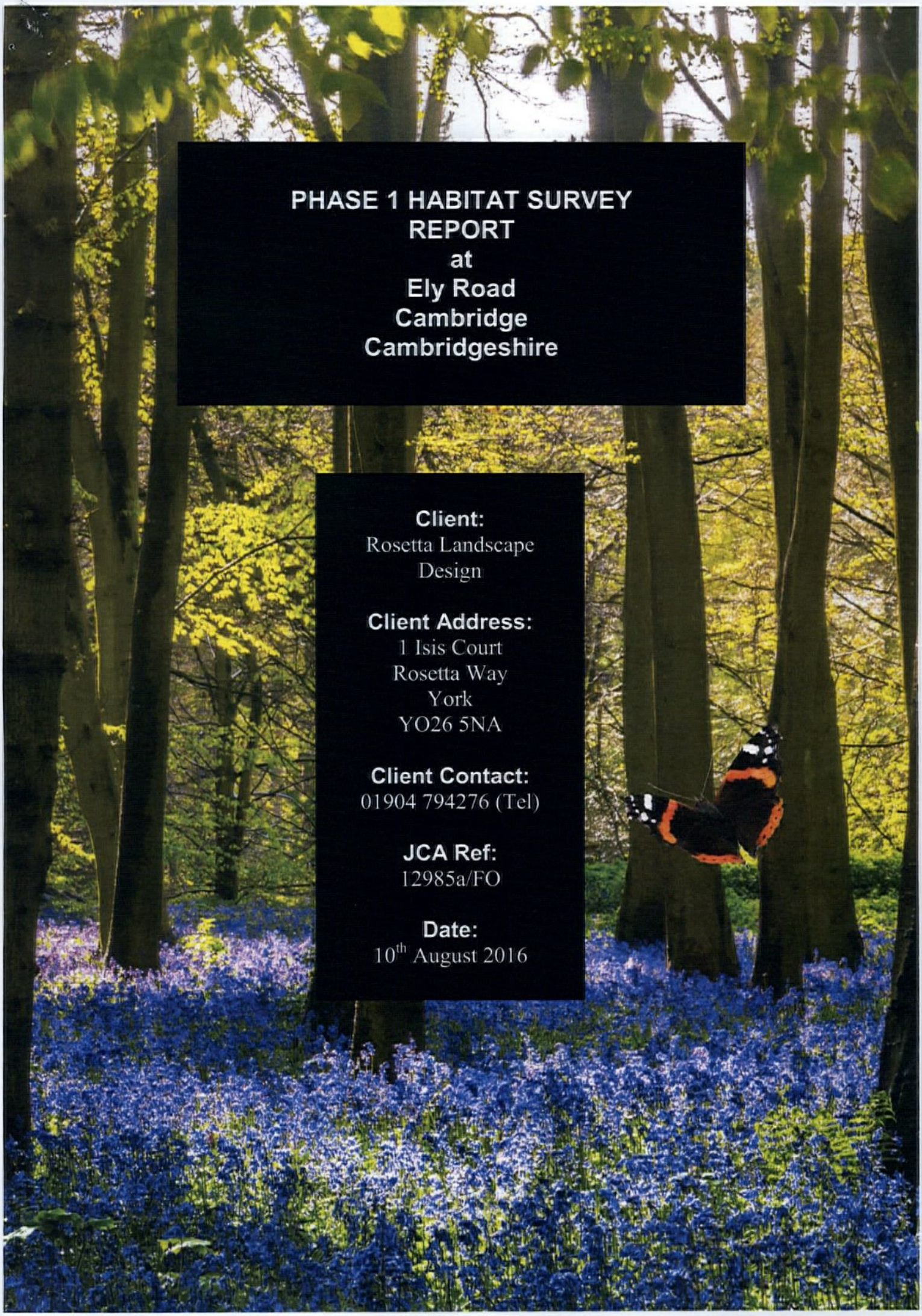


PHASE 1 HABITAT SURVEY REPORT at Ely Road Cambridge Cambridgeshire

Client:
Rosetta Landscape Design

Client Address:
1 Isis Court
Rosetta Way
York
YO26 5NA

Client Contact:
01904 794276 (Tel)

JCA Ref:
12985a/FO

Date:
10th August 2016

Quality Assurance

JCA ref.	Version	Desktop Survey Completed:		Site Surveyed:		Report Completed:		Checked:	
		Date	Name	Date	Name	Date	Name	Date	Name
12985a	First	09/08/16	Freya Olsson	03/08/16	Freya Olsson	10/08/16	Freya Olsson	10/08/16	David Bodenham

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*

Contents

1. Introduction

1.1 Purpose of the Report

1.1.1 A report is required for **Ely 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 **Rosetta Landscape Design** 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: 2681-1-etos-DRAFT), and brief details of the proposal.

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 a new supermarket.

1.5 Site Description

1.5.1 **Ely Road,** is situated 9.5km south-southeast of Ely, at grid reference: TL 452792

1.5.2 The site is surrounded by predominantly arable and agricultural land to the south and east. To the north and west are major roads, beyond which are residential properties and industrial units and further agricultural land.

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 Cambridge and Peterborough Environmental Records Centre has been commissioned to provide the records held for protected and notable species within a 2km radius of the survey site. The result has been summarised in **Table 1** below.

Table 1: Cambridge and Peterborough Environmental Record Centre'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	*Scientific Name*	No. of Records	Most Recent Record
Amphibian	Common Toad	*Bufo bufo*	1	2011
	Common Frog	*Rana temporaria*	2	2011
	Great Crested Newt	*Triturus cristatus*	7*	2012
Bird	Lesser Redpoll	*Acanthis cabaret*	7	2011
	Goshawk	*Accipiter gentilis*	1	2003
	Skylark	*Alauda arvensis*	9	2013
	Kingfisher	*Alcedo atthis*	11	2010
	Garganey	*Anas querquedula*	10	2013
	White-fronted Goose	*Anser albifrons*	2	2009
	Greylag Goose	*Anser anser*	1	2006
	Short-eared Owl	*Asio flammeus*	8	2012
	Bittern	*Botaurus stellaris*	5	2005
	Brent Goose	*Branta bernicla*	4	2012
	Stone-curlew	*Burhinus oedicnemus*	1	2000
	Ruff	*Calidris pugnax*	2	2008
	Cetti's Warbler	*Cettia cetti*	9	2013
	Little Ringed Plover	*Charadrius dubius*	5	2013

Bird	Black Tern	*Chlidonias niger*	1	2000
	White Stork	*Ciconia ciconia*	1	2001
	Black Stork	*Ciconia nigra*	1	2008
	Marsh Harrier	*Circus aeruginosus*	20	2011
	Hen Harrier	*Circus cyaneus*	11	2013
	Montagu's Harrier	*Circus pygargus*	1	2009
	Quail	*Coturnix coturnix*	3	2011
	Cuckoo	*Cuculus canorus*	22	2012
	Bewick's Swan	*Cygnus columbianus subsp. bewickii*	1	2000
	Whooper Swan	*Cygnus cygnus*	1	2000
	Little Egret	*Egretta garzetta*	8	2012
	Corn Bunting	*Emberiza calandra*	9	2006
	Yellowhammer	*Emberiza citrinella*	26	2011
	Reed Bunting	*Emberiza schoeniclus*	9	2008
	Merlin	*Falco columbarius*	14	2012
	Peregrine	*Falco peregrinus*	6	2011
	Hobby	*Falco subbuteo*	15	2011
	Brambling	*Fringilla montifringilla*	14	2011
	Crane	*Grus grus*	1	2008
	Bar-tailed Godwit	*Limosa lapponica*	1	2012
	Black-tailed Godwit	*Limosa limosa*	3	2008
	Linnet	*Linaria cannabina*	17	2013
	Grasshopper Warbler	*Locustella naevia*	3	2011
	Common Crossbill	*Loxia curvirostra*	3	2011
	Red Kite	*Milvus milvus*	9	2012
	Yellow Wagtail	*Motacilla flava*	9	2011
	Spotted Flycatcher	*Muscicapa striata*	17	2013
	Whimbrel	*Numenius phaeopus*	5	2011
	Osprey	*Pandion haliaetus*	3	2011
	Bearded Tit	*Panurus biarmicus*	1	2003
	House Sparrow	*Passer domesticus*	12	2011
	Tree Sparrow	*Passer montanus*	33	2012
	Grey Partridge	*Perdix perdix*	11	2012
	Honey-buzzard	*Pernis apivorus*	3	2008
	Black Redstart	*Phoenicurus ochruros*	4	2006
	Wood Warbler	*Phylloscopus sibilatrix*	2	2005
	Snow Bunting	*Plectrophenax nivalis*	1	2004
	Glossy Ibis	*Plegadis falcinellus*	1	2009
	Golden Plover	*Pluvialis apricaria*	9	2010
	Dunnock	*Prunella modularis*	5	2012

Bird	Bullfinch	*Pyrrhula pyrrhula*	24	2013
	Firecrest	*Regulus ignicapilla*	6	2010
	Arctic Skua	*Stercorarius parasiticus*	1	2011
	Common Tern	*Sterna hirundo*	1	2009
	Arctic Tern	*Sterna paradisaea*	2	2009
	Turtle Dove	*Streptopelia turtur*	49	2013
	Starling	*Sturnus vulgaris*	4	2011
	Greenshank	*Tringa nebularia*	2	2003
	Green Sandpiper	*Tringa ochropus*	6	2009
	Redwing	*Turdus iliacus*	16	2010
	Song Thrush	*Turdus philomelos*	11	2012
	Fieldfare	*Turdus pilaris*	18	2011
	Ring Ouzel	*Turdus torquatus*	17	2013
	Barn Owl	*Tyto alba*	30	2012
	Lapwing	*Vanellus vanellus*	9	2012
Flowering Plant	Stinking Hellebore	*Helleborus foetidus*	1*	1998
	Fringed Water-lily	*Nymphoides peltata*	1	1996
	Tubular Water-dropwort	*Oenanthe fistulosa*	4	2009
Insect (Coleoptera)	Mallow Flea Beetle	*Podagrica fuscicornis*	1	1996
Insect (Lepidoptera)	Grey Dagger	*Acronicta psi*	1	2004
	Knot Grass	*Acronicta rumicis*	1	1996
	Brown-spot Pinion	*Agrochola litura*	1	2004
	Beaded Chestnut	*Agrochola lychnidis*	2	2004
	Green-brindled Crescent	*Allophyes oxyacanthae*	1	2004
	Ear Moth	*Amphipoea oculea*	1	2004
	Mouse Moth	*Amphipyra tragopoginis*	1	2004
	Large Nutmeg	*Apamea anceps*	3	2004
	Dusky Brocade	*Apamea remissa*	1	1993
	Deep-brown Dart	*Aporophyla lutulenta*	2	2004
	Garden Tiger	*Arctia caja*	1	2004
	Sprawler	*Asteroscopus sphinx*	2	2004
	Centre-barred Sallow	*Atethmia centrago*	2	2004
	Dark Brocade	*Blepharita adusta*	1	1992
	Mottled Rustic	*Caradrina morpheus*	4	2004
	Crescent	*Celaena leucostigma*	1	1992
	Broom-tip	*Chesias rufata*	1	2004
	Latticed Heath	*Chiasmia clathrata*	2	2004
	Small Heath	*Coenonympha pamphilus*	7	2010

Insect (Lepidoptera)	White-spotted Pinion	*Cosmia diffinis*	3	2011
	Small Square-spot	*Diarsia rubi*	2	2004
	Small Phoenix	*Ecliptopera silaceata*	1	2004
	August Thorn	*Ennomos quercinaria*	1	1991
	Garden Dart	*Euxoa nigricans*	2	2004
	White-line Dart	*Euxoa tritici*	1	1992
	Small Emerald	*Hemistola chrysoprasaria*	1	2004
	Ghost Moth	*Hepialus humuli*	2	2004
	Rustic	*Hoplodrina blanda*	1	2004
	Rosy Rustic	*Hydraecia micacea*	2	2004
	Wall	*Lasiommata megera*	10	2011
	Grey Carpet	*Lithostege griseata*	2	2004
	Brindled Beauty	*Lycia hirtaria*	1	1990
	V-moth	*Macaria wauaria*	1	1993
	Lackey	*Malacosoma neustria*	2	2004
	Dot Moth	*Melanchra persicariae*	2	2004
	Broom Moth	*Melanchra pisi*	2	2004
	Rosy Minor	*Mesoligia literosa*	1	2004
	Shoulder-striped Wainscot	*Mythimna comma*	1	2004
	Powdered Quaker	*Orthosia gracilis*	2	2004
	Dark Spinach	*Pelurga comitata*	2	2004
	Large Wainscot	*Rhizedra lutosa*	2	2004
	White-letter Hairstreak	*Satyrium w-album*	6*	2013
	Shaded Broad-bar	*Scotopteryx chenopodiata*	2	2004
	White Ermine	*Spilosoma lubricipeda*	1	2004
	Buff Ermine	*Spilosoma luteum*	2	2004
	Hedge Rustic	*Tholera cespitis*	2	2004
	Feathered Gothic	*Tholera decimalis*	3	2004
	Blood-Vein	*Timandra comae*	2	2004
	Pale Eggar	*Trichiura crataegi*	1	2004
	Cinnabar	*Tyria jacobaeae*	2	2004
	Oak Hook-tip	*Watsonalla binaria*	2	2004
	Dusky-lemon Sallow	*Xanthia gilvago*	2	2004
	Sallow	*Xanthia icteritia*	2	2004
	Dark-barred Twin-spot Carpet	*Xanthorhoe ferrugata*	2	2004
Reptile	Grass Snake	*Natrix natrix*	4	2015
Stonewort	Tassel Stonewort	*Tolypella intricata*	3	2003
Terrestrial Mammal	Bats	*Chiroptera*	3	2011

Terrestrial Mammal	West European Hedgehog	*Erinaceus europaeus*	2	2011
	Brown Hare	*Lepus europaeus*	1*	1997
	Eurasian Badger	*Meles meles*	5	2011
	Daubenton's Bat	*Myotis daubentoni*	2	2009
	Whiskered Bat	*Myotis mystacinus*	1	1991
	Natterer's Bat	*Myotis nattereri*	1	1991
	Noctule Bat	*Nyctalus noctula*	1	2005
	Pipistrelle Bat Species	*Pipistrellus*	5	1988
	Common Pipistrelle	*Pipistrellus pipistrellus*	9	2010
	Soprano Pipistrelle	*Pipistrellus pygmaeus*	4	2009
	Brown Long-eared Bat	*Plecotus auritus*	2	2011

2.2.2 Nature Conservation Designations: This search revealed that there are no nature conservation designations within 2km of the site.

3. Site Assessment

3.1 Survey Conditions

3.1.1 The site was surveyed on 3rd August 2016 by Freya Olsson *BSc (Hons)*.

3.1.2 The weather conditions during this survey can be seen in Table 2:

Table 2: Survey times and weather conditions.

Survey date	Lead surveyor	Temp	Humidity	Wind speed/Direction		Cloud Cover	Precipitation
3/8/2016	Freya Olsson	23°C	50%	BF1	SW	100%	None

3.1.3 The following limitations to this survey are stated below:

The survey was conducted at the optimal time of year when most plant species were in flower, although a small number species may have been present that flower in early spring or late summer. These species may not have been visible at the time of the survey; 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, Dormouse, 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 **Ely Road** (in alphabetical order):

- Scattered trees
- Scrub
- Semi-improved grassland

- Tall ruderal

3.3.3 Overview: The majority of the site is made up of semi-improved grassland with scrub border to the south and a number of semi-mature scattered trees within the site. The site boundary runs through the centre of the grassland patch with further similar habitat beyond the boundary to the east.

3.3.4 Scattered trees: there are a number of scattered trees throughout the site, many of which are young self-seeded trees. A few more mature trees are also present including a large Ash (*Fraxinus excelsior*), mature Apple (*Malus sp.*)and Hawthorn (*Crataegus monogyna*).

3.3.5 Scrub: There is a large area of dense continuous scrub along the southern border of the site. The scrub is dominated by Bramble (*Rubus fruticosus*) with frequent Nettle (*Urtica dioica*) and Spear Thistle (*Cirsium vulgare*) and occasional young tree species (Hawthorn and Ash).

3.3.6 Semi-improved grassland: This habitat dominates the majority of the site. It has a moderate diversity of forb species dominated by Ribwort Plantain (*Plantago lanceolata*), Oxeye Daisy (*Leucanthemum vulgare*) and Pignut (*Conopodium majus*). The dominant grass species is Bearded Couch (*Elymus caninus*) with some occasional Cock's Foot (*Dactylis glomerata*).

3.3.7 Tall ruderal: there are a few patches of tall ruderal vegetation, one in the north of the site and another in the southeast bordering an area of scrub. The habitat is dominated by Rosebay Willowherb (*Chamerion angustifolium*) and Thistle (*Cirsium sp.*).

3.4 Target Notes

3.4.1 **Target Note 1**: Dry ditch running the northern boundary. The ditch is filled with dense tall ruderal vegetation and scrub.

3.4.2 **Target Note 2**: Stands of Horsetail (*Equisetum arvense*).

3.4.3 **Target Note 3**: Pile of stones.

3.5 Fauna Species Encountered

3.5.1 A number of faunal species were either seen or heard during the site investigation. These include a number of Lepidoptera including; Red Admiral (*Vanessa Atlanta*), Meadow Brown (*Maniola jurtina*) and Peacock butterfly (*Aglais io*). Also seen were numerous species of Odonata including Common Blue (*Enallagma cyanthigerum*), Brown Hawker (*Aeshna grandis*) and Common Darter (*Sympetrum striolatum*). Other species seen include Tapered Drone Fly (*Eristalis pertanax*), *Helophilus hybridus* and Blackbird (*Turdus merula*).

3.6 Potential for Protected Species

3.6.1 Amphibians: There was no aquatic habitat on site suitable to support amphibians. However, the terrestrial environment present on site offers optimal habitat for amphibians in their terrestrial life-stage. The records show a number of records of Great Crested Newts within 500m of the site and inspection of maps highlight a number of ponds within 500m requiring further investigation.

3.6.2 Badgers: During the site visit there was no evidence of badger activity including setts both active and inactive. There were a number of badger records within 2km of the site but none within 500m.

3.6.3 Barn Owls: There are no suitable features on site suitable for roosting barn owls. The proximity to human activity is also likely to restrict barn owls use of this site.

3.6.4 Bats: There were no buildings or trees on sited deemed suitable to support roosting bats. The site offers foraging habitat and the linear features in the wider landscape provide useful commuting landmarks. There were no bat records within the 500m of the site however, there were a number within 2km and the connectivity to the broader landscape is good. Therefore, bats may be using the site to forage.

3.6.5 Dormice: The site does not offer the floral habitat required by dormice and therefore it is unlikely that this species will be present in this site.

3.6.6 Nesting Birds: The vegetation present on site, including the scrub and scattered trees offer suitable habitat for nesting birds. However, no nesting activity was seen during the site visit.

3.6.7 Otters, Water Voles and White Clawed Crayfish: The site does not offer suitable aquatic habitat to support otters, water voles or white clawed crayfish.

3.6.8 Reptiles: There are features present on site which may offer refuge and foraging opportunity for reptiles. However, there were no records of reptiles within 500m 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 The following invasive plant species were present at the survey site;

3.7.2 Horsetail (*Equisetum arvense*):

A multiple stands of Horsetail was located within the site boundary, located at the centre and to the north of the site (please see **Appendix 1**).

Horsetail is a deep rooted, highly invasive species, which spreads rapidly via rhizomes. If left untreated this species can quickly spread throughout a site, dominating and out competing other floral species. Therefore, JCA Ltd. always recommends the treatment and removal of this species from a site.

Eradication Strategies: There are several strategies available for the control and removal of Horsetail. Below is a summary of the options available:

Non-chemical: Horsetail spreads via rhizomes, which can grow to a depth of around 2 meters. Therefore, the physical removal of this species is extremely difficult and new plants will grow from any small section of root left behind. The vigor of this species can be reduced by repeatedly removing any above ground growth as soon as it appears, and continuing to do this over a number of years. If present in grassland, continual mowing is most effective.

Chemical: Horsetail can be more efficiently removed with the use of appropriate weed killers. Horsetail is very persistent and so several applications will usually be required. Before treatment, the stems of these plants should be damaged, either by trampling or raking, in order to assist the uptake of weed killer into the root system. When present around water courses or trees, an environmentally sensitive weed killer must be used.

4. Conclusions and Recommendations

4.1 After conducting a thorough site investigation and a detailed Desktop Study, we consider **Ely Road** to contain habitats of moderate ecological value (please see **Section 3.3**).

4.2 The site is comprised of a semi-natural grassland habitat and scrubland border to the south. There are also patches of tall ruderal in the north and south of the site. These habitats are important for invertebrate species including dragonflies, butterflies and moths. They also offer refuge and foraging habitat for reptile, amphibians and small mammals.

4.3 No nature conservation designations will be impacted upon by proposed development.

4.4 A desktop survey highlighted a number of protected species records within close proximity of the site:

Great Crested Newts: There were records of great crested newts within 500m of the site, mainly to the south. The site is highly connected to these areas and the terrestrial habitat on site offers good foraging and refuge areas for terrestrial life-stage amphibians.

4.5 Based on the records of protected species and the site survey the following recommendations are made for the site:

The desktop study and site inspection highlighted the potential of the site to support a number of protected species and a number of records occurring within 500m. Therefore further surveys are required:

Great Crested Newts: The habitats present on site are of optimal terrestrial habitat for great crested newts. The desktop study highlighted a number of records within 500m of the survey site. Therefore, any ponds within 500m of the site will need to be surveyed for great crested newts. The initial part of this survey is to assess the ponds and give each a Habitat Suitability Index (HSI) score. This type of survey can be done at any time of year. If these scores are low then no further survey effort will be required. If the ponds are deemed suitable then further presence/absence surveys will be required. If newts are present then a population estimate needs to be calculated, requiring further survey effort. Presence/absence surveying season is from mid-March to mid-June.

Nesting Bird: removal of vegetation prior to the development going ahead should be done outside the breeding bird season (March to September). If this is not possible and vegetation is to be removed during these months then nesting bird surveys will be required to establish any nesting behaviours on the site.

Ongoing development: the removal of a good area of semi-improved grassland will

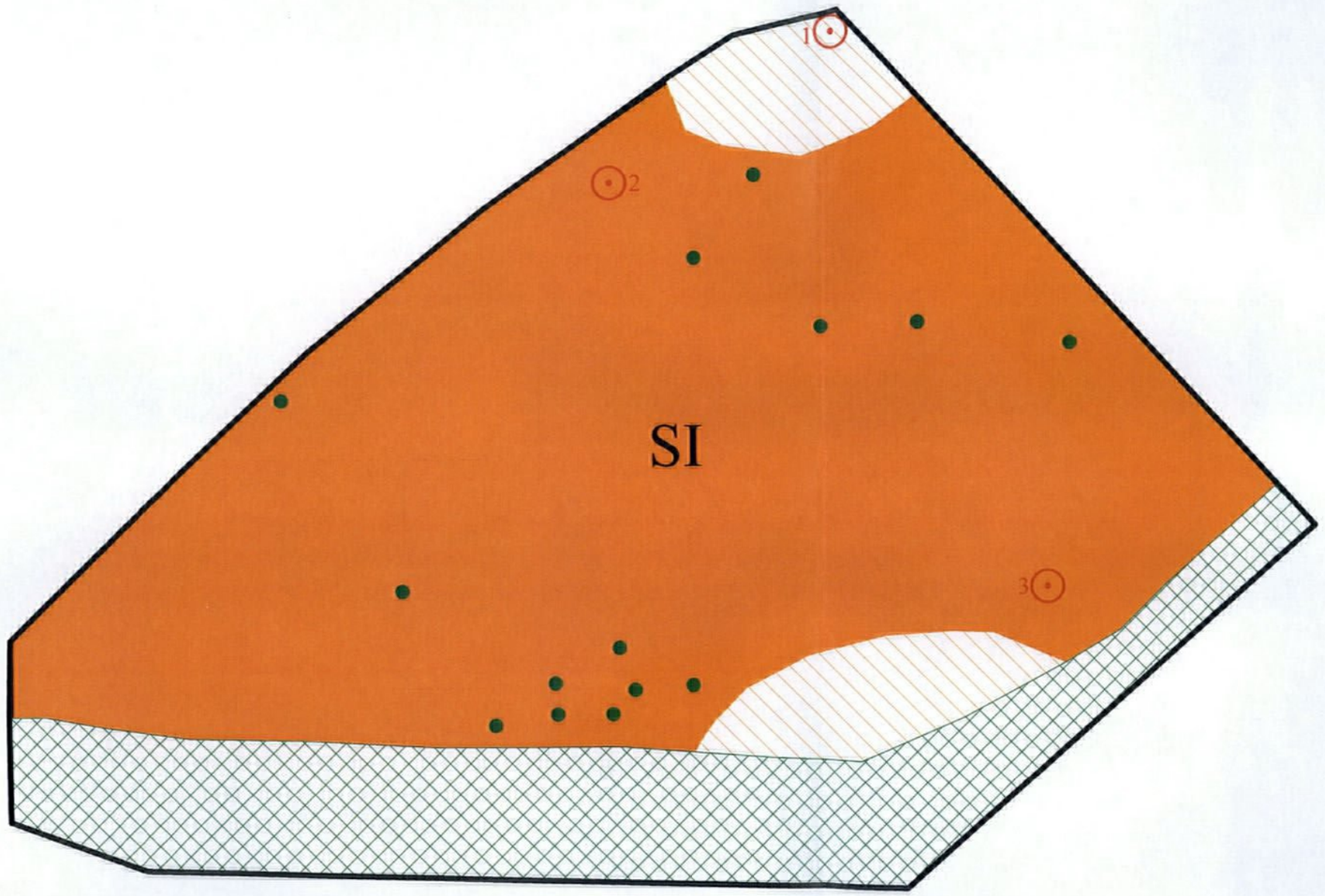
especially impact invertebrate species present on the site, which appeared to be highly diverse based on the site visit. Therefore, the development should mitigate for the loss of this habitat by planting native shrubs and trees useful to these species such as Buddleia (*Buddleja sp.*). Maintaining and improving the ecological value of the site within the development should ensure that the overall biodiversity of the site is not lost. A Biodiversity Enhancement Plan can be provided upon request.

The Horsetail found on site should be removed following the eradication strategies outlined in Section 3.7. The site should then be surveyed frequently to ensure that the species has not re-grown or spread. Eradication strategies and re-surveys can be provided upon request.

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



Appendix 1: Phase 1 Habitat Map

JCA ref: 12985a/FO
Ely Road
Sutton
Cambridge
Cambridgeshire

Not to scale | PAPER SIZE : A3

KEY

- Dense/continuous scrub
- Scattered broad-leaved trees
- SI — Neutral grassland (Semi-improved)
- Tall ruderal
- Target note

JCA Limited
Arboricultural & Forestry Consultants

Appendix 2: Photographic Evidence

Photo 1: View looking south of grassland and scrub border with scattered young trees.

Photo 2: View looking east of semi-improve grassland habitat.

Photo 3: Stand of Horsetail in north of the site (see Target Note 2).

Photo 4: Example of the tall ruderal habitat found within the site.

Photo 5: Pile of stones found in the southeast of the site (see Target Note 3).

Photo 6: View of site looking north.

Appendix 3: Site Map

Figure 1: Google Maps image of Ely Road 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*
Field Maple	*Acer campestre*	Herb Robert	*Geranium robertianum*
Birch	*Betula sp.*	St. John's-wort	*Hypericum sp.*
Rough-stalked Feather-moss	*Brachythecium rutabulum*	Ragwort	*Jacobaea vulgaris*
Bindweed	*Calystegia sepium*	Oxeye Daisy	*Leucanthemum vulgare*
Chamomile	*Chaemaemelum nobile*	Apple	*Malus sp.*
Rosebay Willowherb	*Chamerion angustifolium*	Black Medick	*Medicago lupulina*
Rosebay	*Chamerion angustifolium*	Ribbed Melilot	*Melilotus officinalis*
Marsh Thistle	*Cirsium palustre*	Wild Parsnip	*Patinaca sativa*
Thistle	*Cirsium sp.*	Bristly Oxtongue	*Picris echioides*
Spear Thistle	*Cirsium vulgare*	Ribwort Plantain	*Plantago lanceolata*
Pignut	*Conopodium majus*	Selfheal	*Prunella vulgaris*
Hawthorn	*Crataegus monogyna*	Oak	*Quercus robur*
Cock's Foot	*Dactylis glomerata*	Dog Rose	*Rosa canina*
Teasle	*Dipsacus fullonum*	Bramble	*Rubus fruticosus*
Bearded Couch	*Elymis caninus*	-	*Rumex sp.*
Field Horsetail	*Equisetum arvense*	Elder	*Sambucus nigra*
Wood Horsetail	*Equisetum sylvaticum*	Elm	*Ulmus minor*
Common Ash	*Fraxinus excelsior*	Nettle	*Urtica dioica*

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. Mittchell-Jones. English Nature (now Natural England).

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

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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 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 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).

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.

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.

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

F. Olsson.

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Freya Olsson *BSc (Hons) Biology and Geography*

10th August 2016

Proofread by

.....

David Bodenham *BSc Ind (Hons), Msc*

10th August 2016

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

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- Veteran Tree Management

Tree Health and Pest and Disease Management

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- Tree Health Checks
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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:

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