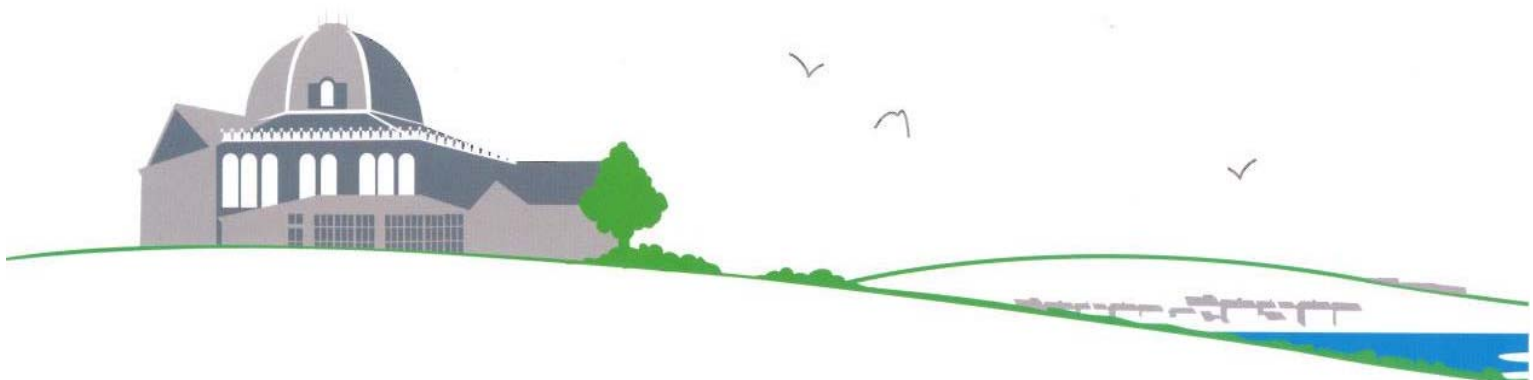




IMPEL CONTRACT LTD
ROSE PLACE, LIVERPOOL
ECOLOGICAL ASSESSMENT AND BUILDING
ASSESSMENT FOR BATS



IMPEL CONTRACT LTD

ROSE PLACE, LIVERPOOL

ECOLOGICAL ASSESSMENT AND BUILDING INSPECTION FOR BATS

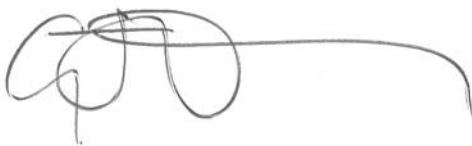
Penny Anderson Associates Limited
'Park Lea'
60 Park Road
Buxton
Derbyshire
SK17 6SN

Project Manager
Gerard Hawley BA (Hons), MSc, DipPSE (Dist), MCIEEM

Authors
Gerard Hawley
Helen Hamilton BSc, MSc, MCIEEM, CEnv
Caroline Boffey BSc (Hons), MRes

September 2017

This project has been undertaken in accordance with PAA policies and procedures on quality assurance.



Signed: _____

CONTENTS

	Page
1. INTRODUCTION.....	1
Site Description	1
Legislative Context	1
Protected Species	2
Invasive Species.....	2
2. METHODS	3
Desk Study	3
Extended Phase 1 Habitat Survey	3
Bat Inspection Survey.....	3
Limitations	4
3. RESULTS	6
Desk Study	6
Internationally Designated Sites	6
Special Protection Areas (SPA).....	6
RAMSAR Sites	6
Statutory Protected Sites.....	6
Sites of Special Scientific Interest (SSSI).....	6
Non-Statutory Protected Sites	7
Local Sites	7
Protected and Notable Species	8
Section 41 Species	8
Bats.....	8
Birds	9
Common Name	9
Scientific Name.....	9
No of Records.....	9
Dates	9
Conservation Status	9
Schedule 1 Bird Species	10
West European Hedgehog	11
Phase 1 Habitat Survey.....	11

Target Notes	11
Target Note 1 (TN1)	11
Target Note 2 (TN2)	11
Target Note 3 (TN3)	11
Target Note 4 (TN4)	12
Bat Inspection Survey.....	12
Summary.....	14
Other Protected Species	14
Evaluation.....	14
4. RECOMMENDATIONS.....	15
Bats.....	15
Breeding Birds	15
Invasive Species.....	15
Other Protected Species	15
Habitat Enhancements	15
Native Species.....	15
Artificial Refugia.....	16
Bird Boxes	16
Bat Boxes	16
Bat Bricks.....	16
5. REFERENCES.....	17
6. ABBREVIATIONS.....	17

TABLES

1	Building Assessment Criteria	4
2	Bat Records from BioBank	8
3	S41 Bird Species Recorded within the 1km Search Area	9
4	Schedule 1 Bird Species Recorded within the 1km Search Area	10
5	Building Inspection for Bats Results	13

FIGURES

1	Phase 1 Habitats
2	Building Inspection for Bats

PLATES

1 - 14

APPENDICES

- 1 Summary Legislation Relating to Bats and Breeding Birds
- 2 Desk Study from BioBank Merseyside
- 3 Leeds-Liverpool Canal Citation
- 4 Botanical Species List

1. INTRODUCTION

- 1.1 Penny Anderson Associates Ltd (PAA) was commissioned by Impel Contract Ltd to carry out an ecological assessment of a building and land off Rose Place, Liverpool (hereafter referred to as the 'site').
- 1.2 The ecological assessment included a desk study for the site and the area within 1km of its centre. This examined all data records for protected sites, habitats and species held by BioBank Merseyside, the local biodiversity records centre for North Merseyside, and other web-based data repositories, in order to ecologically characterise and contextualise the site within the surrounding area.
- 1.3 This report details the results of the desk study, the site survey and the building inspection for bat roost potential, and evaluates the results in the context of the proposed re-development of the site, making recommendations for any further survey work as required.

Site Description

- 1.4 The site is located off Rose Place with Saint Anne Street (B5186) to the west. It consists of a commercial building with a hipped double-pitched corrugated roof with skylights and frontage on to Rose Place. The remaining area to the west of the building is hardstanding.

Legislative Context

- 1.5 A range of international and national legislation has been established in the UK to protect important nature conservation sites and priority species. At the international level, European Union (EU) Directives require individual member states to implement their conservation provisions nationally for the benefit of Europe as a whole. These Directives have been transposed into UK law by the Conservation of Habitats and Species Regulations 2010¹ (further amended in 2011 and 2012); further details can be obtained from the Joint Nature Conservation Committee (JNCC) website at www.jncc.defra.gov.uk.
- 1.6 Other international conventions include the Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979), which requires the maintenance of populations of wild flora and fauna, giving particular protection to endangered and vulnerable species; and the Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979), which requires the protection of migratory species throughout their entire range. The above conventions are implemented in England and Wales via the Wildlife and Countryside Act (WCA) (1981) (as amended) and Countryside and Rights of Way (CROW) Act 2000. This legislation also protects important habitats and sites such as Sites of Special Scientific Interest (SSSI).
- 1.7 At the national level, the UK Post-2010 Biodiversity Framework published in 2012 is the Government's response to the Convention on Biological Diversity (2010). It describes the UK's biological resources, commits a detailed plan for the protection of these resources within the UK's devolved framework across England, Wales, Scotland and Northern Ireland. The

¹ Please note: the text provides a brief summary of the legislation in England and Wales and the original Acts and any amendments should be referred to for the precise wording.

document identifies future priorities for nature conservation and adopts a more strategic approach, including ecosystem services and sustainability alongside biodiversity. Despite administrative changes following devolution, there is still an underlying objective of protecting and enhancing a range of priority species and habitats, often still based on the objectives and classifications of the original UK Biodiversity Action Plan (BAP). Biodiversity 2020 is England's national biodiversity strategy. Building on the Natural Environment White Paper published in 2011, this provides a means of delivering the international and EU commitments to biodiversity. Under Biodiversity 2020, Priority Species and Habitats referred to are those of 'Principal Importance' for the conservation of biodiversity in England listed on Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006.

- 1.8 Finally, the National Planning Policy Framework (NPPF), published in 2012, provides guidance for local authorities on the content of the Local Plans and is a material consideration in determining planning applications. The NPPF has replaced much existing planning policy guidance, including Planning Policy Statement 9: Biological and Geological Conservation. Briefly, with an overall focus on sustainable development, the NPPF states that developments should aim to engender positive outcomes for biodiversity, with a particular focus on the maintenance and creation of ecological networks. Furthermore, the NPPF also states that any planning proposals for which significant negative impacts on biodiversity cannot be avoided, mitigated or compensated should be refused. Biodiversity 2020 Priority Species are also referred to as 'species of principal importance' for the conservation of biodiversity in England within Section 74 of the CRow Act 2000, and Sections 41 (England) of the NERC Act 2006. The NPPF states that the planning system should contribute to and enhance the natural environment through a range of actions, including:

- a) protecting and enhancing valued landscapes, geological interests and soils;
- b) recognising the wider benefits of ecosystem services; and
- c) minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Protected Species

- 1.9 Details of the protected species legislation relevant to this site can be found in Appendix 1.

Invasive Species

- 1.10 Certain non-native species that have been introduced into the UK are regarded as being a threat to native biodiversity. Legislative measures have, therefore, been put in place to prevent the spread of these invasive species in the wild.
- 1.11 Under section 14 of the WCA 1981 (as amended), it is illegal to introduce plants listed under Part II of Schedule 9 of the WCA into the wild or sell these species. Offences include causing the spread of viable plant material or neglecting to contain or appropriately manage non-native species.
- 1.12 Commonly introduced Schedule 9 species include non-native cotoneaster species, specifically, small-leaved cotoneaster (*Cotoneaster microphylla*) and wall cotoneaster (*C. horizontalis*), Himalayan balsam (*Impatiens glandulifera*) and Japanese knotweed (*Fallopia japonica*).

2. METHODS

Desk Study

- 2.1 A request for details of protected species and wildlife sites within 1km of the centre of the site (grid reference SJ3506791449) was made to BioBank Merseyside. The desk study consisted of a consultation exercise to gather local and site-specific ecological information. The desk study data is used to assess the potential likely effect of the proposed development on the site and the surrounding areas.
- 2.2 It is important to note that the desk study results provide an indication of the species present in and around the site, but do not confirm current presence or absence of any particular species. Protected species are often under-recorded in county wildlife databases.

Extended Phase 1 Habitat Survey

- 2.3 The site habitat survey was undertaken by Ecologist Caroline Boffey on 22nd August 2017, assisted by Principal Ecologist Helen Hamilton (MCIEEM)², both experienced botanical and habitat surveyors.
- 2.4 The survey followed standard methods as set out in the *Handbook for Phase 1 Habitat Survey* (JNCC 2010) for classifying and mapping British habitats. This entailed mapping, describing and collating plant species lists for habitats within the site boundary. Each plant species was assigned abundance codes within each habitat using the 'DAFOR' scale (where: D = dominant; A = abundant; F = frequent; O = occasional; R = rare), which provides an indication of the relative abundance of each plant species present within a particular habitat. The names follow the nomenclature of Stace (2010) and common names only are referred to in the text.
- 2.5 The survey was 'extended' (Institute of Environmental Assessment 1995, CIEEM 2013) to include a general assessment for the presence or potential presence of protected species, noting any areas of suitable habitat, along with the location and type of any incidental field signs of protected species. In particular, this component of the field survey focused on the potential presence of bats and breeding birds, taking into account any contemporary, relevant desk study records.

Bat Inspection Survey

- 2.6 The building was inspected for bats and bat roost potential by Principal Ecologist Helen Hamilton (MCIEEM) on 22nd August 2017 following standard methodologies, using a high-powered torch and binoculars, making detailed notes, taking photographs and following the best practice survey guidance of Collins (2016).
- 2.7 During the inspection, the exterior of the building was walked and examined for any signs of bats (such as staining or droppings on surfaces including walls and window ledges, feeding remains, as well as the bats themselves) or features suitable for roosting bats. Features of interest would include gaps around doorframes, beneath felt/lead flashing, at the wall plates

² Member of the Chartered Institute of Ecology and Environmental Management.

and eaves of pitched roofs, and any crevices beneath fascia boards, barge boards, within soffits or created by missing mortar within the brickwork.

- 2.8 The bat inspection assigned an overall roost potential category, based on its suitability for supporting roosting bats and any evidence found, using criteria in Table 1 adapted from the *Bat Mitigation Guidelines* (Mitchell-Jones 2004) and *Bat Surveys Good Practice Guidelines* (Collins 2016).
- 2.9 During the survey any evidence of the buildings being used by nesting birds (e.g. active nests or old nest material) was also investigated.

Limitations

- 2.10 No significant limitations to the assessment were encountered during the surveys, which took place in fine weather during daylight hours. All areas to be surveyed were accessible or easily viewed from outside the site perimeter, thereby allowing visual external and internal inspection. It was not possible to access the roof of the depot buildings for close observation, so it was viewed from the ground. Plants were visible and nearly all were able to be assigned to species level. The back of the buildings was observed from outside the site and again viewed from ground level.

Table 1 Building Assessment Criteria

Roost Potential Category	Category Description	Indicator
Confirmed Roost	Building with evidence of current use by bats i.e. confirmed roost.	<ul style="list-style-type: none"> Sighting/hearing of bats (including emergence). Presence of fresh droppings/staining.
	Building with evidence of recent use by bats.	<ul style="list-style-type: none"> Small numbers of old droppings/old staining, smoothing and lack of cobwebs, feeding remains. Roosts identified by personal communication from reliable source (e.g. property owner).
High	Building has high potential to support bat roost(s).	<ul style="list-style-type: none"> Buildings of early or pre 20th century origin with numerous access points for bats e.g. gaps under eaves, loose lead flashing and/or roof tiles. Agricultural buildings of traditional, stone or timber construction and/or with exposed large wooden beams (>200mm thick) and mortise joints, cracks and holes. Large and complicated roof voids, with unobstructed flying spaces. Roof warmed by the sun, especially south facing roofs, free of strong draughts. Undisturbed roof spaces. Weatherboarding and/or hanging tiles with gaps. Buildings in proximity to each other providing a variety of roosting opportunities. Within 200m of good foraging habitat, particularly trees, parkland, woodland or waterbodies. Well connected to wider landscape through presence of

Roost Potential Category	Category Description	Indicator
		continuous linear features such as hedgerows, watercourses, farm tracks etc.
Medium	Building has moderate potential to support bat roost(s)	<ul style="list-style-type: none"> Buildings with some of the above features but are considered to be less suitable on account of their age, location and disturbance levels.
Low	Building has low potential to support bat roost(s)	<ul style="list-style-type: none"> Modern well maintained buildings with few or no access points for bats. Small cluttered roof space. Buildings comprised predominantly of prefabricated steel and sheet materials. Roof sections with a dense cover of cobwebs and no sections of clean ridge board. High levels of regular disturbance. Buildings with exposed roosting features which are open to the elements. Location with few or no mature trees, parkland, woodland or water features and isolated due to a lack of commuting routes.
None	Building has no potential to support bat roost(s)	<ul style="list-style-type: none"> Buildings with no features that could be utilised by bats for roosting.

3. RESULTS

Desk Study

- 3.1 The desk study results returned by BioBank Merseyside are presented in Appendix 2³ and a summary of the results is given below.

Internationally Designated Sites

Special Protection Areas (SPA)

- 3.2 These sites are strictly protected in accordance with Article 4 of the European Commission (EC) Directive on the conservation of wild birds (79/409/EEC) for rare and vulnerable birds (also known as the Birds Directive).
- 3.3 There is one SPA within the search area: Mersey Estuary. The Mersey Estuary was classified as a SPA on 20th December 1995.
- 3.4 The Mersey is a large, sheltered estuary with large areas of saltmarsh and extensive intertidal sand and mudflats, with limited areas of brackish marsh, rocky shoreline and boulder clay cliffs, within a rural and industrial environment. The intertidal flats and saltmarshes provide feeding and roosting sites for large and internationally important populations of waterfowl. During the winter, the site is of major importance for ducks and waders. The site is also important during spring and autumn migration periods, particularly for wader populations moving along the west coast of Britain.

RAMSAR Sites

- 3.5 RAMSAR sites are designated because they meet the criteria for identifying Wetlands of International Importance, especially as waterfowl habitat (the RAMSAR Convention).
- 3.6 The Mersey Estuary SPA is also designated a RAMSAR site.

Statutory Protected Sites

Sites of Special Scientific Interest (SSSI)

- 3.7 SSSIs are statutory sites designated to support species of plants and animals that find it more difficult to survive in the wider environment. They represent a selection of this country's best wildlife and geological sites and cover approximately 7% of the terrestrial area of the country (with over 4,000 separate sites in England).
- 3.8 The Mersey Estuary is also listed as a SSSI, being recognised as an internationally important site for wildfowl. Hale Marsh is an important roosting site for wildfowl and waders at high tide. In

³ Please note: BioBank Merseyside's Appendix 2 (sources from which biological records are derived) is not included in this report's Appendix 2, but is available upon request.

winter the estuary supports large numbers of wildfowl and waders. The birds feed on the rich invertebrate fauna of the intertidal sediments as well as plants and seeds from the salt-marsh and adjacent agricultural land.

Non-Statutory Protected Sites

Local Sites

- 3.9 Local Sites are non-statutory sites designated through Local Sites Partnerships and receive policy protection through Local Plans. These include both Local Wildlife Sites (LWS) and Local Geological Sites (LGS). Local Sites are designated due to substantive wildlife or geological interest. (The location of the sites are presented on maps in Appendix 2, pages 51, 52 and 54).
- 3.10 There are three LWS within the search area:
- Leeds-Liverpool Canal (current);
 - Leeds-Liverpool Canal (proposed); and
 - Everton Nature Garden.
- 3.11 A detailed description of the habitats and species associated with the Leeds-Liverpool Canal is given in Appendix 3. Everton Nature garden includes two small lakes, grassland meadows and woodland.
- 3.12 There are 13 LGS with the search area:
- Lime Street Railway Cutting;
 - St James Cemetery, Liverpool Anglican Cathedral;
 - Metropolitan Catholic Cathedral, Brownlow Hill;
 - College Street North;
 - Everton Quarry, Mark Street;
 - Netherfield Road North;
 - Notre Dame High School, Everton Valley;
 - St Georges Hill, Netherfield Road South;
 - Everton Park North;
 - St Anne Street Underpass;
 - Everton Gaol, Netherfield Road South;
 - Whitley Gardens (south), Shaw Street; and

- Whitley Gardens (north), Shaw Street.

3.13 The geology of Merseyside is largely dominated by Triassic sandstones and mudstones.

Protected and Notable Species

Section 41 Species

- 3.14 Some of the rarest and most threatened species are listed under Section 41 (S41) of the 2006 Natural Environment and Rural Communities (NERC) Act and are referred to as Species of Principal Importance in England. The Government's Biodiversity 2020 strategy has an ambition to ensure that by 2020 there will be an overall improvement in the status of wildlife and reduction in further extinctions of known threatened species. To achieve this, a range of actions have been identified to help in the recovery of S41 species.
- 3.15 The S41 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.

Bats

- 3.16 Table 2 below shows the number of each species of bat recorded in the search area. The most recorded species in the area are common pipistrelle.

Table 2 Bat Records from BioBank

Species		No. of Records
Common Name	Scientific Name	
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	34
Brown long-eared	<i>Plecotus auritus</i>	9
Noctule	<i>Nyctalus noctula</i>	1
Pipistrelle species		12

- 3.17 The majority of the records returned are for pipistrelle species recorded in Liverpool city centre. There are two native species - common pipistrelle and soprano pipistrelle. The common pipistrelle is one of the UK's most common bat species, found in a wide range of habitats including suburban and urban habitats. Soprano pipistrelle is also widely distributed across the UK. Where the distinction between the two species has not been made, they are recorded as pipistrelle species. There are records for a brown long-eared bat, which is found throughout the UK and is widespread in the rest of Europe. The noctule is the largest British bat, roosts in holes in trees and often feeds over the tree canopy.
- 3.18 Information provided by Mersey BioBank indicates that bat species are found throughout Merseyside, with pipistrelles (common/soprano) most often encountered and brown long-eared and noctule are less common. Daubenton's (*Myotis daubentonii*) are also frequently encountered in suitable wetland habitat. Whiskered (*Myotis mystacinus*), Brandt's (*Myotis brandti*) and Natterer's (*Myotis nattereri*) are considered rare locally.

Birds

- 3.19 The conservation status of birds is indicated on the Red and Amber Lists (species of high and medium conservation concern respectively) in Birds of Conservation Concern (Eaton *et al.* 2015), the UK Biodiversity Action Plans (UK Biodiversity Steering Group 1995), which include conservation plans for around 60 priority bird species, and around bird 90 species are listed on Schedule 1 of the WCA 1981, which are afforded additional protection. Red is the highest conservation priority, with species needing urgent action, with Amber being the next most critical group, followed by green.

Table 3 S41 Bird Species Recorded within the 1km Search Area

Common Name	Scientific Name	No of Records	Dates	Conservation Status
Common linnet	<i>Linaria cannabina</i>	6	1997-2003	Red
Common starling	<i>Sturnus vulgaris</i>	10	1997-2003	Red
Dunnock	<i>Prunella modularis</i>	9	1997-1999	Amber
Herring gull	<i>Larus argentatus</i>	4	1997-1999	Red
House sparrow	<i>Passer domesticus</i>	27	1997-2006	Red
Northern lapwing	<i>Vanellus vanellus</i>	4	1997-2002	Red
Sky lark	<i>Alauda arvensis</i>	4	1997-2003	Red
Song thrush	<i>Turdus philomelos</i>	4	1997-1999	Red

- 3.20 The Red and Amber conservation status assessment is based on a number of criteria: historical decline, trends in population and range, rarity, localised distribution and international importance. Nevertheless, some species remain relatively common such, as the common starling, dunnock, house sparrow and song thrush; species are Red listed because of a decline in their population.
- 3.21 Dunnock is Amber listed⁴ because the breeding population or range has declined by 25 to 50% in the last 25 years.
- 3.22 Herring gull is Red listed having suffered a moderate decline over the past 25 years, with UK breeding sites now confined to ten sites in the UK.
- 3.23 The house sparrow population has experienced a severe decline in the UK dropping by 71% between 1977 and 2008, with substantial declines in both rural and urban populations, and is consequently Red listed.
- 3.24 Common linnet is Red listed because numbers have dropped substantially over the past few decades, with the UK population estimated to have declined by 57% between 1970 and 2008.

⁴ According to their population status of each species, is placed on one of three lists: red, amber or green. Red list species are of high conservation concern, having declined by 50% or more in population or breeding range in the last 25 years. Amber listed species are of medium conservation concern, having suffered between 25% and 49% reduction in breeding or non-breeding populations, breeding or wintering ranges. Green list species have a favourable conservation status (Eaton *et al.*, 2015).

- 3.25 Song thrushes are also Red listed having suffered a serious decline in numbers nationally, with more than a 50% reduction since the 1970s.
- 3.26 Data provided by Mersey BioBank show that in Merseyside, house sparrows and common starlings currently breed in all urban areas. Records in 1987 and 1998 showed a northern lapwing decline in England and Wales, with Wales and the south-west of England showing greatest loss. Two-thirds of the population is now resident in the north and north-west of England.
- 3.27 Although sky lark is relatively widespread in Europe and large numbers are thought to breed in the UK, it is in significant decline on lowland farms, with an overall fall in the UK population of 53% between 1970 and 2005. In Merseyside sky lark breed in suitable habitat, but declines in the region are thought to reflect a national trend.
- 3.28 Although still widespread, song thrush declined sharply by around 73% in farmland in the 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 Merseyside, though thinly distributed, song thrush still breed in most areas, with the highest breeding concentrations found to occur in suburban areas where abundant garden and parkland habitats are present.

Schedule 1 Bird Species

- 3.29 All breeding birds are protected under Section 1 of the WCA 1981 (as amended) and additional protection is offered to bird species listed in Schedule 1 of the WCA 1981, which are protected from, for example, disturbance whilst nesting or attempting to make a nest. The CRoW Act 2000 makes it an offence to recklessly disturb, in addition to intentionally disturb Schedule 1 species.

Table 4 Schedule 1 Bird Species Recorded within the 1km Search Area

Common Name	Scientific Name	No. of Records	Conservation Status
Black redstart	<i>Phoenicurus ochruros</i>	6	Red
Peregrine falcon	<i>Falco peregrinus</i>	7	Green
Little ringed plover	<i>Charadrius dubius</i>	3	Green

- 3.30 Black redstart is a rare breeder, passage migrant and winter visitor with a small breeding population concentrated in London, West Midlands, Manchester, Sheffield and Liverpool that has adapted to live in industrial areas and urban centres. There are records for black redstart in the docks (Princes, Salisbury, Huskisson and Liverpool) and the Liver Building.
- 3.31 Peregrine falcon faced extinction in the UK in the 1960s largely as a result of poisoning by pesticides. However, they have made a rapid comeback and many now nest on high buildings in city centres.
- 3.32 There are three records for little ringed plover. This species first bred in the UK in 1938. They are summer visitors and breed in unvegetated, man-made habitats such as industrial and post-industrial land, gravel pits and shingle river banks.

West European Hedgehog

- 3.33 West European hedgehog (*Erinaceus europaeus*) is classed as a Species of Principal Importance under Section 41 (S41) of the NERC Act 2006. Surveys in urban and rural areas indicate falling numbers of hedgehogs.
- 3.34 There are six records for West European hedgehog in the search area.

Phase 1 Habitat Survey

- 3.35 Please refer to Figure 1, the Phase 1 survey map.
- 3.36 The site comprises depot buildings and an adjacent hardstanding compound used for storage. Plant species were recorded across the whole site and are listed in Appendix 4. The plates included illustrate the general distribution of plants and habitats on the site.

Target Notes

Target Note 1 (TN1)

- 3.37 The compound is adjacent to the building wall, with a perimeter wall surrounding on three sides and entrance gates with wall and security fencing at the front along Rose Place. Security fencing part-way across the compound divides it into two areas (Plate 1).
- 3.38 Within the compound there is a fringe of introduced shrub around the edge of the perimeter and depot walls. The vegetation is overwhelmingly dominated by butterfly-bush (buddleia) shrubs with occasional hemp-agrimony and tree saplings occurring rarely.

Target Note 2 (TN2)

- 3.39 At the entrance to the compound, at the edge of the band of butterfly-bush is a small plant of Japanese knotweed amongst some dumped rubbish (Plate 2). Japanese knotweed is non-native, invasive and a Schedule 9 listed species, which section 14(2) of the Wildlife and Countryside Act 1981 states is an offence 'if any person plants or otherwise causes to grow in the wild'.

Target Note 3 (TN3)

- 3.40 The compound consists of hardstanding (concrete with stones), with a scattering of ephemeral/short perennial vegetation along the cracks of the hardstanding. The plant species present are generally typical of this type of urban environment and consist of mainly annual species with occasional short perennials and seedlings of butterfly-bush. Canadian fleabane and rat's-tail fescue are the most commonly occurring species, with occasional grasses of Yorkshire fog and annual meadow-grass, greater plantain, procumbent pearlwort and dandelion. All other species present occur rarely (Plate 3).
- 3.41 No rare plant species were recorded.

Target Note 4 (TN4)

- 3.42 Scattered ephemeral/short perennial plant species have established between the top of the building wall and the corrugated roof and a few between the bricks at the top of the wall. There is less species diversity than on the hardstanding but similar species are present, with Canadian fleabane and rat's-tail fescue again the most commonly occurring, along with ribwort plantain.

Bat Inspection Survey

- 3.43 See Table 5 for the results of the building inspection for bats undertaken on 22nd August 2017, please also refer to Figure 2.

Table 5 Building Inspection for Bats Results

Building Area	Exterior	Interior	Bat Roost Potential	Photo Ref.
1	Front south-facing elevation along Rose Place. Brick structure with 6 no. roller doors giving access into two separate premises. Poorly-maintained with vegetation and missing mortar throughout. Gaps present, but faces onto albeit quiet road with street lighting.	NA	None	Plates 4 and 5
2	Brick wall around disused car park to west of buildings and adjacent to St Annes St. wall is rendered single-skin brick with advertising hoardings along it. Some mortar cracks but few other gaps. Gaps being hoardings too wide for bats and stuffed in places with rubbish.	NA	None	Plate 6
3	Rear of buildings. Western half is brick to ridge, no windows. No gaps visible in mortar but small gap behind flashing near ridge above vegetation. Wall dirty and cobwebbed. Eastern half is clad in corrugated asbestos sheets from the top of a brick wall.	NA	None	Plates 7 and 8
4	West elevation is brick wall, unclad and unrendered. Mortar is intact with gaps being metal soffits unsuitable for bats. Small 1-storey lean-to with asbestos roof and unfinished soffits giving potential access to interior for bats. No access for surveyor as all boarded. Dilapidated and damp.	NA	Negligible	Plates 9 and 10
5	Roof - corrugated asbestos with skylights. Dilapidated with some broken sheets and ridges. Not water-tight and definitely accessible for bats (and birds) to interior. Plants in gutter.	Disused premises, abandoned for some years and now used occasionally by rough sleepers. Access via broken door from adjacent unit (6). Roof interior is partially lined but uninsulated over metal frame. Most of lining has fallen away. Area within is broken up into workshop areas and offices, using metal and some timber frame with boarding. Single-skin only. Many pigeons and a lot of dust and pigeon droppings. Potential for bats to access and use space, but generally open, light in daytime (from skylights) and unsuitable. No evidence found in likely areas. Generally very low potential.	Negligible	Plates 11 and 12
6	Roof - corrugated asbestos with skylights. Dilapidated with some broken sheets and ridges. Not water-tight and definitely accessible for bats (and birds) to interior. Plants in gutter.	Scaffolding business premises in active use. Construction as above - metal frame, with little remaining lining on underside. All open space apart from single-storey offices built within space which are modern and well-maintained. Bat access possible, but use very unlikely given high levels of daytime lighting throughout.	None	Plates 13 and 14

Summary

- 3.44 Overall, following the assessment criteria described in Table 1, the site and buildings at Rose Place were considered to have negligible potential for bat roosting.

Other Protected Species

- 3.45 No evidence of other protected species was found during the survey.
- 3.46 The building was not considered suitable for use by nesting or foraging black redstart, with no high song perches favoured by this species, few sheltered, quiet, high ledges for nesting, limited insect activity and a high degree of disturbance from the busy adjacent roads.
- 3.47 Furthermore, there is limited suitable foraging habitat on the site or immediately close by. On this basis it is considered very unlikely that black redstart are present on the site and no species-specific survey is recommended.

Evaluation

- 3.48 The desk study identified a number of protected sites and species within the search area. All sites and records of species returned in the desk study were considered sufficiently distant and isolated from the site not to be impacted by the development proposals.
- 3.49 There are no areas of habitat of nature conservation interest.
- 3.50 Schedule 9 listed Japanese knotweed was recorded in the grounds of the building.
- 3.51 The survey identified negligible potential for roosting bats to be present within the building and no evidence of roosting was found during the building inspections. The surrounding habitats were considered to be of very low value to foraging and commuting bats.
- 3.52 No active or disused birds' nests were observed. The building was not considered suitable for use by nesting or foraging black redstart.
- 3.53 The building and site have very low ecological value.

4. RECOMMENDATIONS

Bats

- 4.1 No further survey or special measures are recommended in relation to bats and their roosts.
- 4.2 It would be considered good practice to repeat the bat survey at a suitable time of year (May to August inclusive) if building works have not commenced two years from the date of this survey. This is because buildings can become more suitable for bats over time and some species of bat are quick to make use of new roosting opportunities.

Breeding Birds

- 4.3 It is recommended that prior to building works a check is made by a qualified ecologist for active nests. All breeding birds are protected and pigeons can nest any time of the year if weather conditions are suitable. If nesting birds are confirmed to be present, then works should be postponed in the vicinity of the nest until young have fledged and/or nesting has been completed. It may be necessary to cordon off the nest and monitor it until work is completed.

Invasive Species

- 4.4 It is recommended to instruct a specialist invasive weed consultant to remove the Japanese knotweed from the site. Under Section 14 of the WCA 1981 it is illegal to allow these plants to spread from the site, therefore, careful removal and disposal will be required when the site is cleared.

Other Protected Species

- 4.5 Additional surveys or special measures for other protected species are not considered necessary.

Habitat Enhancements

- 4.6 The site presently is generally of low ecological value. However, new buildings can present some opportunities to increase biodiversity and add ecological value. Below are a number of general considerations for enhancement measures.

Native Species

- 4.7 Planting schemes used in urban environments often include non-native species. These may be selected for their aesthetic appeal, pollution tolerance, evergreen foliage and low maintenance, and many nectar-bearing exotic species do support insects and provide foraging and nesting opportunities for birds. However, native species, preferably of local provenance, tend to support greater biodiversity as they have evolved to the local conditions. It is recommended that, wherever practical, native trees and shrubs are selected for landscape designs.

Artificial Refugia

Bird Boxes

- 4.8 It is recommended that where practical, bird boxes should be installed, targeted towards species currently known to utilise the site and its surrounds, to potentially accommodate a range of small birds. Traditional nest boxes should be attached in various locations around the site on the south-western or south-eastern side buildings.

Bat Boxes

- 4.9 It is recommended that bat boxes facing south-west, south-east and north are erected to provide additional roosting opportunities for commuting/feeding bats in various weather conditions. Recommended bat boxes include Schwegler 2F for smaller bats and 2FN for larger bats. The addition of traditional wooden bat boxes may reduce the number of small birds attempting to use boxes provided for bats.
- 4.10 High levels of lighting around site may have important implications for bats. High densities of bats are often detected near white street lamps (mercury lamps) and, as a consequence, such street lighting may offer enhanced feeding opportunities for various species (Bat Conservation Trust, 2007). This has proved beneficial for certain species, including pipistrelle bats that forage on invertebrates drawn to the lights. Both low-flying species and those feeding at lights are, however, more vulnerable to collisions with traffic. Other species, particularly long-eared bats, actively avoid bright lights. Consequently, continuous external lighting may also function as a barrier to species movement, thereby effectively increasing habitat fragmentation. It is, therefore, suggested that directional lighting is carefully designed to limit unnecessary excess illumination. With regard to potential health risks associated with bats, these are considered to be minimal.

Bat Bricks

- 4.11 Bat bricks can be incorporated within the structure of new buildings in place of the usual building bricks (e.g. Bioquip www.bioquip.net/acatalog/boxes_for_building.html). These would be best placed on the south-western or south-eastern side of the building.

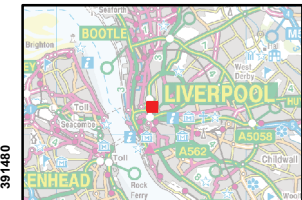
5. REFERENCES

- Bat Conservation Trust, 2007. *Bats and lighting in the UK - bats and the built environment series*. Bat Conservation Trust. <www.bats.org.uk>.
- CIEEM, 2013. *Guidelines for Preliminary Ecological Appraisal*. Technical Guidance Series. Chartered Institute of Ecology and Environmental Management.
- Collins, J. (ed.), 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn.)*. The Bat Conservation Trust.
- Eaton, M. A., Aebischer, N., Brown, A., Hearn, R., Lock, L., Musgrove, A., Noble, D., Stroud, D., and Gregory, R., 2015. Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man. *British Birds*. **108**: 708–746.
- Institute of Environmental Assessment, 1995. *Guidelines for Baseline Ecological Assessment*. E & F.N. Spon, an imprint of Chapman & Hall.
- JNCC, 2010. *Handbook for Phase 1 Habitat Survey – a technique for environmental audit*. Joint Nature Conservation Committee (revised edition 2010). Joint Nature Conservation Committee
- Mitchell-Jones, A.J., 2004. *Bat Mitigation Guidelines*. English Nature.
- Stace, C., 2010. *New Flora of the British Isles. Third Edition*. Cambridge University Press.
- UK Biodiversity Steering Group, 1995. *Biodiversity: The UK Action Plan*. HMSO.

6. ABBREVIATIONS

BAP	Biodiversity Action Plan	NERC	Natural Environment and Rural Communities
CRoW	Countryside and Rights of Way	NPPF	National Planning Policy Framework
EC	European Commission	PAA	Penny Anderson Associates Ltd
EU	European Union	SAC	Special Area of Conservation
JNCC	Joint Nature Conservation Committee	SPA	Special Protection Area
LGS	Local Geological Site	SSSI	Site of Special Scientific Interest
LWS	Local Wildlife Site	WCA	Wildlife and Countryside Act

FIGURES



Legend

- Site boundary
- Habitat**
 - Introduced shrub
 - Building
 - Hardstanding
 - Wall
 - Ephemeral/short perennial
 - Target note

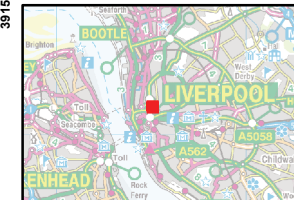
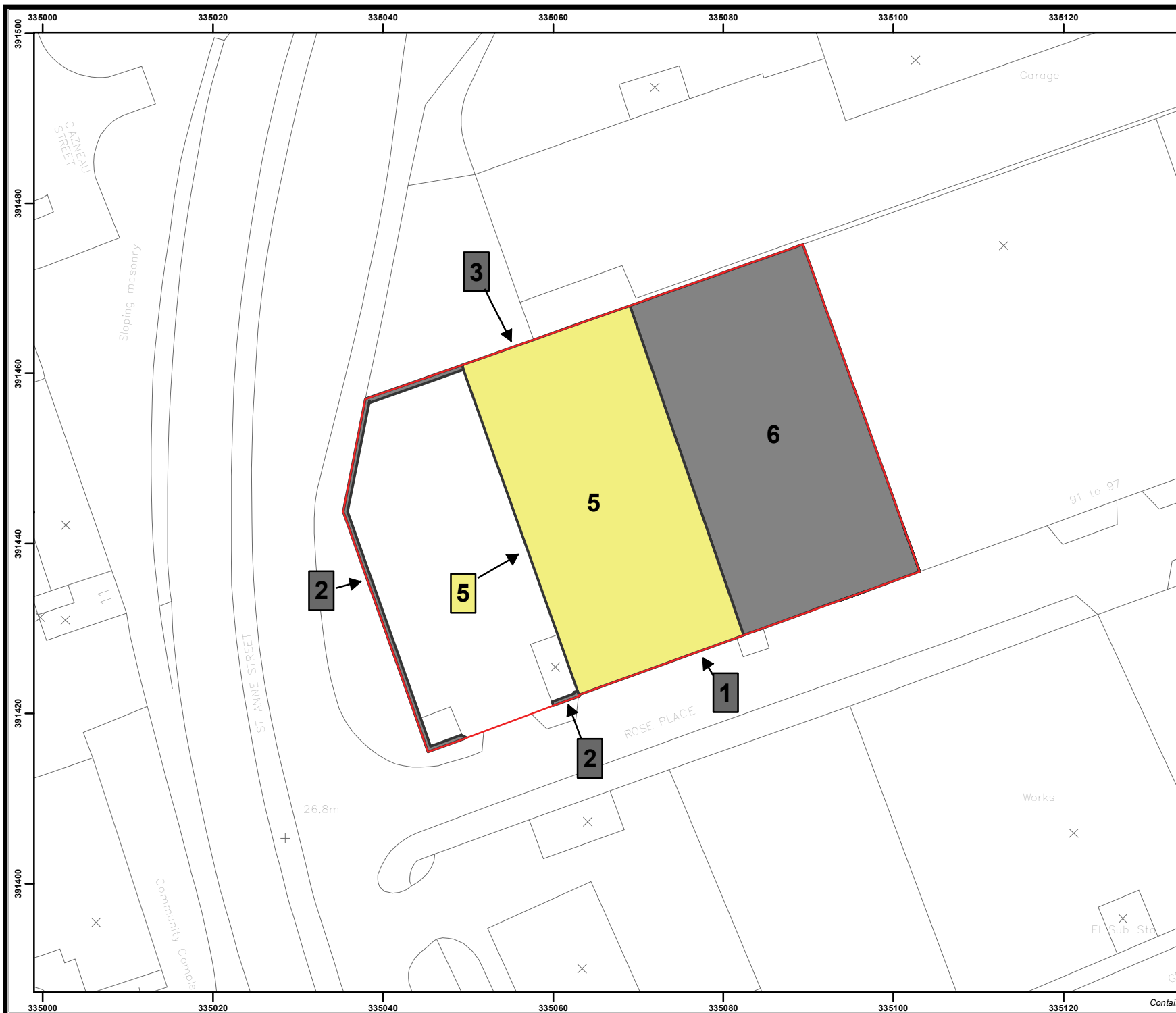
British National Grid
Projection: Transverse Mercator
False Easting: 400000.000000
False Northing: 100000.000000
Central Meridian: -2.000000
Scale Factor: 0.999601
Latitude Of Origin: 49.000000

ISO A4

N

0 2.5 5 10 15 Metres

Perry Anderson Associates Ltd. Parklea, 60 Park Road, Buxton, Derbyshire, SK17 6SN. Telephone 01298 27086		Perry Anderson Associates Ltd Governance Ecologists	
Title:			
Phase 1 Habitats			
Project Name Rose Place, Liverpool			
Discipline Ecology			
Scale 1:500		Drawing No. Figure 1	
Drawn By CC	Originator HH	Date 11/09/2017	Revision A
PAA Ref:		Revision	

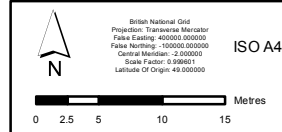


Legend

Site boundary

Building Inspection Results

- Negligible bat roosting potential
- No bat roosting potential



Perry Anderson Associates Ltd.
Parklea, 60 Park Road,
Buxton, Derbyshire, SK17 6SN.
Telephone 01298 27086

ISO A4

Building Inspection for Bats

Project Name
Rose Place, Liverpool

Discipline
Ecology

Scale
1:600

Drawing No.
Figure 2

Drawn By
CC

Originator
HH

Date
11/09/2017

PAA Ref.

Revision
A

PLATES



Plate 1 Security fencing across the compound dividing the area.



Plate 2 Rubbish accumulation and Japanese knotweed colonisation.



Plate 3 Hardstanding and butterfly-bush at the margins



Plate 4



Plate 5



Plate 6



Plate 7



Plate 8



Plate 9



Plate 10



Plate 11



Plate 12



Plate 13



Plate 14

APPENDICES

APPENDIX 1

Summary Legislation Relating to Bats, Breeding Birds and Black Redstarts

SUMMARY OF THE LEGISLATION RELATING TO BATS

All wild species of bat are protected under the Wildlife and Countryside Act (WCA) 1981, which has also been amended by later legislation, including the Countryside and Rights of Way (CROW) Act 2000 and the Conservation of Habitats and Species Regulations 2010, and this legislation is applicable to England and Wales. Bats are listed on Schedule 5 of the WCA and are therefore subject to some the provisions of Section 9 which, with the amendments, make it an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection (S9:4b).
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection by a bat (S9:4c).

There are additional offences in relation to buying and selling (S9:5) any live or dead animal of this species or anything derived from them.

Bat species are also listed under Annexes IIa and IVa of the EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, also known as the 'Habitats Directive'. Inclusion on Annex IVa means they are consequently identified as European Protected Species (EPS) and protected under the Conservation of Habitats and Species Regulations 2010.

The Conservation of Habitats and Species Regulations 2010¹ state that a person commits an offence if they:

- (a) deliberately capture, injure or kill any wild animal of a European protected species,
- (b) deliberately disturb wild animals of any such species, in such a way as –
 - (i) to impair their ability to survive, to breed or reproduce, or to rear their young, or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate, or
 - (iii) to affect significantly the local distribution or abundance of the species to which they belong;
- (c) deliberately take or destroy the eggs of such an animal, or
- (d) damage or destroy a breeding site or resting place of such an animal.

Under these Regulations it is an offence to damage or destroy a breeding site or resting place whether the animal is in occupation or not, and protection extends to all life stages of the animal in question. There are additional offences relating to possession, control and sale of a live or dead bat or part of such an animal.

In addition, seven native British bat species, including the soprano pipistrelle (*Pipistrellus pygmaeus*) and the brown long-eared bat (*Plecotus auritus*), that are frequently found in buildings, are listed as a 'Priority Species' under the 2011 biodiversity strategy for England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*, under the 2012 UK Post-2010 UK Biodiversity Framework. These Priority Species are also referred to as 'species of principal importance' for the conservation of biodiversity in England and Wales within Section 74 of the CROW Act 2000, and Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006. Section 11 of the National Planning Policy Framework (NPPF) states that the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible. The NPPF also includes the requirement to contribute to the Government's commitment to halt the overall decline in biodiversity and to promote the reservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets. Reference is made to Circular 06/2005 *Biodiversity and*

¹ These regulations have been slightly amended by The Conservation of Habitats and Species Regulations 2012

Geological Conservation - Statutory Obligations and Their Impact within the Planning System in respect of statutory obligations for biodiversity and geodiversity conservation.

Local authorities in England are required to ensure that where significant harm resulting from development cannot be avoided (through locating on alternative sites with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, planning permission is refused. The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.

Please note: the above text provides a brief summary of the legislation in relation to bats in England and Wales and the original Acts, Regulations and any amendments should be referred to for the precise wording.

SUMMARY OF THE LEGISLATION RELATING TO BREEDING BIRDS

All wild species of breeding birds and their nests are protected under Part 1 of the Wildlife and Countryside Act (WCA) 1981, as amended by later legislation including the Countryside and Rights of Way (CROW) Act 2000. This legislation applies in England and Wales.

Part 1 (Section 1:1) of the WCA states that:

'If any person intentionally,

- (a) kills, injures or takes any wild bird;
- (b) takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- (c) takes or destroys an egg of any wild bird,

he shall be guilty of an offence.'

Part 1 (Section 1:5) of the WCA (amended by the CROW Act 2000) refers to specific birds listed on Schedule 1 of the WCA, and states that:

'If any person intentionally or recklessly,

- (a) disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- (b) disturbs dependent young of such a bird,

he shall be guilty of an offence and liable to a special penalty.'

Schedule 1 includes birds such as barn owl (*Tyto alba*), black redstart (*Phoenicurus ochruros*), wood lark (*Lullula arborea*) and Cetti's warbler (*Cettia cetti*). Please refer to the WCA for a complete list of Schedule 1 species.

Some provisions are made to allow the killing and taking of certain species under certain circumstances, as follows:

- Birds listed on Schedule 2 (Part 1) of the Act may be taken or killed outside of the 'close season' for each individual species (the 'close season' is defined by the Act). This includes various wild duck and geese species.
- Birds listed on Schedule 2 (Part 2) of the Act may be killed or taken by authorised persons at all times. This includes species such as carrion crow (*Corvus corone*), black-billed magpie (*Pica pica*), feral pigeon (*Columba livia*) and greater Canada goose (*Branta canadensis*). An 'authorised person' is defined as a person who has written authorisation to undertake the act from the relevant statutory authority. The written authority is in the form of a licence, either a general licence which covers a number of the more typical 'pest' species, or an individual licence for other individual species. In England these licences are issued by Natural England and in Wales by the Welsh Assembly Government.

Please note: the above text provides a brief summary of the legislation in relation to breeding birds in England and Wales and the original Act and any amendments should be referred to for the precise wording.

SUMMARY OF LEGISLATION RELATING TO BLACK REDSTART

All wild species of breeding birds and their nests are protected under Part 1 of the Wildlife and Countryside Act (WCA) 1981, as amended by later legislation including the Countryside and Rights of Way (CROW) Act 2000.

Black redstarts (*Phoenicurus ochruros*) are additionally protected as they are listed on Schedule 1 of the WCA. Therefore, black redstarts, their nests, eggs and young are fully protected at all times throughout England and Wales.

Part 1 (Section 1:1) of the WCA states that:

'If any person intentionally,

- (a) kills, injures or takes any wild bird;
- (b) takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- (c) takes or destroys an egg of any wild bird,

he shall be guilty of an offence.'

Part 1 (Section 1:5) of the WCA (amended by the CROW Act 2000) states that:

'If any person intentionally or recklessly,

- (a) disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- (b) disturbs dependent young of such a bird,

he shall be guilty of an offence and liable to a special penalty.'

In addition, the black redstart is identified as a bird species of moderate conservation concern ('Amber' listed) due to its declining breeding population and its rarity as a breeding species within Britain.

Please note: the above text provides a brief summary of the legislation in relation to black redstart for England and Wales and the original Act and any amendments should be referred to for the precise wording.

APPENDIX 2

Desk Study from BioBank Merseyside

Please note: BioBank Merseyside's Appendix 2 (sources from which biological records are derived) are not reproduced here but are available upon request



Biodiversity Information Report 15/08/2017

MBB reference: 2272-PennyAnderson

Site: off Rose Place

Your Ref: IMCO01
Your contact: Gerard Hawley

MBB Ref: 2272-PennyAnderson
MBB Contact: Ben Deed

Date: 15/08/2017

Merseyside BioBank biodiversity information report

These are the results of your data request relating to **an area at off Rose Place defined by a buffer of 1000 metres around the centre of grid reference SJ3506791449.**

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/or NVC habitats** found within 500m of your site
- a map showing such habitats

Merseyside BioBank (MBB) is the Local Records Centre (LRC) 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 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 Gateway.

The handling charge for this data request is not a charge for the data themselves, but rather a partial charge for the staff time required to service the request. 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 Gateway. 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 in appendix 2 of this report. 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 2010. The latter regulations enact the European Union's (EU) Habitats Directive (92/43/EEC) in the UK and supercede The Conservation Regulations 1994. In our list of protected species, you may see designations that refer to schedules in the 1994 regulations, but these remain unchanged under the 2010 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>	2	2000-2006	WCA5/9.5a
	Smooth Newt	<i>Lissotriton vulgaris</i>	2	2004	WCA5/9.5a
bird	Black Redstart	<i>Phoenicurus ochruros</i>	6	1979-1999	WCA1i
	Little Ringed Plover	<i>Charadrius dubius</i>	3	2001-2003	WCA1i
	Peregrine	<i>Falco peregrinus</i>	7	1997-2007	WCA1i
flowering plant	Bluebell	<i>Hyacinthoides non-scripta</i>	8	1983-2003	WCA8
	Water Germander	<i>Teucrium scordium</i>	1	1995	WCA8
marine mammal	Bottle-Nosed Dolphin	<i>Tursiops truncatus</i>	1	2000	HabRegs2,WCA5/9.5a
	Common Porpoise	<i>Phocoena phocoena</i>	5	2004-2012	HabRegs2,WCA5/9.5a
	Grey Seal	<i>Halichoerus grypus</i>	1	1996	HabRegs4
terrestrial mammal	Bats	<i>Chiroptera</i>	8	1985-2006	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c
	Brown Long-eared Bat	<i>Plecotus auritus</i>	9	1911-1991	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c
	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	35	2000-2016	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	1	1970	WCA5/9.2,WCA5/9.4.a,WCA5/9.4b,WC A5/9.5a,WCA5/9.4c
	European Water Vole	<i>Arvicola amphibius</i>	4	1987-2015	WCA5/9.4.a,WCA5/9.4b,WCA5/9.4c
	Noctule Bat	<i>Nyctalus noctula</i>	1	2016	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c
	Pipistrelle Bat species	<i>Pipistrellus</i>	11	1980-2012	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c

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.
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).
HabRegs2	The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 2)	Schedule 2- European protected species of animals.
HabRegs4	The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 4)	Schedule 4- Animals which may not be taken or killed in certain ways
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.
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
bird	House Martin	<i>Delichon urbicum</i>	1	1997	LBAP
	House Sparrow	<i>Passer domesticus</i>	27	1997-2006	LBAP
	Lapwing	<i>Vanellus vanellus</i>	4	1997-2002	LBAP
	Skylark	<i>Alauda arvensis</i>	4	1997-2003	LBAP
	Song Thrush	<i>Turdus philomelos</i>	9	1997-1999	LBAP
	Starling	<i>Sturnus vulgaris</i>	10	1997-2003	LBAP
	Swift	<i>Apus apus</i>	3	1997-1998	LBAP
flowering plant	Bluebell	<i>Hyacinthoides non-scripta</i>	8	1983-2003	LBAP
	Willow	<i>Salix viminalis x repens = S. x friesiana</i>	1	1981	LBAP
insect - dragonfly (Odonata)	Banded Demoiselle	<i>Calopteryx splendens</i>	1	1940-1960	LBAP
	Black Darter	<i>Sympetrum danae</i>	1	1993	LBAP
	Blue-tailed Damselfly	<i>Ischnura elegans</i>	10	1982-2006	LBAP
	Brown Hawker	<i>Aeshna grandis</i>	5	1940-2006	LBAP
	Common Blue Damselfly	<i>Enallagma cyathigerum</i>	7	1999-2009	LBAP
	Common Darter	<i>Sympetrum striolatum</i>	7	1982-2015	LBAP
	Emperor Dragonfly	<i>Anax imperator</i>	2	2006	LBAP
	Southern Hawker	<i>Aeshna cyanea</i>	4	2000-2006	LBAP
terrestrial mammal	Bats	<i>Chiroptera</i>	8	1985-2006	LBAP

Brown Long-eared Bat	<i>Plecotus auritus</i>	9	1911-1991	LBAP
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	35	2000-2016	LBAP
Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	1	1970	LBAP
European Water Vole	<i>Arvicola amphibius</i>	4	1987-2015	LBAP
Noctule Bat	<i>Nyctalus noctula</i>	1	2016	LBAP
Pipistrelle Bat species	<i>Pipistrellus</i>	11	1980-2012	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: 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 is 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: Sefton Coast Rare Plants (*Salix viminalis x repens* = *S. x friesiana*)

A number of rare plants of the Sefton Coast are recognised as declining on a national scale, with some found in very few other locations. They are all rare locally and in some cases declining. Threats include development causing loss of habitat and destruction of populations, encroachment of scrub which both out competes species and reduces suitable habitat. In some cases rabbit grazing, sand-blow and other changes in the local conditions have detrimental effects.

Due to the small size of many of the populations they are highly vulnerable to any damage or disturbance.

NM BAP species: Dragonflies (*Calopteryx splendens*; *Sympetrum danae*; *Ischnura elegans*; *Aeshna grandis*; *Enallagma cyathigerum*; *Sympetrum striolatum*; *Anax imperator*; *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: Bats (*Plecotus auritus*; *Pipistrellus pipistrellus*; *Nyctalus noctula*)

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 2007 revised list of UK BAP 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
bird	Duncock	<i>Prunella modularis</i>	9	1997-1999	Sect.41.suppl
	Herring Gull	<i>Larus argentatus</i>	4	1997-1999	Sect.41.suppl
	House Sparrow	<i>Passer domesticus</i>	27	1997-2006	Sect.41
	Lapwing	<i>Vanellus vanellus</i>	4	1997-2002	Sect.41
	Linnet	<i>Linaria cannabina</i>	6	1997-2003	Sect.41.suppl
	Skylark	<i>Alauda arvensis</i>	4	1997-2003	Sect.41,Sect.41.suppl
	Song Thrush	<i>Turdus philomelos</i>	9	1997-1999	Sect.41.suppl
	Starling	<i>Sturnus vulgaris</i>	10	1997-2003	Sect.41.suppl
bony fish (Actinopterygii)	Atlantic Cod	<i>Gadus morhua</i>	107	2005-2011	Sect.41
	European Eel	<i>Anguilla anguilla</i>	7	1982-2016	Sect.41
	Whiting	<i>Merlangius merlangus</i>	98	2005-2012	Sect.41
flowering plant	Cornflower	<i>Centaurea cyanus</i>	4	2004-2015	Sect.41
	Darnel	<i>Lolium temulentum</i>	2	1977	Sect.41
	Water Germander	<i>Teucrium scordium</i>	1	1995	Sect.41
insect - butterfly	Wall	<i>Lasiommata megera</i>	5	1982-1993	Sect.41
marine mammal	Bottle-Nosed Dolphin	<i>Tursiops truncatus</i>	1	2000	Sect.41
	Common Porpoise	<i>Phocoena phocoena</i>	5	2004-2012	Sect.41
terrestrial mammal	Bats	<i>Chiroptera</i>	8	1985-2006	Sect.41
	Brown Long-eared Bat	<i>Plecotus auritus</i>	9	1911-1991	Sect.41
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	1	1970	Sect.41
	European Water Vole	<i>Arvicola amphibius</i>	4	1987-2015	Sect.41
	Noctule Bat	<i>Nyctalus noctula</i>	1	2016	Sect.41
	Pipistrelle Bat species	<i>Pipistrellus</i>	11	1980-2012	Sect.41
	West European Hedgehog	<i>Erinaceus europaeus</i>	6	2010-2017	Sect.41

Desig. Code	Desig. Name	Designation Description
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).
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.

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	Corn Marigold	<i>Glebionis segetum</i>	6	2004-2007	RLGB.VU
	Corn Mint	<i>Mentha arvensis</i>	2	1982-1983	RLGB.Lr(NT)
	Corn Spurrey	<i>Spergula arvensis</i>	7	1977-2007	RLGB.VU
	Creeping Willow	<i>Salix repens</i>	4	1981-1983	RLGB.Lr(NT)
	Crosswort	<i>Cruciata laevipes</i>	1	2017	RLGB.Lr(NT)
	Dandel	<i>Lolium temulentum</i>	2	1977	RLGB.CR
	Field Scabious	<i>Knautia arvensis</i>	1	2015	RLGB.Lr(NT)
	Field Woundwort	<i>Stachys arvensis</i>	4	1981	RLGB.Lr(NT)
	Goldenrod	<i>Solidago virgaurea</i>	1	1982	RLGB.Lr(NT)
	Hawkweed	<i>Hieracium aggregatum</i>	2	1983	RLGB.DD
	Heather	<i>Calluna vulgaris</i>	1	2015	RLGB.Lr(NT)
	Hoary Plantain	<i>Plantago media</i>	2	1983-1987	RLGB.Lr(NT)
	Large-flowered Hemp-nettle	<i>Galeopsis speciosa</i>	2	2008	RLGB.VU
	Prickly Poppy	<i>Papaver argemone</i>	2	2007	RLGB.EN,RLGB.VU
	Water Germander	<i>Teucrium scordium</i>	1	1995	RLGB.EN
	Wild Pansy	<i>Viola tricolor</i>	2	1983-2003	RLGB.Lr(NT)
insect - butterfly	Wall	<i>Lasiommata megera</i>	5	1982-1993	RLGB.Lr(NT)
mollusc	Large Black Slug	<i>Arion (Arion) ater</i>	3	2005-2007	RLGB.DD
	Marsh Pond Snail	<i>Lymnaea (Stagnicola) palustris</i>	1	1982	RLGB.DD

Desig. Code	Desig. Name	Designation Description
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.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.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	Darnel	<i>Lolium temulentum</i>	2	1977	NR-excludes
	Fringed Water-lily	<i>Nymphaoides peltata</i>	3	1982-1992	NS-excludes
	Hawkweed	<i>Hieracium aggregatum</i>	2	1983	NR-excludes
	Northern Yellow-cress	<i>Rorippa islandica</i>	3	1977	NS-excludes
	Rock Stonecrop	<i>Sedum forsterianum</i>	2	1981	NS-excludes
	Water Germander	<i>Teucrium scordium</i>	1	1995	NR-excludes
	Willow	<i>Salix caprea</i> subsp. <i>sphacelata</i>	1	1995	NS-excludes
insect - beetle (Coleoptera)	Adonis' Ladybird	<i>Hippodamia (Adonia) variegata</i>	1	1998	Nb
	Anommatus duodecimstriatus	<i>Anommatus duodecimstriatus</i>	1	2007	Na
	Polydrusus (Chrysophis) formosus	<i>Polydrusus (Chrysophis) formosus</i>	1	2006	Na
insect - hymenopteran	Red-tailed (Hill) Cuckoo Bee	<i>Bombus (Psithyrus) rupestris</i>	1	1971	Nb

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.
Nb	Nationally Notable B	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in between 31 and 100 10km squares of the National Grid or, for less-well recorded groups between eight and twenty vice-counties. Superseded by Nationally Scarce, and therefore no longer in use.
Na	Nationally Notable A	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in 30 or fewer 10km squares of the National Grid or, for less well-recorded groups, within seven or fewer vice-counties. Superseded by Nationally Scarce, and therefore no longer in use.

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	Canada Goose	<i>Branta canadensis</i>	5	1997-2011	MBB-WCA-S9
fern	Water Fern	<i>Azolla filiculoides</i>	1	2006	MBB-WCA-S9
flowering plant	Canadian Waterweed	<i>Elodea canadensis</i>	2	1982-1983	MBB-WCA-S9
	Curly Waterweed	<i>Lagarosiphon major</i>	1	1992	MBB-WCA-S9
	Indian Balsam	<i>Impatiens glandulifera</i>	4	1977-1983	MBB-WCA-S9
	Japanese Knotweed	<i>Fallopia japonica</i>	16	1977-2015	MBB-WCA-S9
	Montbretia	<i>Crocsmia pottsii</i> x <i>aurea</i> = <i>C. x crocosmiiflora</i>	1	1981	MBB-WCA-S9
	Nuttall's Waterweed	<i>Elodea nuttallii</i>	2	1982-1992	MBB-WCA-S9

	Rhododendron ponticum	<i>Rhododendron ponticum</i>	2	2003-2015	MBB-WCA-S9
terrestrial mammal	Black Rat	<i>Rattus rattus</i>	19	1889-1989	MBB-WCA-S9
	Eastern Grey Squirrel	<i>Sciurus carolinensis</i>	17	2007-2015	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
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	0.24	kilometres
All Woodland	10.25	hectares
Ponds	0.18	hectares

Ponds	4	count
-------	---	-------

The table above indicates the extent of each of the BAP habitat inventories (see previous table) occurring within your search area (see appendix 3 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: Liverpool-2006-07		
Source: Liverpool Space for Nature project - phase 1 habitat survey 2006-2007		
Survey date: 2006 - 2007		
Notes: This is the 'default' baseline mapping used by the Council. It is the most recent complete coverage for the borough.		
Woodland and scrub		
A1.1.2	Broadleaved woodland - plantation	1.09 ha
Miscellaneous		
J1.2	Cultivated/disturbed land - amenity grassland	6.37 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	23
Sefton Local Wildlife Site	55
St Helens Local Wildlife Site	121
Liverpool Local Wildlife Site (current)	28
Liverpool Local Wildlife Site (proposed)	30
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 3 for maps).

Name	Type
Leeds-Liverpool Canal	Liverpool Local Wildlife Site (current)
Leeds-Liverpool Canal	Liverpool Local Wildlife Site (proposed)
Everton Park Nature Garden	Liverpool Local Wildlife Site (potential)
Everton Park South	Liverpool Local Geological Site
College Street North, Shaw Street	Liverpool Local Geological Site
Lime Street Railway Cutting	Liverpool Local Geological Site
Everton Quarry, Mark Street	Liverpool Local Geological Site
Netherfield Road North, Everton	Liverpool Local Geological Site
Notre Dame High School, Everton Valley	Liverpool Local Geological Site
St Georges Hill, Netherfield Road South	Liverpool Local Geological Site
Metropolitan Cateolic Cathedral, Brownlow Hill	Liverpool Local Geological Site
Everton Park North	Liverpool Local Geological Site
St Anne Street Underpass	Liverpool Local Geological Site
Everton Gaol, Netherfield Rd South	Liverpool Local Geological Site
Whitley Gardens (south), Shaw Street	Liverpool Local Geological Site
Whitley Gardens (north), Shaw Street	Liverpool Local Geological Site
Mersey Estuary	Nature Improvement Area

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 Gateway records included

All relevant records available to Merseyside BioBank from the NBN Gateway are included in this report, except where excluded by one or more of the conditions described in the rest of this section. NBN Gateway 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 Gateway 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 Gateway 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.

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 Gateway datasets (though, of course, we do not report on NBN Gateway 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 Gateway.

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



***The Local Biodiversity
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

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 LRC.

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.

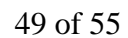
All data passed to a third party (users) by Merseyside BioBank are subject to these access terms and conditions. Non-adherence to these terms and conditions will be viewed as a breach of contract, which may result in legal redress being sought.

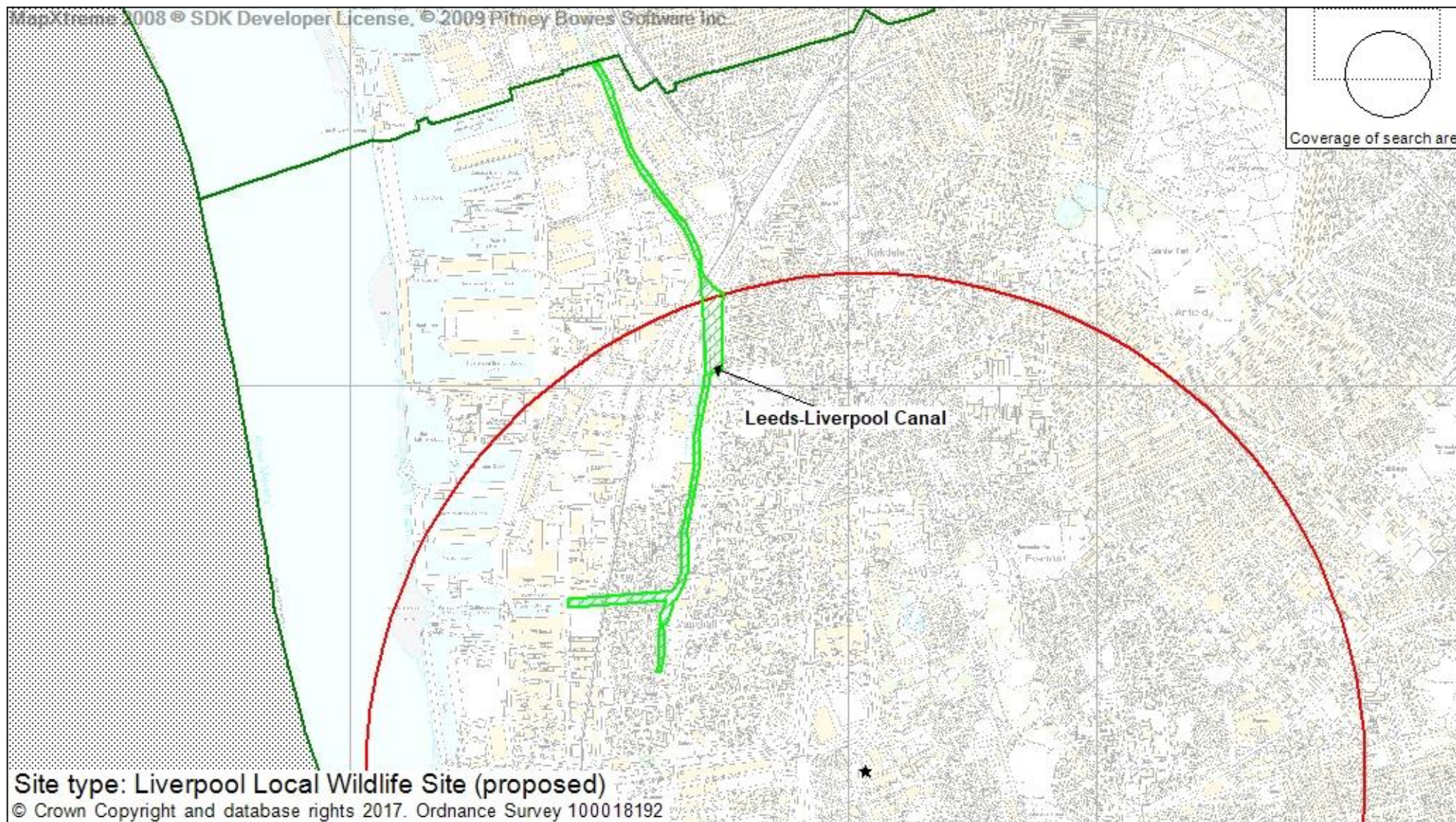
1. Users agree that data released by Merseyside BioBank, in any format and on any media, will only be used for the purpose for which it was originally requested and for any time period originally agreed upon (See note 3 below).
2. Users agree that data released by Merseyside BioBank will not be added 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.

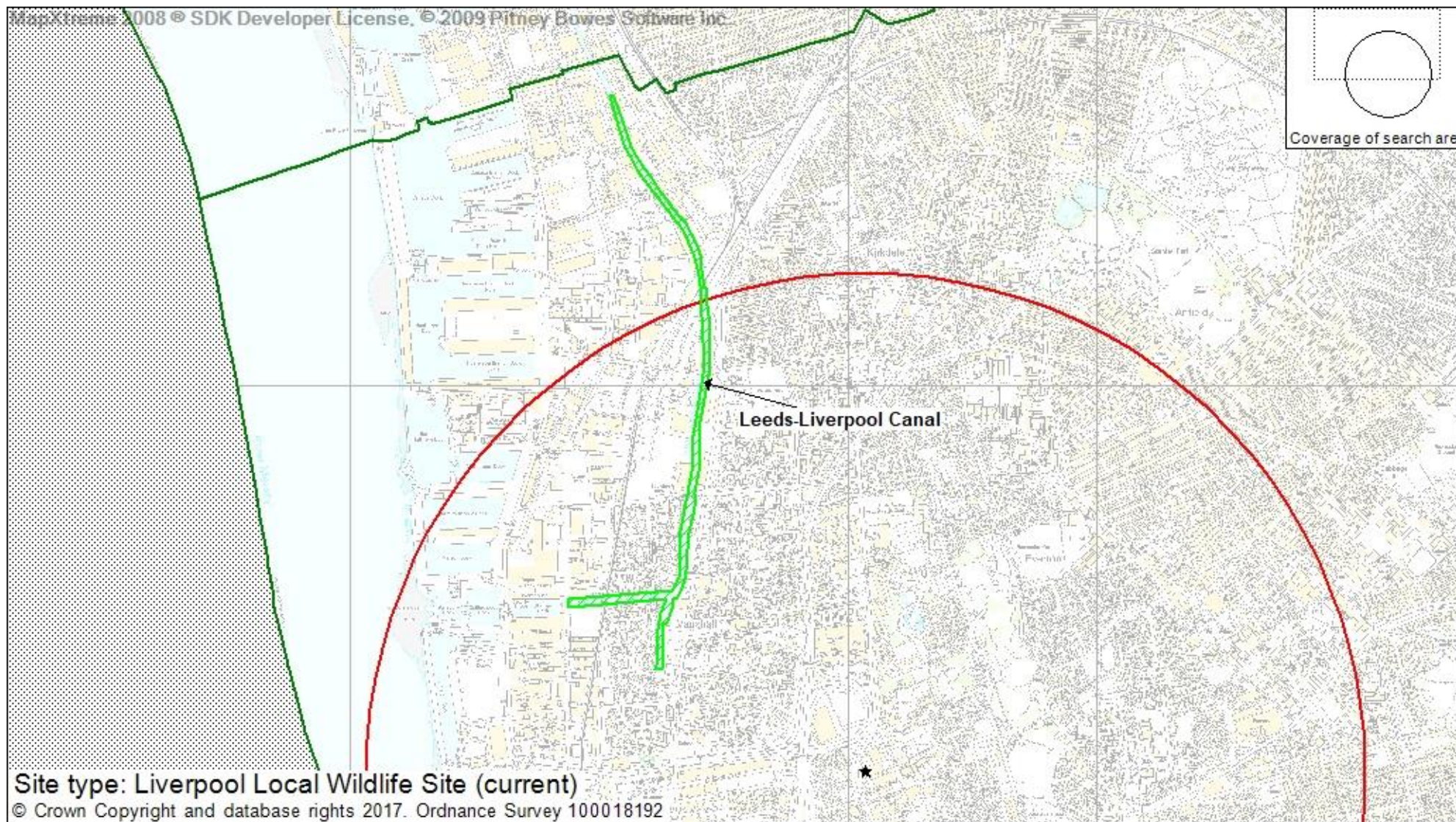
Appendix 3: Maps

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.



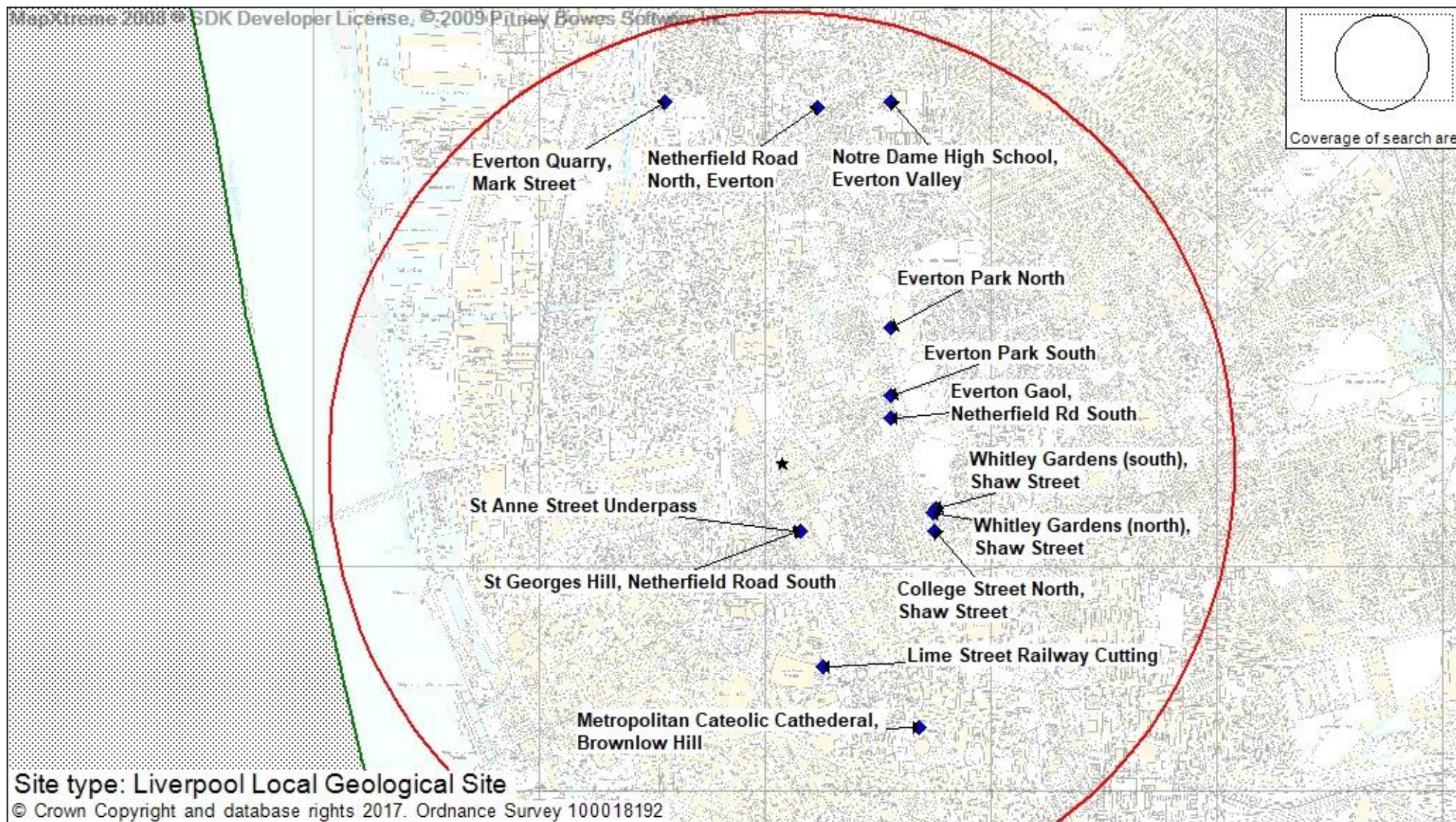


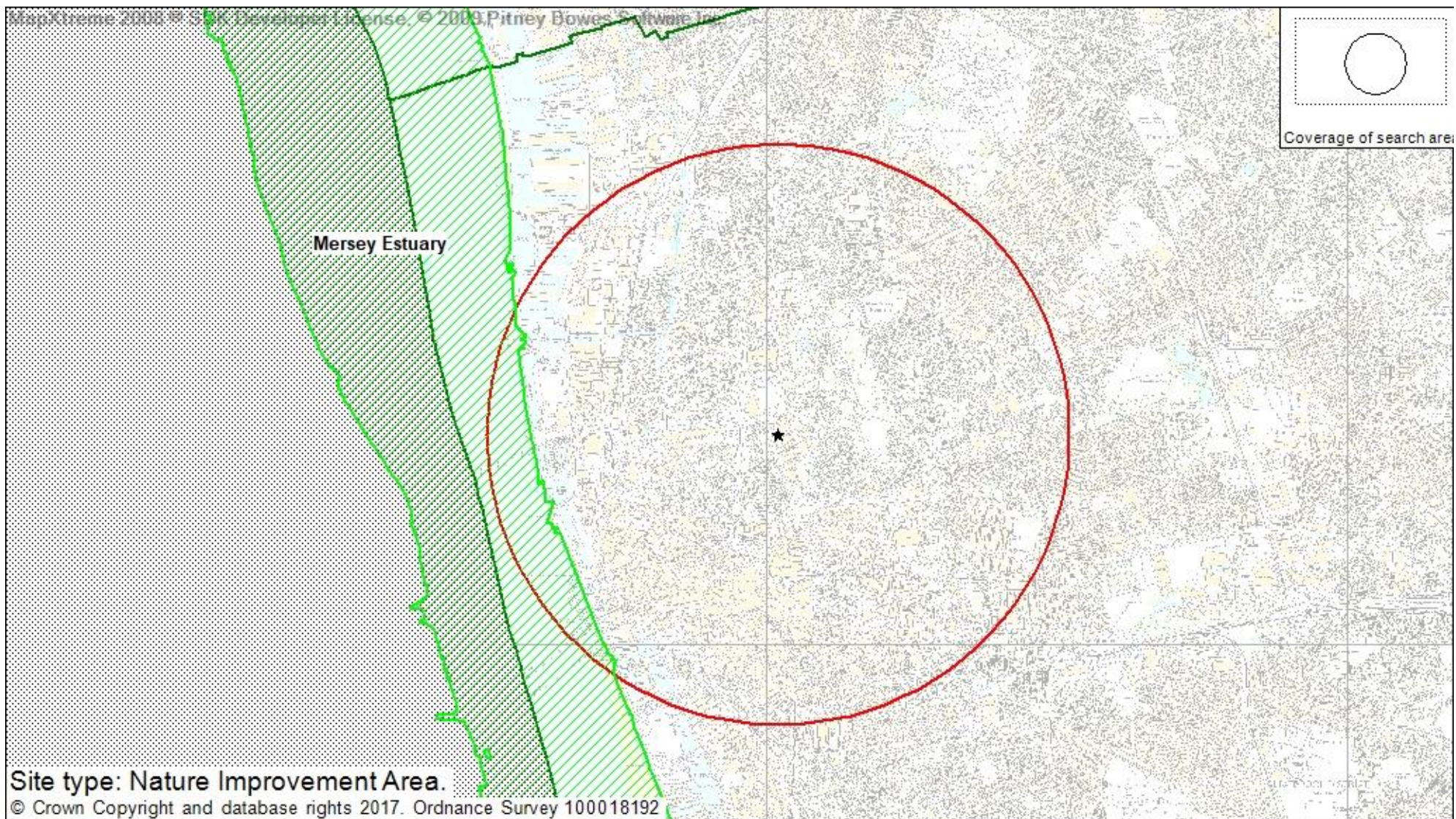




**The Local Biodiversity Records Centre
for North Merseyside**

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







APPENDIX 3

Leeds – Liverpool Canal Citation

Site name: Leeds-Liverpool Canal (Eldonian Village to Sefton boundary) and adjacent waterways and open spaces

Site area: 8.59ha

Grid reference: SJ343919 to SJ343943

Date of designation: 1995

District: Liverpool

Date of last revision: March 2010

Local Wildlife Site number: 8

Citation:

The Remainder Length of the Leeds-Liverpool Canal connects with the River Mersey via the Stanley Dock to Pier Head link and is now fully navigable. It currently supports a very limited range of aquatic plants with only Yellow Water-lily and Common Duckweed, together with the invasive species Parrot's-feather and Water Fern, recorded in recent years. Its marginal vegetation also lacks diversity, being composed almost entirely of Lesser Reedmace, Reed Canary-grass and Reed Sweet-grass, which together form several significant blocks of swamp habitat.

The towpath (western) bank of the canal is relatively uniform throughout its length. A narrow strip of mown grassland separates the canal from the surfaced footpath/cycle track. In some sections this is best categorised as amenity grassland but semi-improved neutral to acid grassland predominates elsewhere. Grasses include Perennial Ryegrass, Red Fescue, and Creeping Bent, and it supports a good variety of forbs, including Bird's-foot Trefoil, Common Cat's-ear, Autumn Hawkbit, Common Mallow, Marsh Woundwort, Wood Sage and Wild Carrot. The grassy margins of the path alongside the lock spur to Stanley Dock are less heavily managed but support a similar range of species plus ruderals such as Scentless Mayweed and tall herbs such as Mugwort and Lesser Burdock.

The western side of the footpath is narrow and mainly composed of native and exotic scrub which occasionally extends off the site forming significant habitat blocks at the rear of industrial premises.

The eastern bank of the canal is difficult to access except where it opens out into the Canalside Park and is dominated by areas of scattered and continuous scrub and tall herb vegetation. Although several non-native tree species are present, this scrub is composed predominantly of native species, including Grey and Goat Willow, Hawthorn, Elder, Alder, Gorse and Broom, with an often dense understorey of Bramble and some large stands of Bracken. These areas are the most floristically diverse on the site and include additional species such as Meadow Vetchling and Herb Robert.

The Canalside Park is a discontinuous open space of mainly amenity grassland adjacent to parts of the eastern bank of the canal. Some native scrub has developed where management has ceased but invasive Japanese Knotweed and White Poplar have also colonised. Two areas have recently been sown with meadow wildflowers which have established reasonably well, species including Cow Parsley, Ox-eye Daisy, Bluebell, Meadowsweet, Lesser Knapweed, Red Campion, Meadow Buttercup and St. John's-wort.

The canal walls form a distinctive habitat throughout the site, supporting many of the species found elsewhere but also Sheep's Fescue, Wavy Hair-grass, Gipsywort and very frequent Male Fern. The site has not been surveyed for Water Voles but similar brick-constructed walls on the canal's Sefton sections support thriving populations.

Many waterbirds breed, mostly common species such as Mute Swan, Mallard, Coot and Moorhen but also Grey Wagtail at one of its two sites in Liverpool. Wintering birds include regular Kingfisher and recently Great Crested Grebe and Goldeneye. A pair of Peregrines has nested on the Tobacco Warehouse at Stanley Dock since the mid-1980s.

Appraisal:

Guideline		Comment
HABITATS		
H1	Rarity	--
H2	Diversity	10 habitats recorded
H3	Nearness	--
H4	Isolation	--
PLANTS		
Sp1	Rarity	9 locally rare species.
Sp2	Diversity	A total of 40 plant species was recorded during 2006-2007 but at least 138 are known to occur.
Sp3	Naturalness	85% of the plants are native to the city. Colonisation has been aided by man and the site has been physically altered.
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	--

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

9 locally rare species

Common Mallow *Malva sylvestris*
Hemp Agrimony *Eupatorium cannabinum*
Marsh Woundwort *Stachys palustris*
Reed Sweet-grass *Glyceria maxima*
Sheep's Fescue *Festuca ovina*
Wavy Hair-grass *Deschampsia flexuosa*
Wild Carrot *Daucus carota*
Wood Sage *Teucrium scorodonia*
Yellow Water-lily *Nuphar lutea*

APPENDIX 4

Botanical Species List

Appendix 4 Botanical Species List

Common Name	Scientific Name	DAFOR
Woody species		
Butterfly-bush	<i>Buddleja davidii</i> (shrub)	LD
Butterfly-bush	<i>Buddleja davidii</i> (seedlings)	O
Goat willow	<i>Salix caprea</i>	R
Hornbeam	<i>Carpinus betulus</i>	R
Norway maple	<i>Acer platanoides</i> (sapling)	R
Herbs, grasses and ferns		
Annual meadow-grass	<i>Poa annua</i>	O
Broad-leaved dock	<i>Rumex obtusifolius</i>	R
Broad-leaved willowherb	<i>Epilobium montanum</i>	R
Canadian fleabane	<i>Conyza canadensis</i>	F
Cat's-ear	<i>Hypochaeris radicata</i>	R
Common bent	<i>Agrostis capillaris</i>	R
Common ragwort	<i>Senecio jacobaea</i>	R
Dandelion	<i>Taraxacum officinale</i> agg.	O
Early hair-grass	<i>Aira praecox</i>	R
Fern-grass	<i>Catapodium rigidum</i>	R
Great willowherb	<i>Epilobium hirsutum</i>	R
Greater plantain	<i>Plantago major</i>	O
Groundsel	<i>Senecio vulgaris</i>	R
Hare's-foot clover	<i>Trifolium arvense</i>	R
Hedge mustard	<i>Sisymbrium officinale</i>	R
Hemp-agrimony	<i>Eupatorium cannabinum</i>	O
Herb-Robert	<i>Geranium robertianum</i>	R
Japanese knotweed	<i>Fallopia japonica</i> (<i>Reynoutria japonica</i>)	R
Mouse-ear species	<i>Cerastium</i> sp.	R
Nipplewort	<i>Lapsana communis</i>	R
Oxford ragwort	<i>Senecio squalidus</i>	R
Petty spurge	<i>Euphorbia peplus</i>	R
Procumbent pearlwort	<i>Sagina procumbens</i>	O
Rat's-tail fescue	<i>Vulpia myuros</i>	F
Red fescue	<i>Festuca rubra</i>	R
Redshank	<i>Persicaria maculosa</i>	R
Ribwort plantain	<i>Plantago lanceolata</i>	O
Smooth sow-thistle	<i>Sonchus oleraceus</i>	R
Spear thistle	<i>Cirsium vulgare</i>	R
Wall barley	<i>Hordeum murinum</i>	R
Willowherb species	<i>Epilobium</i> sp. (annual)	R
Yorkshire fog	<i>Holcus lanatus</i>	O

Key:

D = dominant
 A = abundant
 F = frequent
 O = occasional
 R = rare
 L = locally

Penny Anderson
Associates Ltd
CONSULTANT ECOLOGISTS



Park Lea, 60 Park Road, Buxton, Derbyshire SK17 6SN

Registered Office as Above | Registered in England & Wales | Company No. 4223109 | Directors: Mrs P Anderson Mr P Worrall Miss S Rogers