

**PHASE 1 HABITAT SURVEY
REPORT
at
Tower Works
Moorfield Street
Leeds
West Yorkshire
LS12 3RU**

Client:
KMRE Group

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Contents

1. Introduction.....	3
1.1 Purpose of the Report	3
1.2 Terms of Reference	3
1.3 Scope of the Report	3
1.4 Details of Proposed Development	3
1.5 Site Description	3
2. Desktop Study	4
2.1 Methodology.....	4
2.2 Results	4
3. Site Assessment	7
3.1 Survey Conditions	7
3.2 Methodology.....	7
3.3 Habitat Types Present.....	7
3.4 Target Notes	8
3.5 Fauna Species Encountered	9
3.6 Potential for Protected Species	9
3.7 Invasive Plant Species	10
4. Conclusions and Recommendations.....	11
Appendix 1: Phase 1 Habitat Map	13
Appendix 2: Photographic Evidence.....	14
Appendix 3: Site Map.....	15
Appendix 4: Floral Species List.....	16
Appendix 5: Protected Species Information.....	17
Appendix 6: References.....	18
Appendix 7: Author Credentials	19

1. Introduction

1.1 Purpose of the Report

- 1.1.1 A report is required for **Tower Works, Moorfield 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 **KMRE Group** to visit the site and prepare my findings in a report.

1.3 Scope of the Report

- 1.3.1 This report is compiled in accordance with the Joint Nature Conservation Committee's (JNCC's) *Handbook for Phase 1 habitat survey - A technique for environmental audit* (Revised reprint 2010).

1.4 Details of Proposed Development

- 1.4.1 The development proposed on this site is the construction of 47 new dwellings.

1.5 Site Description

- 1.5.1 **Tower Works, Moorfield Street** is situated approximately 3km west of Leeds city centre at grid reference: SE262337. The site is currently an area of hard standing, covered by scattered scrub and short ephemeral vegetation. The site previously contained a number of brick industrial buildings, which have since been demolished.
- 1.5.2 The site is surrounded predominantly by residential properties and occasional areas of parkland. There is a railway line approximately 400m to the south and a golf course approximately 400m to the north.

2. Desktop Study

2.1 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 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).

2.2 Results

- 2.2.1 Local Data Centre Records: The records requested from West Yorkshire Ecology can be seen in Table 1 below:

Table 1: West Yorkshire Ecology's records of protected and notable species within a 2km radius of the site. No records were obtained from within 500m of the site.

Group	Common Name	Scientific Name	No. of Records	Most Recent Record
Amphibian	Common Toad	<i>Bufo bufo</i>	10	2013
	Common Frog	<i>Rana temporaria</i>	12	2008
	Palmate Newt	<i>Triturus helveticus</i>	1	2008
	Smooth Newt	<i>Triturus vulgaris</i>	3	2008
Bird	Common Sandpiper	<i>Actitis hypoleucos</i>	1	1988
	Kingfisher	<i>Alcedo atthis</i>	3	2013
	Teal	<i>Anas crecca</i>	3	2014
	Mallard	<i>Anas platyrhynchos</i>	4	2014
	Greylag Goose	<i>Anser anser</i>	2	2014
	Meadow Pipit	<i>Anthus pratensis</i>	1	1988
	Swift	<i>Apus apus</i>	1	1988
	Pochard	<i>Aythya ferina</i>	4	2014
	Tufted Duck	<i>Aythya fuligula</i>	4	2014
	Scaup	<i>Aythya marila</i>	1	1988
	Canada Goose	<i>Branta canadensis</i>	4	2014
	Goldeneye	<i>Bucephala clangula</i>	1	1988
	Black Tern	<i>Chlidonias niger</i>	1	1988
	House Martin	<i>Delichon urbica</i>	1	1988
	Kestrel	<i>Falco tinnunculus</i>	2	2013
	Fulmar	<i>Fulmarus glacialis</i>	1	1988

Bird	Oystercatcher	<i>Haematopus ostralegus</i>	1	1985
	Swallow	<i>Hiundo rustica</i>	2	1988
	Herring Gull	<i>Larus argentatus</i>	3	2014
	Common Gull	<i>Larus canus</i>	1	1988
	Lesser Black-backed Gull	<i>Larus fuscus</i>	1	1988
	Great Black-backed Gull	<i>Larus marinus</i>	1	1988
	Black-headed Gull	<i>Larus ridibundus</i>	3	2014
	Grey Wagtail	<i>Motacilla cinerea</i>	1	1988
	Ruddy Duck	<i>Oxyura jamaicensis</i>	1	1988
	House Sparrow	<i>Passer domesticus</i>	1	1988
	Dunnock	<i>Prunella modularis</i>	1	1988
	Sand Martin	<i>Riparia riparia</i>	1	1988
	Little Grebe	<i>Tachybaptus ruficollis</i>	3	1988
	Shelduck	<i>Tadorna tadorna</i>	4	2014
	Redwing	<i>Turdus iliacus</i>	1	1988
	Song Thrush	<i>Turdus philomelos</i>	1	1988
	Fieldfare	<i>Turdus pilaris</i>	1	1988
	Mistle Thrush	<i>Turdus viscivorus</i>	1	1988
	Lapwing	<i>Vanellus vanellus</i>	1	1988
Crustacean	Signal Crayfish	<i>Pacifastacus leniusculus</i>	2	1986
Flowering Plant	Canadian Waterweed	<i>Elodea canadensis</i>	4	1990
	Nuttall's Water-weed	<i>Elodea nuttalli</i>	2	1990
	Japanese Knotweed	<i>Fallopia japonica</i>	3	2014
	Giant Hogweed	<i>Heracleum mantegazzianum</i>	2	2014
	Bluebell	<i>Hyacinthoides non-scripta</i>	1	2013
	Himalayan Balsam	<i>Impatiens glanulifera</i>	9	2013
	Round-fruited Rush	<i>Juncus compressus</i>	2	2013
	Yellow Archangel	<i>Lamiastrum gaeobdolon subsp. Argentatum</i>	1	2013
	Rhododendron	<i>Rhododendron ponticum</i>	1	2013
Insect-moth	Cinnabar	<i>Tyria jacobaeae</i>	2	2013
Reptile	Viviparous Lizard	<i>Lacerta vivipara</i>	1	1935
Terrestrial Mammal	Water Vole	<i>Arvicola terrestris</i>	10	2000
	Otter	<i>Lutra lutra</i>	25	2013
	Badger	<i>Meles meles</i>	3	1990
	American Mink	<i>Mustela vison</i>	1	2016
	Myotis Bat Species	<i>Myotis sp.</i>	2	2011
	Natterer's Bat	<i>Myotis nattereri</i>	2	2014
	Leisler's Bat	<i>Nyctalus leisleri</i>	1	2011
	Noctule	<i>Nyctalus noctula</i>	7	2014
	Pipistrelle Bat Species	<i>Pipistrellus sp.</i>	13	2011
	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	145	2015

Terrestrial Mammal	Soprano Pipistelle	<i>Pipistrellus pygmaeus</i>	2	2011
	Brown Long-eared Bat	<i>Plecotus auritus</i>	3	2014
	Vesper Bat	<i>Vespertilionidae</i>	20	2010

2.2.2 Nature Conservation Designations: This search revealed the following designated nature conservation sites within 2km of the site:

- **Leeds Liverpool Canal:** The Leeds Liverpool Canal is a designated SSSI (Site of Special Scientific Interest) located approximately 700m northeast of Tower Works. The site has received its designation due to the rich aquatic flora present here as well as well represented faunal species in the form of amphibians, fish and molluscs.
- **Farnley Fish Pond:** Farnley Fish Pond is a LNR (Local Nature Reserve), located approximately 1.7km southwest of the site. Habitats here include woodland and ponds with records of frogs, toads, newts, mallards and moorhens.

3. Site Assessment

3.1 Survey Conditions

- 3.1.1 The site was surveyed on 8th July 2016 by Josie Collier, *BSc (Hons), GradCIEEM*.
- 3.1.2 Limitations: As the site survey was conducted in July, those plants that flower in early spring or late summer are not likely to have been in flower at this time. This limitation increases the difficulty of identifying some floral species which means the report may 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.

3.2 Methodology

- 3.2.1 A thorough site assessment was undertaken; following the guidelines set out in the JNCC's *Handbook for Phase 1 habitat surveys*.
- 3.2.2 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.
- 3.2.3 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, Otter, Reptiles, Water Vole, White-Clawed Crayfish (please see **Appendix 5**).

3.3 Habitat Types Present

- 3.3.1 A Phase 1 Habitat map showing all habitat types present can be found at **Appendix 1**.
- 3.3.2 The following habitat types are present at **Tower Works, Moorfield Street** (in alphabetical order):
- Amenity Grassland
 - Ephemeral/Short Perennial
 - Hard Standing
 - Scattered Broad-leaved Trees
 - Scrub
- 3.3.3 Amenity Grassland: Immediately east of the site there is a small area of public open

space. This is characterised as well maintained amenity grassland with the occasional scattered tree and used for sport and dog walking. A small section of the site boundary encroached onto this field to the southeast. This habitat was species poor and regularly cut to a short length. The grassland was dominated by Perennial Rye-grass (*Lolium perenne*), Dandelion (*Taraxacum officinale*), Cleavers (*Galium aparine*), White Clover (*Trifolium repens*) and Broad-leaved Dock (*Rumex obtusifolius*).

- 3.3.4 **Ephemeral/Short Perennial:** Since the previous demolition works, pioneer vegetation has grown up within the rubble and between the gaps in the concrete slabs. The dominant species noted included; Coltsfoot (*Tussilago farfara*), Broad-leaved Dock (*Rumex obtusifolius*), Groundsel (*Senecio vulgaris*), Dandelion (*Taraxacum officinale*), Purple Toadflax (*Linaria purpurea*), Annual Meadow Grass (*Poa annua*), Creeping Thistle (*Cirsium arvense*), Herb-Robert (*Geranium robertianum*) and Broad-leaved Willowherb (*Epilobium montanum*).
- 3.3.5 **Hard Standing:** The majority of the site is made up of concrete hard standing and loose rubble. This provides very little ecological value as no floral species are able to grow here.
- 3.3.6 **Scattered Broad-leaved Trees:** The trees on site ranged from young to mature specimens and were located mostly along the site boundaries. Species present included Sycamore (*Acer pseudoplatanus*), Goat Willow (*Salix caprea*), Holly (*Ilex sp.*), Cherry (*Prunus sp.*), Beech (*fagus sylvatica*), Hawthorn (*Crataegus monogyna*), Horse Chestnut (*Aesculus hippocastanum*), Elm (*Ulmus sp.*) and Common Ash (*Fraxinus excelsior*).
- 3.3.7 **Scrub:** The dominant scrub species present were Buddleia and Bramble. Buddleia is a fast growing non-native species, but has a high ecological value due to its abundance of flowers and seeds. Large, dense stands of these will also provide shelter and breeding opportunities for birds and other animal groups.

3.4 Target Notes

- 3.4.1 **Target Note 1:** Dense areas of climbing plants growing up boundary walls, fences and trees. Species include Ivy, Honeysuckle, Clematis sp. and Bindweed sp.
- 3.4.2 **Target Note 2:** Multiple stemmed, mature Sycamore with one standing dead stem. This stem has peeling bark.
- 3.4.3 **Target Note 3:** Rubble piles.
- 3.4.4 **Target Note 4:** Large pile of deadwood created from previous pruning works to overhanging Sycamore.

3.5 Fauna Species Encountered

3.5.1 No faunal species were encountered during the time of the survey.

3.6 Potential for Protected Species

3.6.1 Amphibians: The site does not contain the required aquatic habitat to support amphibians during the breeding and juvenile stages of their life-cycle, nor are there any ponds within the immediate vicinity of the site. The habitat here is largely made up of concrete hard standing and rubble, which would be unfavourable for foraging and commuting amphibians. The data search did not reveal any records of amphibians from within 500m of the site.

3.6.2 Badgers: The site does not contain the adequate levels of vegetative cover to support badgers and close proximity to humans would deter them from entering this site. The data search did not reveal any records of badgers from within 500m of the site.

3.6.3 Barn Owls: The site does not contain the required roosting or foraging habitat to support barn owls and close proximity to humans would deter them from entering this site. The data search did not reveal any records of barn owls from within 2km of the site.

3.6.4 Bats: The site contained no built structures and only a small number of mature trees. One Sycamore on the northern boundary had a dead stem with peeling bark. This feature has a low potential for supporting bat roosts. The vegetation on site, especially areas of Buddleia, will attract insects to the site, thus providing limited foraging habitat for bats. The scattered trees may also provide commuting routes for bats where they form linear features. The data search did not reveal any records of bats from within 500m of the site.

3.6.5 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 from within 2km of the site.

3.6.6 Nesting Birds: Although no bird species were seen or heard at the time of the survey, the trees and scrub vegetation found on site do have potential to support nesting birds. There are records of birds within 2km of the site.

3.6.7 Otters: The site does not contain the required aquatic habitat to support otters and there is no suitable habitat in close proximity to the site. The data search did not reveal any records of otters from within 500m of the site.

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

3.6.9 Water Voles: The site does not contain the required aquatic habitat to support water voles and there is no suitable habitat in close proximity to the site. The data search did not reveal any records of water voles from within 500m of the site.

3.6.10 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 habitats. The data search did not reveal any records of white-clawed crayfish from 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 5**), work should stop immediately and JCA or Natural England contacted.*

3.7 Invasive Plant Species

3.7.1 Invasive plant species are those plants listed under Schedule 9, Part II of the Wildlife and Countryside Act 1981 (as amended) or described on the Non-Native Species Secretariat (NNSS) website. Invasive species include; Giant Hogweed, Giant Kelp, Japanese Knotweed, Japanese Seaweed, Himalayan Balsam, Horsetail and Floating Pennywort.

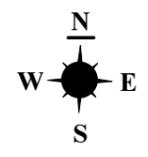
3.7.2 No invasive plant species were found at this site whilst conducting the site investigation.

4. Conclusions and Recommendations

- 4.1 After conducting a thorough site investigation and a detailed Desktop Study, we consider **Tower Works** to contain habitats of low ecological value (please see **Section 3.3**).
- 4.2 The habitats present at Tower Works are amenity grassland, ephemeral/short perennial, hard standing, scattered broad-leaved trees and scrub. Hard standing occupies the majority of the site, which drastically reduces the ecological value of the site as it prevents the growth of many floral species.
- 4.3 No nature conservation designations will be impacted upon by proposed development.
- 4.4 A data search of the West Yorkshire Joint Services records was undertaken for a 2km radius around the site. No record of rare or protected species were found within or immediately surrounding the site.
- 4.5 Based on the findings of the survey, the following recommendations and enhancements have been suggested.
- 4.6 Any tree or vegetation removal should be carried out outside of the breeding bird period. If works within this period (March – August) are unavoidable, a nesting bird survey should first be instructed to ensure that no nests are disturbed and any young have fledged.
- 4.7 The biodiversity of the site could be enhanced post-development to increase the value of the site for faunal species. This could be done through a planting scheme or through the provision of faunal boxes. A biodiversity Enhancement Plan can be provided upon request.
- 4.8 Should any protected species be discovered whilst on site, works must stop immediately and Natural England or JCA Ltd. be contacted. A list of protected species can be found in **Appendix 5**.

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

Appendices



Appendix 1: Phase 1 Habitat Map

Tower Works, Moorfield Street, Armley,
LS12 3RU.
JCA Ref: 12913/JoC

NOT TO SCALE | PAPER SIZE : A3

KEY

- A Amenity grassland
- Dense/continuous Scrub
- Ephemeral/short perennial
- ++++ Fence
- H Hard Standing
- Scattered Broad-leaved Trees
- Scattered Scrub
- Target note

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Appendix 2: Photographic Evidence

Photo 1: Southern portion of the site.



Photo 2: Rubble and scrub towards the centre of the site.



Appendix 3: Site Map

Figure 1: Google Maps image of Tower Works, showing the survey site in relation to the surrounding landscape and habitats.



Appendix 4: Floral Species List

Common Name	Scientific Name	Common Name	Scientific Name
Annual Meadow grass	<i>Poa annua</i>	Goat Willow	<i>Salix caprea</i>
Ash	<i>Fraxinus excelsior</i>	Green Alkanet	<i>Pentaglottis sempervirens</i>
Beech	<i>Fagus sylvatica</i>	Groundsel	<i>Senecio vulgaris</i>
Blackcurrant	<i>Ribes nigrum</i>	Hawthorn	<i>Crataegus monogyna</i>
Box sp.	<i>Buxus sp.</i>	Hedge Bindweed	<i>Calystegia sepium</i>
Bramble	<i>Rubus agg.</i>	Herb-robert	<i>Geranium robertianum</i>
Broad-leaved Dock	<i>Rumex obtusifolius</i>	Holly	<i>Ilex aquifolium</i>
Broad-leaved Willowherb	<i>Epilobium montanum</i>	Honeysuckle	<i>Lonicera sp.</i>
Buddleja	<i>Buddleja sp.</i>	Horse Chestnut	<i>Aesculus hippocastanum</i>
Burdock	<i>Arctium lappa</i>	Ivy	<i>Hedera helix</i>
Cherry	<i>Prunus sp</i>	Nettle	<i>Urtica dioica</i>
Chickweed	<i>Stellaria media</i>	Opium Poppy	<i>Papaver somniferum</i>
Cock's-foot	<i>Dactylis glomerat</i>	Perennial Daisy	<i>Bellis perennis</i>
Coltsfoot	<i>Tussilago farfara</i>	Perennial Rye-grass	<i>Lolium perenne</i>
Cow parsley	<i>Anthriscus sylvestris</i>	Purple Toadflax	<i>Linaria purpurea</i>
Cowslip	<i>Primula veris</i>	Ragwort	<i>Senecio jacobaea</i>
Creeping Buttercup	<i>Ranunculus repens</i>	Raspberry	<i>Rubus idaeus</i>
Creeping Thistle	<i>Cirsium arvense</i>	Red Valerian	<i>Centranthus ruber</i>
Dandelion	<i>Taraxacum agg.</i>	Ribwort Plantain	<i>Plantago lanceolata</i>
Dogwood	<i>Cornus sanguinea</i>	Rosebay Willowherb	<i>Chamerion angustifolium</i>
Elder	<i>Sambucus nigra</i>	Smooth Sow-thistle	<i>Sonchus oleraceus</i>
Elm	<i>Ulmus sp.</i>	Spear Thistle	<i>Cirsium vulgare</i>
Fescue sp.	<i>Festuca</i>	Sycamore	<i>Acer pseudoplatanus</i>
Feverfew	<i>Tanacetum parthenium</i>	Welsh Poppy	<i>Meconopsis cambrica</i>
Field Rose	<i>Rosa arvensis</i>	White Champion	<i>Silene latifolia</i>
Forget-me-not	<i>Myosotis sp.</i>	White Clover	<i>Trifolium repens</i>
Foxglove	<i>Digitalis purpurea</i>	Wood Avens	<i>Geum urbanum</i>
Garlic Mustard	<i>Alliaria petiolata</i>		

Appendix 5: 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
- Large Blue Butterfly
- Natterjack Toad
- Otter
- 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
- Pine Marten
- 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.

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

Appendix 6: References

Bat Mitigation Guidelines (Jan. 2004). A. J. Mitchell-Jones. English Nature (now Natural England).

Bat Survey Guidelines: Good Practice Guidelines (2007). Bat Conservation Trust (BCT).

Bat Workers Manual (3rd Edition 2004). A. J. Mitchell-Jones & A. P. McLeish. Joint Nature Conservation Committee (JNCC).

Great Crested Newt Mitigation guidelines (Aug. 2001). English Nature (now Natural England).

Great Crested Newt: Conservation Handbook (2001). Tom Langton, Catherine Beckett and Jim Foster. FROGLife.

Handbook for Phase 1 habitat survey - A technique for environmental audit (Revised reprint 2010). Joint Nature Conservation Committee (JNCC).

Herpetofauna Workers' Manual (2003). Tony Gent and Steve Gibson. Joint Nature Conservation Committee (JNCC).

Natterjack toad: Conservation Handbook. Trevor Beebee & Jonathan Denton. English Nature (now Natural England).

Reptile Habitat Management Handbook (2010). Paul Edgar, Jim Foster and Jon Backer. Amphibian and reptile Conservation. Esmee Fairbairn, & Natural England.

The Dormouse conservation handbook (second edition). Paul Bright, Pat Morris and Tony Michell-Jones. Natural England.

Websites:

Bat Conservation Trust (BCT). <<http://www.bats.org.uk/>>

Google Maps. <<http://maps.google.co.uk/>>

Multiple-Agency Geographic Information for the Countryside (MAGIC). <<http://www.magic.gov.uk/>>

National Biodiversity Network (NBN) Gateway. <data.nbn.org.uk>

Natural England. <<http://www.naturalengland.org.uk/>>

Nature on the Map. Natural England. <www.natureonthemap.org.uk>

Royal Society for the Protection of Birds (RSPB). <<http://www.rspb.org.uk/>>

Relevant Legislation:

Wildlife and Countryside Act 1981 <<http://jncc.defra.gov.uk/page-3614>>

Conservation (Natural Habitats, &c.) Regulations 1994 (The Habitats Directive) (Amended 2010)
<<http://www.legislation.gov.uk/uksi/2010/490/contents/made>>

Countryside and Rights of Way Act 2000
<http://www.legislation.gov.uk/ukpga/2000/37/pdfs/ukpga_20000037_en.pdf?view=interweave>

Hedgerow Regulations 1997 <<http://www.legislation.gov.uk/uksi/1997/1160/contents/made>>

Protection of Badgers Act 1992 <<http://www.legislation.gov.uk/ukpga/1992/51/contents>>

Appendix 7: Author Credentials

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 was promoted to Technical Coordinator and now oversees all office and on-site activities at JCA and is on hand to offer technical support and advice.

Consulting Staff: Arboriculture

Andy Bagshaw *FdSc (Arboriculture).* Andy joined JCA in 2005 having gained several years experience in tree surgery and landscaping. He is trained in aerial rescue and is JCA's principal first aid person. Andy has obtained a foundation degree in Arboriculture at the University of Central Lancashire, is QTRA qualified and is a JCA team leader who manages an office of Consulting Arboriculturists.

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.

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 Myerscough College, Preston, undertaking a one year RFS course which will be followed up by a further two year course, in order to obtain a Foundation degree in Arboriculture – *FdSc (Arboriculture).*

Emily Wilde *FdSc Arboriculture.* Emily has recently 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.

Consulting Staff: Ecology

David Ryder. David has recently 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 has recently joined JCA as part of our expanding ecology department. She 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 seeking to become a member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

Administrative Staff

Sue Guest Administrative Team Leader.

Simeon Haigh *BSc (Hons).* IT Officer.

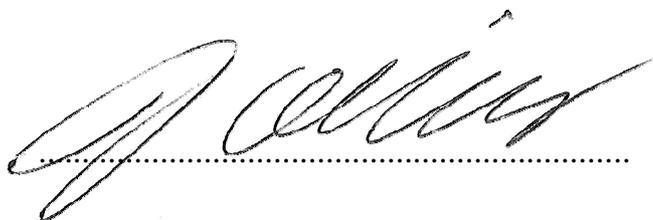
Lorraine Spink Administrative Assistant.

Yasmin Shahzad Administrative Assistant.

Catherine Cocking Accounts Manager.

I hope that this report provides all the necessary information, but should any further advice be needed please do not hesitate to contact the author.

Signed

A handwritten signature in black ink, appearing to read 'J Collier', written over a horizontal dotted line.

Josie Collier, BSc (Hons), GradCIEEM.

13th July 2016

For and on behalf of *JCA Ltd*

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- Arboricultural Method Statements
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(R. F. S.), F. Arbor. A., CBiol, MIBiol

Catherine Cocking
RGN RM

Photo front cover: Sluice at Bowers Mill

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