

CCG-C-23-14146

**PHASE I HABITAT REPORT
AT THE FORMER LAWFORD BOARDING KENNELS
GREENBRIDGE LANE
TARBOCK GREEN
MERSEYSIDE
L35 1QH
OCTOBER 2023**

Prepared for:

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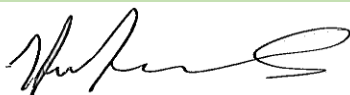
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1.0 INTRODUCTION

1.1 Purpose of the Report & Brief Description of the Development

CC GEOTECHNICAL LIMITED (CCG) is providing consultancy services to **MR. J. MURPHY** in connection with the proposed partial redevelopment of land at the former Lawford Boarding Kennels Greenbridge Lane, Tarbock Green, Merseyside L35 1QH.

Following the demolition of existing on-site structures and subsequent site clearance works, it is understood that the site is to be redeveloped for residential use by the construction of traditional houses, with associated private front and rear private gardens and newly created hard paved access road and off-road car parking facilities.

The proposed redevelopment falls within the administrative jurisdiction of **KNOWSLEY METROPOLITAN BOROUGH COUNCIL**.

This Phase I Habitat survey report was required to assess the potential effects of the development on the ecological value of the land proposed for the development and on wildlife habitats in surrounding areas.

1.2 Survey Constraints

The comprehensiveness of an ecological assessment may be limited by the season in which a survey is undertaken. To confirm the presence and/or absence of all protected species at sites exhibiting potentially suitable habitats, may require multiple visits at suitable times of the year. The visit made to this site focussed on assessing the potential of the site to support species given protection under British or European Law. Furthermore, the survey was carried out when the full spectrum of plant life would not be evident, since some plant species had passed their flowering period, and others were yet to come into flower, and hence a full vegetation assessment could not be completed.

1.3 Site Details

The site comprises a triangular shaped parcel of land located immediately to the west of public pavements extending along Greenbridge Lane, Tarbock Green, Merseyside L35 1QH as illustrated on **CCG** Drawing No. CCG-C-23-14146-1 and Aerial Plate No. CCG-C-23-14146-2 contained herein.

The **ORDNANCE SURVEY** coordinates for the approximate site centre are 345633, 386569.

1.4 Site Description

The site was visited during September 2023 on completion of a review of all relevant historical and environmental mapping data (provided in Appendix D). Photographs taken at the time of the site visit are presented in Appendix E.

It was observed that the site comprises an elongated triangular shaped parcel of land which extends to the approximate dimensions of c. 240m x 96m (c. 13895m²); its long axis being on a north south alignment. It is bound to the east by public pavements extending along Greenbridge Lane, and to the west by Netherly Brook beyond which lies a development of residential properties. Its northern boundary is formed by public pavements extending along Cartbridge Lane.

Preminant structures occupying the site comprise a well-maintained 2-storey detached dwelling constructed of white rendered brick elevations under pitched roofing materials, with 2nr single storey poorly maintained terraces (former kennels) constructed of traditional brick elevations under flat roofing materials adjoining.

The surface topography across the site was seen to be sensibly flat with surface cover comprising a combination of concrete pavers / tarmac covering to the north and unkempt tall ruderal species within the southern section.

Small mounds of building debris (i.e., concrete blocks and brick etc.) and stockpiles of timber fencing panels, and long sections of plastic cladding are located within the western section of the site.

2.0 **PLANNING CONTEXT**

Planning guidance in relation to prospective development in England is issued in the form of Planning Policy Statements (PPS's). In relation to the potential impact of development on flora and fauna, the most relevant of the guidance notes are contained within National Planning Policy Framework (NPPF) (2023).

3.0 **LEGISLATION**

3.1 **Introduction**

The planning and legislative context applicable to ecological considerations of site development in England is summarised hereunder. This is provided as general advice only and does not relate specifically to the site being assessed.

3.2 **Statutory Designated Sites**

Sites with statutory designations receive varying degrees of legal protection under UK law and European Directives. A number of statutory designations are used for sites of high conservation value in the UK dependent on the importance of the site at a local, regional, national and international level. These designations are as follows:

Special Area of Conservation (SACs): SACs are sites of European importance for nature conservation. These receive legal protection under the EC Habitats Directive (1992) which was incorporated into UK legislation through the Conservation (Natural Habitats, &c) Regulations 1994. In the UK all SACs are also designated as SSSIs.

- **Special Protection Areas (SPAs):** SPAs are sites of European importance for birdlife as designated under the Birds Directive. As with SACs all SPAs in the UK will also be designated as SSSIs.
- **Ramsar Sites:** These sites are wetlands of international importance designated under the Ramsar Convention 1971. In most cases these sites are also designated as SPAs or Sites of Special Scientific Interest (SSSI) and receive legal protection in the UK through these designations.
- **Sites of Special Scientific Interest (SSSI):** SSSIs are UK sites of national importance for nature conservation. These sites may be designated as a result of the habitats present or for the presence of rare species or species assemblages. SSSIs receive some legal protection through the Wildlife and Countryside Act 1981. This protection was recently extended through the Countryside and Rights of Way (CROW) Act 2000.
- **National Nature Reserves (NNR):** NNRs are nationally important nature reserves designated by Natural England under the Wildlife and Countryside Act 1981 (amended 2022). These sites will either be managed by Natural England or an approved body and are often designated as SSSIs.
- **Local Nature Reserves (LNR):** Local Nature Reserve is a statutory designation made by local authorities under Section 21 of the National Parks and Access to Countryside Act 1949. These sites may or may not be SSSIs.

3.3 **Non-Statutory Designated Sites**

Non-statutory sites are afforded no statutory legal protection but are in most cases recognised by local planning authorities and statutory agencies as being of local conservation value. The protection of these sites is usually afforded through Local Planning Policies (county, district and unitary development plans) and these sites will, in most cases, be taken into account as a material consideration by the local authority when deciding planning applications. These sites are designated by the local authority (usually in consultation with the local Wildlife Trust and other agencies). Various titles exist including Sites of Biological Importance (SBIs), County Wildlife Sites and Biological Heritage Sites.

The ancient woodland inventory of England records the location and extent of woodlands classified as ancient (*i.e. continuously wooded since 1600*). These sites may be included in the above county level designations. Ancient woodlands again have no statutory protection but may be afforded protection through local plans.

3.4 Protected Species and their Habitats

In the majority of cases relevant to planning applications, protected species are those listed in Schedules 1, 5 and 8 of the Wildlife and Countryside Act (as amended), the Protection of Badgers Act 1992 and the Habitats Regulations. The extent of legal protection varies between species, as do the implications for developments where these species are to be affected.

3.5 Great Crested Newts

Great Crested Newts (*Triturus cristatus*) are listed in Annex IV of the EC “Habitats and Species Directive” and are also included in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to:

- Intentionally kill, injure or take a great crested newt;
- Possess or control any live or dead specimen or anything derived from a great crested newt;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt, and;
- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose.

The great crested newt is also listed in Annex II and Annex IV of the Habitats (and Species) Directive. The directive is transposed into UK law through the Conservation (Natural Habitats &c.) Regulations 1994.

Great crested newts are included in Schedule 2 of the Regulations with Regulation 39 making it offence to:

- Deliberately capture or kill a great crested newt;
- Deliberately disturb a great crested newt;
- Deliberately take or destroy the eggs of a great crested newt, and;
- Damage or destroy a breeding site or resting place of a great crested newt.

Several exceptions exist to the provisions of the legislation. A disabled great crested newt may be captured for the purposes of restoring it to health for subsequent release, and ‘mercy killing’ of a severely injured newt is permissible without a licence.

It is important to identify the presence of great crested newts as early as possible in a development so that the legal obligations regarding this species can be observed. If surveys identify the presence of great crested newts on site a mitigation scheme must be developed in consultation with the local Natural England team. This mitigation scheme must minimise direct threats to newts and compensate for any habitat loss. A licence issued by Natural England is required before the mitigation scheme can be legally implemented.

Mitigation licence applications require full Method Statements and a Reasoned Statement of Application. The method statement contains details of the proposed mitigation works whilst the Reasoned Statement must provide justification as to how the proposed development meets the requirements of the Conservation (Natural Habitats & c.) Regulations 1994.

3.6 Bats

All 16 species of British bat are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (and amended) and under Regulation 39 of the Conservation (Natural Habitats, &c.) Regulations 1994 (the Habitats Directive). Under this legislation it is an offence to:

- Intentionally kill, injure or capture a bat;
- Deliberately disturb bats, and;
- Damage, destroy or obstruct access to roosts (a bat roost is defined as any structure or place which is used for shelter or protection, whether or not bats are present).

The potential fine for each offence is £5,000. If more than one bat is involved, the fine is £5,000 per bat. An offender can also be imprisoned for six months.

The UKBAP lists six bat species considered as priorities: barbastelle, Bechstein's, greater mouse-eared bat, pipistrelles (*common and soprano*), greater horseshoe and lesser horseshoe.

Where bats are found to occur on a development site, and there is considered to be a reasonable possibility that a roost may be damaged or destroyed or that bats using a roost will be disturbed, a licence must be obtained from Natural England.

3.7 Badgers

Badgers (*Meles meles*) and their habitat are protected under The Protection of Badgers Act 1992 and are also included on Schedule 6 of the Wildlife and Countryside Act 1981, and Appendix III of the Berne Convention. The legislation affords badgers protection against deliberate harm or injury making it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger (or attempt to do so);
- To interfere with a sett by damaging or destroying it;
- To obstruct access to, or entrance of, a badger sett, and;
- To disturb a badger whilst it is occupying a sett.

Penalties for offences include fines of up to £5,000, plus up to six months' imprisonment, for each illegal sett interference, badger injury or death.

Works that disturb badgers whilst they are occupying a sett are illegal without a licence. Disturbance can occur even without direct interference or damage to the sett in question. In general, the following activities are likely to require a licence:

- Use of heavy machinery or significant earth moving within 30m of a sett;
- Use of lighter machinery (usually any wheeled vehicles) within 20m of a sett, and;
- Any digging, chain saw use or scrub clearance within 10m of a sett.

3.8 Reptiles

All species of British reptile are protected against intentional killing and injury under the Wildlife and Countryside Act 1981 (as amended). The sand lizard and the smooth snake are afforded a higher degree of protection making it illegal to:

- Deliberately or intentionally kill, capture or injure sand lizards and smooth snakes;
- Deliberately, intentionally or recklessly disturb sand lizards or smooth snakes;
- Deliberately, intentionally or recklessly damage, destroy or obstruct a breeding site, resting place or other place used for shelter and protection;
- Take or destroy eggs, and;
- Keep, sell or exchange sand lizards or smooth snakes (or their eggs).

Slow-worm, common lizard, adder and grass snakes are also protected against killing, injury, sale or barter in England and Wales, however their habitats and places of shelter are not specifically protected. The distribution of smooth snakes and sand lizards is limited to heathland habitats in Surrey, Dorset, Hampshire and Sussex. The sand lizard is also known to occur on sand dune habitats in Merseyside and has recently been introduced to some areas of North Wales.

In England and Wales, a development license must be obtained from Natural England or the WA before undertaking any works that will affect sand lizards or smooth snakes or their habitat. A license is not required to carry out surveys or mitigation for other reptile species.

3.9 Water Voles

The water vole (*Arvicola terrestris*) is afforded full legal protection through its inclusion on Schedule 5 of the Wildlife and Countryside Act 1981 (and amended). The legislation makes it illegal to:

- Intentionally kill, injure or take (capture) a water vole;
- Possess or control live or dead water vole, or any part of a water vole;

- Intentionally or recklessly damage, destroy or obstruct access to any structure or place water voles uses for shelter or protection or disturb water voles while they are using such a place, and;
- Sell, offer for sale or advertise for live or dead water voles.

Penalties for offences include fines of up to £5,000 plus up to six months' imprisonment.

Licences are available from Natural England to allow activities that would otherwise be illegal under the legislation.

3.10 Birds (including Barn Owls)

Section 1 of the Wildlife and Countryside Act 1981 makes it an offence to intentionally kill, injure, handle, or remove any wild bird (with the exception of some pest species), to take or damage a nest whilst it is in use or being built and to take or destroy eggs.

Species listed in Schedule 1 of the Act (see Table 1), including the little ringed plover, barn owl and kingfisher, are afforded an even higher level of protection. In addition to the offence of taking, damaging, or destroying nests or eggs it is also an offence to disturb Schedule 1 species whilst they are building or sitting on nests.

Whilst it is not an offence to disturb non-Schedule 1 species whilst they are building or sitting on a nest an offence may occur if the bird is permanently driven away from its nesting site by prolonged disturbance which leads to the failure of eggs or the death of young. Surveys for the presence of breeding birds are required if any nesting habitat is to be removed during the breeding season (*March to August inclusive*).

3.11 Invasive Plant Species

Under Section 14 (2) of the Wildlife and Countryside Act (1981) it is illegal to spread the invasive non-native plants Japanese Knotweed (*Fallopia japonica*) and Giant Hogweed (*Heracleum mantegazzianum*). At present no requirement exists to eradicate these plants from sites where they are already established.

Environment Agency guidance also exists for Himalayan Balsam (*Impatiens balsamifera*), and the aquatic weeds Australian swap stonecrop (*Crassula helmsii*), floating pennywort (*Hydrocotyle ranunculoides*) and parrot's feather (*Myriophyllum aquaticum*). Although no legal obligation exists it is considered good practice to avoid spreading these invasive plants when working in infested areas.

4.0 METHODOLOGY OF PREPARATION OF PHASE I HABITAT SURVEY REPORT

4.1 Approach & Limitations

A Phase I Habitat Survey is a means of identifying specific features of a site and in relation to their suitability for protected species to inhabit these locations. The report may make recommendations for further survey work and, if appropriate, for mitigation measures to be implemented.

The Phase I Habitat Survey is a standard technique for classifying and mapping British habitats. The Phase I Habitat Survey is a standard method of survey, widely adopted as the basis of ecological assessments (the **JOINT NATURE CONSERVATION COMMITTEE - JNCC**, 2010). The primary aim of such survey is to provide a record of habitats that are likely to be of ecological importance on site. A colour coded alphanumeric habitat map (presented herein) is prepared for the site to show the locations of habitats observed within the vicinity of the site and its environs.

A Phase I Habitat Survey is not intended to provide a comprehensive list of species or provide national vegetation classifications (NVC). However, detailed descriptions of observed flora and fauna are presented in table format, as presented hereunder, and other valuable ecological components (e.g. protected and/or invasive species potential), if encountered, are discussed hereunder.

The Phase 1 Habitat Survey Report was prepared on the basis of there may be a potential for 2nr phases of work. An initial desk study was undertaken, followed by a field study / investigation. These phases are discussed in detail hereunder.

It must be borne in mind that desk study data is not exhaustive and is intended mainly to set a context for the study. It is therefore possible that protected species not identified during the data search do in fact occur within the 1km radius of the site.

4.2 Desk Study

The desk study involved a search of all freely available reference materials relating to ecology within the vicinity of the proposed development site. This included a review of the UK Biodiversity Actions Plan (UKBAP; UK Biodiversity Steering Group 1998a-f, Biodiversity Reporting, and Information Group 2007), **HALTON MBC** Local Biodiversity Action Plans (LBAP's) with reference to the site, the *Halton Natural Assets Strategy* (2007-2012), the *Halton Unitary Development Plan* (UDP: 2005) and Halton BC '*Infrastructure Plan, 2014 Review*'.

Information pertaining to statutory and non-statutory sites and notable species was gathered from internet sources such as the National Biodiversity Network (NBN), Multi-Agency Geographic Information for the Countryside (MAGIC), Live Search and Nature on the Map, and procured environmental data **BIOBANK MERSEYSIDE** '*Local Environmental Records Centre for Merseyside*' Report Reference No. 01-09-2023, as centred on the site (appended herein).

A search was made for statutory designated ecological sites (those which are protected under national and international legislations) and non-statutory designated (those which are important at a local scale) within a 1km radius of the subject site. Additional searches were also made for records of notifiable species within the same 1km radius.

The results of the Desk Study are discussed in Section 5.0 hereunder.

4.3 Field Survey

The findings of the desk study may have provided guidance in the planning of the field survey, but notwithstanding these findings, good practice required that a field survey be undertaken.

For this site, the field survey was undertaken by an ecologist with over 14nr years' field experience, a member of the British Ecological Society, as employed by **CCG**.

During the survey, the presence, or potential presence of protective species was also recorded as were the presence of any native and non-native invasive plant species. Incidental observations of birds and mammals were also made during the habitat survey and are tabulated in Table 3 hereunder.

5.0 DESK STUDY RESULTS

5.1 Introduction

From the information assembled from the above-mentioned sources, the relative ecological data was reviewed, and the results of the reviews for the site and surroundings are as summarised hereunder.

5.2 Designated Conservation Sites

6nr sites of local and/or national biological sites of interest are identified within 1km radius of the site, these being:

1. Netherly Brook and Bitton Brook Corridor (Nature Improvement Area)
2. Cartbridge Lane Wood (Knowsley Local Wildlife Site)
3. Green's Bridge Plantation (Knowsley Local Wildlife Site)
4. Bitton Brook (Knowsley Local Wildlife Site)
5. Netherly Woods and Brook (Knowsley Local Wildlife Site)
6. Netherly Brook (Knowsley Local Wildlife Site)

5.3 Biodiversity Action Plan

Following the Convention on Biological Diversity (1992), the UK Biodiversity Action Plan was published in 1994 to guide national strategy for the conservation of biodiversity through Species Action Plans (SAPs) and Habitat Action Plans (HAPs), which met conservation targets and objectives. Most areas now possess a Local Biodiversity Action Plan (LBAP) to complement the national strategy where priority habitats and species are identified, and targets set for their conservation. BAPs are the key nature conservation initiative in the UK, working at national, regional, and local levels.

The North Merseyside Biodiversity Action Plan (Merseyside Biodiversity Group), which includes the study site and its surrounding environs and comprises numerous Habitat Action Plans and Species Action Plans, a number of which may be applicable for this study. Notable species / habitats as listed under current North Merseyside Biodiversity Action Plans include the following:

5.4 Protective Species (UK BAP's / and/or LABAP's)

Below is a list of Species that are listed on the current North Merseyside Biodiversity Action Plan

- **Corn Bunting**
- **Grey Partridge**
- **Lapwing**
- **Skylark**
- **Song Thrush**
- **Urban Birds**
- **Bats**
- **Brown Hare**
- **Red Squirrel**
- **Water Vole**
- **Common Lizard**
- **Sand Lizard**
- **Great Crested Newt**
- **Natterjack Toad**
- **Dark Green Fritillary**
- **Dragonflies**
- **Grayling Butterfly**
- **Vernal Mining Bee**
- **Northern Dune Tiger Beetle**
- **Sandhill Rustic Moth**
- **Bluebell**
- **Dune Helleborine**
- **Purple Rambling-Fumitory**
- **Isle of Man Cabbage**
- **Petlewort**
- **Sand Grass**
- **Sefton Coast Plants**
- **Stonewort's**

5.5 Protected Habitats (UK BAP's and/or LBAP's)

Below is a list of habitats that are listed on the current North Merseyside Biodiversity Action Plan

- **Conifer Woodland**
- **Lowland Mixed Broad-leaf Woodland**
- **Wet Woodland**
- **Lowland Wood-pasture and Parkland**
- **Urban Trees**
- **Lowland Acid Grassland**

- Lowland Heathland
- Urban Grasslands
- Lowland Raised Bog
- Canals
- Ponds
- Reedbeds
- Coastal Saltmarshes
- Coastal Sand Dunes
- Field Boundaries
- Urban Green Infrastructure

5.6 Records of UK Protected Species within 1km of Development Site

After a review of the aforementioned North Merseyside Biodiversity Action Plan and the appended BioBank Merseyside Biodiversity Information Report (Ref No. 3962-CCG) the following UK Protected Species have been identified within, or within 1km of the study site:

Table 1: UK Protected Species Identified within 1km of The Study Site

Group	Common Name	Scientific Name	Records	Designation
Amphibian	Common Frog	<i>Rana temporaria</i>	30	WCA5/9.5a
	Common Toad	<i>Bufo bufo</i>	11	WCA5/9.5a
	Great Crested Newt	<i>Triturus cristatus</i>	1	HabRegs2,WCA5/9.4b,WCA5/9.5a,WCA5/9.4c
	Smooth Newt	<i>Lissotriton vulgaris</i>	26	WCA5/9.5a
Bird	Barn Owl	<i>Tyto alba</i>	4	WCA1i
	Kingfisher	<i>Alcedo atthis</i>	2	WCA1i
	Peregrine	<i>Falco peregrinus</i>	1	WCA1i
	Quail	<i>Coturnix coturnix</i>	1	WCA1i
Flowering Plant	Bluebell	<i>Hyacinthoides non-scripta</i>	1	WCA8
Terrestrial Mammal	Bat	<i>Chiroptera</i>	3	HabRegs2
	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	5	HabRegs2,WCA5/9.4b,WCA5/9.5a,WCA5/9.4c
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	1	WCA5/9.1k/I,WCA5/9.1t,WCA5/9.2,WCA5/9.4.a,WCA5/9.4b
	European Water Vole	<i>Arvicola amphibius</i>	13	WCA5/9.4.a,WCA5/9.4b,WCA5/9.4c
	Noctule Bat	<i>Nyctalus noctula</i>	6	HabRegs2,WCA5/9.4b,WCA5/9.5a,WCA5/9.4c
	Pipistrelle Bat species	<i>Pipistrellus</i>	12	HabRegs2,WCA5/9.4b,WCA5/9.5a,WCA5/9.4c
	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>		HabRegs2,WCA5/9.4b,WCA5/9.5a,WCA5/9.4c

5.7 Records of North Merseyside BAP Species

The following North Merseyside BAP Species have been recorded within, or within 1km of the site:

Table 2: North Merseyside BAP Species Recorded within 1km off The Site

Group	Common Name	Scientific Name	Records	Designation
Amphibian	Great Crested Newt	<i>Triturus cristatus</i>	1	LBAP
Bird	Corn Bunting	<i>Emberiza calandra</i>	9	LBAP
	Grey Partridge	<i>Perdix perdix</i>	13	LBAP
	House Martin	<i>Delichon urbicum</i>	6	LBAP
	House Sparrow	<i>Passer domesticus</i>	6	LBAP
	Lapwing	<i>Vanellus vanellus</i>	11	LBAP
	Skylark	<i>Alauda arvensis</i>	14	LBAP
	Song Thrush	<i>Turdus philomelos</i>	9	LBAP
	Starling	<i>Sturnus vulgaris</i>	7	LBAP
	Swift	<i>Apus apus</i>	4	LBAP
Flowering Plant	Bluebell	<i>Hyacinthoides non-scripta</i>	25	LBAP
Insect – Dragonfly (Odonata)	Azure Damselfly	<i>Coenagrion puella</i>	11	LBAP

	Banded Demoiselle	<i>Calopteryx splendens</i>	3	LBAP
	Black Darter	<i>Sympetrum danae</i>	1	LBAP
	Black-tailed Skimmer	<i>Orthetrum cancellatum</i>	4	LBAP
	Blue-tailed Damselfly	<i>Ischnura elegans</i>	19	LBAP
	Broad-bodied Chaser	<i>Libellula depressa</i>	7	LBAP
	Brown Hawker	<i>Aeshna grandis</i>	4	LBAP
	Common Blue Damselfly	<i>Enallagma cyathigerum</i>	10	LBAP
	Common Darter	<i>Sympetrum striolatum</i>	5	LBAP
	Emperor Dragonfly	<i>Anax imperator</i>	15	LBAP
	Four-spotted Chaser	<i>Libellula quadrimaculata</i>	5	LBAP
	Migrant Hawker	<i>Aeshna mixta</i>	2	LBAP
	Southern Hawker	<i>Aeshna cyanea</i>	3	LBAP
Terrestrial Mammal	Bat	<i>Chiroptera</i>	3	LBAP
	Brown Hare	<i>Lepus europaeus</i>	15	LBAP
	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	5	LBAP
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	1	LBAP
	European Water Vole	<i>Arvicola amphibius</i>	13	LBAP
	Noctule Bat	<i>Nyctalus noctula</i>	6	LBAP
	Pipistrelle Bat species	<i>Pipistrellus</i>	12	LBAP
	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	1	LBAP

LBAP = North Merseyside BAP: Species that are incorporated within the North Merseyside Biodiversity Action Plan. These species may or may not also be UK BAP species. Some species have their own action plans within the NM BAP, others are members of group species action plans.

5.8 Records of NERC Act Section 41 Species

The following species of principal important recorded within, or within 1km of, the site are as follows:

Table 3: Species of Principal Important Recorded Within 1km of The Site

Group	Common Name	Scientific Name	Records	Designation
Amphibian	Common Toad	<i>Bufo bufo</i>	11	Section 41
	Great Crested Newt	<i>Triturus cristatus</i>	1	Section 41
Bird	Bullfinch	<i>Pyrrhula pyrrhula</i>	3	Sect.41.suppl
	Corn Bunting	<i>Emberiza calandra</i>	9	Sect.41.suppl
	Cuckoo	<i>Cuculus canorus</i>	2	Section 41
	Duncock	<i>Prunella modularis</i>	6	Sect.41.suppl
	Grasshopper Warbler	<i>Locustella naevia</i>	5	Section 41
	Grey Partridge	<i>Perdix perdix</i>	13	Section 41
	Herron Gull	<i>Larus argentatus</i>	1	Sect.41.suppl
	House Sparrow	<i>Passer domesticus</i>	6	Section 41
	Lapwing	<i>Vanellus vanellus</i>	11	Section 41
	Linnet	<i>Linaria cannabina</i>	6	Sect.41.suppl
	Reed Bunting	<i>Emberiza schoeniclus</i>	8	Section 41
	Skylark	<i>Alauda arvensis</i>	14	Sect.41.suppl
	Song Thrush	<i>Turdus philomelos</i>	9	Sect.41.suppl
	Starling	<i>Sturnus vulgaris</i>	7	Sect.41.suppl
	Tree Sparrow	<i>Passer montanus</i>	3	Section 41
	Willow Tit	<i>Poecile montanus</i>	3	Sect.41.suppl
	Yellowhammer	<i>Emberiza citronella</i>	13	Section 41
Boney Fish (Actinopterygii)	European Eel	<i>Anguilla Anguilla</i>	2	Section 41
Flowering Plant	Cornflower	<i>Centaurea cyanus</i>	1	Section 41
	Marsh Stitchwort	<i>Stellaria palustris</i>	1	Section 41
Insect – Butterfly	Wall (Brown)	<i>Lasiommata megera</i>	4	Section 41
Insect - Moth	Sallow	<i>Cirrhia icteritia</i>	1	Section 41
Mollusc	Mud Pond Snail	<i>Omphiscola glabra</i>	1	Section 41
Terrestrial Mammal	Bat	<i>Chiroptera</i>	3	Section 41
	Brown Hare	<i>Lepus europaeus</i>	15	Section 41
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	1	Section 41
	European Water Vole	<i>Arvicola amphibius</i>	13	Section 41
	Noctule Bat	<i>Nyctalus noctula</i>	6	Section 41
	Pipistrelle Bat species	<i>Pipistrellus</i>	12	Section 41

	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	1	Section 41
	Western European Hedgehog	<i>Erinaceus europaeus</i>	28	Section 41

Section 41: Natural Env. and Rural Communities Act 2006. *Species of Principal Importance in England (section 41) ‘Species “of principal importance for the purpose of conserving biodiversity” covered under section 41 (England) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity’.*

Section 41 Supplement: Supplementary list to deal with S41 bird sub-sp problems *‘Bird species corresponding to British sub-species listed in section 41 (England) of the NERC Act (2006).*

5.9 Records of IUCN Red-listed Species

The following IUCN Red-listed Species recorded within, or within 1km of, the site are as follows:

Table 4: IUCN Red-listed Species Recorded Within 1km of The Site

Group	Common Name	Scientific Name	Records	Designation
Flowering Plants	Box	<i>Buxus sempervirens</i>	3	RLGB.DD
	Corn Marigold	<i>Glebionis segetum</i>	1	RLGB.VU
	Creeping Spearwort	<i>Ranunculus reptans</i>	2	RLGB.VU
	Field Woundwort	<i>Stachys arvensis</i>	2	RLGB.Lr(NT)
	Large-flowered Hemp-nettle	<i>Galeopsis speciosa</i>	1	RLGB.VU
	Marsh Stitchwort	<i>Stellaria palustris</i>	1	RLGB.VU
	Stinking Chamomile	<i>Anthemis cotula</i>	1	RLGB.VU
	Wood Bitter-vetch	<i>Vicia orobus</i>	1	RLGB.Lr(NT)
Insect – Beetle (Coleoptera)	Alder Leaf Beetle	<i>Agelastica alni</i>	3	RLGB.DD
insect - dragonfly (Odonata)	Common Darter	<i>Sympetrum striolatum</i>	5	RLGB.DD
Lichen	Scarlet-Cup Lichen	<i>Cladonia coccifera s. lat.</i>	1	RLGB.DD
Mollusc	Marsh Pond Snail	<i>Stagnicola palustris/fuscus/corvus</i>	2	RLGB.DD
Terrestrial mammal	Bat	<i>Chiroptera</i>	3	RLGB.CR,RLGB.DD,RLGB.EN,RLGB.Lr(NT), RLGB.VU
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	1	RLGB.EN
	European Water Vole	<i>Arvicola amphibius</i>	13	RLGB.EN
	Pipistrelle Bat species	<i>Pipistrellus</i>	12	RLGB.Lr(NT)
	West European Hedgehog	<i>Erinaceus europaeus</i>	28	RLGB.VU

5.10 Records of Nationally Notable Species

The following Nationally Notable Species recorded within, or within 1km of, the site are as follows:

Table 5: Nationally Notable Species Recorded Within 1km of The site

Group	Common Name	Scientific Name	Records	Designation
Flowering Plants	Aggregate-headed Hawkweed	<i>Aggregatum</i>	1	NR-excludes
	Box	<i>Buxus sempervirens</i>	3	NR-excludes
	Creeping Spearwort	<i>Ranunculus reptans</i>	2	NR-excludes
	Fringed Water-lily	<i>Nymphoides peltata</i>	2	NS-excludes
	Wood Bitter-vetch	<i>Vicia orobus</i>	1	NS-excludes
insect - true fly (Diptera)	Cheilosia mutabilis	<i>Cheilosia mutabilis</i>	2	NS-excludes
	Pocota personata	<i>Pocota personata</i>	1	NS-excludes

NS-excludes - Nationally Scarce Excludes Red Listed taxa: *Nationally Scarce - Occurring in 16-100 hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria.*

NR-excludes - Nationally Rare. Excludes Red Listed taxa: *Nationally Rare - Occurring in 15 or fewer hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria.*

5.11 Records of WCA schedule 9 species (including non-native invasive plants)

The following records of WCA schedule 9 species (including non-native invasive plants) identified within, or within 1km, of the site are as follows:

Table 6: WCA schedule 9 Species Recorded Within 1km of The Site

Group	Common Name	Scientific Name	Records	Designation
Birds	Barn Owl	<i>Tyto alba</i>	4	MBB-WCA-S9
Flowering Plants	Canadian Waterweed	<i>Elodea canadensis</i>	4	MBB-WCA-S9
	Himalayan Balsam	<i>Impatiens glandulifera</i>	59	MBB-WCA-S9
	Japanese Knotweed	<i>Fallopia japonica</i>	3	MBB-WCA-S9
	Japanese Rose	<i>Rosa rugosa</i>	1	MBB-WCA-S9
	Montbretia	<i>Crocasmia pottsii x aurea = C. x crocosmiiflora</i>	1	MBB-WCA-S9
	Rhododendron ponticum	<i>Rhododendron ponticum</i>	17	MBB-WCA-S9
	Three-cornered Garlic	<i>Allium triquetrum</i>	1	MBB-WCA-S9
Terrestrial Mammal	European Grey Squirrel	<i>Sciurus carolinensis</i>	20	MBB-WCA-S9

MBB-WCA-S9 - Wildlife and Countryside Act 1981 (Variation of Schedule 9) (England and Wales) Order 2010: *Species on Schedule 9 (part 2) as revised 2010. Under section 14 of the Act it is illegal to release into the wild any animal or allow to grow in the wild any plant which is not ordinarily resident in GB or which is a known threat and is listed on Schedule 9 of the Act.*

5.12 Habitats

The following habitats recorded to be within, or within 1km of, the study site are as follows:

Table 7: Habitats Recorded to be Within 1km of The Site

Habitat	Size
CBA Grassland	
Grassland	0.17ha
Lowland Meadow	11.06ha
CBA Mosaic	
Local Wildlife Site	0.65ha
CBA Wetland	
Local Wildlife Site	3.55ha
Reedbeds	0.06ha
CBA-Woodland	
Local Wildlife Site	13.02ha
Lowland Mixed Broad-leaf Woodland	61.75ha
Lowland Mixed Deciduous Woodland	42.02ha
Lowland Wood-pasture and Parkland	3.8ha
Traditional Orchards	0.22ha
Wet Woodland	3.78ha
Linear Features	
Active railway corridor	6.41km
Hedgerow	13.41km
River	5.9km
Stepping Stones	
Ponds	1.65ha
Woodland and scrub	
A1.1.1 Broadleaved woodland - semi-natural	2.82ha
A1.1.2 Broadleaved woodland – plantation	6.18ha
A2.1 Scrub - dense/continuous	5.3ha
A2.2 Scrub – scattered	0.58 (36 count)
A3.1 Broadleaved Parkland/scattered trees	
Grasslands & Marshes	
B2.1 Neutral grassland – unimproved	5.89ha
B4 Improved grassland	14.09ha
B5 Marsh/marshy grassland	0.17ha
B6 Poor semi-improved grassland	8.36ha
Tall Herbs & Ferns	
C1.1 Bracken – continuous	0.01ha
C3.1 Other tall herb and fern – ruderal	6.16ha
Swamp, Marginal & Inundation	
F1 Swamp	0.06ha
Open Water	
G1 Standing water	0.38ha 0.24km
G2 Running Water	0.83ha 1.12km
Miscellaneous	

J1.1	Cultivated/disturbed land – arable	42.49ha
J1.2	Cultivated/disturbed land - amenity grassland	8.3ha
J2.1.2	Intact hedge - species-poor	3.69km
J2.6	Dry ditch	0.27km
J4	Bare ground	0.02ha
NVC habitat mapping for Knowsley sites in 2002, sourced from MEAS		
Aquatic communities		
A2a	Lemna minor community, typical sub-community	0ha
Mesotrophic grasslands		
MG1e	Arrhenatherum elatius grassland, Centaurea nigra sub-community	0.14ha
MG7a	Lolium perenne leys and related grasslands, Lolium perenne-Trifolium repens leys	0ha
MG9a	Holcus lanatus-Deschampsia cespitosa grassland, Poa trivialis sub-community	0.73ha
Vegetation of Open Habitats		
OV24a	Urtica dioica-Galium aparine community, typical sub-community	0.1ha
OV26d	Epilobium hirsutum community, Arrhenatherum elatius-Heracleum sphondylium sub-community	0.26ha
Swamps & Tall-Herb Fens		
S12a	Typha latifolia swamp, Typha latifolia sub-community	0.05ha
S14c	Sparganium erectum swamp, Mentha aquatica sub-community	0.01ha
Woodlands & Scrub		
W1	Salix cinerea-Galium palustre woodland	0.07ha
W10a	Quercus robur-Pteridium aquilinum-Rubus fruticosus woodland, typical sub-community	3.08ha
W10c	Quercus robur-Pteridium aquilinum-Rubus fruticosus woodland, Hedera helix sub-community	0.61ha
W21b	Crataegus monogyna-Hedera helix scrub, Mercurialis perennis sub-community	0.06ha
W23c	Ulex europaeus-Rubus fruticosus scrub, Teucrium scorodonia sub-community	0.1ha
W24a	Rubus fruticosus-Holcus lanatus underscrub, Cirsium arvense-Cirsium vulgare sub-community	0.48ha
W24b	Rubus fruticosus-Holcus lanatus underscrub, Arrhenatherum elatius-Heracleum sphondylium sub-community	0.54ha
W6a	Alnus glutinosa-Urtica dioica woodland, typical sub-community	0.93ha
W6b	Alnus glutinosa-Urtica dioica woodland, Salix fragilis sub-community	0.14ha
W6d	Alnus glutinosa-Urtica dioica woodland, Sambucus nigra sub-community	1.09ha
W6e	Alnus glutinosa-Urtica dioica woodland, Betula pubescens sub-community	0.53ha

5.13 Designated Areas

The following Designated Areas are located within 1km of the study site:

Table 8: Designated Areas Within 1km of The Site

Name	Type
Netherley Brook and Ditton Brook Corridor	Nature Improvement Area
Cartbridge Lane Wood	Knowsley Local Wildlife Site
Green's Bridge Plantation	Knowsley Local Wildlife Site
Ditton Brook	Knowsley Local Wildlife Site
Netherley Woods and Brook	Knowsley Local Wildlife Site
Netherley Brook	Knowsley Local Wildlife Site

6.0 FIELD SURVEY RESULTS

6.0 Introduction

The survey was undertaken in late September 2023 when many British wildflower species have surpassed their flowering period and therefore the survey data discussed hereunder may not be representative of other times of year.

Weather conditions at the time of undertaking the survey comprised clear skies, a light breeze with ambient temperature being in the order of 17-20°.

The results of the survey are presented hereunder. Photographs taken during the survey are presented in Appendix B.

The survey required a systematic walkover of the site to classify the habitat types present and was completed using standard Phase 1 Habitat Survey methodology whereby the habitat type present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which may further survey.

An annotated (*alphanumeric*) habitat map is presented in Appendix A. This drawing illustrates the locations of all habitat types recorded within the specified search parameter of the development site, which incorporates a 1km buffer zone extending out from the approximate site centre for visual representation.

To assess the presence/absence of tree and/or ground nesting birds, the entire site was walked over at a slow and constant pace whilst listening and looking for any evidence of tree/ground nesting bird activities. The surveyor was equipped with a pair of 'Nikon Sport Lite 10 x 25 50' binoculars to observe bird behaviour from distance. All significant areas of dense ground vegetation that may have the potential to support nesting birds were inspected for evidence of current/historical nesting activity. Where possible, vegetation was carefully searched for signs of current nests. No nesting activity was observed. However, given the density of foliage and ground flora, it may be possible that nest sites may have been under looked.

With regards the above, at the time of undertaking the survey, the following bird species were seen within, crossing the site and its immediate environs; Blackbird (*Turdus merula*), Dunnock (*Prunella modularis*), Wood Pigeon (*Columba palumbus*), Kestrel (*Falco Tinnunculus*), Common Buzzard (*Buteo buteo*), Kestrel (*Falco tinnunculus*) and Magpie (*Pica pica*).

6.2 Observed Habitats on Site

At the time of the site visit habitats observed within the site boundary and its immediate environs comprised the following:

- **The Site**
- **Buildings (including out buildings (former kennels))**
- **Evergreen trees**
- **Deciduous tree**
- **Hard standing**
- **Gravel**
- **Stockpiled building debris**
- **Stockpiled timber fence panels / plastic cladding sheets**
- **Tall ruderal species**

6.3 The Site Description & Habitats

The site comprises a parcel of partially developed land located immediately to the west of public pavements extending along Greenbridge Lane, Tarbock Green, Merseyside L35 1QH. It is situated within a mixed residential / agricultural context. It comprises a triangular shaped parcel of land that is bound to the north by public pavements extending along Cartbridge Lane and to the west by Netherly Brook

The surface topography across the site was seen to be sensibly flat with hard pavement cover to the north and dense scrub, tall ruderal species occupying the south.

The site boundaries are defined by a tree lined low-level brick wall extending along its eastern boundary, with a tree lined brook extending forming the western boundary with a tree lined, partially demolished, high brick wall delineating its northern boundary. Habitats observed within the confines of the site are discussed hereunder.

Species observed within the site, and bird species observed within, or within close proximity of the site are presented hereunder in Table 10 – 12.

6.3.1 Permanent Structures

Permanent structures within the site boundary occupy the northern section of the overall site and comprise a 2-storey detached residential property constructed of rendered traditional brick elevations under pitched roofing materials, with 2nd terraces of single storey, poorly maintained, outbuildings, former kennels, being positioned close by.

A survey of the existing buildings undertaken at ground floor level failed to detect voids under the gutter / fascia board alignments which would potentially allow access for bat species into the roof spacing.

6.3.2 Evergreen Species

Trees lining the northeastern site boundary comprise (T1), tall, mature ivy (*Hedera helix*) clad evergreens comprising Leyland cypress (*Cupressus x leylandii*) with an understorey generally consisting of dense Bramble (*Rubus fruticosus*), Herb-Robert (*Geranium robertianum*) Autumn Hawkbit (*Scorzonoides autumnalis*), Dandelion (*Taraxacum officinale*), occasional stands of Golden rod (*Solidago virgaurea*) and

Horsetails fern (*Equisetum arvense*) with sparse grass cover consisting of Red fescue (*Festuca rubra*) and False-oat grass (*Arrhenatherum elatius*) and occasional Alder (*Alnus glutinosa*) and Sycamore (*Acer pseudoplatanus*) saplings.

No rare, species of principle importance or protected plant species were recorded at the site during the survey.

6.3.3 Deciduous Woodland Species

Trees lining the southeastern boundary (**T2**) comprise deciduous woodland species consisting of mature stands of Oak (*Quercus robur*), Hawthorn (*Crataegus monogyna*) Sycamore (*Acer pseudoplatanus*), locally Elder (*Sambucus nigra*) with occasional Alder (*Alnus glutinosa*) saplings. The understorey was seen to consist of Redshank (*Persicaria maculosa*), Common nettle (*Urtica dioica*), Colt's-foot (*Tussilago farfara*) Cleavers, Cleavers (*Galium aparine*), Hedge bindweed (*Calystegia sepium*), Garlic mustard (*Alliaria petiolata*) Herb-Robert (*Geranium robertianum*) with small isolated pockets of Himalayan balsam (*Impatiens glandulifera*). Grass species were seen to include Red fescue (*Festuca rubra*) and False-oat grass (*Arrhenatherum elatius*) Rough-meadow grass (*Poa trivialis*), Common couch (*Elymus repens*) Sweet-vernal grass (*Anthoxanthum odoratum*) and Sheep's fescue (*Festuca ovina*).

Trees lining the western site boundary (**T3**) were seen to generally comprise Crack willow (*Salix fragilis*), with 1nr mature White poplar (*Populus alba*) being located at the extreme southern tip, and isolated stands of Alder (*Alnus glutinosa*), and occasional stands of mature /semi-mature Oak (*Quercus robur*) with occasional Sycamore (*Acer pseudoplatanus*) saplings.

The understorey of the trees lining the western site boundary was seen to comprise generally dense patches of Himalayan balsam (*Impatiens glandulifera*) Broad-leaf dock (*Rumex obtusifolius*) Rosebay willowherb (*Chamerion angustifolium*) Common ragwort (*Senecio jacobaea*) Groundsel (*Senecio vulgaris*) with lesser amounts of Hedge woundwort (*Stachys sylvatica*) Herb-Robert (*Geranium robertianum*) and singular patches of both Common centaury (*Centaureum erythraea*) and Black Bamboo (*Phyllostachys nigra*). Grass species were seen to include Red fescue (*Festuca rubra*) and False-oat grass (*Arrhenatherum elatius*) Rough-meadow grass (*Poa trivialis*), Common couch (*Elymus repens*) Sweet-vernal grass (*Anthoxanthum odoratum*) and Sheep's fescue (*Festuca ovina*).

The northern / northwester site boundaries (**T4**) are lined by stands of mature, semi-mature deciduous species consisting generally of ivy (*Hedera helix*) cladded Sycamore (*Acer pseudoplatanus*) and Oak (*Quercus robur*) with occasional immature stands of Ash (*Fraxinus excelsior*) and Alder (*Alnus glutinosa*) saplings.

The understorey associated with the above habitat was seen to consist Common nettle (*Urtica dioica*), Hedge bindweed (*Calystegia sepium*), Broad-leaf dock (*Rumex obtusifolius*) Rosebay willowherb (*Chamerion angustifolium*) Common ragwort (*Senecio jacobaea*) Herb-Robert (*Geranium robertianum*) and grass species consisting of Red fescue (*Festuca rubra*) and False-oat grass (*Arrhenatherum elatius*) Rough-meadow grass (*Poa trivialis*), Common couch (*Elymus repens*) Sweet-vernal grass (*Anthoxanthum odoratum*) and Sheep's fescue (*Festuca ovina*).

From a review of the appended environmental data, habitats identified as target notes T2 through to T4 are listed as UK BAP priority habitats.

No rare, species of principle importance or protected plant species were recorded at the site during the survey.

Notwithstanding the above, localised pockets of Himalayan balsam (*Impatiens glandulifera*) were identified within the dense understorey. Under the Wildlife and Countryside Act 1981 (amended), you are allowed to have Himalayan balsam on your own land, you cannot allow it to spread onto adjacent land and therefore the *Client* is advised to seek professional guidance pertaining to the management / eradication of this species before undertaking any site clearance works.

6.3.4 Areas of Hard Standing

Land forming the northern section of the site (**T5**) was seen to generally comprise areas of hard standing comprising locally moss covered black bituminous paving and concrete block paving. Species which have taken holding within the concrete block paving joint spacings include Rosebay willowherb (*Chamerion angustifolium*) Common ragwort (*Senecio jacobaea*) Herb-Robert (*Geranium robertianum*) Autumn Hawkbit (*Scorzoneroide autumnalis*), Pineappleweed (*Matricaria discoidea*), Dandelion (*Taraxacum officinale*) and Horsetails fern (*Equisetum arvense*).

As small, raised area of planting (**T8**), located within the driveway area to the south of former kennels occupies stands of Tutsan (*Hypericum androsaemum*) as a central feature with Cotoneaster (*Cotoneaster horizontalis*) and small amounts of Field Horsetail (*Equisetum arvense*) overhanging at the base.

6.3.5 Areas of Gravel

A narrow strip of gravel (**T6**), located within the northwestern section of the study site was seen to accommodate various perennial species including Common nettle (*Urtica dioica*), Broad-leaf dock (*Rumex obtusifolius*) Rosebay willowherb (*Chamerion angustifolium*) Common ragwort (*Senecio jacobaea*), Mugwort (*Artemisia vulgaris*), Herb-Robert (*Geranium robertianum*) Black Medick (*Medicago lupulina*) small pockets of Himalayan balsam (*Impatiens glandulifera*) and an isolated stand of Common sunflower (*Helianthus annuus*).

6.3.6 Stockpile of Building Debris

On the southwestern edge of the aforementioned gravel area lies a small, unsorted stockpile of building debris generally consisting concrete breeze block brick with fragments of wood which are placed within close proximity of a metal skip container.

6.3.7 Stockpile of timber fence Panels & Corrugated Plastic Sheeting

Placed alongside the building debris stockpile is a stack of timber fence panels and 2nr stacks of corrugated plastic sheets.

6.3.8 Tall Ruderal / Scrub Habitat

Land forming the southern section of the site comprises an area of unkempt vegetation (**T7**) which contains a number of small, wooded structures that were previously used during the previous land use as a kennelling facility. Dominant species within the area includes Canadian Goldenrod (*Solidago canadensis*), Mugwort (*Artemisia vulgaris*), Greater plantain (*Plantago major*), and Ribwort plantain (*P. lanceolata*), dense stands of Hogweed (*Heracleum sphondylium*), Cow parsley (*Anthriscus sylvestris*), Meadow vetchling (*Lathyrus pratensis*), Spear thistle (*Cirsium vulgare*), Red clover (*Trifolium pratense*) Bramble (*Rubus fruticosus*) Broad-leaved dock (*Rumex obtusifolius*), with scattered pockets of Himalayan balsam (*Impatiens glandulifera*), with a single small isolated pocket of Lemon Balm (*Melissa officinalis*) positioned along the western edge, and the exotic Japanese pachysandra (*Pachysandra terminalis*) being located at its northern edge. Also contained within this area are a series of very immature pockets of Grey willow (*Salix cinerea* subsp. *Oleifolia*), Alder (*Alnus glutinosa*).

Grass / sedge species located within this habitat include Red Fescue (*Festuca rubra*) Sweet vernal grass (*Anthoxanthum-odoratum*), Black sedge (*Carex nigra*), Perennial rye-grass (*Lolium perenne*), Yorkshire fog (*Holcus lanatus*) and Sheep's-fescue (*Festuca ovina*) and Rough Meadow-grass (*Poa trivialis*).

7.0 Observed Habitats

Table 9: Habitats Present Within Site Boundary

HABITAT TYPE	UK BAP?	LBAP?	WILL HABITAT BE IMPACTED?	IS HABITAT A NOTABLE CONSIDERATION?
Areas of Hard Standing / Gravel	No	No	Yes	No
Timber / Plastic Sheeting	No	No	Yes	No
Tall Ruderal Species /Scrub	No	No	Yes	Yes
Evergreen Species	No	No	No	Yes
Deciduous Woodland Species	No	No	No	Yes
Urban Species Poor Hedge	No	No	No	Yes

*Included in the 'Urban Wasteland Habitat Action Plan'

Given that similar habitats are located within the surrounding area; it is considered that the site is of poor – moderate ecological importance.

7.0 Fauna & Flora Observations

Various types of fauna and flora were observed within and adjoining the site boundary during the site visit. A comprehensive list of species observed within the site boundary is presented hereunder:

Table 10: Observed Bird Species (Within &/or Crossing the Site)

Common Name	Scientific Name
Blackbird	<i>Turdus merula</i>
Black-headed gull	<i>Chroicocephalus ridibundus</i>
Buzzard	<i>Buteo buteo</i>
Carrion crow	<i>Corvus corone</i>
Chaffinch	<i>Fringilla coelebs</i>
Common gull	<i>Larus canus</i>
Dunnock	<i>Prunella modularis</i>
Kestrel	<i>Falco tinnunculus</i>
Magpie	<i>Pica pica</i>
Wood pigeon	<i>Columba palumbus</i>
Wren	<i>Troglodytes troglodytes</i>

Table 11: Butterflies

Common Name	Scientific Name
Red admiral	<i>Vanessa atalanta</i>
Small White	<i>Pieris rapae</i>
Speckled Wood	<i>Pararge aegeria</i>

Table 12: Observed Plant Species

Common Name	Scientific Name
Autumn hawkbit	<i>Scorzoneroides autumnalis</i>
Bird's-foot	<i>Ornithopus perpusillus</i>
Black Bamboo	<i>Phyllostachys nigra</i>
Black Medick	<i>Medicago lupulina</i>
Black nightshade	<i>Solanum nigrum</i>
Bramble	<i>Rubus fruticosus</i>
Broad-leaved dock	<i>Rumex obtusifolius</i>
Bugle	<i>Ajuga reptans</i>
Cats-ear	<i>Hypochaeris radicata</i>
Canadian Goldenrod	<i>Solidago canadensis</i>
Cleavers / Goose grass	<i>Galium aparine</i>
Colt's-foot	<i>Tussilago farfara</i>
Cotoneaster	<i>Cotoneaster horizontalis</i>
Common centaury	<i>Centaurium erythraea</i>
Common chickweed	<i>Stellaria media</i>
Common comfrey	<i>Symphytum officinale</i>
Common dandelion	<i>Taraxacum officinale</i>
Common Fleabane	<i>Pulicaria dysenterica</i>
Common knapweed	<i>Centaurea nigra</i>
Common nettle	<i>Urtica dioica</i>
Common Orache	<i>Atriplex patula</i>
Common ragwort	<i>Senecio jacobaea</i>
Common sunflower	<i>Helianthus annuus</i>
Cow parsley	<i>Anthriscus sylvestris</i>
Creeping thistle	<i>Cirsium arvense</i>
Creeping buttercup	<i>Ranunculus repens</i>
Dog's mercury	<i>Mercurialis perennis</i>
Feverfew	<i>Tanacetum parthenium</i>
Field horsetail	<i>Equisetum arvense</i>
Garlic mustard	<i>Alliaria petiolata</i>
Golden Rod	<i>Solidago virgaurea</i>
Greater burdock	<i>Arctium lappa</i>
Greater plantain	<i>Plantago major</i>
Groundsel	<i>Senecio vulgaris</i>
Hedge bindweed	<i>Calystegia sepium</i>
Hedge woundwort	<i>Stachys sylvatica</i>
Herb-robert	<i>Geranium robertianum</i>
Himalayan balsam	<i>Impatiens glandulifera</i>
Hogweed	<i>Heracleum sphondylium</i>
Ivy	<i>Hedera helix</i>
Jacobs Ladder	<i>Polemonium caeruleum</i>
Japanese pachysandra	<i>Pachysandra terminalis</i>
Laurel [ssp.]	<i>Prunus [ssp.]</i>

Lemon Balm	<i>Melissa officinalis</i>
Marsh Woundwort	<i>Stachys palustris</i>
Meadow buttercup	<i>Ranunculus acris</i>
Meadow thistle	<i>Cirsium dissectum</i>
Meadow vetchling	<i>Lathyrus pratensis</i>
Michaelmas-daisy	<i>Symphyotrichum</i>
Moss (various ssp.)	<i>Bryophytes</i> [various ssp.]
Mugwort	<i>Artemisia vulgaris</i>
Perennial Sow-thistle	<i>Sonchus arvensis</i>
Pineappleweed	<i>Matricaria discoidea</i>
Polypody	<i>Polypodium</i>
Red clover	<i>Trifolium pratense</i>
Redshank	<i>Persicaria maculosa</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Rosebay willowherb	<i>Chamerion angustifolium</i>
Rough Hawkbit	<i>Leontodon hispidus</i>
Selfheal	<i>Prunella vulgaris</i>
Smooth Cat's-ear	<i>Hypochaeris glabra</i>
Spear thistle	<i>Cirsium vulgare</i>
Sun Spurge	<i>Euphorbia helioscopia</i>
Tutsan	<i>Hypericum androsaemum</i>
Wavy Bitter-cress	<i>Cardamine flexuosa</i>
Wetted Thistle	<i>Carduus crispus</i>
White clover	<i>Trifolium repens</i>
White dead-nettle	<i>Lamium album</i>
Yarrow	<i>Achillea millefolium</i>
Alder	<i>Alnus glutinosa</i>
Ash	<i>Fraxinus excelsior</i>
Black poplar	<i>Populus nigra</i> subsp. <i>betulifolia</i>
Buddleia	<i>Buddleja davidii</i>
Crack willow	<i>Salix fragilis</i>
Elder	<i>Sambucus nigra</i>
Grey willow	<i>Salix cinerea</i> subsp. <i>oleifolia</i>
Hawthorn	<i>Crataegus monogyna</i>
Holly	<i>Ilex aquifolium</i>
Leyland cypress	<i>Cupressus x leylandii</i>
oak	<i>Quercus robur</i>
Silver birch	<i>Betula pendula</i>
Sycamore	<i>Acer pseudoplatanus</i>
White poplar	<i>Populus alba</i>
Annual meadow-grass	<i>Poa annua</i>
Black sedge	<i>Carex nigra</i>
Cock's-foot	<i>Dactylis glomerata</i>
Common Couch	<i>Elymus repens</i>
Creeping bent	<i>Agrostis stolonifera</i>
False oat-grass	<i>Arrhenatherum elatius</i>
False-brome	<i>Brachypodium sylvaticum</i>
Perennial rye-grass	<i>Lolium perenne</i>
Red Fescue	<i>Festuca rubra</i>
Rough Meadow-grass	<i>Poa trivialis</i>
Sheep's-fescue	<i>Festuca ovina</i>
Soft brome	<i>Bromus hordeaceus</i>
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>
Yorkshire fog	<i>Holcus lanatus</i>

8.0 OVERALL ASSESSMENT

Overall on the basis of the desk study, the Phase I Habitat Survey and the protected species assessment, it is considered that the habitats on this site are considered to be of a low, to high ecological value in a regional context as the habitats and species recorded within this site are not notable or rare and are present within the wider area.

9.0 HABITAT DATABASE SUMMARY

Ecological data procured and freely available, revealed records relating to UK and European Protected Species within 1km of the site. The UK Biodiversity Action Plan (UKBAP) and Local Biodiversity Action Plan (LBAP) did identify species and habitats within close proximity of the site as summarised hereunder:

9.1 Knowsley Wildlife Site

There are 3nr Knowsley wildlife sites within 1km of the study site, these comprising Netherly Brook, extending along the western site boundary, Green's Bridge Plantation c. 107m east of the site, and Cartbridhe Lane Wood (c. 210m west of the site). It is considered that the scale and type of the development would not have a detrimental effect on these habitats and associated fauna / fauna present.

9.2 UK BAP Habitats

There are a number of UK BAP habitat site within a 1km radius of the study site, these include the following:

1. Hedgerows, the nearest extending along the eastern alignment of public pavement extending along Greenbridge Lane and extending along the north of pavements extending along Cartbridge Lane to the north
2. Mixed deciduous woodland extending along the western / northern site boundaries, and long the Netherly Brook, immediately south of the site
3. Green's Bridge Plantation c.170m east of the study site
4. Deciduous woodland extending along the southern and northern alignment of the Halewood to Houg Green rail line, c. 600m south of the study site
5. Natural grassland habitats located with the vicinity of Greens Bridge Farm, and Georgesons farm, c. 300m north of the study site, and immediately to the west of Greenbridge Lane
6. Land forming the second UK BAP designated natural grassland habitat, located c. 520m southwest of the study site is shown on current mapping to have been developed for mixed residential / educational land uses

Given that the woodland boundaries are listed on the local and UK BAP's, the development may not be permitted if it is likely to cause significant / irreparable damage, either directly and/or indirectly.

9.3 Grasslands

There are 4nr records pertaining to the presence of lowland meadows and grassland within 1km radius of the study site, 3nr being located within the footprint of Greens Bridge Farm, and Georgesons farm, c. 300m north of the study site, and 2nr shown on current OS mapping as being developed for commercial land uses (within the footprint of Poplar Close, Lightoaks Drive etc.).

Given the distance to the above sites, it is concluded that the proposed development will not impact both flora and flora present at these sites.

9.4 Mosaic (Netherly Brook & Woods)

There is 1nr record pertaining to mosaic, this being a section of Netherly Brook and an adjoining woodland which is located c. 770m north of the study site.

Given the distance between the proposed development and this site, It is concluded that the proposed development will not impact both flora and flora present at these sites.

9.5 Wetlands

The nearest documented wetland within 1km radius of the study site is documented to be the water course (Netherly Brook) extending along the western site boundary.

Other wetland features within the surrounding area comprises 2nr small reedbed, 1nr being located within the footprint of the nearby Green's Bridge Plantation, and the other being located within the foot print of Court Farm Woods, c.380m southwest of the site.

9.6 Woodlands

There are a number of records pertaining to the presence of woodlands within a 1km radius of the study site, the include the following:

1. Lowland mixed broad leaf woodland extending along the western site boundary, and continuing along Netherly Brook to the south

2. Lowland mixed broad leaf woodland, Greens' Bridge Plantation, Green's Bridge Plantation c.170m east of the study site
3. Lowland mixed broad leaf woodland extending along the northern / southern alignment of the nearby Halewood to Hough Green railway line, c. 600m south of the site
4. Lowland mixed deciduous woodland at Court Farm Woods, c.380m southwest of the site
5. Small pockets of lowland mixed broad leaf woodland located with in the fields associated with Foxhill Farm, c. 56 and 196m north of the study site
6. Unspecified lowland woodland located to the north of Georgeson's Farm c. 577m north of the site

9.7 Linear Features

The nearest linear feature, water course, extending along the western site boundary, with other nearby linear features such as hedgerows extending along the eastern and north alignment of pavements extending along Greenbridge and Cartbridge :Lanes respectively .

It is concluded that the proposed development will not impact both flora and flora present at these sites.

9.8 7 Stepping Stones (Ponds)

There are numerous records pertaining to the presence of pond within 1km radius of the site, with the nearest lying c. 14m northeast of the study site.

It is concluded that the proposed development will not impact both flora and flora present at these sites.

9.9 Summary of Habitats on Site

From a local perspective, with the exception of mature, immature deciduous / evergreen species and poor hedging around the site, the remaining habitats present within 1km of the site have no significant ecological value. This is judged on the basis of how rare the habitat type is the species it supports and the ease with which it could be replaced.

- In the context of this site, the surfaces within the northern section of the site comprise generally poorly maintained hard pavement cover with lesser areas comprising gravels in a sandy matrix. This habitat does not have the potent to notable plant species.
- The dense tall ruderal and scrub vegetation covering the southern section of the site are not ecologically rare or important. However, they generally have the potential to be utilised by protected and/or notable amphibians and reptiles, as well as a variety of mammals, invertebrates and foraging birds. The close association of dense scrub / tall ruderal vegetation with other areas of unkempt land within the surrounding area extenuates the nature conservation value of this habitat type.
- Around the periphery of the site are stands of immature/mature woodland species. All appear to be in generally good condition with minor areas of exhibiting visible evidence of delaminated bark and/or cracks or crevices and therefore are capable of supporting roosting bats and/or nesting birds.
- The timber panel sheeting located within the site do not support any floral species of ecological importance. However, such habitats can support populations of some protected or notable species as listed above and therefore care must be taken when removing these items.
- Although not safely accessible at the time of undertaking the site survey, the adjoining Netherly Brook classifies as a local wildlife site.

10.0 SPECIES DATABASE SUMMARY

10.1 Amphibians

The desk study confirms the presence of Common frogs (*Rana temporaria*) within a 1km radius of the site, with the nearest recorded being at some point located on Cartbridge Lane. The potential for this species to exist nearby does exist given the presence of nearby bodies of standing water within the surrounding area.

There are numerous records pertaining to the presence of Common toads (*Bufo bufo*) within a 1km radius of the site with the nearest recording being identified as Green Bridge Plantation. The potential for this species to exist nearby does exist given the presence of nearby bodies of standing water within the surrounding area.

There is 1nr record pertaining to the presence of Great crested newts (*Triturus cristatus*) within a 1km radius of the site, this being documented as being present within the foot print of Court Farm Woods. Notwithstanding this, there is a potential for this species to be present nearby does exist given the presence of nearby bodies of standing water within the surrounding area.

There are numerous records pertaining to the presence of Smooth newts (*Lissotriton vulgaris*) within a 1km radius of the site, with the nearest recording being at Court Farm Woods pond. Notwithstanding this, there is a potential for this species to be present nearby does exist given the presence of nearby bodies of standing water within the surrounding area.

10.2 Barn Owl

There are 4nr records pertaining to the presence of Barn owls (*Tyto alba*) within a 1km radius of the site. However, the place of sighting is not documented within the procured data pack.

Notwithstanding the above, given the presence of mature broad leaf species surrounding the study site and taking account of on-site dense tall ruderal and scrub species, the site provided suitable nesting / foraging habitats.

10.3 Birds (Various)

Records of a range of bird species were provided by the desk study, including species which are listed on the UK and Local BAP's. With the exception of trees within the site boundary, the overall habitats within 1km of site centre were observed to be of low-high value to birds. To ensure compliance with the Wildlife and Countryside Act 1981 (as amended), vegetation clearance should be undertaken outside the nesting bird season. The bird nesting season is weather dependent but generally extends between March and September inclusive. If this is not possible then any vegetation that is to be removed or disturbed should be checked by an experienced ecologist for nesting birds immediately prior to works commencing. If birds are found to be nesting any works which may affect them would have to be delayed until the young have fledged, and the nest has been abandoned naturally.

In addition, any trees and/or hedges on site, or overhanging the site, which are not to be removed as a part of any proposed works should be protected in accordance with British Standard 5837: 2012 "*Trees in relation to design, demolition and construction - recommendations*". Protection should be installed on site prior to the commencement of any works on site.

The following are suggestions that will enhance the value of the site for wildlife.

To mitigate against the potential loss of nesting habitats, it is recommended that a small variety of bird boxes be erected on trees in the mixed deciduous / evergreen habitats extending around the site boundaries to provide additional nesting opportunities for birds in the local area. It is recommended that 5nr each of 2-types of Schwegler tit nest boxes: 1B (26 mm) and 1B (32 mm), and 4nr Schwegler 2H open-fronted boxes, or similar, should be erected. Each box should be located out of direct sunlight and close to, but not restricted by, vegetation.

Landscaping could incorporate native or wildlife attracting trees, shrubs, and wildflower areas as these would likely be of benefit to a variety of wildlife including, birds, bats and invertebrates. Trees and shrubs, such as hawthorn, field maple, hazel, cherry plum, guelder rose and blackthorn could be planted to encourage movement, enhancing the existing connections associated with the site.

10.4 Bats

The desk study identified a number of bat species and roost within 1km radius of the development site including Noctule (*Nyctalus noctula*), Pipistrelle ssp. (*Pipistrellus* ssp.), at locations ranging from the nearby Ditton Brook and Halewood Park.

The potential for them to exist within or nearby does exist given the presence of mature deciduous trees in the immediate surroundings and the presence of the nearby southerly flowing Netherly Brook, which have the potential to provide commuting and foraging habitats and support roosting bat species.

Any trees and/or hedges on site or overhanging the site which are to be removed should be surveyed prior to commencement, the *Client* is advised to survey the trees for evidence of bat roost prior to undertaking these works and undertake both dawn and dusk surveys. Optimum conditions for bat surveys are between the months of March and September inclusive.

The following are suggestions that will enhance the value of the site for wildlife.

To mitigate against the potential loss of on-site habitat, it is recommended that a variety of boxes be erected on trees in the mixed deciduous / evergreen trees extending around the site boundaries.

The Schwegler 2F is the most popular general-purpose box and are understood to have the highest rate of occupation of all box types. particularly attractive to the smaller British bats. They are a simple design with a narrow entrance slit on the front and comprise a 75% wood sawdust, concrete and clay mixture construction which allows natural respiration, stable temperature, and durability.

Boxes should be set at least 4.0-5.0m above ground level, away from artificial light sources, and clear of any overhanging branches and/or wires. Access holes should be fixed to provide differing aspects to suit different weather conditions.

In addition to the above, should the proposed incorporate high gable wall, then a Schwegler 1 FR bat tube, or similar, may be incorporated within its final design since the bat tube will be concealed within the brick masonry wall, preferably facing the wooded boundaries.

10.5 Reptiles

No reptiles were encountered during the site survey, however; nearby hedgerows and tall ruderal / scrub habitat, stockpiles of building debris, timber fence panels etc on site may provide limited habitat for reptiles to forage, commute, rest and hibernate.

10.6 Hares

There are numerous records (15nr) pertaining to the presence of brown hares (*Lepus europaeus*) within a 1km radius of the site, with the nearest sighting being along Greenbridge Lane. Given the context of the site and taking into account the presence of similar habitats within the surrounding area, it is concluded that the proposed development will not have a negative impact on this species.

10.7 Badgers

There are no records pertaining to the presence of badgers/sett's with a 1km radius of the study site.

10.8 Hedgehog

There are several records (28nr) pertaining to the presence of Western European Hedgehog (*Erinaceus europaeus*) within 1km of the site, with the nearest sighted along Greenbridge Lane.

The site and boundary margins provided suitable habitat for foraging hedgehogs, although no evidence of hedgehogs was recorded during the survey. The tall ruderal species forming the southern section of the site provides suitable cover when foraging and for hibernation.

In addition to the above, the stockpiles of building debris, timber fence panels etc. within the western section of the site have the potential, albeit limited, to provide suitable refugia for this species group and therefore it is recommended that a watching brief be undertaken when removing such features.

If existing deadwood stumps are to be disturbed, stag beetle loggeries should be incorporated into design plans ideally translocating rotten deadwood stumps. Loggeries can be created by partially burying logs (vertically) into the ground.

Any trenches associated with foundation construction and service installations should not be left open over night. Any trenches that are to remain open for long periods of time must have ramps and/or sloping ends installed to allow animals to escape should they fall in.

10.9 Boney Fish

There are 2nr records for the presence of European eel (*Anguilla anguilla*) within a 1km radius of the site, with sighting being just north of the site and within a section of the nearby Netherly Brook. Notwithstanding this, given the layout of the proposed development, it is concluded that the proposed development will not have a negative impact on this species.

Given the presence of a nearby water course, to mitigate against potential sediment intrusions, it is recommended that no excavation works should not be undertaken in extreme wet weather conditions to reduce potential sediment run-off.

10.10 Grey Squirrel

There are numerous records pertaining to the presence of Grey squirrel (*Sciurus carolinensis*) within a 1km radius of the site, with the nearest sighting being along Cartbridge Lane.

Notwithstanding the above, given the context of this site and given the presence of similar habitats within the surrounding area, it is concluded that the proposed development will have a negative impact on this species.

10.11 Water Vole

There are numerous records pertaining to the sighting of Water voles (*Arvicola amphibius*) within a 1km radius of the site, with the nearest sighting being in the section of Netherly Brook near Georgeson's Farm, off Greensbridge Lane c. 450m north of the study site, with a second sighting being recorded in the small tributary within the grounds of Foxhill Farm, which feeds directly in to Netherly Brook.

Notwithstanding this, given the layout of the proposed development, it is concluded that the proposed development will not have a negative impact on this species.

In addition to the above, given the close proximity of Netherly Brook, to mitigate against potential sediment intrusions, it is recommended that no excavation works should not be undertaken in extreme wet weather conditions to reduce potential sediment run-off.

10.9 Non-Native Invasive Plant Species

At the time of undertaking a site walkover survey, it was evident that that Himalayan Balsam (*Impatiens glandulifera*) has been allowed to establish its self along the bank of Netherly Brook, with Cotoneaster (*Cotoneaster horizontalis*) being introduced to the site to form a part of the landscape.

Section 14 of the Wildlife and Countryside Act 1981 (as amended) prohibits the introduction into the wild of any species of animal or plant that is not ordinarily resident in, and is not a regular visitor to, Great Britain in a wild state, or any species of animal or plant listed on Schedule 9 of the Act. Commonly occurring non-native species in the countryside include Japanese Knotweed (*Fallopia japonica*), Himalayan Balsam (*Impatiens glandulifera*) and Giant Hogweed (*Heracleum mantegazzianum*). The Schedule also includes commonly occurring garden species such Cotoneaster (*Cotoneaster horizontalis*).

Taking into account the above, the *Client* is advised to seek professional advice pertaining to the management / eradication those species before undertaking any site clearance works.

9.0 CONCLUSIONS & RECOMMENDATIONS

9.1 Conclusions:

- There are sections of the site which are considered as high ecological value, most notably the mature tree boundaries . these will be retained in the proposed development. The remainder of the site is considered to be of low ecological value.
- The development of this site will not have a significant detrimental impact on the regional ecology
- Notwithstanding the above, the development should provide an opportunity for ecological enhancement as discussed in Section 9.3 hereunder

9.2 Habitat Loss & Ecological Enhancement Recommendations:

With regard to NPPF (2023), it is now a requirement for local planning authorities to maintain and enhance, restore or add to biodiversity. As stated within Section 14 of the document, "Development proposals provide many opportunities for building-in beneficial biodiversity [...] as

part of good design. When considering proposals, local planning authorities should maximise such opportunities in and around developments, using planning obligations where appropriate". This is most pertinent to any future re-development of this site and could be achieved by incorporating a range of measures, including planting a suitable mix of indigenous flowering / fruit bearing species during landscaping and the provision of bird and bat boxes or ridge tiles on any buildings to be constructed.

9.3 Post Construction Recommendations:

Landscape recommendations considered beneficial for local wildlife are as follows:

- 1) Shrub planting and/or wildflower borders which are to be considered for the site should comprise native species which are beneficial to wildlife (i.e. urban birds and invertebrates, butterflies and bees)
- 2) Any trees considered for the site should be beneficial to wildlife, with approximately 50% of the tree species planted bearing fruit
- 3) Any climbing plants incorporated to the landscape design should comprise native species which are known to be beneficial to wildlife
- 4) It is recommended that nesting spaces, i.e. bird boxes, in the form of open fronted boxes, are incorporated in to the development. These could be implemented to attract urban birds such as Blue tit (*Parus caeruleus*) and Robin (*Erithacus rubecula*) etc.
- 5) Bird tables could be located in rear landscaped areas or attached to the outside of buildings. Feeding stations should be located close to shrubs to provide cover for foraging birds
- 6) Bats boxes to be erected within trees and if possible incorporated within the building design
- 7) No peat-based compost to be used during landscaping

For a comprehensive list of plant species beneficial for wildlife see 'Natural England (2007), Plants for Wildlife Friendly Gardens' and Natural England (2008) Gardening with Wildlife in Mind'

REFERENCES & BIBLIOGRAPHY

- Anon (2010) Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit. England Field Unit, Nature Conservancy Council (reprinted Joint Nature Conservancy Council), Peterborough, UK. (Revised 2016)
- Eaton, M, *et.al* (2015) Birds of conservation Concern 4: The population status of bird in the UK, Channel Islands & the Isle of Man
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough, UK.
- Stace, C. (2011) New Flora of the British Isles (3rd Edition). Cambridge University: Press, Cambridge, UK.
- Rose, F. (1989) Colour identification guide to the grasses, sedge, and ferns of the British Isles and north-western Europe. Viking, London, UK.
- CIRIA C587 (2011) Working with wildlife, a resource and training pack for the construction industry
- JNCC (2010) Handbook for Phase 1 habitat survey - a technique for environmental audit
- British Standards Institution. (2012). *British Standard 5837:2012, Trees in relation to design, demolition and construction – recommendations*. British Standards Institution, London.
- www.magic.gov.uk (Accessed September 2023)
- www.naturalengland.org.uk (Accessed September 2023)
- www.ukbap.org.uk (Accessed September 2023)
- <http://planningguidance.communities.gov.uk/>

Web addresses for access to full UK legislation and policy text:

- Conservation (Natural Habitats &c.) (Amendment) Regulations 2017:
- <https://www.legislation.gov.uk/uksi/2007/1843>

Habitats Directive:

- https://environment.ec.europa.eu/topics/nature-and-biodiversity/habitats-directive_en
- Wildlife and Countryside Act 1981:
- Natural Environment and Rural Communities Act 2006:

Birds Directive:

- Directive 2009/147/EC on the conservation of wild birds

Standard Notes and Limitations of Survey

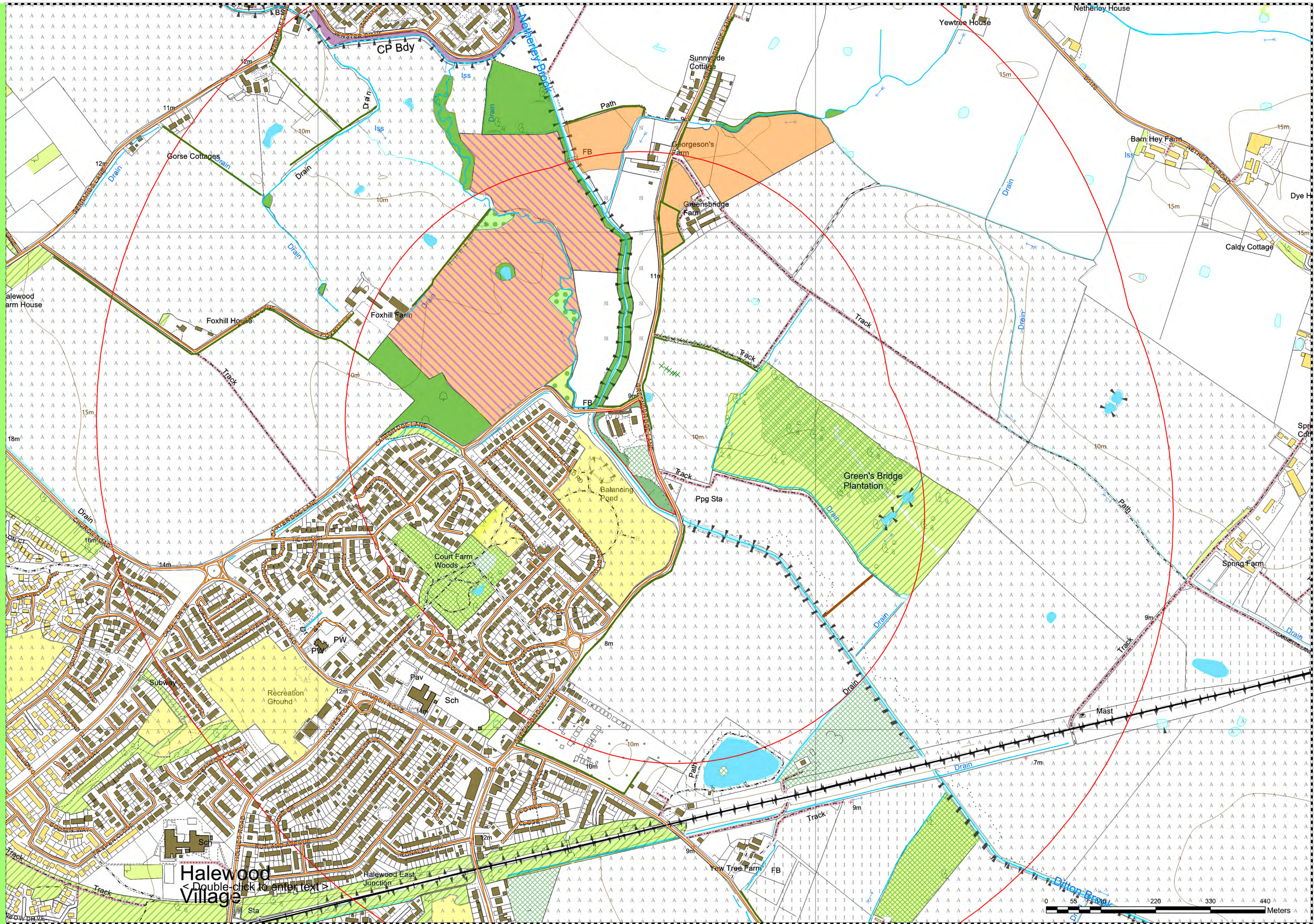
These Notes and Limitations cover ecological work undertaken by **CCG**. They are additional and complimentary to **CCG** Standard Terms and Conditions and should be read in association with them.

- **CCG** staff have endeavoured to identify the presence of protected species wherever possible on site, where this falls within the agreed scope of works.
- Up to date standard methodologies have been used, which are accepted by English Nature and other statutory conservation bodies. No responsibility will be accepted where these methodologies fail to identify all species on site. **CCG** cannot take responsibility where Government, national bodies or industry subsequently modify standards.
- The results of the survey and assessment work undertaken by **CCG** are representative at the time of surveying.
- **CCG** have advised on the optimum survey season for a particular habitat/species prior to undertaking the survey work. However, **CCG** cannot accept responsibility for the accuracy of surveys undertaken outside this period.
- **CCG** cannot accept responsibility for data collected from third parties.

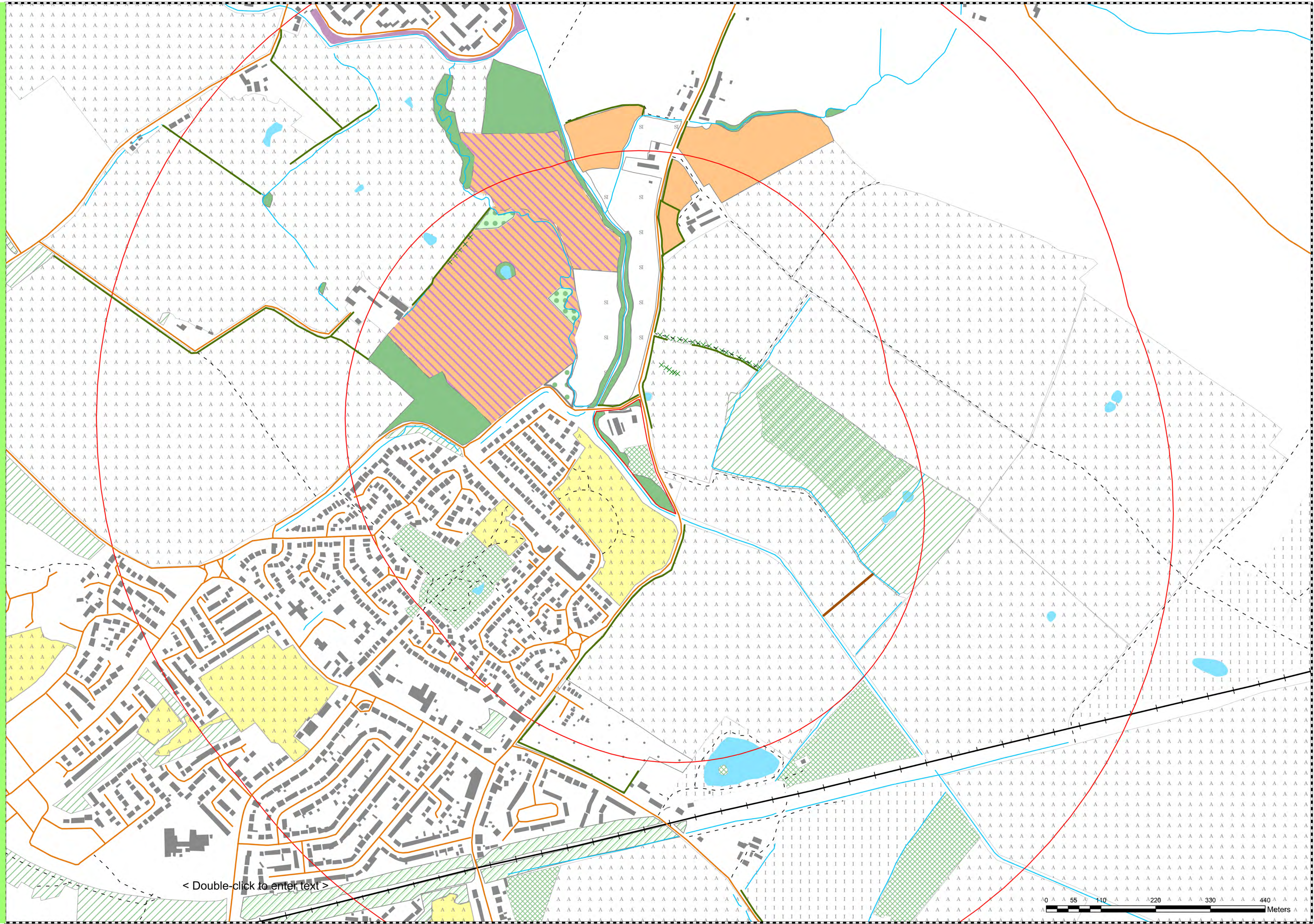
**THIS SURVEY IS VALID FOR UP TO 1 YEAR
AFTER THIS PERIOD RE-SURVEYS ARE RECOMMENDED**

APPENDIX A: DRAWINGS

Greenbridge Lane, Tarbock Green, L35 1HQ



Greenbridge Lane, Tarbock Green, L35 1HQ



Legend

Site

Habitats

Habitat

EN-CBA-Mosaic LWS

B5

A3.1

B6

J4

B2.1

I2.2.2

A1.1.1

I2.1

A1.1.2

A1.3.1

B3.2

A1.3.2

A2.1

J1.1

B4

J1.2

G1

J3.6

Site Boundary

1km Buffer

Roads_Paths

Roads

Hedgerow

Path

Road

Habitat_Point

<all other values>

A2.2

Line_Features

C1.1

G2

J2.1.2

J2.3.1

Public Footpath

Public Road

Rail Line

N

W

E

S

0

55

110

220

330

440

Meters



APPENDIX B: MERSEY BIOBANK DATA



Biodiversity Information Report 01/09/2023

MBB reference: 3962-CCG

**Site: Lawford Boarding Kennels Greensbridge
Lane, Tarbock Green, Merseyside L35 1QH**

Your Ref: None supplied
Your contact: Tony Gerrard

MBB Ref: 3962-CCG
MBB Contact: Mat Sharples / Catie Haworth

Date: 01/09/2023

Merseyside BioBank biodiversity information report

These are the results of your data request relating to **an area at Lawford Boarding Kennels Greensbridge Lane, Tarbock Green, Merseyside L35 1QH defined by a buffer of 1000 metres around the centre of grid reference SJ456865.**

You have been supplied with the following:

- records of **protected** taxa that intersect the search area
- records of **BAP** taxa that intersect the search area
- records of **Red Listed** taxa that intersect the search area
- records of other '**notable**' taxa that intersect the search area
- records of WCA schedule 9 taxa (including '**invasive plants**') that intersect the search area
- a map showing the location of monad and tetrad references that overlap the search area
- a list of all **designated sites** that intersect your search area
- citations, where available, for intersecting Local Wildlife Sites
- a list of **other sites of interest** (e.g. Ancient Woodlands) that intersect your search area
- a map showing such sites
- a list of all **BAP habitats** which intersect the search area
- a map showing BAP habitats
- a summary of the area for all available mapped **Phase 1 and NVC habitats** found within 500m of your site
- a map showing such habitats

Merseyside BioBank (MBB) is the Local Environmental Records Centre (LERC) for North Merseyside. We collect and collate biological and environmental information and make it available to people and organisations that have need to access such information in North Merseyside. We promote the North Merseyside Biodiversity Action Plan and wider participation in biological recording and conservation through education, community involvement and by supporting the biological recording community of North Merseyside.

Merseyside BioBank is an information node of the National Biodiversity Network (NBN) and integrate records from our own databases with those of the NBN Atlas.

The product charge for this data request is not a charge for the data themselves, but rather a fixed rate that enables us to cover a portion of our running costs. Our annual income from data requests is something less than 20% of our total running costs.

Species records

The biological records held by Merseyside BioBank come from a variety of sources; from large organisations to individual amateur naturalists. Merseyside BioBank operates as managers or custodians of these records but the individuals and groups, who provide their records free of charge, retain copyright on their data. Without their contribution, we would not be able to provide the records included in this report. Their efforts, expertise and goodwill make a substantial contribution to the protection of North Merseyside's biodiversity.

You may only use the records in this document subject to our access terms and conditions which can be found in Appendix 1. Non-adherence to these terms and conditions will be viewed as a breach of contract, which may result in legal redress being sought.

This report also integrates records from the NBN Atlas. Some NBN data providers give us permission to download and integrate their records at a higher resolution than available through public access in order to contribute to the protection of North Merseyside's biodiversity.

Details of the biological records summarised in the following tables, and the sources from which they are derived, are included separately. Note that the date ranges in the summary tables (headed 'Dates') show the earliest and latest years for which records have been summarised for each taxon.

UK Protected Species

'UK Protected species' are those taxa specifically identified by UK legislation including: Wildlife & Countryside Act 1981 (as amended); Protection of Badgers Act 1992; Conservation of Habitats and Species Regulations 2017. The latter regulations enact the European Union's (EU) Habitats Directive (92/43/EEC) in the UK and supercede The Conservation Regulations 1994 and 2010. In our list of protected species, you may see designations that refer to schedules in the 1994 and 2010 regulations, but these remain unchanged under the 2017 regulations.

Some protected species may not be legally disturbed unless you are in possession of an appropriate license. If you are in any doubt as to whether or not a license is required, you should contact Natural England.

The following tables detail the protected species that were recorded in the search area.

Group	Common Name	Scientific Name	Records	Dates	Designations
amphibian	Common Frog	<i>Rana temporaria</i>	30	1981-2019	WCA5/9.5a
	Common Toad	<i>Bufo bufo</i>	11	1971-2021	WCA5/9.5a
	Great Crested Newt	<i>Triturus cristatus</i>	1	2011	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c
	Smooth Newt	<i>Lissotriton vulgaris</i>	26	1996-2018	WCA5/9.5a
bird	Barn Owl	<i>Tyto alba</i>	4	1997-2005	WCA1i
	Kingfisher	<i>Alcedo atthis</i>	2	1997-2014	WCA1i
	Peregrine	<i>Falco peregrinus</i>	1	1997	WCA1i
	Quail	<i>Coturnix coturnix</i>	1	1997	WCA1i
flowering plant	Bluebell	<i>Hyacinthoides non-scripta</i>	25	1981-2020	WCA8
terrestrial mammal	Bat	<i>Chiroptera</i>	3	1988-2007	HabRegs2
	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	5	2007-2019	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	1	2008	WCA5/9.1k/l,WCA5/9.1t,WCA5/9.2,WC A5/9.4.a,WCA5/9.4b
	European Water Vole	<i>Arvicola amphibius</i>	13	1999-2018	WCA5/9.4.a,WCA5/9.4b,WCA5/9.4c
	Noctule Bat	<i>Nyctalus noctula</i>	6	1988-2018	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c
	Pipistrelle Bat species	<i>Pipistrellus</i>	12	1996-2008	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c

Group	Common Name	Scientific Name	Records	Dates	Designations
	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	1	2008	HabRegs2, WCA5/9.4b, WCA5/9.5a, WCA5/9.4c

Desig. Code	Desig. Name	Designation Description
WCA5/9.5a	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.5a)	Section 9.5 Animals which are protected from being sold, offered for sale or being held or transported for sale either live or dead, whole or part.
HabRegs2	The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 2)	Schedule 2- European protected species of animals.
WCA5/9.4b	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.4b)	Section 9.4 Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.
WCA5/9.4c	Wildlife and Countryside Act 1981 (Schedule 5)	Animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed.
WCA1i	Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Birds and their young, for which it is an offence to intentionally or recklessly disturb at, on or near an active nest. They are protected by special penalties at all times.
WCA8	Wildlife and Countryside Act 1981 (Schedule 8)	Plants which are protected from intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
WCA5/9.1k/l	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.1 (killing/injuring))	Section 9.1. Animals which are protected from intentional killing or injuring.
WCA5/9.1t	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.1 (taking))	Section 9.1 Animals which are protected from taking.
WCA5/9.2	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.2)	Section 9.2 Animals which are protected from being possessed or controlled (live or dead).
WCA5/9.4.a	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.4, subdivision a)	Section 9.4 subdivision a - Animals which are protected from intentional damage or destruction to any structure or place used for shelter or protection.

North Merseyside BAP Species

The North Merseyside Biodiversity Action Plan (NM BAP) was published in September 2001 and last reviewed in 2008. Like other Local Biodiversity Action Plans (LBAPs) its purpose is to focus local conservation on national priority species and habitats. However, LBAPs also embrace the idea of 'local distinctiveness' and species which are not considered UK conservation priorities can be catered for by LBAPs if they are of particular local significance. Such is the case with the NM BAP which currently names 74 species of which 57 are not conservation priority species but are included because their conservation is considered to be a priority in North Merseyside.

The following tables detail the North Merseyside BAP species that were recorded in the search area.

Group	Common Name	Scientific Name	Records	Dates	Designations
amphibian	Great Crested Newt	<i>Triturus cristatus</i>	1	2011	LBAP
bird	Corn Bunting	<i>Emberiza calandra</i>	9	1994-2005	LBAP
	Grey Partridge	<i>Perdix perdix</i>	13	1997-2005	LBAP
	House Martin	<i>Delichon urbicum</i>	6	1997-2005	LBAP
	House Sparrow	<i>Passer domesticus</i>	6	1998-2005	LBAP
	Lapwing	<i>Vanellus vanellus</i>	11	1997-2006	LBAP
	Skylark	<i>Alauda arvensis</i>	14	1997-2010	LBAP
	Song Thrush	<i>Turdus philomelos</i>	9	1997-2010	LBAP
	Starling	<i>Sturnus vulgaris</i>	7	1997-2010	LBAP
	Swift	<i>Apus apus</i>	4	1997-2005	LBAP
flowering plant	Bluebell	<i>Hyacinthoides non-scripta</i>	25	1981-2020	LBAP
insect - dragonfly	Azure Damselfly	<i>Coenagrion puella</i>	11	1991-2011	LBAP

Group	Common Name	Scientific Name	Records	Dates	Designations
(Odonata)					
	Banded Demoiselle	<i>Calopteryx splendens</i>	3	2011-2017	LBAP
	Black Darter	<i>Sympetrum danae</i>	1	1991	LBAP
	Black-tailed Skimmer	<i>Orthetrum cancellatum</i>	4	2005	LBAP
	Blue-tailed Damselfly	<i>Ischnura elegans</i>	19	1989-2011	LBAP
	Broad-bodied Chaser	<i>Libellula depressa</i>	7	2006-2018	LBAP
	Brown Hawker	<i>Aeshna grandis</i>	4	2005-2014	LBAP
	Common Blue Damselfly	<i>Enallagma cyathigerum</i>	10	1982-2005	LBAP
	Common Darter	<i>Sympetrum striolatum</i>	5	1989-2005	LBAP
	Emperor Dragonfly	<i>Anax imperator</i>	15	2005-2010	LBAP
	Four-spotted Chaser	<i>Libellula quadrimaculata</i>	5	2010	LBAP
	Migrant Hawker	<i>Aeshna mixta</i>	2	2016	LBAP
	Southern Hawker	<i>Aeshna cyanea</i>	3	2000-2009	LBAP
terrestrial mammal	Bat	<i>Chiroptera</i>	3	1988-2007	LBAP
	Brown Hare	<i>Lepus europaeus</i>	15	1976-2022	LBAP
	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	5	2007-2019	LBAP
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	1	2008	LBAP
	European Water Vole	<i>Arvicola amphibius</i>	13	1999-2018	LBAP
	Noctule Bat	<i>Nyctalus noctula</i>	6	1988-2018	LBAP
	Pipistrelle Bat species	<i>Pipistrellus</i>	12	1996-2008	LBAP
	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	1	2008	LBAP

Desig. Code	Desig. Name	Designation Description
LBAP	North Merseyside BAP	Species that are incorporated within the North Merseyside Biodiversity Action Plan. These species may or may not also be UK BAP species. Some species have their own action plans within the NM BAP, others are members of group species action plans.

NM BAP species: Great Crested Newt (*Triturus cristatus*)

Great Crested Newt is thought to have been in decline since the 1940s. Over a period of five years in the 1980s 2% of all UK colonies were lost, and although Britain remains a stronghold for this species, it is now considered to be dependant on conservation and is afforded international protection.

There is no current North Merseyside population estimate, though recent surveys suggest that in the general North West area around 25% of ponds have Great Crested Newts. A study of the parts of the Sefton Coast showed that a number of populations were present.

This species is highly dependant on the quality of ponds and also the habitat in the surrounding area (where they forage and hibernate away from the water). Habitat loss is the greatest cause of decline with many ponds being drained or drying up as a result of natural succession. Removal of scrub and woodland in addition to over-grazing and intensive management of surrounding grassland is also detrimental. Other factors which may affect population levels include predation by fish and waterfowl, habitat fragmentation and pollution.

NM BAP species: Corn Bunting (*Emberiza calandra*)

Nationally this species has significantly declined with a loss of 90% of the UK population between 1970 and 2005 and large contractions in the species range.

Locally Corn Bunting is thought to have undergone severe declines with only an estimated 200 pairs remaining in 1997-99. Corn Buntings are sparsely distributed across much of North Merseyside's arable farmland.

Declines are thought to be caused by changes in agricultural practices. Sowing cereals later in the year, increasing use of herbicide and the removal of fallow fields have all greatly reduced winter seed sources. Increasing use of pesticides has reduced the availability of invertebrate food sources. Earlier crop harvesting may also result in the destruction of some nests, especially where there are limited uncropped areas.

NM BAP species: Grey Partridge (*Perdix perdix*)

The UK population of Grey Partridge declined by 88% between 1970 and 2005 and though still widespread shows distinct variation according to agricultural practices. In North Merseyside there were an estimated 300 pairs in 1997-99 and they are present in all suitable habitat.

Loss of suitable habitat is the main cause of decline in this species, with changes in agricultural practices being particularly detrimental. The amalgamation of small fields into a larger ones and the removal of hedgerows, ditches and other field margins have destroyed potential nesting sites. Changes in sowing, harvesting and crop type have removed essential winter food sources.

NM BAP species: Urban Birds (*Delichon urbicum*; *Passer domesticus*; *Sturnus vulgaris*; *Apus apus*)

The four species covered by the NM BAP Urban Birds Species Action Plan (House Martin, Swift, House Sparrow and Starling) are considered to be in significant decline across the UK. In North Merseyside House Sparrows and Starlings currently breed in all urban areas, while House Martins are restricted to areas nearer sources of mud for nest-building. Swifts occurred in only 55 tetrads during 1997-2000.

Urban bird numbers are thought to relate strongly to the availability of prey species, and nesting opportunities.

Declines are most likely caused by the reduction in the diversity and abundance of invertebrate prey species resulting from increased 'tidiness' in our parks and gardens, the use of pesticides and other changes in farm practices. The exclusion of urban birds from breeding in or around modern buildings reduces nesting opportunities for urban birds.

NM BAP species: Lapwing (*Vanellus vanellus*)

Between 1987 and 1998 Lapwing declined by 48% in England and Wales with Wales and the SW of England showing greatest loss. Two thirds of the population is now resident in the N and NW of England.

Locally this species continues to breed in all suitable habitats and the 2002-03 surveys indicated a population of around 1,500 pairs with arable farmland and pockets of grassland being particularly favoured.

Local threats are thought to include development in nesting areas, increasing recreation and disturbance, scrub encroachments on coastal grassland and changes in farm practice towards silage production, livestock and agricultural intensification.

NM BAP species: Skylark (*Alauda arvensis*)

Although Skylark is widespread throughout Europe and large numbers are thought to breed in the UK, it is in significant decline with a fall in the population of 75% between 1972 and 1996 on lowland farms and an overall fall in the UK population of 53% between 1970 and 2005.

Locally Skylark breeds in all remaining suitable habitat and in 1997-2000 there were 750 breeding pairs but declines are thought to reflect the national trend.

This species relies heavily on traditional arable farming and so declines have largely been due to changes in farming practices in recent decades. Conversion to silage production, changes in sowing times and general agricultural intensification have all been particularly detrimental by reducing nesting habitat and sources of food.

Other causes of decline include overgrazing, disturbance during the breeding season and loss of grassland to development and tree planting.

NM BAP species: Song Thrush (*Turdus philomelos*)

Although still widespread, Song Thrush declined sharply by around 73% in farmland (mid 1970s) and 49% in woodland (1968-1993), while overall UK numbers fell by 50% between 1970 and 2005. The North of the UK is thought to have been hit hardest.

In North Merseyside, though thinly distributed, Song Thrush still breed in most areas with an estimated 500 pairs during 1997-2000. Highest breeding concentrations were found to occur in suburban areas where abundant garden and parkland habitats were present.

Song Thrush are reliant on a variety of habitats to meet their needs at different times of the year and loss of these habitats causes a reduction in numbers.

Local factors in the decline of the species include changes in farm practices that remove nesting habitat (hedgerows and dense scrub), limit the abundance of winter food (changes in sowing, cropping and use of herbicides/molluscicides) or cause the loss of feeding habitat (use of pesticides/herbicides and monocropping).

NM BAP species: Bluebell (*Hyacinthoides non-scripta*)

British Bluebells make up about 20% of the global population of *Hyacinthoides non-scripta* and are often found in humid woodland habitat, along hedgerows and on occasion along the coast. Locally there are a number of good colonies.

Local threats to the species include possible over-shading in un-managed woodlands, localised trampling by the public in popular areas and hybridisation with the Spanish Bluebell. On a national scale declines are caused by the loss of woodland habitat, grazing by introduced Muntjac, collection of plants and hybridisation with Spanish Bluebell.

NM BAP species: Dragonflies (*Coenagrion puella*; *Calopteryx splendens*; *Sympetrum danae*; *Orthetrum cancellatum*; *Ischnura elegans*; *Libellula depressa*; *Aeshna grandis*; *Enallagma cyathigerum*; *Sympetrum striolatum*; *Anax imperator*; *Libellula quadrimaculata*; *Aeshna mixta*; *Aeshna cyanea*)

Twentyone species of dragonfly and damselfly are included in the NM BAP Dragonflies Species Action

Plan. These include vagrant species and some which are thought to be undergoing range expansions in the UK. Eighteen of these species are known to breed in our local area, with significant breeding sites in St Helens and Sefton.

Local causes of decline in this include the destruction or damage of essential wetland habitat through development, waste-tipping and agricultural run-off. Removal of nearby feeding habitats such as woodlands, hedgerows and tall vegetation is also detrimental.

NM BAP species: Brown Hare (*Lepus europaeus*)

Whilst still well distributed in North Merseyside it is thought that the local population of Brown Hare declined in-line with National trends which have shown severe declines in the western pastoral parts of the country to around 20% of the numbers present in Victorian times.

Reasons for local declines are thought to include loss and fragmentation of suitable habitat to development, illegal hunting and changes in farming practices and land use that cause increased disturbance (changes in cropping/sowing times, livestock trampling and recreation).

NM BAP species: Bats (*Pipistrellus pipistrellus*; *Nyctalus noctula*; *Pipistrellus pygmaeus*)

The NM BAP Bats Species Action Plan covers all species found in North Merseyside since all are considered to be locally threatened.

Bat Species are found throughout North Merseyside, with Pipistrelles (Common/Soprano) most often encountered and Brown Long-eared and Noctules less common. Daubenton's are also frequently encountered in suitable wetland habitat. Whiskered, Brandt's and Natterers are considered rare locally.

Bat species will roost in many locations that are warm, dark, sheltered and little undisturbed. Such places can include derelict buildings, barns, roof spaces and tree hollows.

Factors causing declines in these species include the loss of prey insects due to the increased use of pesticides and general park/garden 'tidiness', loss and fragmentation of habitat mosaics, loss of winter roosts in old trees and buildings and intentional exclusion from buildings by people.

NM BAP species: Red Squirrel (*Sciurus vulgaris*)

Over the last 100 years the UK range Red Squirrel has contracted massively. In most areas the species of Britain it has vanished and most populations are now restricted to areas of Scotland and North England. North Merseyside has a relatively stable population on the Sefton Coast with small numbers across Knowsley and St Helens.

Threats include the Grey Squirrel which carries the squirrel pox virus that appears to have been the main cause of the red squirrel decline in Britain. In addition the fragmentation of woodland has reduced suitable habitat and increased road mortality as individuals try to move between pockets of habitats. Locally, over-maturation of trees will soon greatly reduce the Red Squirrels food source.

NM BAP species: Water Vole (*Arvicola amphibius*)

This species is found throughout Britain but localised to areas of suitable habitat near water. Previously common this species has undergone severe range and population reductions, with a national survey showing a decline of around 89% since 1939, estimated to increased to a loss of 94% by 2000. Merseyside appears to be a stronghold for the species with 75% of sites surveyed having Water Voles

present in 1989-90. Though they may still be in decline locally, it is thought to be at a lower level than nationally.

Local declines in the species are caused by inappropriate management of bank-side habitats and waterside developments as well as predation by invasive species such as mink. The use of rodenticides and loss of habitat connectivity may also be factors in population declines.

NERC Act Section 41 Species

Known also as 'Species of Principle Importance in England' and the 'England Biodiversity List' this list was developed to meet the requirements of Section 40 of the Natural Environment and Rural Communities Act (2006). The list is derived, almost wholly, from the 2012 revised list of 'UK Post-2010 Biodiversity Framework' priority species. (So called 'research only' moth species have been excluded from the report.). The section 41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006 'to have regard' to the conservation of biodiversity in England, when carrying out their normal functions. In particular:

- Regional Planning Bodies and Local Planning Authorities must use it to identify the species that should be afforded priority when applying the requirements of National Planning Policy Framework (NPPF) to maintain, restore and enhance species and habitats.
- Local Planning Authorities must use it to identify the species that require specific consideration in dealing with planning and development control, recognising that under NPPF the aim of planning decisions should be to minimise impacts on biodiversity and geodiversity.
- All Public Bodies must use it to identify species that should be given priority when implementing the NERC Section 40 duty.

The following tables detail the NERC Section 41 species that were recorded in the search area.

Group	Common Name	Scientific Name	Records	Dates	Designations
amphibian	Common Toad	<i>Bufo bufo</i>	11	1971-2021	Sect.41
	Great Crested Newt	<i>Triturus cristatus</i>	1	2011	Sect.41
bird	Bullfinch	<i>Pyrrhula pyrrhula</i>	3	1998-1999	Sect.41.suppl
	Corn Bunting	<i>Emberiza calandra</i>	9	1994-2005	Sect.41.suppl
	Cuckoo	<i>Cuculus canorus</i>	2	1998-1999	Sect.41
	Dunnock	<i>Prunella modularis</i>	6	1997-2010	Sect.41.suppl
	Grasshopper Warbler	<i>Locustella naevia</i>	5	1997-2006	Sect.41
	Grey Partridge	<i>Perdix perdix</i>	13	1997-2005	Sect.41
	Herring Gull	<i>Larus argentatus</i>	1	2000-2005	Sect.41.suppl
	House Sparrow	<i>Passer domesticus</i>	6	1998-2005	Sect.41
	Lapwing	<i>Vanellus vanellus</i>	11	1997-2006	Sect.41
	Linnet	<i>Linaria cannabina</i>	6	1998-2002	Sect.41.suppl
	Reed Bunting	<i>Emberiza schoeniclus</i>	8	1997-2006	Sect.41
	Skylark	<i>Alauda arvensis</i>	14	1997-2010	Sect.41,Sect.41.suppl
	Song Thrush	<i>Turdus philomelos</i>	9	1997-2010	Sect.41.suppl
	Starling	<i>Sturnus vulgaris</i>	7	1997-2010	Sect.41.suppl

Group	Common Name	Scientific Name	Records	Dates	Designations
	Tree Sparrow	<i>Passer montanus</i>	3	1997-2015	Sect.41
	Willow Tit	<i>Poecile montanus</i>	3	1998-1999	Sect.41.suppl
	Yellowhammer	<i>Emberiza citrinella</i>	13	1998-2007	Sect.41
bony fish (Actinopterygii)	European Eel	<i>Anguilla anguilla</i>	2	2014	Sect.41
flowering plant	Cornflower	<i>Centaurea cyanus</i>	1	2002	Sect.41
	Marsh Stitchwort	<i>Stellaria palustris</i>	1	1987	Sect.41
insect - butterfly	Wall	<i>Lasiommata megera</i>	4	1994-1995	Sect.41
insect - moth	Sallow	<i>Cirrhia icteritia</i>	1	1971	Sect.41
mollusc	Mud Pond Snail	<i>Omphiscola glabra</i>	1	1996	Sect.41
terrestrial mammal	Bat	<i>Chiroptera</i>	3	1988-2007	Sect.41
	Brown Hare	<i>Lepus europaeus</i>	15	1976-2022	Sect.41
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	1	2008	Sect.41
	European Water Vole	<i>Arvicola amphibius</i>	13	1999-2018	Sect.41
	Noctule Bat	<i>Nyctalus noctula</i>	6	1988-2018	Sect.41
	Pipistrelle Bat species	<i>Pipistrellus</i>	12	1996-2008	Sect.41
	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	1	2008	Sect.41
	West European Hedgehog	<i>Erinaceus europaeus</i>	28	2005-2021	Sect.41

Desig. Code	Desig. Name	Designation Description
Sect.41	Natural Env. and Rural Communities Act 2006. Species of Principal Importance in England (section 41)	Species "of principal importance for the purpose of conserving biodiversity" covered under section 41 (England) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.
Sect.41.suppl	Supplementary list to deal with S41 bird sub-sp problems	Bird species corresponding to British sub-species listed in section 41 (England) of the NERC Act (2006).

IUCN Red-listed Species

The IUCN Red List of Threatened Species (sometimes called 'Red Data Book' species) indicates the conservation status of plants and animals that have been globally evaluated using the IUCN Red List Categories and Criteria. The system is designed to determine the relative risk of extinction, and the main purpose of the IUCN Red List is to catalogue and highlight those plants and animals that are facing a higher risk of global extinction (i.e. those listed as Critically Endangered, Endangered and Vulnerable). The IUCN Red List also includes information on plants and animals that are categorized as 'Extinct' or 'Extinct in the Wild'; on taxa that cannot be evaluated because of insufficient information ('Data Deficient'); and on plants and animals that are either close to meeting the threatened thresholds or that would be threatened were it not for an ongoing taxon-specific conservation programme ('Near Threatened').

The following tables detail the IUCN Red-listed species that were recorded in the search area.

Group	Common Name	Scientific Name	Records	Dates	Designations
flowering plant	Box	<i>Buxus sempervirens</i>	3	2015-2020	RLGB.DD
	Corn Marigold	<i>Glebionis segetum</i>	1	2021	RLGB.VU
	Creeping Spearwort	<i>Ranunculus reptans</i>	2	1987	RLGB.VU
	Field Woundwort	<i>Stachys arvensis</i>	2	2010-2021	RLGB.Lr(NT)
	Large-flowered Hemp-nettle	<i>Galeopsis speciosa</i>	1	1987	RLGB.VU
	Marsh Stitchwort	<i>Stellaria palustris</i>	1	1987	RLGB.VU

Group	Common Name	Scientific Name	Records	Dates	Designations
	Stinking Chamomile	<i>Anthemis cotula</i>	1	1987	RLGB.VU
	Wood Bitter-vetch	<i>Vicia orobus</i>	1	1987	RLGB.Lr(NT)
insect - beetle (Coleoptera)	Alder Leaf Beetle	<i>Agelastica alni</i>	3	2018-2019	RLGB.DD
insect - butterfly	Wall	<i>Lasiommata megera</i>	4	1994-1995	RLGB.Lr(NT)
insect - dragonfly (Odonata)	Common Darter	<i>Sympetrum striolatum</i>	5	1989-2005	RLGB.DD
lichen	Scarlet-Cup Lichen	<i>Cladonia coccifera</i> s. lat.	1	1982	RLGB.DD
mollusc	Marsh Pond Snail	<i>Stagnicola palustris/fuscus/corvus</i>	2	2016	RLGB.DD
terrestrial mammal	Bat	<i>Chiroptera</i>	3	1988-2007	RLGB.CR,RLGB.DD,RLGB.EN,RLGB.Lr(NT),RLGB.VU
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	1	2008	RLGB.EN
	European Water Vole	<i>Arvicola amphibius</i>	13	1999-2018	RLGB.EN
	Pipistrelle Bat species	<i>Pipistrellus</i>	12	1996-2008	RLGB.Lr(NT)
	West European Hedgehog	<i>Erinaceus europaeus</i>	28	2005-2021	RLGB.VU

Desig. Code	Desig. Name	Designation Description
RLGB.DD	IUCN (2001) - Data Deficient	A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat or Lower Risk. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that a threatened category is appropriate.
RLGB.VU	IUCN (2001) - Vulnerable	A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium term future.
RLGB.Lr(NT)	IUCN (2001) - Lower risk - near threatened	Taxa which do not qualify for Lower Risk (conservation dependent), but which are close to qualifying for Vulnerable. In Britain, this category includes species which occur in 15 or fewer hectads but do not qualify as Critically Endangered, Endangered or Vulnerable.
RLGB.CR	IUCN (2001) - Critically endangered	A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future, as defined by any of the criteria A to E.
RLGB.EN	IUCN (2001) - Endangered	A taxon is Endangered when it is not Critically endangered but is facing a very high risk of extinction in the wild in the near future.

Nationally Notable Species

These are plants and animals which do not fall within red-list categories but which are none-the-less uncommon in Great Britain.

The following tables detail the Nationally Notable species that were recorded in the search area.

Group	Common Name	Scientific Name	Records	Dates	Designations
flowering plant	Aggregate-headed Hawkweed	<i>Hieracium aggregatum</i>	1	1987	NR-excludes
	Box	<i>Buxus sempervirens</i>	3	2015-2020	NR-excludes
	Creeping Spearwort	<i>Ranunculus reptans</i>	2	1987	NR-excludes
	Fringed Water-lily	<i>Nymphoides peltata</i>	2	2005-2006	NS-excludes
	Wood Bitter-vetch	<i>Vicia orobus</i>	1	1987	NS-excludes
insect - true fly (Diptera)	Cheilosia mutabilis	<i>Cheilosia mutabilis</i>	2	1985-1986	NS-excludes
	Pocota personata	<i>Pocota personata</i>	1	1987	NS-excludes

Desig. Code	Desig. Name	Designation Description
NS-excludes	Nationally Scarce. Excludes Red Listed taxa	Nationally Scarce - Occurring in 16-100 hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria
NR-excludes	Nationally Rare. Excludes Red Listed taxa	Nationally Rare - Occurring in 15 or fewer hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria.

WCA schedule 9 species (including non-native invasive plants)

Schedule 9 of the Wildlife & Countryside Act (amended 2010) lists species of plants and animals for which it is a specific offence to plant or otherwise cause to grow in the wild (plants) or release or allow to escape into the wild (animals). Many of these are invasive non-native plants and animals, but there are also a number of native animals on the list (e.g. Barn Owl) which cannot be released into the wild in England without a license from Natural England.

The following tables detail the WCA Schedule 9 species recorded in the search area.

Group	Common Name	Scientific Name	Records	Dates	Designations
bird	Barn Owl	<i>Tyto alba</i>	4	1997-2005	MBB-WCA-S9
flowering plant	Canadian Waterweed	<i>Elodea canadensis</i>	4	1981-2010	MBB-WCA-S9
	Himalayan Balsam	<i>Impatiens glandulifera</i>	59	1989-2020	MBB-WCA-S9
	Japanese Knotweed	<i>Fallopia japonica</i>	3	1996-2012	MBB-WCA-S9
	Japanese Rose	<i>Rosa rugosa</i>	1	2012	MBB-WCA-S9
	Montbretia	<i>Crocsmia pottsii x aurea</i> = <i>C. x crocosmiiflora</i>	1	2012	MBB-WCA-S9
	Rhododendron ponticum	<i>Rhododendron ponticum</i>	17	1987-2018	MBB-WCA-S9
	Three-cornered Garlic	<i>Allium triquetrum</i>	1	2020	MBB-WCA-S9
terrestrial mammal	Eastern Grey Squirrel	<i>Sciurus carolinensis</i>	20	2007-2019	MBB-WCA-S9

Desig. Code	Desig. Name	Designation Description
MBB-WCA-S9	Wildlife and Countryside Act 1981 (Variation of Schedule 9) (England and Wales) Order 2010	Species on Schedule 9 (part 2) as revised 2010. Under section 14 of the Act it is illegal to release into the wild any animal or allow to grow in the wild any plant which is not ordinarily resident in GB or which is a known threat and is listed on Schedule 9 of the Act.

BAP priority habitats

In 2007 the Local Biodiversity Manager (responsible for the North Merseyside Biodiversity Action Plan) undertook a review of the extent of UK BAP priority habitats in North Merseyside and produced GIS layers to show their extents. In most cases these inventories were derived from two main sources: the latest Phase 1 habitat surveys which were conducted for the four North Merseyside local authorities between 1996 and 2007; and an NVC survey of the Sefton Coast carried out between 2003 and 2004. A separate NVC survey of the Ribble estuary carried out in 2002 (which also included saltmarsh at the Alt) was also useful as were one or two other sources. Because of the diverse nature of habitat classifications, it was not always possible to produce inventories with a one-to-one correspondence with UK BAP priority habitats. The table below shows the BAP habitat inventories for North Merseyside and their correspondence with UK BAP priority habitats.

North Merseyside habitat inventory	Correspondence with UK BAP priority habitats
Lowland Acid Grassland	Lowland Dry Acid Grassland
Lowland Heathland	Lowland Heathland
Lowland Raised Bog	Lowland Raised Bog

North Merseyside habitat inventory	Correspondence with UK BAP priority habitats
Neutral Grassland	Incorporates the UK BAP habitat Lowland Meadows but also, in North Merseyside, includes a lot of amenity grassland, road verges etc.
Calcareous Grassland	Calcareous Grassland
Ponds	Ponds
Lakes	Eutrophic lakes
Reedbeds	Reedbeds
Hedgerows	Hedgerows
Saltmarsh	Coast Saltmarsh
Sand Dune	Coastal Sand Dune
All Woodland	It was not possible, from the available data, to produce separate inventories for different woodland types in North Merseyside, so this inventory incorporates elements of several UK BAP priority habitats such as Lowland Mixed Deciduous Woodland, Wet Woodland and Wood Pasture & Parkland.

Note that the 'Ponds' BAP inventory was derived locally using water bodies less than two hectares in extent from Ordnance Survey data. The 'Lakes' BAP inventory is a nationally supplied inventory, but the lakes are only represented in this as points. Therefore any water body over two hectares in extent will only be represented on our habitat maps by a point and will not show the extent of the lake. However, ponds will be indicated by polygons showing their extent. Occasionally a large pond – though still less than two hectares in extent – will be represented in both the 'Lake' and 'Pond' inventories.

Habitat	Amount	Units
Hedgerows	13.41	kilometres
All Woodland	13.97	hectares
Neutral Grassland	11.24	hectares
Ponds	0.56	hectares
Ponds	26	count

The table above indicates the extent of each of the BAP habitat inventories (see previous table) occurring within your search area (see appendix 2 for maps).

Detailed habitat mapping

Merseyside BioBank collates and maintains detailed habitat mapping – normally Phase 1 or NVC – for the North Merseyside area. This includes both historic data and the most up-to-date habitat survey data available. Here we report on the detailed habitat mapping we hold for your search area.

Ref: EN-CBA-Grassland		
Source: Composite layer generated by Merseyside Environmental Advisory Service on behalf of the Liverpool City Region		
Survey date: 01/01/2016		
Notes: LCR Ecological Network Grassland Core Biodiversity Areas. See http://www.lcreconet.uk/ for further information.		
CBA Grassland		
Gr1	Grasslands	0.17 ha
Gr6	Lowland Meadow	11.06 ha

Ref: EN-CBA-Mosaic		
Source: Composite layer generated by Merseyside Environmental Advisory Service on behalf of the Liverpool City Region		
Survey date: 01/01/2016		
Notes: LCR Ecological Network Mosaic Core Biodiversity Areas. See http://www.lcreconet.uk/ for further information.		
CBA General features		
Gen3	Local Wildlife Site	0.65 ha

Ref: EN-CBA-Wetland		
Source: Composite layer generated by Merseyside Environmental Advisory Service on behalf of the Liverpool City Region		
Survey date: 01/01/2016		
Notes: LCR Ecological Network Wetland Core Biodiversity Areas. See http://www.lcreconet.uk/ for further information.		
CBA General features		
Gen3	Local Wildlife Site	3.55 ha
Gen4	Reedbeds	0.06 ha

Ref: EN-CBA-Woodland		
Source: Composite layer generated by Merseyside Environmental Advisory Service on behalf of the Liverpool City Region		
Survey date: 01/01/2016		
Notes: LCR Ecological Network Woodland Core Biodiversity Areas. See http://www.lcreconet.uk/ for further information.		
CBA General features		
Gen3	Local Wildlife Site	13.02 ha
CBA Woodland		
Wo3	Lowland Mixed Broad-leaf Woodland	61.76 ha
Wo4	Lowland Mixed Deciduous Woodland	42.02 ha
Wo6	Lowland Wood-pasture and Parkland	3.8 ha
Wo8	Traditional Orchards	0.22 ha
Wo9	Wet Woodland	3.78 ha

Ref: EN-LinearFeatures		
Source: Composite layer generated by Merseyside Environmental Advisory Service on behalf of the Liverpool City Region		
Survey date: 01/01/2016		
Notes: LCR Ecological Network Linear features. See http://www.lcreconet.uk/ for further information.		
Linear feature		
Lin1	Active railway corridor	6.41 km
Lin5	Hedgerow	13.41 km
Lin7	River	5.9 km

Ref: EN-SteppingStones		
Source: Composite layer generated by Merseyside Environmental Advisory Service on behalf of the Liverpool City Region		
Survey date: 01/01/2016		
Notes: LCR Ecological Network Stepping Stone habitats. See http://www.lcreconet.uk/ for further information.		
Stepping stone habitat		
SS1	Ponds	1.65 ha

Ref: Knowsley-1996-98		
Source: Complete phase 1 habitat survey for Knowsley 1996-98.		
Survey date: 1996 - 1998		
Notes: This is the 'default' baseline mapping used by the Council. It is the most recent complete coverage for the borough.		
Woodland and scrub		
A1.1.1	Broadleaved woodland - semi-natural	2.82 ha
A1.1.2	Broadleaved woodland - plantation	6.18 ha
A2.1	Scrub - dense/continuous	5.3 ha
A2.2	Scrub - scattered	0.58 ha 9 (count)
A3.1	Broadleaved Parkland/scattered trees	0.72 ha 36 (count)
Grassland and marsh		
B2.1	Neutral grassland - unimproved	5.89 ha
B4	Improved grassland	14.09 ha
B5	Marsh/marshy grassland	0.17 ha
B6	Poor semi-improved grassland	8.36 ha
Tall herb and fern		
C1.1	Bracken - continuous	0.01 ha 0.41 km
C3.1	Other tall herb and fern - ruderal	6.16 ha
Swamp, marginal and inundation		
F1	Swamp	0.06 ha
Open water		
G1	Standing water	0.38 ha 0.24 km
G2	Running water	0.83 ha 1.12 km
Miscellaneous		
J1.1	Cultivated/disturbed land - arable	42.49 ha
J1.2	Cultivated/disturbed land - amenity grassland	8.3 ha
J2.1.2	Intact hedge - species-poor	3.69 km
J2.6	Dry ditch	0.27 km
J4	Bare ground	0.02 ha

Ref: Knowsley-2002		
Source: NVC habitat mapping for Knowsley sites in 2002, sourced from MEAS		
Survey date: 2002		
Aquatic communities		
A2a	Lemna minor community, typical sub-community	0 ha
Mesotrophic grasslands		
MG1e	Arrhenatherum elatius grassland, Centaurea nigra sub-community	0.14 ha
MG7a	Lolium perenne leys and related grasslands, Lolium perenne-Trifolium repens leys	0 ha
MG9a	Holcus lanatus-Deschampsia cespitosa grassland, Poa trivialis sub-community	0.73 ha

Vegetation of open habitats		
Ov24a	Urtica dioica-Galium aparine community, typical sub-community	0.1 ha
OV26d	Epilobium hirsutum community, Arrhenatherum elatius-Heracleum sphondylium sub-community	0.26 ha
Swamps and tall-herb fens		
S12a	Typha latifolia swamp, Typha latifolia sub-community	0.05 ha
S14c	Sparganium erectum swamp, Mentha aquatica sub-community	0.01 ha
Woodlands and scrub		
W1	Salix cinerea-Galium palustre woodland	0.07 ha
W10a	Quercus robur-Pteridium aquilinum-Rubus fruticosus woodland, typical sub-community	3.08 ha
W10c	Quercus robur-Pteridium aquilinum-Rubus fruticosus woodland, Hedera helix sub-community	0.61 ha
W21b	Crataegus monogyna-Hedera helix scrub, Mercurialis perennis sub-community	0.06 ha
W23c	Ulex europaeus-Rubus fruticosus scrub, Teucrium scorodonia sub-community	0.1 ha
W24a	Rubus fruticosus-Holcus lanatus underscrub, Cirsium arvense-Cirsium vulgare sub-community	0.48 ha
W24b	Rubus fruticosus-Holcus lanatus underscrub, Arrhenatherum elatius-Heracleum sphondylium sub-community	0.54 ha
W6a	Alnus glutinosa-Urtica dioica woodland, typical sub-community	0.93 ha
W6b	Alnus glutinosa-Urtica dioica woodland, Salix fragilis sub-community	0.14 ha
W6d	Alnus glutinosa-Urtica dioica woodland, Sambucus nigra sub-community	1.09 ha
W6e	Alnus glutinosa-Urtica dioica woodland, Betula pubescens sub-community	0.53 ha

Habitat maps themselves are produced at the end of the report. You can cross-reference the figures in the tables below to the maps by means of the reference which appears on each map. A map with the reference 'Composite' is a special map made on-the-fly at the time of this report production by merging data from all available sources and using the most up-to-date mapping available at any given point in your search area.

Designated Areas

There are a number of types of 'designated areas' in North Merseyside. These types are shown in the table below together with the total number of North Merseyside sites for each.

Type of area	No. of sites
Site of Special Scientific Interest	6
Special Protection Area (Natura 2000)	3
Marine Special Protection Area	1
Special Area of Conservation (Natura 2000)	1
RAMSAR (wetland of international importance)	3
National Nature Reserve	3
Local Nature Reserve	57
Knowsley Local Wildlife Site	65
Sefton Local Wildlife Site	55
St Helens Local Wildlife Site	117
Liverpool Local Wildlife Site	29
Merseyside Ancient Woodland Inventory	11
RSPB/LWT Windfarm Alert Map	1
Red Squirrel Protection Area	1

The following table indicates the results of the intersection between the search area and designated areas detailed above (see appendix 2 for maps).



***The Local Environmental
Records Centre
for North Merseyside***

Merseyside BioBank,
Estate Barn, Court Hey Park
Roby Road, Liverpool
L16 3NA
Tel: 0151 737 4150
Info@MerseysideBiobank.org.uk

Name	Type
Netherley Brook and Ditton Brook Corridor	Nature Improvement Area
Cartbridge Lane Wood	Knowsley Local Wildlife Site
Green's Bridge Plantation	Knowsley Local Wildlife Site
Ditton Brook	Knowsley Local Wildlife Site
Netherley Woods and Brook	Liverpool Local Wildlife Site
Netherley Brook	Knowsley Local Wildlife Site

Citations¹ for Local Wildlife Sites are supplied separately.

¹ In Knowsley, some Local Wildlife Site citations do not include lists of species and habitats for which they are designated and where this is the case a separate list is supplied for the site. No Local Wildlife citations are available for Liverpool Local Wildlife Sites (current or potential). No citations for LNRs are available. Citations for national and internationally designated sites (SSSI, SPA etc) are publicly available.

Interpretation and caveats

Merseyside BioBank records included

All relevant non-confidential records managed by Merseyside BioBank which intersect the search area are included in this report, except where excluded by one or more of the conditions described in the rest of this section.

NBN Atlas records included

All relevant records available to Merseyside BioBank from the NBN Atlas are included in this report, except where excluded by one or more of the conditions described in the rest of this section. NBN Atlas records are accessed live *via* web-services at the time of report generation.

Merseyside BioBank often has access to NBN records at higher resolution than the standard 'public' access. These records have been downloaded and used with the permission of the data providers, but are subject to normal NBN Atlas terms and conditions. You must not use them beyond the specific purposes for which this report was provided to you and you must adhere, at all times, to the NBN Atlas terms and conditions.

Record location and dates

If a record can only be located to a relatively low precision (e.g. 1 km or 2 km square), then it is possible that the unrecorded precise location of the animal or plant might have been outside of the search area. Sometimes the location name column can be useful in deciding whether or not this was likely to have been the case. In records from our own database, we have replaced all digits with the '#' character in the location field to people's privacy where addresses have been used as location names.

Records which are only available to us at less than 2 km square (tetrad) precision are excluded from the report. We report dates at the highest precision available to us. Records for which no date is available are excluded from the report.

Sensitive taxa

For some sensitive taxa, the precision of grid references presented here may have been reduced. We do this for:

- all records of Badger; and
- records of breeding Otter.

In addition, we do not report on 'negative records' for Badger or Otter.

Absence of records and 'negative records'

The absence of biological records for an area, or the presence of 'negative records', is not proof that taxa are not present.

Duplicate records

Although we do our very best to avoid reporting the same record more than once ('duplicate records') this is sometimes unavoidable for records that have entered the biological records network *via* more than one route. In particular, there may be some record duplication between records from Merseyside BioBank's database and records from the NBN Atlas datasets



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for North Merseyside***

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Estate Barn, Court Hey Park
Roby Road, Liverpool
L16 3NA
Tel: 0151 737 4150
Info@MerseysideBiobank.org.uk

(though, of course, we do not report on NBN Atlas records which originate from Merseyside BioBank).

Validity of records

Whilst Merseyside BioBank continually strives to verify the records that we manage, we accept no responsibility for any errors subsequently discovered. Merseyside BioBank accepts no responsibility for errors in data derived from the NBN Atlas.

Verification status of records

Records used in this report include those considered verified and those as yet unchecked. This approach is taken on balance to ensure that all potential risks that we are aware of have been flagged.

Bird records

Only bird records with a recorded status of proven, probable and possible breeding have been included in this data search. Bird records with other statuses are not included. The most recent bird records for North Merseyside included, e.g. those generated for the ongoing breeding and wintering atlas projects, since these data have yet to undergo verification by the County Bird Recorder. It is possible for you to contact the County Bird Recorder independently for his interpretation of the most recent data with respect to your search area. The contact details are:

Steve White
stevewhite102@btinternet.com

Please note that if this is a commercial data request you will be invoiced by **Sefton Borough Council**, which is the hosting authority for Merseyside BioBank.

Appendix 1: Terms and conditions of use

Merseyside BioBank receives data from a variety of sources, from large organisations to amateur naturalists. With Merseyside BioBank operating as custodians, these individuals and groups, who provide their records free of charge, retain copyright on their data.

All data passed to a third party (users) by Merseyside BioBank are subject to these access terms and conditions. Non-adherence to these terms and conditions will be viewed as a breach of contract, which may result in legal redress being sought.

1. Users agree that data released by Merseyside BioBank, in any format and on any media, will only be used for the purpose for which it was originally requested and for any time period originally agreed upon (See note 3 below).
2. Users agree that data released by Merseyside BioBank will not be added to any permanent database system (electronic or paper based) unless by written agreement with Merseyside BioBank.
3. Users understand that following the end of the agreed time period, or 12 months from the enquiry date, the received data must be deleted from any electronic system (See note 2 above). Use of the data beyond this period must be preceded by a further request to Merseyside BioBank.
4. Users agree that data retrieved from Merseyside BioBank will not be passed on to or communicated with third parties except as aggregated data within reports, or as anonymised data in the form of maps etc., which constitute a part of the agreed reason for the original enquiry.
5. Merseyside BioBank disclaims any responsibility for the accuracy of the information within its reports and accepts no liability for any result of using these data.
6. Any biological record is specific to the date of the recording and does not necessarily imply the continuance of the species at that site.
7. The lack of species and/or habitat information for a geographically defined area does not necessarily imply a low biodiversity value for that area. It may simply be unrecorded.
8. While the information from Merseyside BioBank in itself will remain free, Merseyside BioBank reserves the right to charge a reasonable fee to cover administration and a proportion of overheads as detailed in our charging policy.
9. A copy of any report, or other product, produced using the data from Merseyside BioBank would be gratefully received if provided without cost.
10. Merseyside BioBank must be acknowledged within any report, or other product produced, using data provided by Merseyside BioBank.



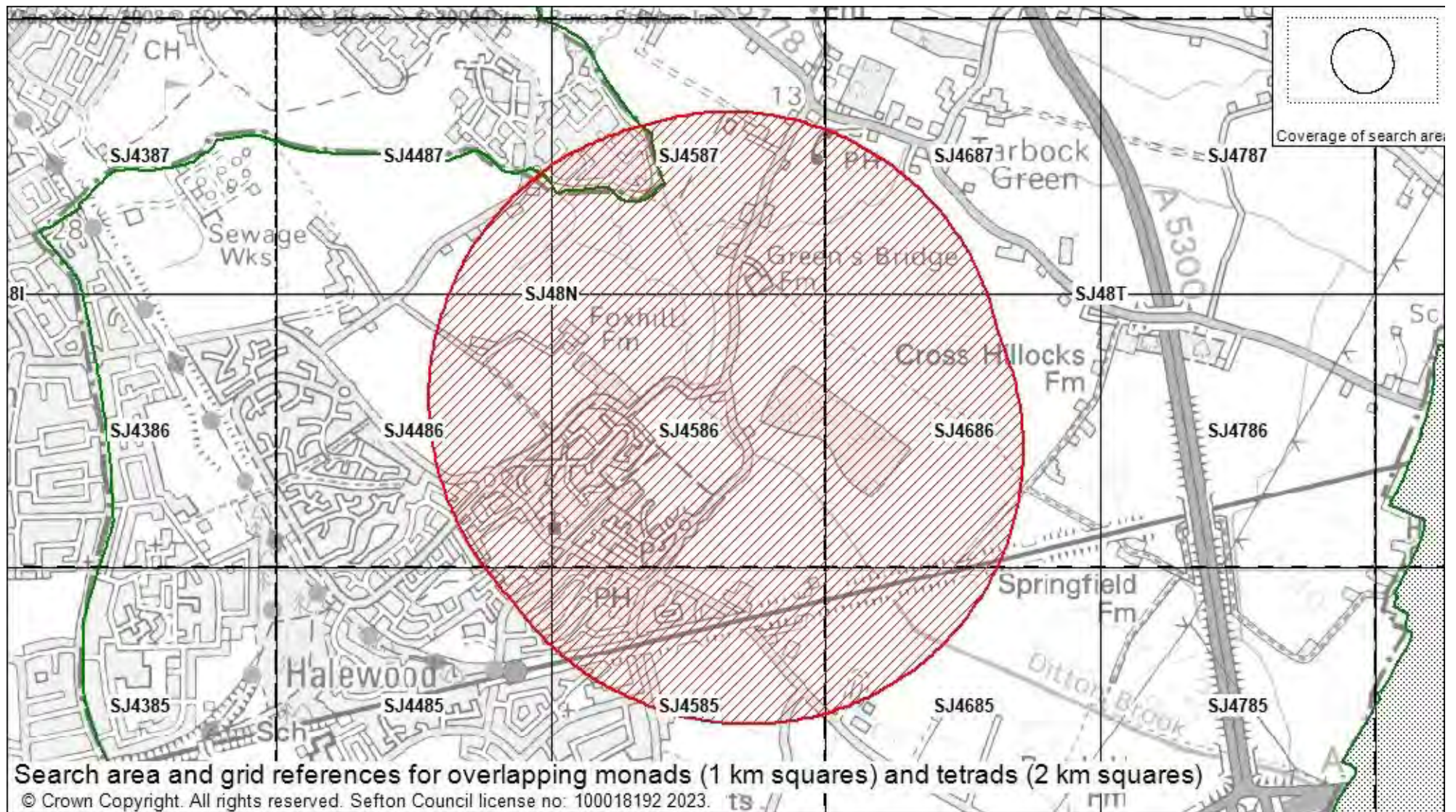
***The Local Environmental Records Centre
for North Merseyside***

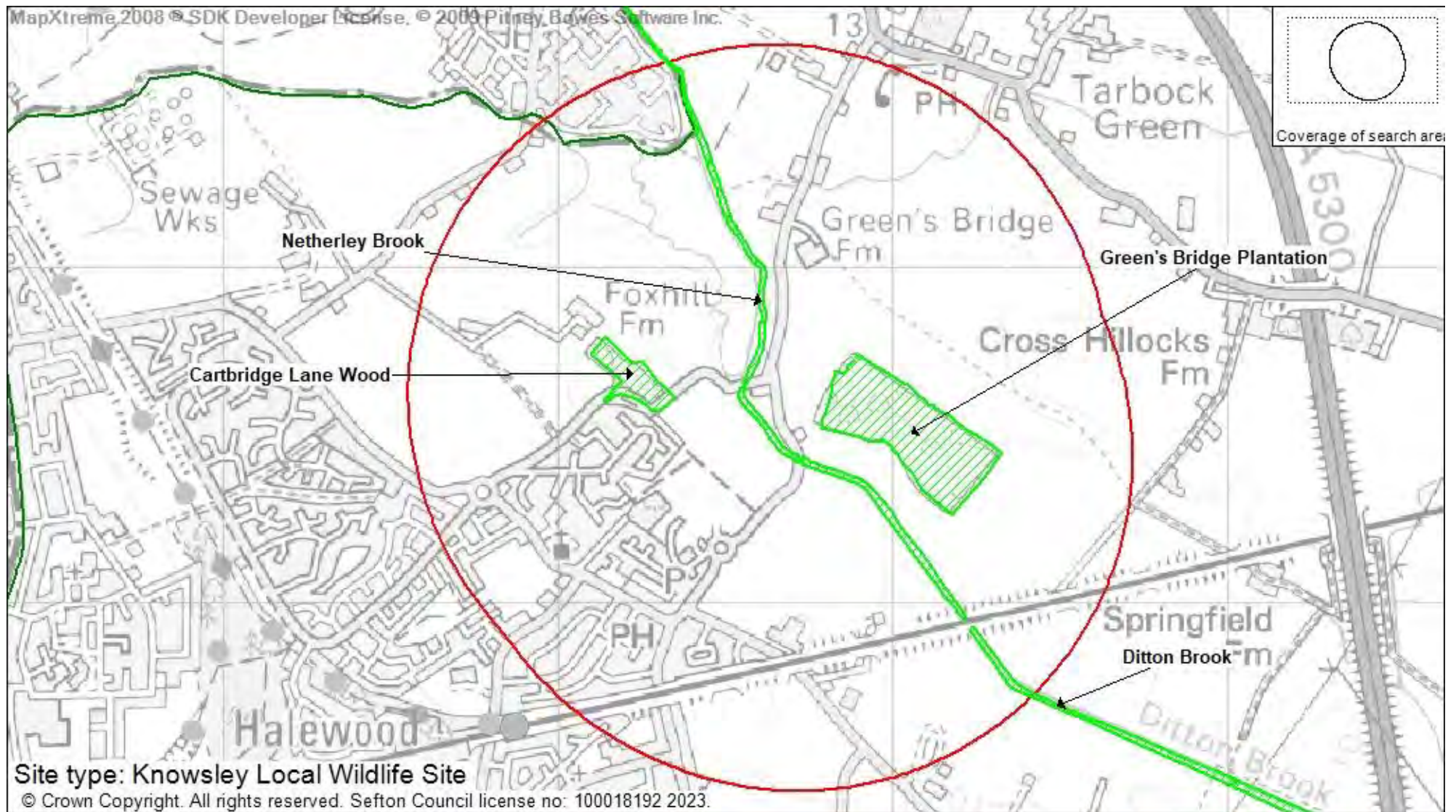
Merseyside BioBank,
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Roby Road, Liverpool
L16 3NA
Tel: 0151 737 4150
Info@MerseysideBiobank.org.uk

Appendix 2: Maps

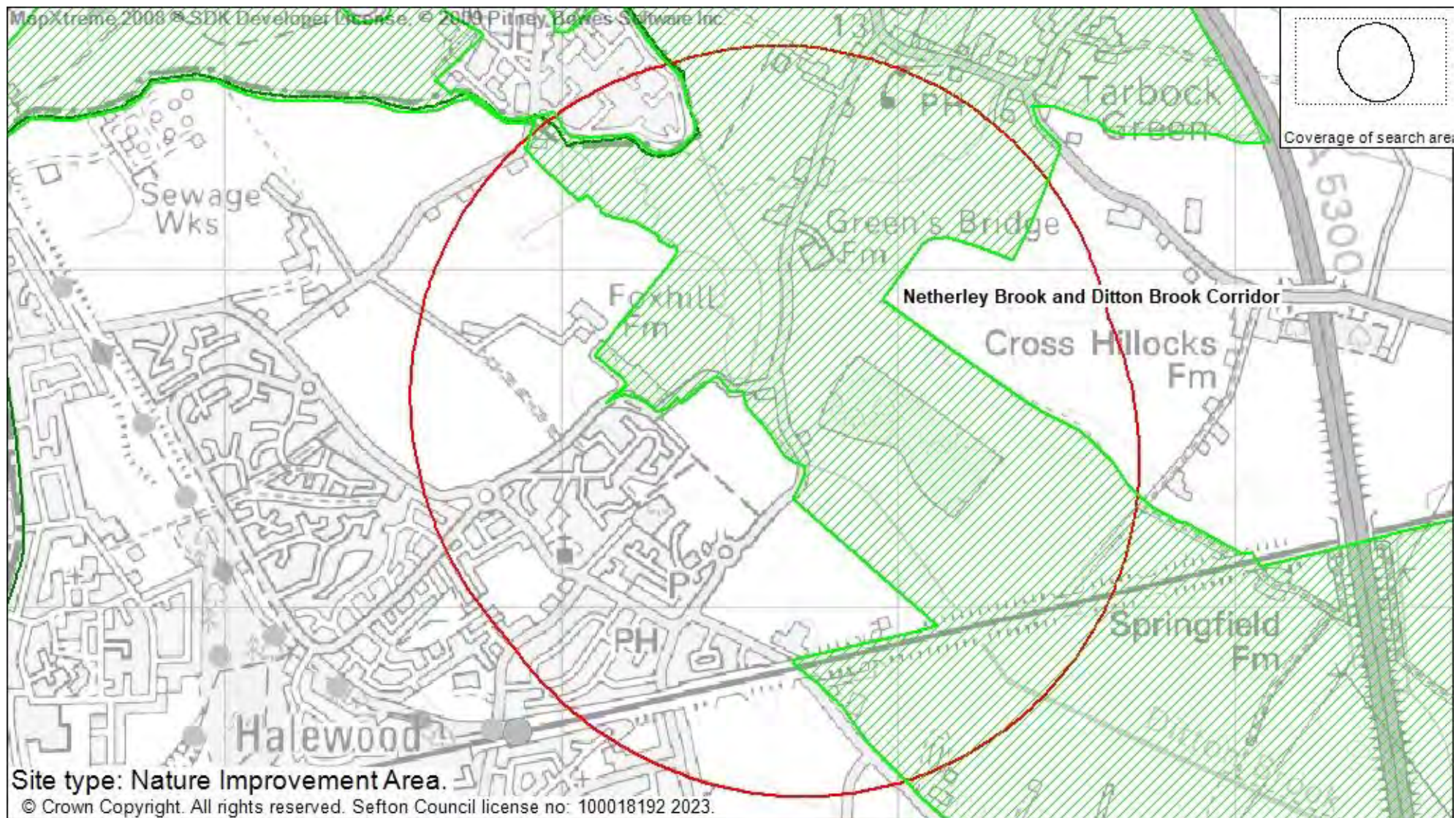
The following page(s) include maps to illustrate some of the results of your data request. They should be viewed in the context of the results supplied in the main body of the report.

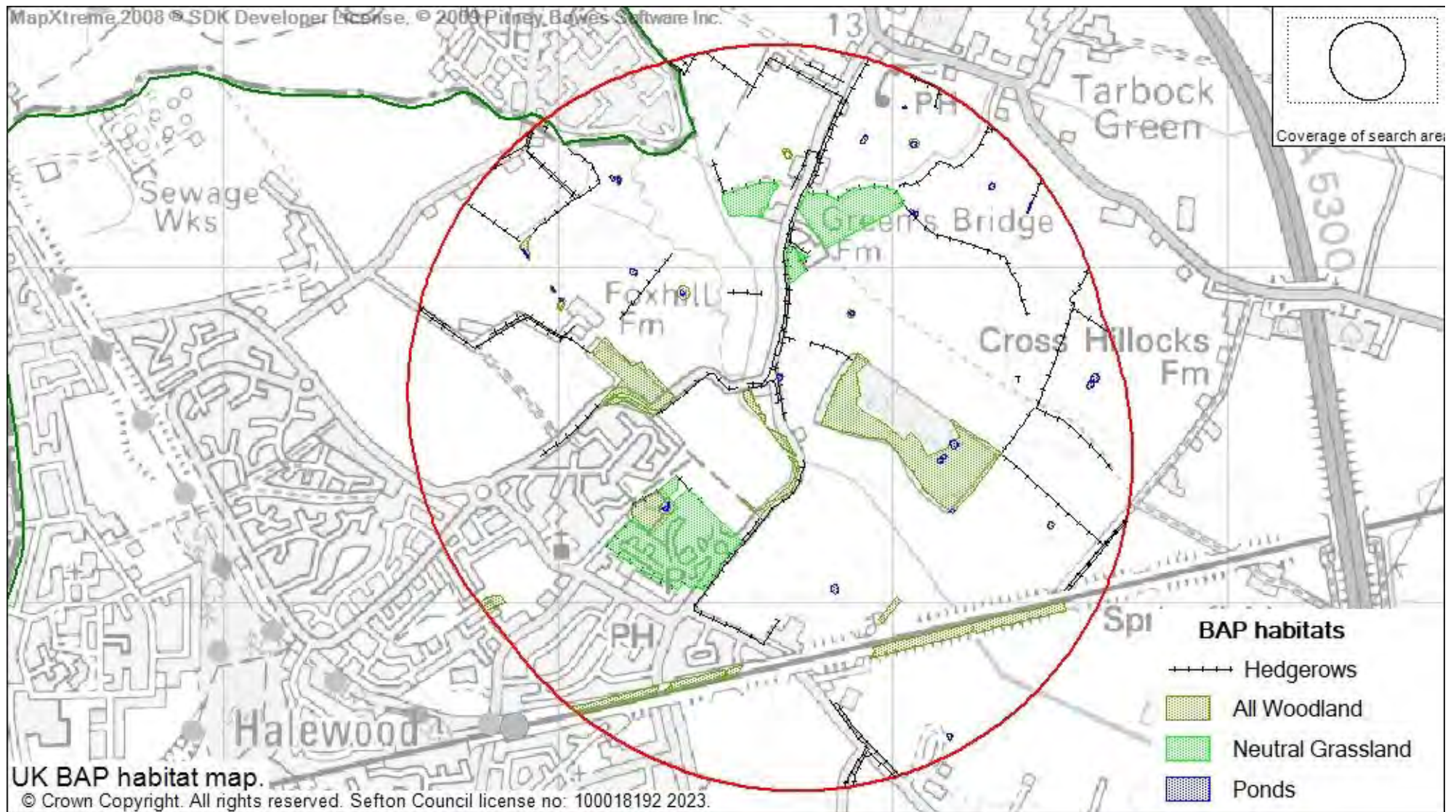
The Ordnance Survey mapping included in the maps provided by Merseyside BioBank under Sefton Council's licence from Ordnance Survey. These maps are provided to assist decision-makers in the effective and sustainable management of land, species and habitats. Ordnance Survey should be contacted directly if any of these maps are to be used in another document.

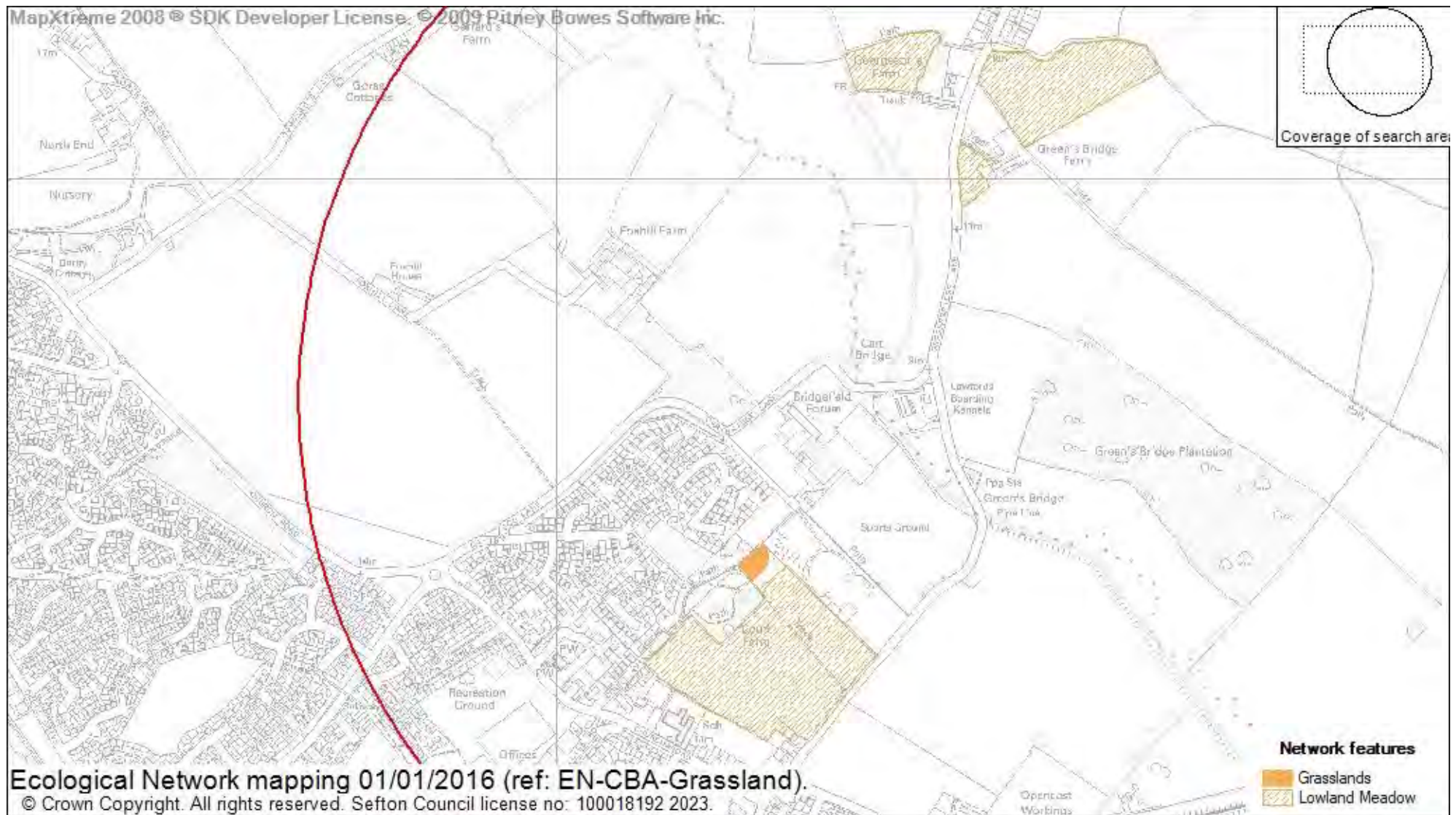


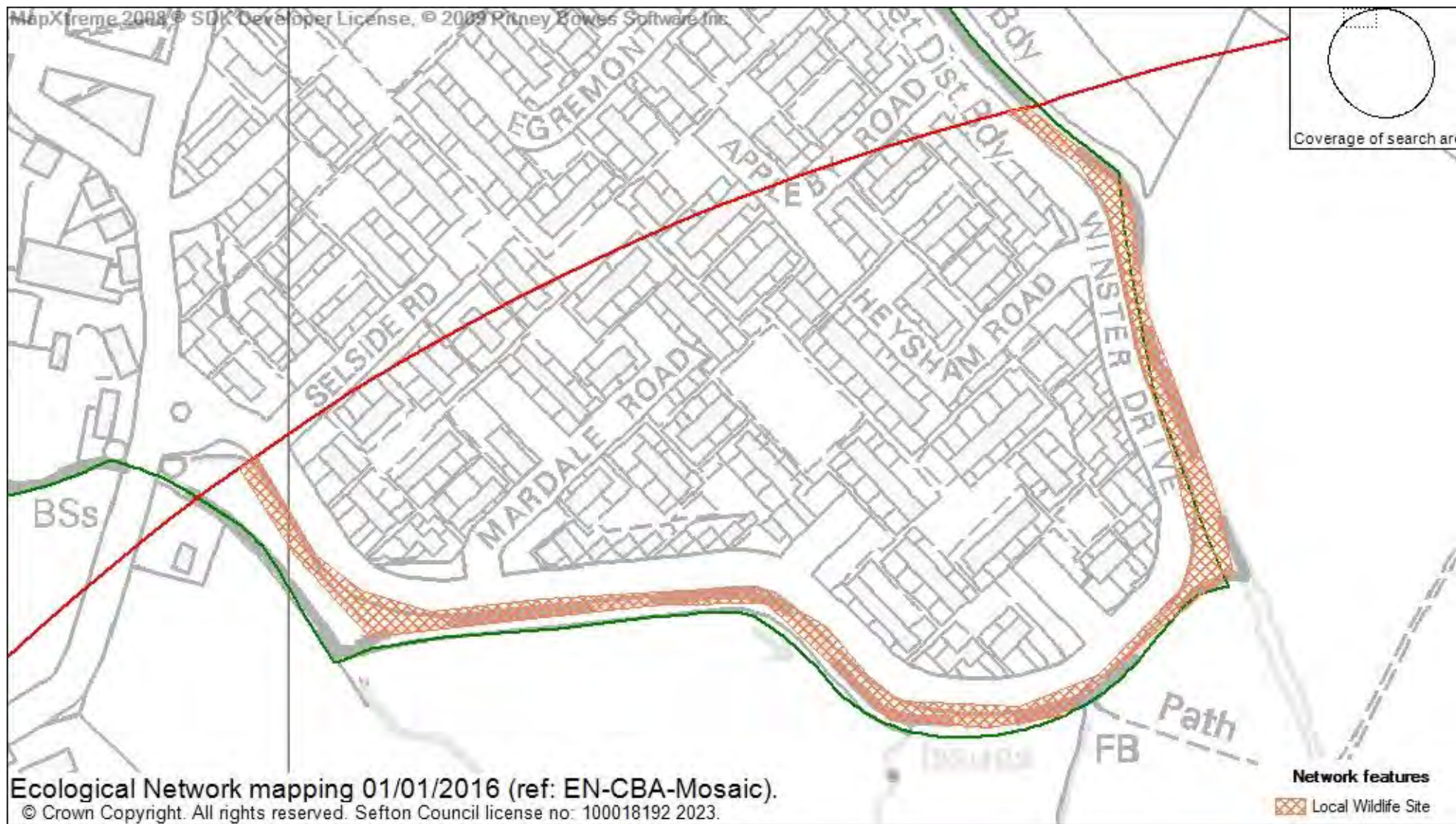


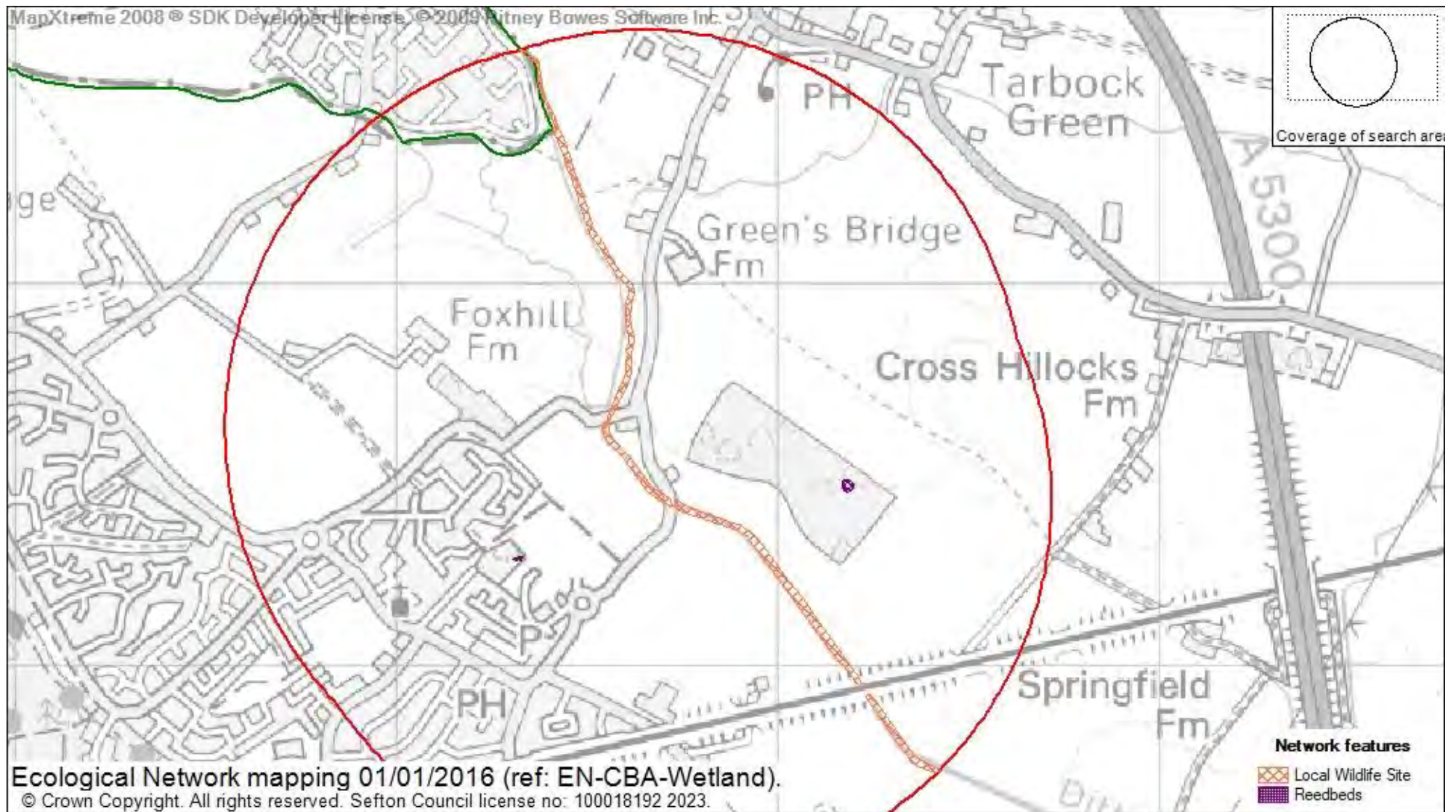


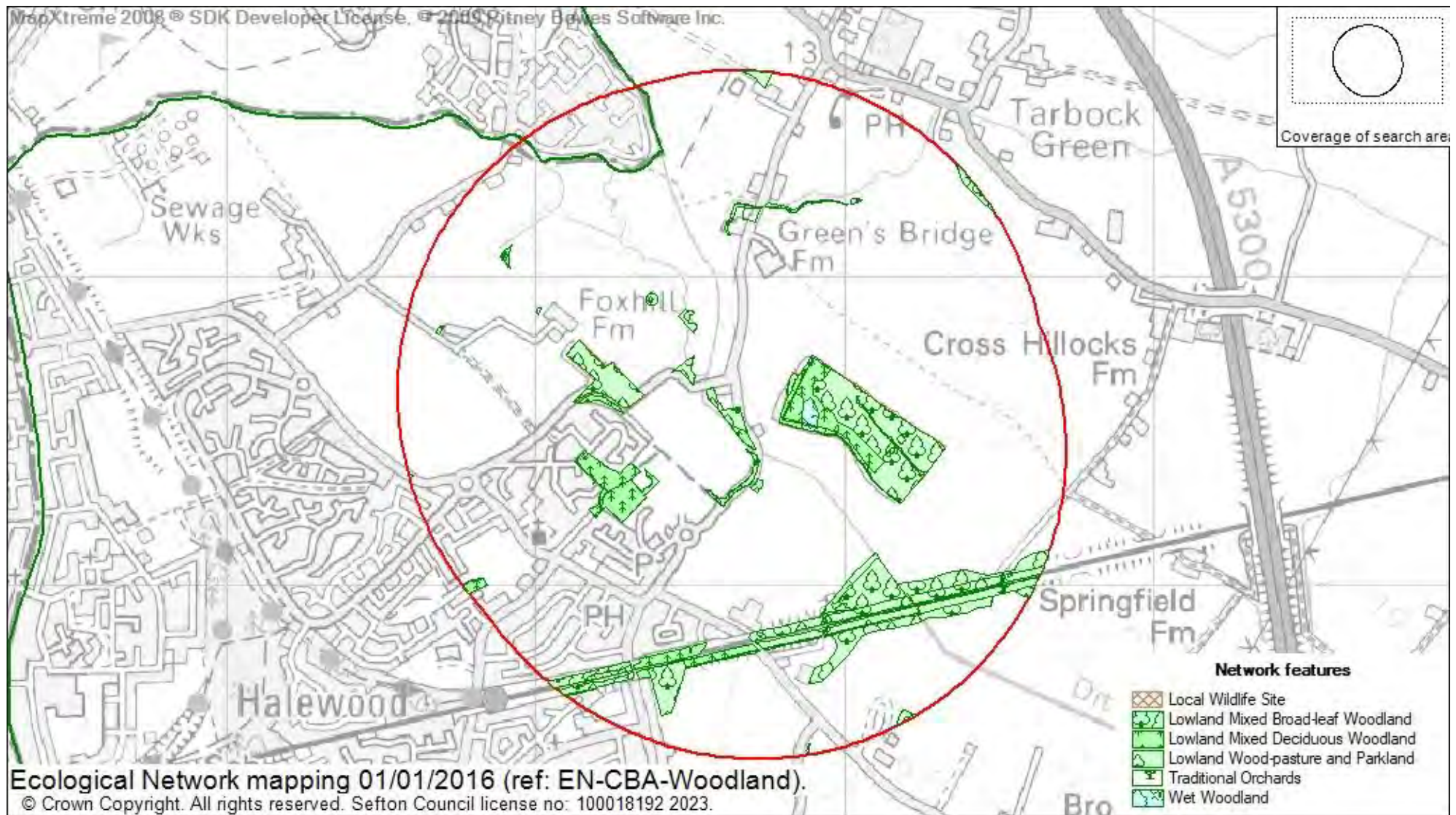


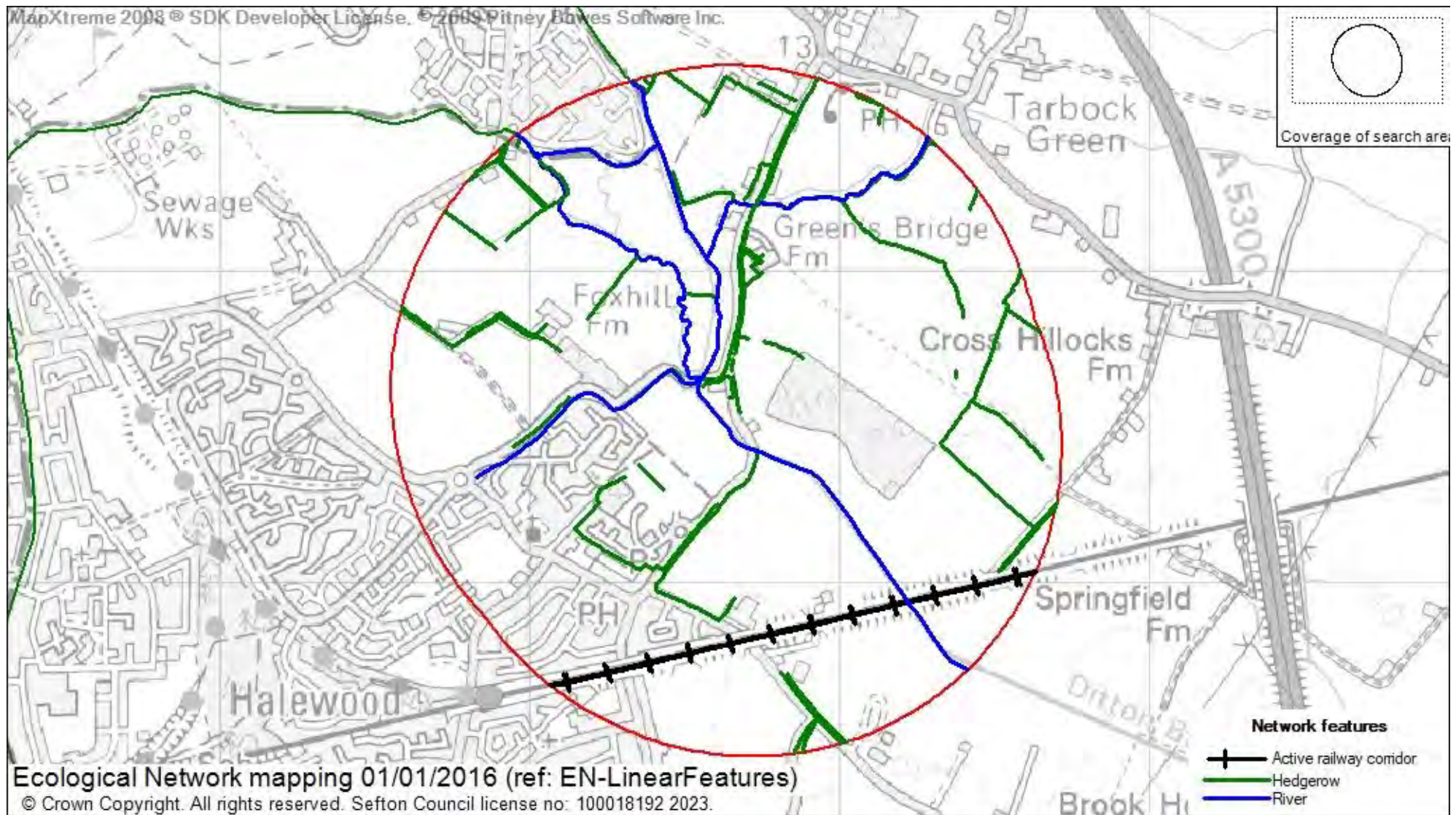


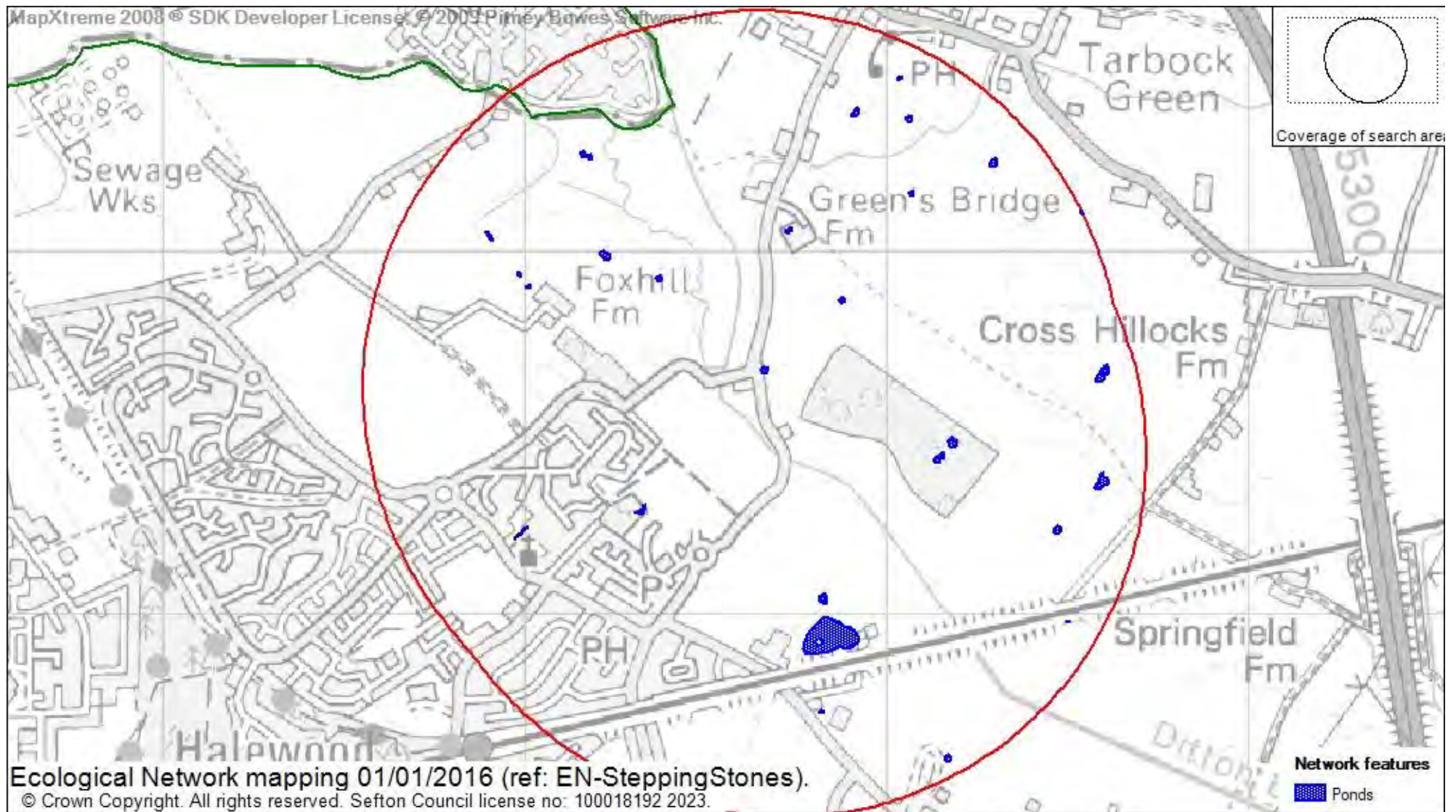


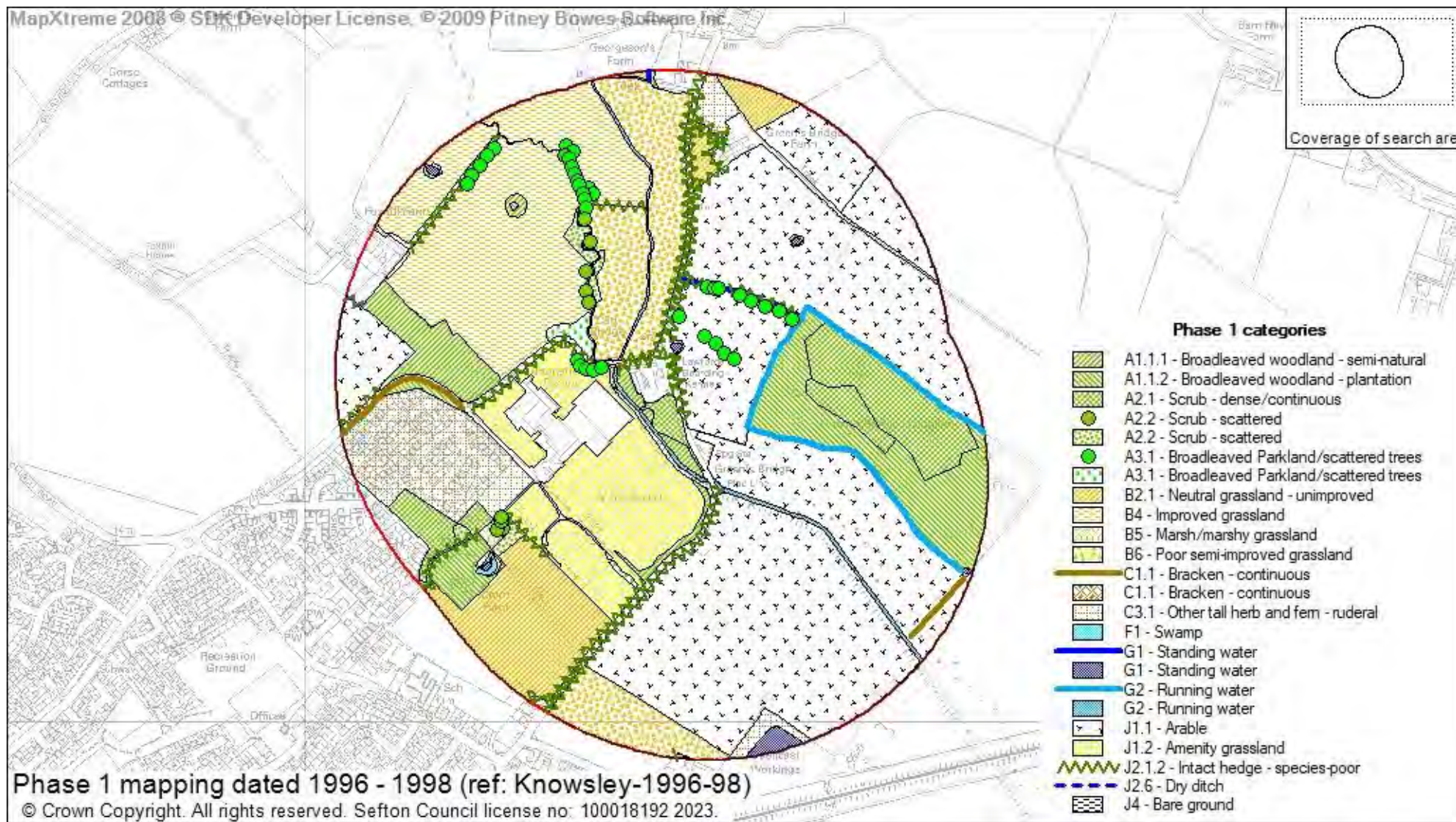


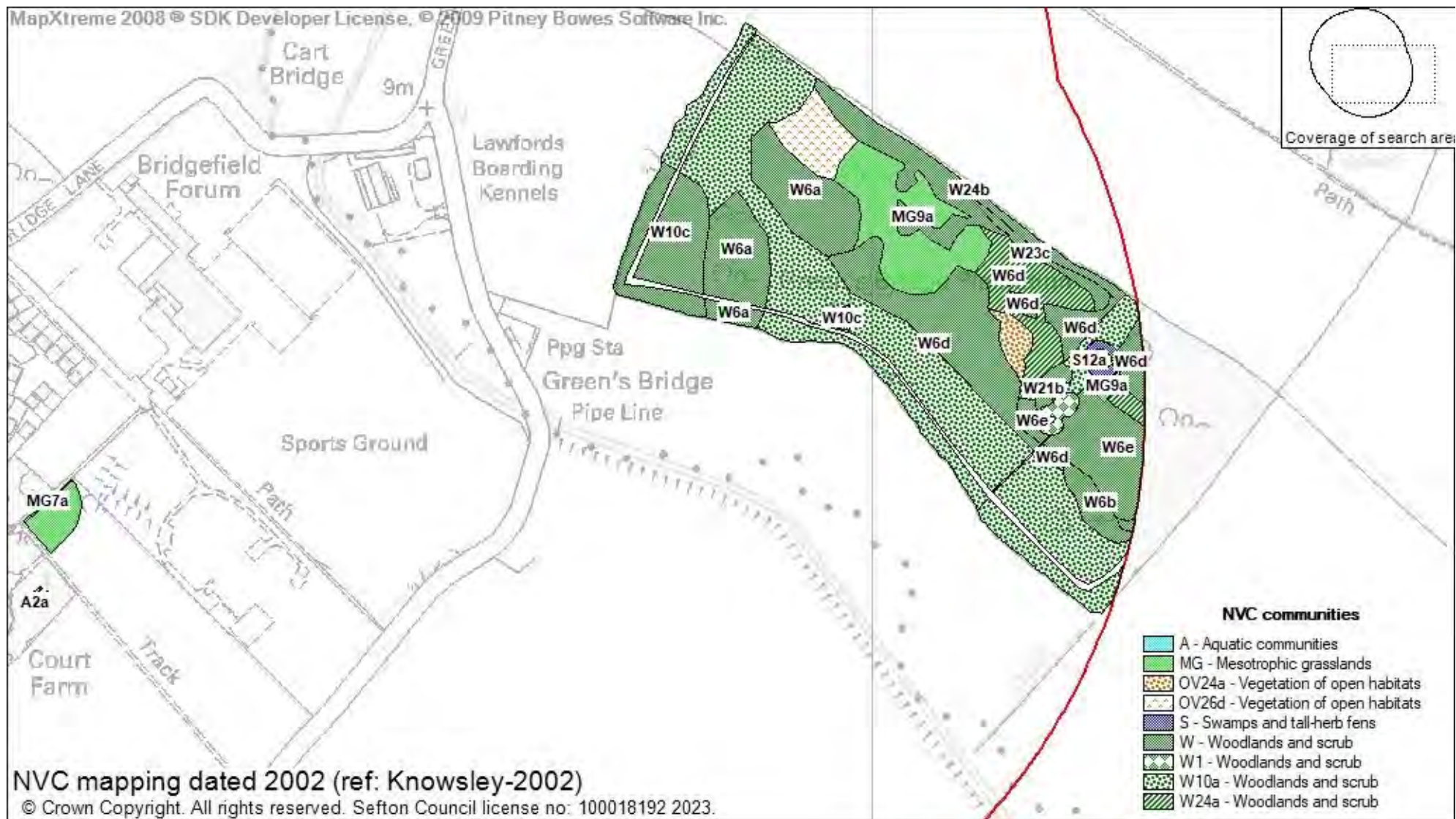












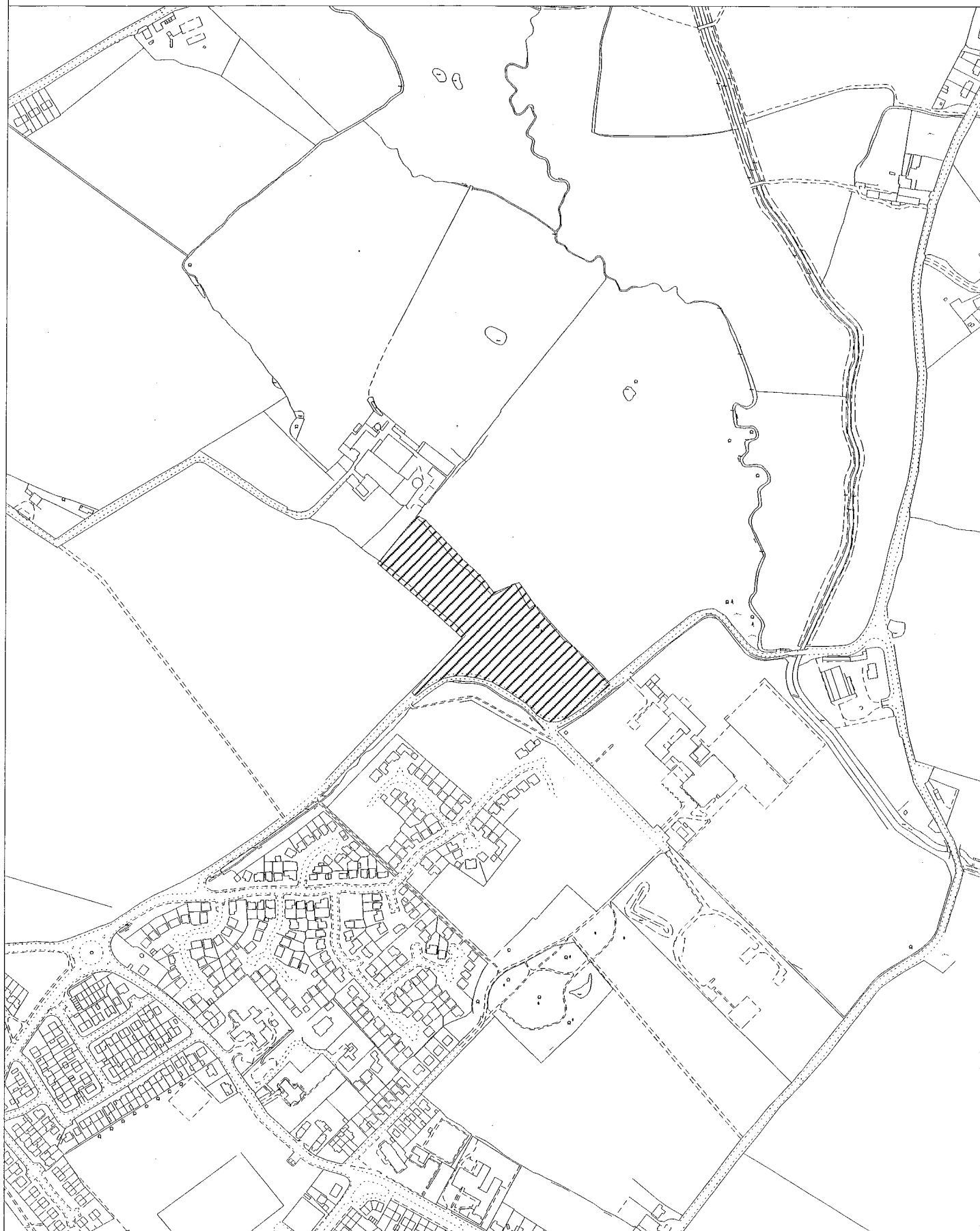
APPENDIX C: CITATIONS

SBI 25. Cartbridge Lane Wood
Scale 1:5000

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Compiled by EAS 30th August 2003



Environmental
Advisory Service



Site Name: Ditton Brook

Site Area: 0.57 hectares

National Grid Reference: SJ468855

Date of Designation: 2003

District: Knowsley

Date of Last Revision: July 2003

SBI Number: 75

CITATION: An open water course providing good water vole habitats.

APPRAISAL: This site has been evaluated against the guidelines approved by the Council for selection of Sites of Biological Interest. The site's evaluation against the guidelines is set out below.

Guideline		Comment
HABITATS		
H1;	Rarity	--
H2;	Diversity	--
H3;	Nearness	--
H4.	Isolation	--
PLANTS		
SP1;	Rarity	--
SP2;	Diversity	--
SP3;	Naturalness	Colonisation has been aided by man and the site has been physically altered.
SP4.	Nationally Rare	--
ANIMALS		
General SP5;	Rare/priority	--
Birds		
B1;	Non-breeding population	--
B2;	Breeding population	--
B3;	Regional rare/scare	--
B4;	Breeding assemblage	--
B5.	Assemblage, breeding, wintering, passage.	--
Dragonflies		
Od1;	Breeding	--
Od2.	Regional rare/scarce	--
Butterflies		
Bf1;	Region rare breeding	--
Bf2.	Breeding assemblage	--
Amphibians		
A1;	Rarity	--
A2.	Exceptional populations	--
Reptiles		
R2;	Exceptional population	--
Bats		
Bat1;	Roost	--
Bat2.	Assemblage	--
Mammals		
Mam1.	Breeding	Guideline met – Water Vole.

SUMMARY: The combination of these factors has led to this site being identified as a Site of Biological Interest.

NOTE: Validated data from 1981 to July 2003 have been used in this assessment. Other data may become available to support this designation.

SBI 75. Ditton Brook
Scale 1:15,000

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Environmental
Advisory Service



Site Name: Green's Bridge Plantation

Site Area: 10.87 hectares

National Grid Reference: SJ460864

Date of Designation: 1995

District: Knowsley

Date of Last Revision: July 2003

SBI Number: 26

CITATION: A predominantly deciduous woodland with a variety of other habitats including ditches, ponds and acidic grasslands.

APPRAISAL: This site has been evaluated against the guidelines approved by the Council for selection of Sites of Biological Interest. The site's evaluation against the guidelines is set out below.

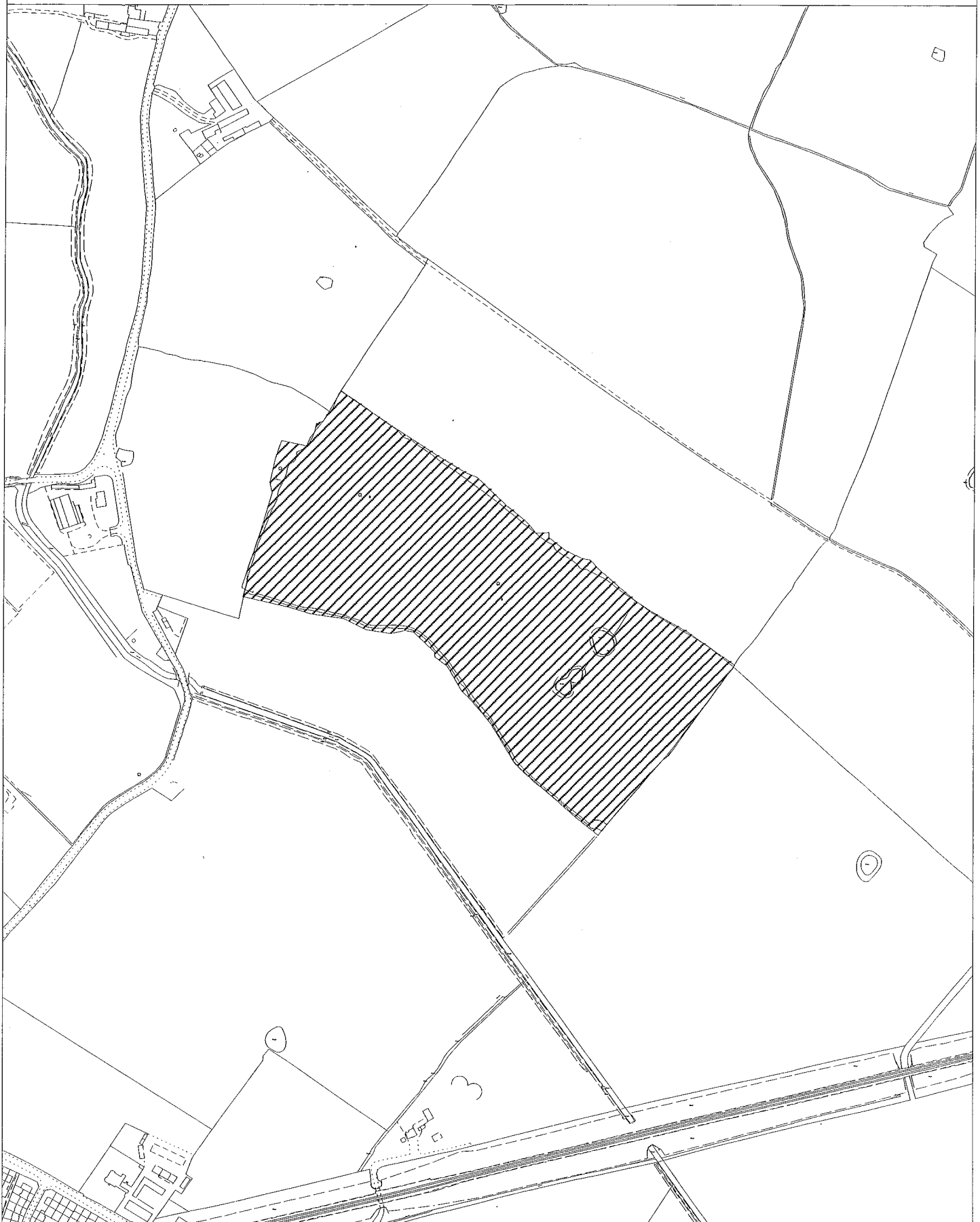
Guideline		Comment
HABITATS		
H1; H2; H3; H4.	Rarity Diversity Nearness Isolation	1 Priority BAP Habitats, 3 regionally important; 1 locally uncommon. 10 habitats recorded. 27 sites within 1 Km.
PLANTS		
SP1; SP2; SP3; SP4.	Rarity Diversity Naturalness Nationally Rare	1 WCA Schedule 8; 1 species of conservation concern; 1 regionally important; 4 locally rare species. Total of 145 plant species. One of 34 sites with 100 or more species. 96.6% of the plants are native to North Merseyside. Colonisation has been aided by man and the site has been physically altered. --
ANIMALS		
General SP5; Birds B1; B2; B3; B4; B5. Dragonflies Od1; Od2. Butterflies Bf1; Bf2. Amphibians A1; A2. Reptiles R2; Bats Bat1; Bat2. Mammals Mam1.	Rare/priority Non-breeding population Breeding population Regional rare/scare Breeding assemblage Assemblage, breeding, wintering, passage. Breeding Regional rare/scarce Region rare breeding Breeding assemblage Rarity Exceptional populations Exceptional population Roost Assemblage Breeding	-- -- -- Guideline met – breeding confirmed. Guideline met – woodland assemblage. -- -- -- -- -- -- -- -- -- --

SUMMARY: The combination of these factors has led to this site being identified as a Site of Biological Interest.

NOTE: Validated data from 1981 to July 2003 have been used in this assessment. Other data may become available to support this designation.

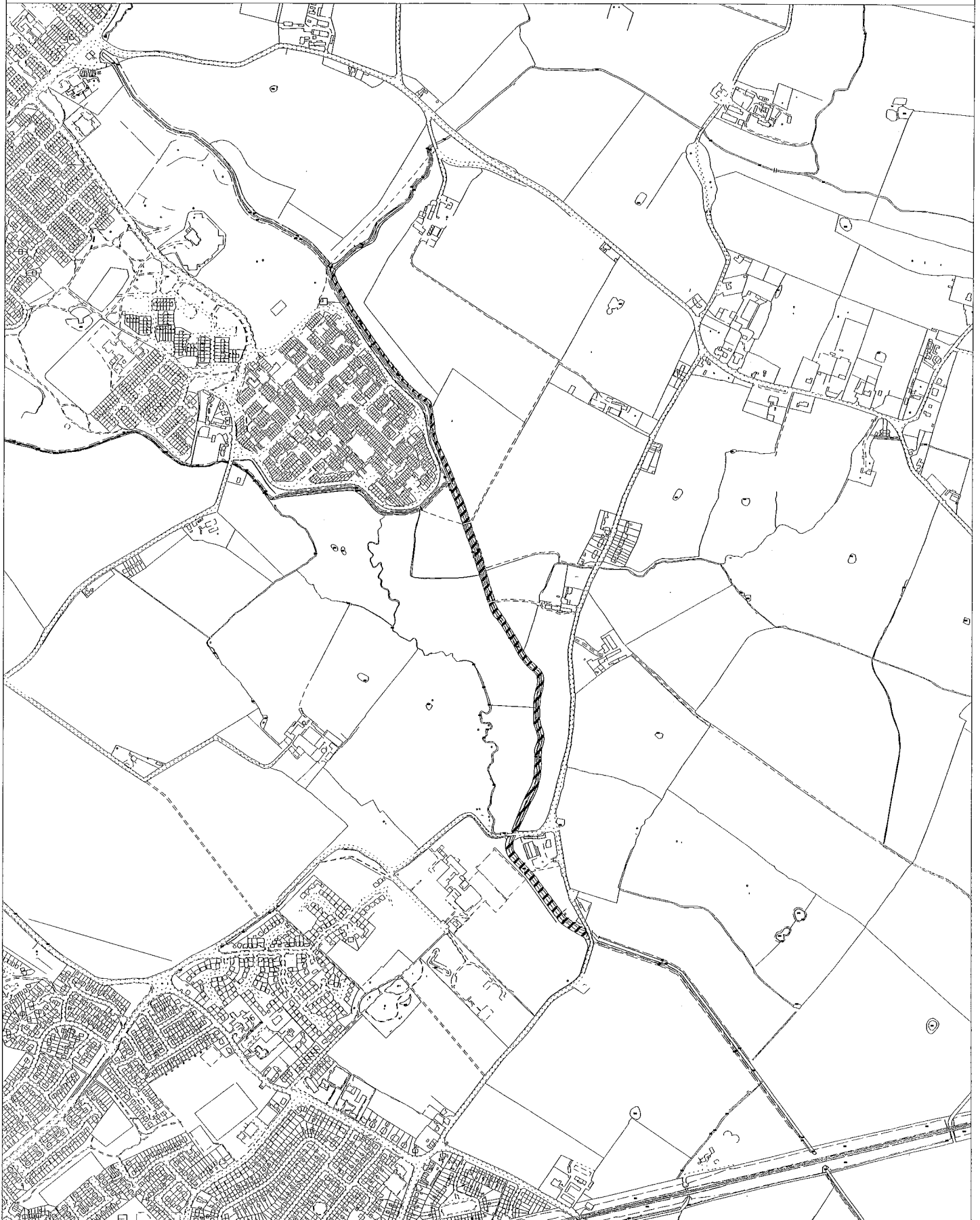
SBI 26. Green's Bridge Plantation
Scale 1:5000

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SBI 66. Netherley Brook.
Scale 1:10,000

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Compiled by EAS 30th August 2003



Site name: Netherley Brook and Woods

Site area: 5.25 hectares

National grid reference: SJ447881

Date of designation: 2008

District: Liverpool

Date of last revision: March 2010

Local Wildlife Site number: 13

Citation:

The site is a mosaic of woodland, grassland and running water. It is the most isolated of Liverpool's Local Wildlife Sites but is close to farmland around Tarbock which is of interest for a range of principally farmland birds.

The woodland is of artificial origin and is dominated by Horse Chestnut and Sycamore but also contains lime, Aspen, Field Maple, Hawthorn and Silver Birch, with an understorey of bramble. A patchy ground flora includes Male Fern, Bluebell, Ivy, Lesser Celandine and Ramsons.

The main grassland areas are semi-improved and dominated by Perennial Rye-grass and Yorkshire Fog, but unkempt margins support a greater floristic diversity, including Meadow Foxtail, Common Vetch and several ruderal species.

The Netherley Brook supports a population of Water Voles. It supports some aquatic species including Marsh-marigold but the bankside vegetation is dominated by Great Willowherb and Indian Balsam.

Appraisal:

Guideline		Comment
HABITATS		
H1	Rarity	--
H2	Diversity	7 habitats recorded
H3	Nearness	--
H4	Isolation	--
PLANTS		
Sp1	Rarity	1 regionally important species; 4 locally rare species.
Sp2	Diversity	A total of 86 plant species was recorded during 2006-2007
Sp3	Naturalness	76% of the plants are native to the city.
Sp4	Nationally rare	--
ANIMALS		
<u>General</u>		
Sp5	Rare/priority	--
<u>Birds</u>		
B1	Non-breeding population	--
B2	Breeding population	--
B3	Regionally rare/scarce	--
B4	Breeding assemblage	--
B5	Assemblage breeding, wintering, passage	--
<u>Dragonflies</u>		
Od1	Breeding	--
Od2	Regionally rare/scarce	-
<u>Butterflies</u>		
Bf1	Regionally rare/scarce	--
Bf2	Breeding assemblage	--
<u>Amphibians</u>		
A1	Rarity	--
A2	Exceptional population	--
<u>Reptiles</u>		
R1	Population of native species	--
R2	Exceptional population	--
<u>Bats</u>		
Bat1	Roost	--
Bat2	Assemblage	--
<u>Mammals</u>		
M1	Breeding	Water Vole

SUMMARY: The combination of these factors has led to this site being identified as a Local Wildlife Site.

NOTE: Validated data from 1995 to 2008 have been used in this assessment. Other data may become available to support this designation.

Status of features of nature conservation importance

PLANTS

1 regionally important species

Bluebell *Hyacinthoides non-scripta*

4 locally rare species

Marsh-marigold *Caltha palustris*

Lesser Celandine *Ranunculus ficaria*

Common Dog-violet *Viola riviniana*

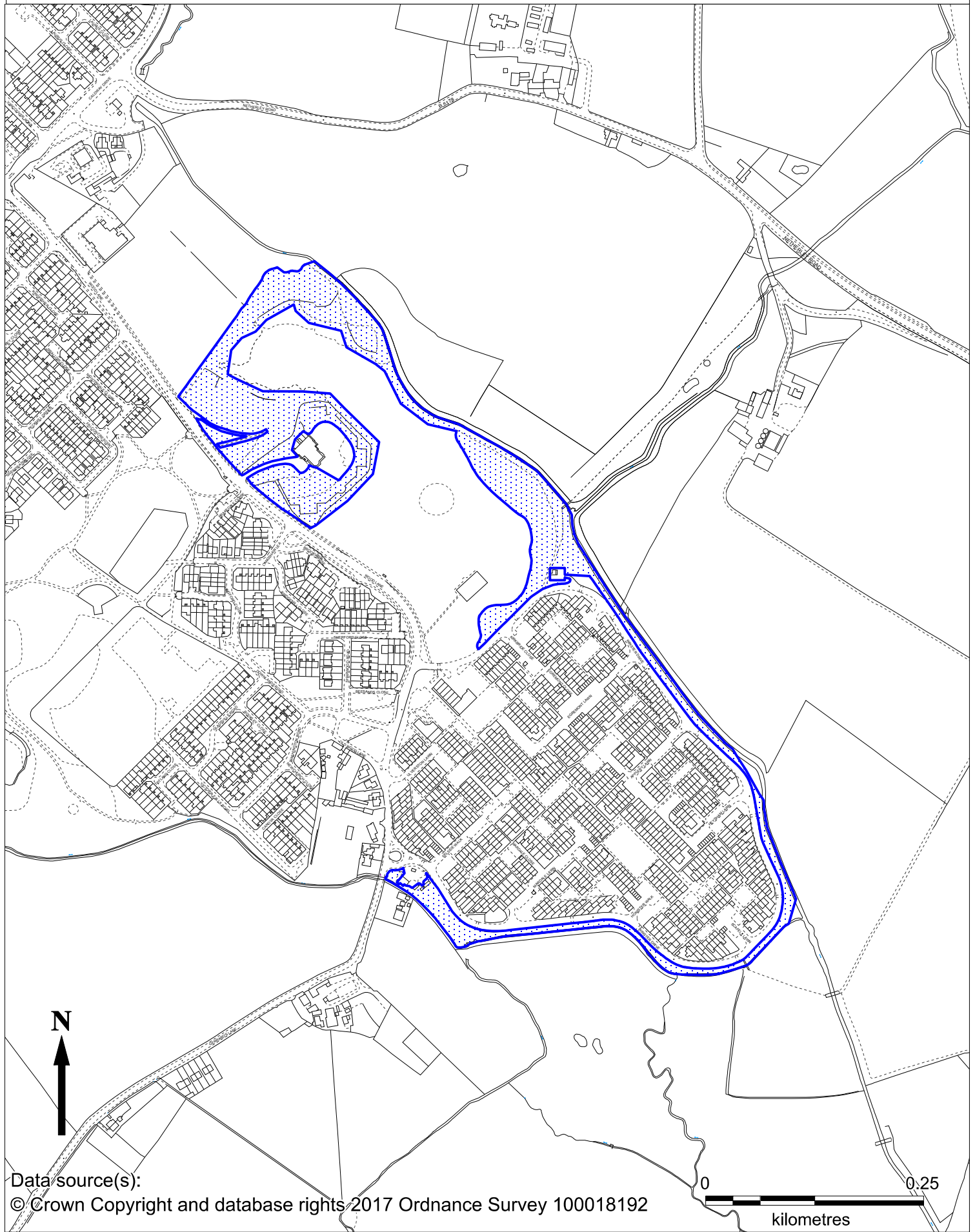
Broom *Cytisus scoparius*

ANIMALS

1 UK BAP Priority Species

Water Vole

Local Wildlife Site 22
Netherley Woods and Brook
Scale: 1:3000



Data source(s):
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APPENDIX D: SPECIES LIST

Species		
<u>Common name</u>	<u>Scientific name</u>	<u>Notes:</u>
<u>Trees</u>		
Alder	<i>Alnus glutinosa</i>	
Almound willow	<i>Salix triandra</i>	
Ash	<i>Fraxinus excelsior</i>	
Black poplar	<i>Populus nigra subsp. betulifolia</i>	
Buddleia	<i>Buddleja davidii</i>	
Crack willow	<i>Salix fragilis</i>	
Elder	<i>Sambucus nigra</i>	
Goat willow	<i>Salix caprea</i>	
Grey willow	<i>Salix cinerea subsp. oleifolia</i>	
Hawthorn	<i>Crataegus monogyna</i>	
Holly	<i>Ilex aquifolium</i>	
Leyland cypress	<i>Cupressus x leylandii</i>	
oak	<i>Quercus robur</i>	
Silver birch	<i>Betula pendula</i>	
Sycamore	<i>Acer pseudoplatanus</i>	
White poplar	<i>Populus alba</i>	
<u>Grasses & Sedges</u>		
Annual meadow-grass	<i>Poa annua</i>	
Black sedge	<i>Carex nigra</i>)	
Cock's-foot	<i>Dactylis glomerata</i>	
Common Couch	<i>Elymus repens</i>	
Creeping bent	<i>Agrostis stolonifera</i>	
False oat-grass	<i>Arrhenatherum elatius</i>	
False-brome	<i>Brachypodium sylvaticum</i>	
Perennial rye-grass	<i>Lolium perenne</i>	
Red Fescue	<i>Festuca rubra</i>	
Rough Meadow-grass	<i>Poa trivialis</i>	
Sheep's-fescue	<i>Festuca ovina</i>	
Soft brome	<i>Bromus hordeaceus</i>	
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>	
Yorkshire fog	<i>Holcus lanatus</i>	
<u>Plants</u>		
Autumn hawkbit	<i>Scorzoneroidea autumnalis</i>	
Bird's-foot	<i>Ornithopus perpusillus</i>	
Black Bamboo	<i>Phyllostachys nigra</i>	Rare, located along eastern edge of site
Black Medick	<i>Medicago lupulina</i>	
Black nightshade	<i>Solanum nigrum</i>	Rare, located within northern section of the site
Bramble	<i>Rubus fruticosus</i>	
Broad-leaved dock	<i>Rumex obtusifolius</i>	
Bugle	<i>Ajuga reptans</i>	
Canadian Goldenrod	<i>Solidago canadensis</i>	
Cats-ear	<i>Hypochaeris radicata</i>	
Cleavers	<i>Galium aparine</i>	
Colt's-foot	<i>Tussilago farfara</i>	
Common centaury	<i>Centaurium erythraea</i>	
Common chickweed	<i>Stellaria media</i>	Rare, Llocated within southeasetrn site boundary
Common comfrey	<i>Symphytum officinale</i>	
Common dandelion	<i>Taraxacum officinale</i>	
Common Fleabane	<i>Pulicaria dysenterica</i>	
Common knapweed	<i>Centaurea nigra</i>	
Common nettle	<i>Urtica dioica</i>	
Common Orache	<i>Atriplex patula</i>	
Common ragwort	<i>Senecio jacobaea</i>	
Common sunflower	<i>Helianthus annuus</i>	
Cotoneaster	<i>Cotoneaster horizontalis</i>	Rare, single plant within northwestern section of site
Cow parsley	<i>Anthriscus sylvestris</i>	
Creeping thistle	<i>Cirsium arvense</i>	
Creeping buttercup	<i>Ranunculus repens</i>	
Dog's mercury	<i>Mercurialis perennis</i>	
Feverfew	<i>Tanacetum parthenium</i>	
Field horsetail	<i>Equisetum arvense</i>	
Garlic mustard	<i>Alliaria petiolata</i>	Rare, single plant observed , in flower

Golden Rod	<i>Solidago virgaurea</i>	
Greater burdock	<i>Arctium lappa</i>	
Greater plantain	<i>Plantago major</i>	
Groundsel	<i>Senecio vulgaris</i>	
Hedge bindweed	<i>Calystegia sepium</i>	
Hedge mustard	<i>Sisymbrium officinale</i>	
Hedge woundwort	<i>Stachys sylvatica</i>	
Herb-robert	<i>Geranium robertianum</i>	
Himalayan balsam	<i>Impatiens glandulifera</i>	Significant populations
Hogweed	<i>Heracleum sphondylium</i>	Generally located within southern section of site
Ivy	<i>Hedera helix</i>	Generally wrapped around tree trunks
Jacobs Ladder	<i>Polemonium caeruleum</i>	Rare, located with pavement joints, northwester section of site
Japanese pachysandra	<i>Pachysandra terminalis</i>	
Laurel [ssp.]	<i>Prunus [ssp.]</i>	Rare, single plant observed
Lemon Balm	<i>Melissa officinalis</i>	
Marsh Woundwort	<i>Stachys palustris</i>	
Meadow buttercup	<i>Ranunculus acris</i>	
Meadow thistle	<i>Cirsium dissectum</i>	
Meadow vetchling	<i>Lathyrus pratensis</i>	
Michaelmas-daisy	<i>Symphyotrichum</i>	
Moss (various ssp.)	<i>Bryophytes [various ssp.]</i>	
Mugwort	<i>Artemisia vulgaris</i>	
Perennial Sow-thistle	<i>Sonchus arvensis</i>	
Pineappleweed	<i>Matricaria discoidea</i>	
Polypody	<i>Polypodium</i>	
Red clover	<i>Trifolium pratense</i>	
Redshank	<i>Persicaria maculosa</i>	
Ribwort plantain	<i>Plantago lanceolata</i>	
Rosebay willowherb	<i>Chamerion angustifolium</i>	
Rough Hawkbit	<i>Leontodon hispidus</i>	
Selfheal	<i>Prunella vulgaris</i>	
Smooth Cat's Ear	<i>Hypochaeris glabra</i>	
Spear thistle	<i>Cirsium vulgare</i>	
Sun Spurge	<i>Euphorbia helioscopia</i>	Rare, single plant observed
Tutsan	<i>Hypericum androsaemum</i>	
Wavy Bitter-cress	<i>Cardamine flexuosa</i>	
Wetted Thistle	<i>Carduus crispus</i>	
White clover	<i>Trifolium repens</i>	
White dead-nettle	<i>Lamium album</i>	
Yarrow	<i>Achillea millefolium</i>	

Birds

Blackbird	<i>Turdus merula</i>	
Black-headed gull	<i>Chroicocephalus ridibundus</i>	
Buzzard	<i>Buteo buteo</i>	Crossing the site around mid-day
Carrion crow	<i>Corvus corone</i>	
Chaffinch	<i>Fringilla coelebs</i>	
Common gull	<i>Larus canus</i>	
Dunnock	<i>Prunella modularis</i>	
Kestrel	<i>Falco tinnunculus</i>	Being chased by Magpie
Magpie	<i>Pica pica</i>	Chasing Kestrel
Wood pigeon	<i>Columba palumbus</i>	

Butterflies

Red admiral	<i>Vanessa atalanta</i>	2nr
Small White	<i>Pieris rapae</i>	1nr
Speckled Wood	<i>Pararge aegeria</i>	1nr

APPENDIX E: SITE PHOTOGRAPHS



1. Public pavements extending along the eastern site boundary, with study site being to the right, southerly aspect
2. As above, study site to the left, northerly aspect





3. Showing typical vegetation cover beneath mature deciduous woodland species extending along the eastern site boundary
4. As above,





5. Point of access into the study site fronting onto Greenbridge Lane. Note mature Leyland cypress (*Cupressus x leylandii*) hedge lining the northeastern site boundary
6. Typical vegetation comprising mixed perennial grasses, ruderal herbs & bramble located within the access area leading into the study site





7. As Figure 5 above, showing stands of Canadian Goldenrod (*Solidago canadensis*) & Michaelmas-daisy (*Symphyotrichum*)
8. As Figure 5 above, showing low level brick wall within the site access area





9. Showing mixed perennial grasses mixed with stands of Cow parsley *Anthriscus sylvestris* & Michaelmas-daisy (*Symphyotrichum*) to the north of site access area
10. Grassed verge extending along the northeastern site boundary showing stands of Common nettle (*Urtica dioica*) & ivy (*Hedera helix*) clad embankment located beneath mature Leyland cypress (*Cupressus x leylandii*) hedge line





11. Showing mixed perennial grasses mixed perennial herbs extending alongside Greenbridg Lane, northeastern site boundary, southerly aspect
12. As above, northerly aspect





13. Ivy (*Hedera helix*) cladded mature deciduous trees, generally consisting of Sycamore (*Acer pseudoplatanus*) extending along public pavements forming the northern site boundary, westerly aspect
14. Damaged section of boundary walling as seen from public pavements extending along the northern site boundary





15. Water course (Netherly Brook, extending along the eastern site boundary with tree cover consisting of Ash (*Fraxinus excelsior*) & Sycamore (*Acer pseudoplatanus*)
16. Concrete paving blocks placed within the site access area showing mixed perennial grasses & herbs including Yarrow (*Achillea millefolium*), Rosebay Willowherb (*Chamerion angustifolium*) & Horsetail fern (*Equisetum arvense*)





17. As Figure 16 above, showing stands of Canadian Goldenrod (*Solidago canadensis*), & Autumn Hawkbit (*Scorzoneroides autumnalis*)
18. As above, showing the northeastern section of on-site hard pavement cover with Leyland cypress (*Cupressus x leylandii*) hedge to the right & small saplings of both Grey willow (*Salix cinerea* subsp. *Oleifolia*) and Silver birch (*Betula pendula*) growing through pavement joint to the front





19. As Figure 18 above, showing terrace of former on-site kennels within the back ground
20. Species poor understorey associated with Leyland cypress (*Cupressus x leylandii*) comprising Ivy (*Hedera helix*) & bramble (*Rubus fruticosus*)





21. Moss covered hard standing to the rear of existing 2-storey property, showing mature deciduous trees consisting of Sycamore (*Acer pseudoplatanus*) extending along the northern site boundary
22. As above, showing terrace of former kennels and storage shed positioned along the northern site boundary, westerly aspect





23. Northwestern section of the site as seen from its northeastern boundary, showing occasional sampling of *Buddleia* (*Buddleia davidii*) growing through pavement joints
24. Above ground gas storage tanks & calor gas bottles positioned with northwestern section of the study site with ground flora generally consisting of ivy (*Hedera helix*) & moss





- 25. Stockpile of building materials including timber sheeting etc. placed upon moss cover pavement
- 26. Moss covered pavement to the rear of existing building





27. Northern section of the site as seen from the rear of existing 2-storey property, showing former kennels to the right & in the back ground, westerly aspect
28. Section of terrace of former kennels extending along the northern site boundary





- 29. Terrace of former kennels extending along the northern site boundary backed by mature
- 30. Dense pocket of Black nightshade (*Solanum nigrum*) with occasional stands of Perennial Sow-thistle (*Sonchus arvensis*)





31. Pavement cover within the northwestern section of the site comprising moss / bramble (*Rubus fruticosus*) covered hard standing
32. Kennels occupying the northwestern section of the site draped in Oak (*Quercus robur*) & Sycamore (*Acer pseudoplatanus*)





33. Timber post & panel fencing forming the east/northwestern site boundary, beyond which lies the Netherly Brook
34. Concrete block paving covering the east/northwestern section of the site with stands of Mugwort (*Artemisia vulgaris*) and Himalayan balsam (*Impatiens glandulifera*) colonising poorly maintained pavement joints





35. As Figure 34 above, showing the extent of Himalayan balsam (*Impatiens glandulifera*) within this section of the site
36. Showing a small patch of Himalayan balsam (*Impatiens glandulifera*) colonising the gravelled area located within the northwestern section of the site





37. Showing established Himalayan balsam (*Impatiens glandulifera*) in both gravel and concrete block paved areas within northwestern section of the site
38. Showing ground flora consisting of pockets mixed perennial grasses Herb-Robert (*Geranium robertianum*), Common ragwort (*Senecio jacobaea*) & localised Silver birch (*Betula pendula*) samplings





39. An example of deciduous trees extending along the western site boundary consisting of Oak (*Quercus robur*), & Sycamore (*Acer pseudoplatanus*), beyond which lies the Netherly Brook
40. Back elevation of former kennels occupying the central section of the site showing an isolated Sunflower (*Helianthus annuus*) in the foreground





41. A lone Sunflower (*Helianthus annuus*) located within northwestern section of the study site with ground flora including mixed perennial grasses, Common nettle (*Urtica dioica*), Perennial Sow-thistle (*Sonchus arvensis*), & Dandelion (*Taraxacum officinale*)
42. The northwestern section of the study site with ground flora consisting of Mugwort (*Artemisia vulgaris*), Golden rod (*Solidago virgaurea*) with occasional Grey willow (*Salix cinerea* subsp. *oleifolia*) saplings





- 43. Southern elevation of former kennels with Grey willow (*Salix cinerea subsp. oleifolia*) sapling in the foreground
- 44. Stockpile of building debris positioned along the western site boundary





45. Small, raised planting bed located within central section of the site containing Tutsan (*Hypericum androsaemum*) as its central piece with Cotoneaster (*Cotoneaster horizontalis*) and Horsetail fern (*Equisetum arvense*) growing out from its base
46. As above





47. Northern section of the site as seen from the approx. site centre, northerly aspect
48. Tall ruderal species occupying the southern section of the site including Michaelmas-daisy (*Symphyotrichum*), Mugwort (*Artemisia vulgaris*), Dandelion (*Taraxacum officinale*), Creeping buttercup (*Ranunculus repens*), backed by mature stands of Sycamore (*Acer pseudoplatanus*)





49. Discarded building materials positioned alongside a tree stump located alongside the eastern site boundary where surface flora includes mixed perennial grasses & tall ruderal species consisting of Creeping buttercup (*Ranunculus repens*), White clover (*Trifolium repens*), Broad leaf-dock (*Rumex obtusifolius*), Common nettle (*Urtica dioica*), Garlic mustard (*Alliaria petiolate*), & an isolated stand of Himalayan balsam (*Impatiens glandulifera*)
50. As above





51. Ash (*Fraxinus excelsior*) with dense understorey generally consisting of mixed perennial grasses & Common nettle (*Urtica dioica*) & bramble (*Rubus fruticosus*)
52. As above





53. A picnic table partially concealed in dense vegetation consisting of mixed perennial grasses & Common nettle (*Urtica dioica*), Creeping thistle (*Cirsium arvense*) Mugwort (*Artemisia vulgaris*), & bramble (*Rubus fruticosus*) with occasional Alder (*Alnus glutinosa*) samplings
54. Tall ruderal species located within the southern section of the site, northerly aspect,





55. As Figures 53 & 54 above, showing mature deciduous woodland species forming the western site boundary in the background
56. Showing the southwestern section of the site where ground cover comprises Canadian goldenrod (*Solidago canadensis*), & Mugwort (*Artemisia vulgaris*),





- 57. Dense pocket of Michaelmas-daisy (*Symphyotrichum*) with some Mugwort (*Artemisia vulgaris*) & Canadian goldenrod (*Solidago canadensis*) located within southern section of the site
- 58. Immature clusters (3yr) of Alder (*Alnus glutinosa*) within southern section of the site with dead stems / crowns associated with Hogweed (*Heracleum sphondylium*) encroaching to the left of image





59. Southeastern section of the with ground cover comprising dense Bramble (*Rubus fruticosus*), stands of dead Hogweed (*Heracleum sphondylium*) with some pockets of Himalayan balsam (*Impatiens glandulifera*)
60. Study site as seen from its southeastern boundary showing small pocket of immature Alder (*Alnus glutinosa*), centre, & Almond willow (*Salix triandra*) to the left





61. Tall perennial grasses & clump of Common knapweed (*Centaurea nigra*) located within fenced off area located within the southern section of the site
62. Cluster of Himalayan balsam (*Impatiens glandulifera*) located within southern section of the site





63. Mixed perennial grasses accommodating stands of *Himalayan balsam* (*Impatiens glandulifera*) Hogweed (*Heracleum sphondylium*) Common knapweed (*Centaurea nigra*) located & Canadian goldenrod (*Solidago canadensis*)
64. Western site boundary, northerly aspect, showing flora adjacent to Netherly Brook to comprise Bramble (*Rubus fruticosus*), Broad-leaf dock (*Rumex obtusifolius*), & stands of *Himalayan balsam* (*Impatiens glandulifera*)





65. Dense vegetation comprising *Himalayan balsam* (*Impatiens glandulifera*) Canadian goldenrod (*Solidago canadensis*) Bramble (*Rubus fruticosus*), Hogweed (*Heracleum sphondylium*), Michaelmas-daisy (*Symphyotrichum*) with occasional Oak (*Quercus robur*) saplings
66. Timber structure associated with former land uses as a kennelling facility located within the southern section of the site in ground flora consisting of mixed perennial grasses & herbs





67. Southern edge of study site delineated by mature hedge consisting of Sycamore (*Acer pseudoplatanus*), & Hawthorn (*Crataegus monogyna*) with 1nr mature White poplar (*Populus alba*)
68. Southwestern site boundary delineated by low level timber post & wire mesh fencing with adjoining hedge line containing Hawthorn (*Crataegus monogyna*), Crack willow (*Salix fragilis*)





- 69. Cluster of Himalayan balsam (*Impatiens glandulifera*) located along the western bank of the adjoining Netherly Brook
- 70. Cluster of Black bamboo (*Phyllostachys nigra*) intermixed with Himalayan balsam (*Impatiens glandulifera*) positioned along the western site boundary





71. Western section of the study site with ground cover containing mixed perennial grasses, Creeping buttercup (*Ranunculus repens*) Broad-leaf dock (*Rumex obtusifolius*) Canadian goldenrod (*Solidago canadensis*), Meadow vetchling (*Lathyrus pratensis*) & Bramble (*Rubus fruticosus*)
72. Dense vegetation comprising Himalayan balsam (*Impatiens glandulifera*) Mugwort (*Artemisia vulgaris*) & Broad-leaf dock (*Rumex obtusifolius*) extending along the western site boundary, backed with mature stands of Crack willow (*Salix fragilis*), & Hawthorn (*Crataegus monogyna*)





- 73. Small pocket of Lemon balm (*Melissa officinalis*) located within mixed perennial grasses extending along the western site boundary
- 74. Small pocket of Crack willow (*Salix fragilis*) saplings located along the western site boundary





75. Dead cains associated with Hogweed (*Heracleum sphondylium*) positioned within the western site boundary with Common knapweed (*Centaurea nigra*) to the rear
76. Pocket of Himalayan balsam (*Impatiens glandulifera*) located along the western site boundary, beyond which lies Netherly Brook





77. As Figure 76 above

78. Western site boundary showing stands of mature White poplar (*Populus alba*) in the back ground





- 79. Corrugated plastic sheeting placed within the western section of the site
- 80. As above





- 81. Timber fence panels stockpiled within the western section of the site
- 82. Cluster of Herb-Robert (*Geranium robertianum*) established at the base of stockpiled timber panels





83. Timber boards stockpiled within the western section of the site with a cluster of Himalayan balsam (*Impatiens glandulifera*) to the rear
84. As above, showing White poplar (*Populus alba*) sapling in the foreground





- 85. Stockpile of building debris positioned along the western section of the site
- 86. Metal skip container positioned along the western site boundary





- 87. Dense pocket of Himalayan balsam (*Impatiens glandulifera*) located along the western site boundary beyond which lies Netherly Brook
- 88. Southwestern site boundary, southerly aspect





- 95. Immature stand of Buddleia (*Buddleja davidii*) located alongside former kennels
- 96. Singular Autumn hawkbit (*Scorzoneroide autumnalis*) in a carpet of Black Medick (*Medicago lupulina*) located within eastern site boundary





- 93. Foliage associated with on-site Colt's-foot (*Tussilago farfara*), located beneath Sycamore (*Acer pseudoplatanus*) hedge extending along the eastern site boundary
- 94. Patch of Wavy Bitter-cress (*Cardamine flexuosa*) located along the southeastern boundary





91. Florets associated with Yarrow (), located along the western site boundary
92. An immature Hawthorn (*Crataegus monogyna*) located close to the western site boundary





89. An isolated stand of Feverfew (*Tanacetum parthenium*) located within southern section of the site
90. Tutsan (*Hypericum androsaemum*) located within raised bedding area located in hard paved area within central section of the site



APPENDIX F: NIOTES ON LIMITATIONS

Standard Terms and Conditions of Engagement

Notes on Limitations For Geoenvironmental and Geotechnical Consultancy Services

General

CC GEOTECHNICAL LTD has prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from CC GEOTECHNICAL LTD and a charge may be levied against such approval.

CC GEOTECHNICAL LTD accepts no responsibility or liability for:

the consequences of this document being used for any purpose or project other than for which it was commissioned and/or

the consequences of use of this document by any party with whom an agreement has not been executed.

Phase I Environmental Audits / Desk Studies

The work undertaken to provide the basis of a Phase 1 Desk Study report comprises a study of available documented information from a variety of sources (including the client), together with (where appropriate) a walk over inspection of the site and meetings and discussions with relevant authorities and other interested parties. The opinions given in a Desk Study report have been dictated by finite data on which they are based and are relevant only to the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in the report, CC GEOTECHNICAL LTD reserves the right to review such information and to modify the opinions accordingly.

It should be noted that any risks identified in this report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

Phase II Environmental Audits

The investigation of the site has been carried out with the intention of providing sufficient information concerning the type and degree of contamination, and ground and groundwater conditions to allow a reasonable risk assessment to be made. The objectives of the investigation have been limited to establishing the risks associated to potential human targets, building materials, the environment (including adjacent land), and surface and groundwater.

The amount of exploratory work and chemical testing undertaken may have been restricted by the timescale available, and the locations of the exploratory holes may have been restricted to areas unoccupied by the building(s) on the site, and further restricted by the existence of buried services. A more comprehensive investigation may be required if the site is to be redeveloped as, in addition to risk assessment, a number of important engineering and environmental issues may need to be resolved.

For those reasons, if costs have been included in relation to site remediation these must be considered as tentative only and must, in any event, be confirmed by a qualified quantity surveyor.

The exploratory holes undertaken, investigate only a small volume of the ground in relation to the size of the site, and can only provide a general indication of site conditions. The number of sampling points and the methods of sampling and testing do not preclude the existence of localised "hotspots" of contamination where concentrations may be significantly higher than those actually encountered.

Geoenvironmental Ground Investigations

The investigation of the site has been carried out to provide sufficient information within the agreed scope of the investigation, under the general headings of type and degree of contamination, geotechnical characteristics, and ground and groundwater conditions, to provide a reasonable assessment of the environmental risks together with engineering and development implications.

If costs have been included in relation to the site remediation, these must be confirmed by a qualified quantity surveyor.

The exploratory holes undertaken, investigate only a small volume of the ground in relation to the size of the site, and can only provide a general indication of the site conditions. The opinions provided and recommendations given in this report are based on the ground conditions apparent at the site of each of the exploratory holes. There may be ground conditions present on the site which have not been disclosed by this investigation, and which have therefore not been taken into account in this report.

The comments made on groundwater conditions are based on observations made at the time that site work was carried out. It should be noted that groundwater levels will vary owing to seasonal, tidal, weather, or other effects.

The risk assessment and opinions provided, inter alia, take into consideration currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.