of habitat are Perennial Ryegrass (*Lolium perenne*), Bent grasses (*Agrostis sp.*) and Fescues (*Festuca sp.*). Floral species present include dandelion (*Taraxacum officinale*) and daisy (*Bellis perennis*).

3.2.5 Buildings: The site contains a number of buildings associated with the school. The largest of these is located to the west of the site and is a two storey school building. There is a small pagoda to the east of this building. Towards the east of the site are two smaller buildings. Both buildings are single storey, brick constructions, one with a flat roof and the other with a pyramid hip roof.

3.2.6 Dense scrub: There are two small areas of scrub vegetation to the southeast and southwest of the site. Species here include Bramble (*Rubus fruticosus*), Elder (*Sambucus nigra*), Nettle (*Urtica dioica*) and Cleavers (*Galium aparine*).

3.2.7 Hard standing: The majority of the site comprises of hard standing. This occurs as roads, footpaths and playground areas within the school grounds.

© JCA Limited 2017

3.2.8 Scattered broad-leaved trees: There are several trees scattered throughout the site. Species here include Silver Birch (*Betula pendula*), Common Alder (*Alnus glutinosa*) and Cherry (*Prunus sp.*).

3.2.9 Standing water: To the west of the site is a small pond, which is contained behind a wooden fenced and used as an educational resource for the school. There is a large amount of pondweed on the surface of the water and a small amount of marginal vegetation around the pond edge.

Target Notes

3.2.10 Target Note 1: A record of a common frog obtained within the site.

3.2.11 Target Note 2: A large pile of branches.

3.2.12 Target Note 3: An area of litter.

Fauna Species Encountered

3.2.13 A single wood pigeon was encountered during the site survey, in a tree to the north of the site. No other faunal species were encountered.

Invasive Plant Species

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

© JCA Limited 2017

4 Discussion and Analysis of Results

4.1 Nature Conservation Designations

4.1.1 No designated nature conservation sites are located within 2km of the site.

4.2 On-site Habitat

4.2.1 The amenity grassland on site is heavily managed and thus does not contain a diverse variety of floral species. This reduces its appeal to faunal species and gives the area negligible ecological value. The hard standing on site also has negligible ecological value as the materials used here, such as tarmac and concrete, prevent floral species from growing.

4.2.2 The buildings on site are mostly flat roofed with well pointed brickwork and contain large windows. These features make the buildings unlikely to support roosting bats. As the development is an extension to the current school building, it is unlikely that these buildings will be affected by the proposed development.

4.2.3 The scrub vegetation has some ecological potential; however, the areas are small and have poor connectivity to superior habitat in the wider landscape. The loss of this habitat could therefore be easily mitigated through an appropriate planting scheme.

4.2.4 The trees on site have moderate ecological value and could provide suitable nesting habitat for birds. The trees do not contain any significant cracks or cavities that could be utilised by roosting bats.

4.2.5 The pond on site has moderate ecological value and a record of a common frog was obtained from this area. The water will likely attract smaller invertebrates, although the lack of surrounding vegetation reduced the value of this area.

4.3 Potential for Protected Species

4.3.1 Amphibians: The pond on site provides aquatic habitat such as common frog, and there is a record of a common frog within this pond. The terrestrial habitat around this pond is sub-optimal as it mostly comprises of hard standing.

4.3.2 Badgers: The site does not contain the required vegetative habitat to support badgers and close proximity to humans would deter them from entering this site. The data search revealed records of badgers within 2km of the site though no records were obtained from within 500m. No evidence of badger activity was discovered during the site survey.

4.3.3 Barn Owls: The site does not contain the required roosting or foraging habitat to support barn owls. The data search did not reveal any records of barn owls within 2km of the site.

© JCA Limited 2017

4.3.4 Bats: The site does not contain the required roosting habitat to support bats, in the form of trees, buildings or other built structures. There are records of bats within 500m of the site and it is likely that they will pass over this site when foraging or commuting.

4.3.5 Dormice: The site does not contain the required floral habitat to support dormice and their distribution in the UK is largely limited to the south of England. The data search did not reveal any records of dormice within 2km of the site.

4.3.6 Nesting Birds: The site contains numerous trees and small areas of scrub vegetation that could be utilised by nesting birds. A wood pigeon was observed in a tree to the north of the site and there are numerous records of bird species within 2km of the site. It is unknown at this stage if any trees are to be removed to facilitate the development; however, the trees on site are generally of low quality and could be easily replaced post-development.

4.3.7 Otters and Water Voles: The site does not contain the required aquatic habitat to support otters and water voles. There are no records of otters within 2km of the site, and only a single record of a water vole which was obtained in 1982 and was located over 500m away.

4.3.8 Reptiles: The site does not contain the required mosaic of habitats to support reptiles and close proximity to humans would deter them from entering this area. The data search did not reveal any records of reptiles within 2km of the site.

4.3.9 White-clawed Crayfish: The site does not contain the required aquatic habitat to support white-clawed crayfish and they are unable to commute large distances over terrestrial land. The data search did not reveal any records of white-clawed crayfish within 2km of the site.

*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 6**), work should stop immediately and JCA or Natural England contacted.*

© JCA Limited 2017

5 Conclusions and Recommendations

5.1 After conducting a thorough site investigation and a detailed Desktop Study, we consider **St Johns Primary School, High Street** to contain habitats of low ecological value (please see **Section 3.2**).

5.2 The site is not situated within influencing distance of any nature conservation sites of either statutory or non-statutory designation.

5.3 The site is already heavily developed, containing school buildings, large areas of hard standing and amenity grassland. This significantly lowers the ecological value of the site. The trees, scrub and pond on site have some potential to support protected species such as nesting birds and amphibians, though the development could likely occur without affecting these habitats.

5.4 The pond on site is known to support common frog, which receives partial protection under the Wildlife and Countryside Act 1981. This pond should therefore be retained within the development.

5.5 Should the removal of any vegetation be required, this should occur outside of the nesting bird period. If work within the nesting bird period is unavoidable, a nesting bird survey must first be carried out to ensure no birds are currently nesting and that any young have fledged. The nesting season is typically March – September inclusive.

5.6 The removal of any vegetation should be mitigated through an appropriate planting scheme post-development. This should incorporate locally native shrubs and trees.

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

© JCA Limited 2017

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*.

© JCA Limited 2017

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)

© JCA Limited 2017

Appendices

Appendix 1: Phase 1 Habitat Map

St. John's Primary School
High Street, Penistone, S36 6BS
JCA Ref: 13452a/JoC

SCALE : 1:200	PAPER SIZE : A2

KEY

- A — Amenity grassland
- Buildings
- Dense/continuous scrub
- Fence
- H — Hard standing
- Scattered broad-leaved trees
- Standing water
- Target note
- Wall

JCA Limited
Arboricultural & Forestry Consultants

Appendix 2: Photographic Evidence

Photo 1: Wood pigeon in a tree to the north of the site.

Photo 2: Amenity grassland to the east of the site.

© JCA Limited 2017

Photo 3: Amenity grassland to the north of the site.

Photo 4: Pile of branches to the south of the site.

© JCA Limited 2017

Photo 5: Pond to the west of the site.

Photo 6: School buildings on site.

© JCA Limited 2017

Appendix 3: Data Search

Table 1: West Yorkshire Ecology's records of protected and notable species within a 2km radius of the site. An asterisk * denotes records that are within 500m of the site.

Group	Common Name	Species Name	No. of Records	Most Recent Record
Amphibian	Common Toad	*Bufo bufo*	1	2015
	Common Frog*	*Rana temporaria*	3	2012
Bird	Skylark	*Alauda arvensis*	32	2016
	Kingfisher	*Alcedo atthis*	27	1996
	Northern Pintail	*Anas acuta*	1	1975
	Teal	*Anas crecca*	2	2015
	Wigeon	*Anas penelope*	6	2015
	Greylag Goose	*Anser anser*	1	2009
	Pink-Footed Goose	*Anser brachyrhyncus*	2	1994
	Meadow Pipit	*Anthus pratensis*	16	2016
	Pochard	*Aythya ferina*	2	1997
	Goldeneye	*Bucephala clangula*	1	2005
	Linnet*	*Carduelis cannabina*	23	2016
	Goldfinch*	*Carduelis carduelis*	30	2016
	Ringed Plover	*Charadrius hiaticula*	1	1975
	Stock Dove	*Columba oenas*	15	2013
	Quail	*Coturnix coturnix*	1	2011
	Cuckoo	*Cuculus canorus*	3	1996
	Tundra Swan	*Cygnus columbianus*	1	1975
	House Martin*	*Delichon urbica*	8	2016
	Lesser Spotted Woodpecker	*Dendrocopos minor*	1	1997
	Yellowhammer*	*Emberiza citrinella*	55	2016
	Reed Bunting	*Emberiza schoeniclus*	15	2016
	Peregrine	*Falco peregrinus*	2	2011
	Kestrel	*Falco tinnunculus*	24	2016
	Brambling	*Fringilla montifringilla*	3	1997
	Snipe	*Gallinago gallinago*	3	2008
	Swallow*	*Hirundo rustica*	24	2016
	Red Grouse	*Lagopus lagopus*	2	2011
	Common Gull	*Larus canus*	1	2013
	Lesser Black-Backed Gull	*Larus fuscus*	2	2012
	Grasshopper Warbler	*Locustella naevia*	1	2009
	Common Scoter	*Melanitta nigra*	1	2009
	Grey Wagtail	*Motacilla cinerea*	10	2015
	Yellow Wagtail	*Motacilla flava*	1	1998
	Spotted Flycatcher	*Muscicapa striata*	8	2016
	Curlew	*Numenius arquata*	10	2016
	Willow Tit	*Parus montanus*	3	2016
	House Sparrow*	*Passer domesticus*	31	2016

© JCA Limited 2017

Bird	Tree Sparrow	*Passer montanus*	12	2016
	Grey Partridge	*Perdix perdix*	9	2016
	Cormorant	*Phalacrocorax carbo*	1	2007
	Ruff	*Philomachus pugnax*	1	1975
	Common Redstart	*Phoenicurus phoenicurus*	1	1975
	Willow Warbler	*Phylloscopus trochilus*	21	2016
	Green Woodpecker	*Picus viridis*	19	1999
	Golden Plover	*Pluvialis apricaria*	2	2016
	Red-necked Grebe	*Podiceps grisegena*	1	1975
	Willow Tit	*Poecile montanus*	1	2010
	Dunnock*	*Prunella modularis*	22	2016
	Bullfinch	*Pyrrhula pyrrhula*	7	2014
	Goldcrest	*Regulus regulus*	6	2016
	Starling*	*Sturnus vulgaris*	24	2015
	Redwing	*Turdus iliacus*	3	2014
	Blackbird*	*Turdus merula*	27	2016
	Song Thrush*	*Turdus philomelos*	38	2016
	Fieldfare	*Turdus pilaris*	10	2016
	Mistle Thrush	*Turdus viscivorus*	12	2013
	Lapwing*	*Vanellus vanellus*	67	2016
Bony fish	Sea Trout	*Salmo trutta*	3	2014
Insect - butterfly	Small Heath	*Coenonympha pamphilus*	1	2016
	Wall	*Lasiommata megera*	4	2016
Insect - moth	Knot Grass	*Acronicta rumicis*	4	2015
	Brown-Spot Pinion	*Agrochola litura*	1	2016
	Mouse Moth	*Amphipyra tragopoginis*	5	2016
	Dusky Brocade	*Apamea remissa*	2	2016
	Centre-barred Sallow	*Atethmia centrago*	2	2016
	Mottled Rustic	*Caradrina morpheus*	2	2016
	Broom Moth	*Ceramica pisi*	2	2016
	Small Square-spot	*Diarsia rubi*	13	2016
	Small Phoenix	*Ecliptopera silaceata*	4	2016
	Ghost Moth	*Hepialus humuli*	1	2016
	Rosy Rustic	*Hydraecia micacea*	1	2016
	Shoulder-striped Wainscot	*Mythimna comma*	1	2016
	Shaded Broad-bar	*Scotopteryx chenopodiata*	1	2016
	White Ermine	*Spilosoma lubricipeda*	7	2016
	Buff Ermine	*Spilosoma luteum*	4	2016
	Cinnabar	*Tyria jacobaeae*	1	2015
Terrestrial mammal	Water Vole	*Arvicola terrestris*	1	1982
	Bats	*Chiroptera*	12	2001
	Hedgehog*	*Erinaceus europaeus*	26	2016
	Brown Hare*	*Lepus europaeus*	13	2016
	Badger	*Meles meles*	7	2016

© JCA Limited 2017

Terrestrial mammal	Myotis Bat Species	*Myotis sp.*	1	2016
	Brandt's Bat	*Myotis brandti*	1	1990
	Daubenton's Bat	*Myotis daubentoni*	1	1991
	Whiskered Bat	*Myotis mystacinus*	1	1987
	Noctule	*Nyctalus noctula*	5	1991
	Common Pipistrelle*	*Pipistrellus pipistrellus*	36	2016

© JCA Limited 2017

Appendix 4: Site Map

Figure 1: Google Maps image of **St Johns Primary School, High Street**, showing the survey site in relation to the surrounding landscape and habitats.

© JCA Limited 2017

Appendix 5: Floral Species List

Table 2: Complete list of floral species encountered during survey.

Common Name	Scientific Name
Field Maple	*Acer campestre*
Common Alder	*Alnus glutinosa*
Daisy	*Bellis perennis*
Silver Birch	*Betula pendula*
Cotoneaster	*Cotoneaster sp.*
Cypress	*Cupressus sp.*
Cleavers	*Galium aparine*
Herb Robert	*Geranium robertianum*
Ivy	*Hedera helix*
Holly	*Ilex aquifolium*
Perennial Ryegrass	*Lolium perenne*
Daffodil	*Narcissus sp.*
Poplar	*Populus sp.*
Cherry	*Prunus sp.*
Bramble	*Rubus fruticosus*
Broad-leaved Dock	*Rumex obtusifolius*
Goat Willow	*Salix caprea*
Elder	*Sambucus nigra*
Sowthistle	*Sonchus sp.*
Whitebeam	*Sorbus aria*
Dandelion	*Taraxacum officinale*
Lime	*Tilia sp.*
Clover	*Trifolium sp.*
Nettle	*Urtica dioica*
Wood Speedwell	*Veronica montana*

© JCA Limited 2017

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.

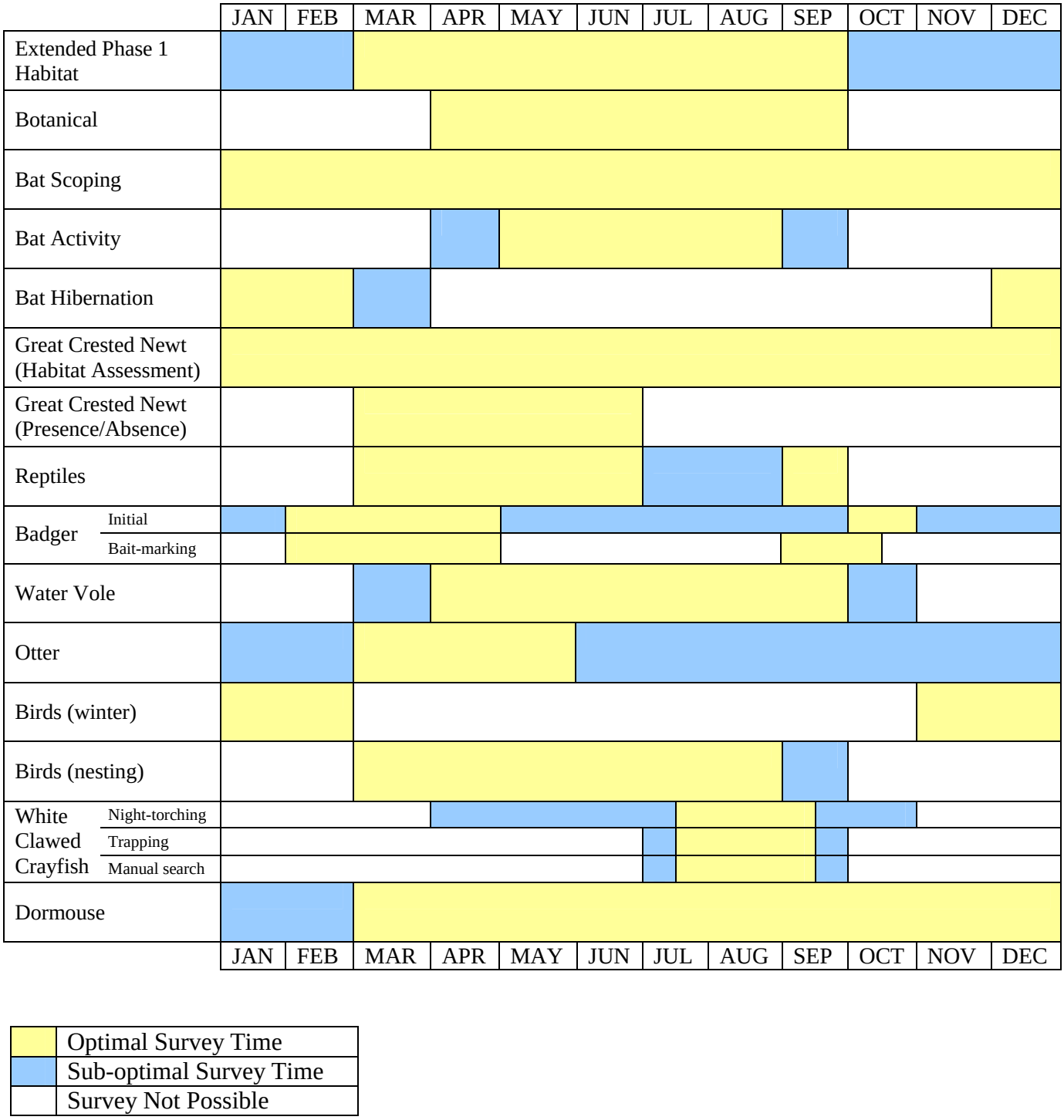
The following habitat types are protected under UK Law:

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

© JCA Limited 2017

Appendix 7: Survey Calendar

Figure 2: Survey calendar for protected species and habitat surveys.



	Optimal Survey Time
	Sub-optimal Survey Time
	Survey Not Possible

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

Josie Collier *BSc (Hons) Ecology, GradCIEEM.* Josie joined JCA's expanding 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).

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.

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.

© JCA Limited 2017

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

.....

Josie Collier, *BSc (Hons) Ecology, GradCIEEM*

5th April 2017

Proofread by

.....

Toby Thwaites, *BSc (Hons) HND (Arboriculture)*

5th April 2017

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

Registered Office:

Unit 80
Bowers Mill
Branch Road
Barkisland
Halifax
HX4 OAD

Tel. 01422 376335
Fax. 01422 376232
Email: jon@jcaac.com

www.jcaac.com

© JCA Limited 2017

JCA Ltd. Arboricultural and Ecological Consultants
Professional Tree and Ecology Advice nationwide

ARBORICULTURAL SERVICES

Guidance for Architects and Developers

- British Standard 5837 Tree Surveys
- Arboricultural Implication Assessments (AIA)
- Arboricultural Method Statements (AMS)

Advice for Engineers, Loss Adjusters and Insurers

- Tree Surveys for Subsidence
- Heave Assessment
- Tree Root Identification

Advice for Local Authorities and Social Housing

- Tree Safety Surveys
- Specialist Decay Detection
- Landscape and Orchard Design

Tree Advice for the Legal Profession

- Subsidence Litigation
- Personal Injury and Accident Investigation
- Expert Witness, Planning Inquiries and Appeals

Veteran Tree Management

- Ancient Woodland Management
- Veteran Tree Management

Tree Health and Pest and Disease Management

- Pest and Disease Surveys
- Tree Health Checks
- Disease Mitigation and Control

ECOLOGICAL SERVICES

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)

HEAD QUARTERS:

Unit 80 Bowers Mill,
Branch Road,
Barkisland,
Halifax, HX4 0AD.

Tel: 01422 376335
Mobile: 07778 391986
Email: jon@jcaac.com
Website: www.jcaac.com

Company Reg No. 05005041
VAT No. 686 4674 78