

Liverpool City Council

Jericho Lane Playing Fields

Preliminary Ecological Appraisal

Project No. 856282





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RSK GENERAL NOTES

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EXECUTIVE SUMMARY

- This report presents the results of ecological field surveys carried out in connection with a
 proposed development at Jericho Lane Playing Fields in south Liverpool. A Phase 1
 Habitat Survey and habitat assessment for protected vertebrates was carried out on 28
 October 2015. A background data search (BDS) was also carried out to obtain any
 existing records of notable species or sites in the area.
- 2. The site mainly consists of an amenity-grassland sports field, changing room building, rough grassland, scrub, ruderal vegetation and a hedgerow.
- 3. On the site, there is habitat suitable for Badgers, bats and nesting birds.
- 4. Ecological restrictions relating to bats and nesting birds are discussed.
- 5. The site should incorporate ecological enhancements which are discussed in this report.



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1 INTRODUCTION

1.1 Purpose of this Report

This report presents the results of ecological field surveys and a background data search (BDS) undertaken in connection with a proposed development at Jericho Lane Playing Fields, Liverpool (Ordnance Survey grid reference (SJ 377 860). *Figure 1* shows the location of the *c*.7.9 ha area referred to as 'the site' throughout this report. This report presents ecological information for the site and identifies the potential ecological constraints on the proposed development.

1.2 Ecological Context

The site is a recreation ground in the south of Liverpool. It is predominantly amenity grassland used as playing fields but also includes changing room facilities and - on the boundary - a hedgerow, areas of rough grassland, ruderal vegetation and dense scrub. The site is bordered to the north by a railway line and embankment with a playing field beyond, to the east by an area of woodland a scrub, to the south by Otterspool Drive and to the west by Jericho Lane.

The surrounding area is made up of a mixture of green open space including public open land and playing fields and small commercial and residential properties within the Aigburth area of south Liverpool.

1.3 Structure of this Report

The remainder of this report is structured as follows:

- Section 2 describes the survey and assessment methods;
- Section 3 presents the survey results;
- Section 4 evaluates the results;
- Section 5 lists the references;
- Section 6 provides the figures;
- Appendix A explains the protected species legislation;
- Appendix B presents the botanical target notes;
- Appendix C provides details of noteworthy species; and
- Appendix D provides details of the abbreviations used in the text.



2 METHODS

2.1 General

The Phase 1 Habitat Survey and habitat assessment for protected vertebrates was carried out by Will Holden on 28 October 2015 to standards for Preliminary Ecological Appraisal set out in CIEEM (2012). Will is a Senior Consultant with over 8 years' experience and is a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM). The survey was carried out in suitable weather conditions.

The preliminary ecological appraisal included the following:

- a background data search (gathering information from national websites; local record centres, councils etc.; and local wildlife groups); and
- a field survey using the extended Phase 1 Habitat Survey methodology.

2.2 Background Data Search

A search was made for reference materials relating to the ecology of Jericho Lane Playing Fields, a list of sources is given in *Table 1* below.

Table 1: Data Sources

Information Obtained	Available From
Protected and Noteworthy species-records	Merseyside BioBank
Designated site locations and citations	Natural England website
Designated site locations and citations	Merseyside BioBank
Designations and legal protection of noteworthy species	Joint Nature Conservation Committee (JNCC) website
North Merseyside Local	Local BAP website
Biodiversity Action Plan	http://www.merseysidebiodiversity.org.uk/

A search was made for information on statutory designated sites (often internationally and nationally important sites for ecology) and non-statutory designated sites (often important in a local context) within 1 km of the site boundary. A search was also made for records of noteworthy species within the same 1 km area. Species included in the search parameters are:

- European protected species (listed on *Schedules 2* and *4* of *The Conservation of Habitats and Species* (Amendment) *Regulations 2012*);
- nationally protected species under Schedules 1, 5 and 8 of The Wildlife & Countryside Act 1981 and The Protection of Badgers Act 1992;



- species listed as Critically Endangered, Endangered or Vulnerable on the IUCN Red List
- all species listed on the RSPB Birds of Conservation Concern 2002-2007 as Red or Amber;
- Nationally Rare or Nationally Scarce species;
- Notable invertebrates; and
- species of Principal Importance under The Natural Environment and Rural Communities (NERC) Act (2006), that have Action Plans under the UK Biodiversity Action Plan (UKBAP) or are Priority Species under the Local Biodiversity Action Plan.

2.3 Phase 1 Habitat Survey

The habitat survey centred on the Phase 1 Habitat Survey approach (Joint Nature Conservation Committee 2010) as extended for use in Environmental Impact Assessments (Institute of Environmental Assessment 1995). This involves the following elements.

- Habitat mapping using a set of standard colour codes to indicate habitat types on a Phase 1 Habitat Map (*Figure 1*).
- Description of features of possible ecological or nature conservation interest in notes relating to numbered locations on the Phase 1 Habitat Map, called 'Target Notes'. These are provided in *Appendix B*.

Basic Phase 1 Habitat Survey methods are described in detail in Joint Nature Conservation Committee (JNCC 2010). Limits to the achievable reliability of the method are discussed in Cherrill & McClean (1999).

Plant nomenclature in this report follows Stace (2010) for native and naturalised species of vascular plant. Plant names in the text are given with scientific names first, followed by the English name in brackets.

Phase 1 surveys done in late autumn or winter (October to March) are considered suboptimal. They can usually describe habitat types adequately, but many plant species (including invasive species) may be unidentifiable or altogether died-away. Out-ofseason surveys often provide information sufficient to inform planning, but further survey in spring or summer may be required to confirm the evaluation.

2.3.1 Invasive Plant Species

Phase 1 Habitat Survey does not involve exhaustive surveying for any individual plant species. But if invasive plant species, e.g. Fallopia japonica (Japanese Knotweed), Heracleum mantegazzianum (Giant Hogweed), Impatiens glandulifera (Indian Balsam), were seen during the normal course of the survey they were noted and reported here.



2.4 Habitat Assessment for Protected Vertebrates

2.4.1 General

The suitability of the site for protected animals was assessed. Taking into account the location and habitats at the site, assessment was carried out for:

- Badger;
- bat species (foraging, commuting and roosting); and
- nesting birds.

There is no habitat suitable for reptiles on the site and no ponds within 500 m of the site which are suitable for Great Crested Newts. There are no habitats suitable for Otters or Water Voles on the site.

Further details of the assessment methods are given below.

2.4.2 Badgers

In line with Harris *et al.* (1989), the site was assessed for Badgers. The survey was focused in areas that might be used by Badger (*Meles meles*) for commuting, foraging and sett-building. Signs of Badgers include setts, tracks, footprints, hair on barbed wire fences, feeding signs, and dung pits.

2.4.3 Bats

Habitat was assessed for commuting and foraging bats. Areas of particular interest vary between species, but generally include habitats with good numbers of insects, such as woodland, scrub, hedges, and species-rich or rough grassland (Hundt 2012).

Trees were assessed for their potential for roosting bats. Suitable features include cracks, splits and rot holes.

The buildings were assessed for suitability for roosting bats. This included an assessment of the exterior of the buildings for suitable features (e.g. gaps and holes in soffits or wooden cladding) and an inspection of the internal of the buildings for accessible roof voids. This survey did not constitute a full initial building inspection but has been used to identify whether further survey is required.

2.4.4 Nesting Birds

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The site was assessed for nesting birds. Birds nest in a wide variety of habitats including scrub, woodland, hedges and trees, as well as on open ground.

2.5 Validity of Data

According to Natural England advice, survey data should not be over two years old for medium-high impact schemes or multi-plot or phased developments. Surveys up to four years old may be acceptable for low impact schemes (*i.e.* small areas of work or temporary land take), as long as the habitats have not changed significantly in that time period. Where a European Protected Species licence is required after the grant of



planning permission, Natural England expects applicants to check - by walk-over survey not more than three months before the submission of a licence application - that conditions have not changed significantly since surveys were carried out for the original planning application.

As the surveys were carried out in late autumn (October) some areas of invasive plant species may have been missed as they could have died-away.



3 RESULTS

3.1 Background Data Search

The latest North Merseyside Local Biodiversity Action Plan (LBAP) lists 16 Habitat Action Plans (HAPs) and 28 Species / Grouped Species Action Plans (SAPs). The local HAPs and SAPs that are relevant to the proposed development are:

Habitats:

- Urban Trees
- Urban Grasslands

Species:

- Urban Birds
- Bats

3.1.1 Designated Sites

3.1.1.1 Statutory Sites

There is one statutory designated site within 1 km of the site boundary, namely the Mersey Estuary that is designated as a Ramsar, Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI). The Mersey Estuary Ramsar, SPA and SSSI lies 190 m to the south-west of the site boundary.

The Mersey Estuary consists of large areas of intertidal sand and mudflats, salt marsh, brackish marsh, cliffs and standing water. The saltmarsh has a diverse flora and a range of communities. The Mersey Estuary is an internationally important site for wintering wildfowl and waders that feed on the rich invertebrate fauna of the intertidal sediments as well as plants and seeds from the salt-marsh and adjacent agricultural land. The estuary is also a valuable staging post for migrating birds in spring and autumn. The estuary is particularly important for Pintail, Teal, Shelduck, Black-tailed Godwit, Wigeon, Dunlin, Curlew, Redshank, Greenshank, Lapwing, Ringed Plover and Golden Plover.

3.1.1.2 Non-statutory Sites

There are nine non-statutory and proposed non-statutory designated sites within 1 km of the site boundary, comprising five Local Wildlife Sites (LWSs) and four Proposed Local Wildlife Sites (PropLWSs). These sites are listed in *Table 2* in order of proximity to the site; short descriptions are given for the LWSs.

Table 2: Non-Statutory Sites within 1 km of the Site Boundary

Site Name	Designation	Approximate Distance (m)	
Otterspool Park	LWS	Borders site	
Otterspool Park LWS comprises parkland, a disused railway and disused allotments.			



Site Name	Designation	Approximate
		Distance (m)

Habitats in the parkland include plantation woodland and amenity grassland. The plantation woodland is dominated by *Acer pseudoplatanus* (Sycamore) and has a spare understorey and ground flora. *Hyacinthoides non-scripta* (Bluebell) is locally abundant. The railway embankments comprise scrub and rough grassland and support a good diversity of plants, including *Deschampsia flexuosa* (Wavy Hair-grass), *Vicia cracca* (Tufted Vetch) and *V. hirsuta* (Hairy Tare). The overgrown allotments have a patchwork of small habitats including marshy grassland, swamp, tall herb, scrub and trees. The disused allotments support a good diversity of typical plant species and some less common species such as *Gnaphalium uliginosum* (Marsh Cudweed). A wide variety of common butterfly species breed throughout the site. The site supports a good diversity of breeding birds, including Bullfinch, and extends to the Mersey Estuary in the south, allowing some interchange of wintering birds with the Mersey Estuary. Otterspool Park LWS borders the eastern site boundary.

Otterspool Park and Gorge	PropLWS	Borders site	
Otterspool Park and Gorge PropLWS covers the same area as Otterspool Park LWS and			
Otterspool Gorge LWS.			
Otterspool Gorge	LWS	25	

Otterspool Gorge LWS comprises woodland that is over a deep sandstone gorge. The woodland is classified as ancient but are currently secondary and plantation woodland of *Fagus sylvatica* (Beech) and *Acer pseudoplatanus* (Sycamore). There is a variety of other canopy species including several non-native species. The ground flora includes *Hyacinthoides non-scripta* (Bluebell), *Osmunda regalis* (Royal Fern), *Luzula sylvatica* (Great Wood-rush) and *Oxalis acetosella* (Wood-sorrel). There are several areas of sandstone exposure and also a shaded pond that supports marginal vegetation. The site is important for woodland birds. Otterspool Gorge LWS is to the north-east of the site boundary, on the other side of the disused railway.

Mersey Estuary / Mersey Way	LWS	190

Mersey Estuary / Mersey Way LWS is within the Mersey Estuary Ramsar, SPA and SSSI, as described above.

Mersey Estuary SPA, SSSI & Coastal		
Reserve	PropLWS	190

Mersey Estuary SPA, SSSI & Coastal Reserve PropLWS is within the Mersey Estuary Ramsar, SPA and SSSI, as described above.

Festival Gardens	PropLWS	310
Sefton Park	LWS	720

Sefton Park LWS is a formal park with amenity grassland, semi-improved grassland, scrub, plantation woodland, parkland trees, standing water and running water. The water courses support interesting marginal and aquatic plants. There are several very old trees in the park that provide a deadwood habitat. The water courses and standing water on site support Common Frogs, Kingfishers and Daubenton's Bat. Pipistrelle and Noctule bats also use the park. A wide range of butterflies use the site, including Orange Tip. The site also supports a diversity of breeding birds, including Great Crested Grebe and Grey Wagtail.



Site Name	Designation	Approximate Distance (m)	
Sefton Park PropLWS covers Sefton Park LWS and extends further to the north.			
Pond, International Garden Festival Site LWS 970			
This LWS comprises a large pond and surrounding woodland and grassland. The site			
was created by Landlife as a nature conservation area for the festival. The pond itself			
has little or no open water but has developed into reedswamp.			

3.1.1.3 Other Notable Sites

There are two areas of ancient woodland within 1 km of the site boundary, Dipford Wood to the east of the site boundary (within Otterspool Park LWS) and Upton Cleave to the north-east of the site boundary (within Otterspool Gorge LWS).

3.1.2 Protected and Noteworthy Species

At least 47 noteworthy species are recorded from places within 1 km of the site boundary. Of these, 3 are amphibians, 14 are birds, 4 are fish, 11 are invertebrates, 5 are plants and at least 10 are mammals. Species that are protected by law under Schedules 2 and 4 of The Conservation of Habitats and Species (Amendment) Regulations 2012, The Wildlife and Countryside Act 1981 or The Protection of Badgers Act 1992 and have been recorded in the search area are listed in the table below; a full species list is given in Appendix C.

Table 3: Protected Species Records within 1 km of the Site Boundary

Latin Name	Common Name	Designation	Number of records	Most recent Date	Within 100m	Within 1km
Amphibians						
Bufo bufo	Common Toad	WCA5.9.5	1	2015		Р
Lissotriton vulgaris	Smooth Newt	WCA5.9.5	8	2015		\boxtimes
Rana temporaria	Common Frog	WCA5.9.5	3	2013		Р
Birds						
Anser anser	Greylag Goose	WCA1.2	1	1997	Р	Р
Plants						
Hyacinthoides non- scripta	Bluebell	WCA8	14	2015	Р	
Mammals						
Arvicola amphibius	European Water Vole	WCA5.9.4a	1	2015		Р
Chiroptera	Bats	EPS (Sch2)	2	1992		\boxtimes
Hyperoodon ampullatus	Northern Bottlenose Whale	EPS (Sch2), WCA5.9.1	1	1953		Р



Latin Name	Common Name	Designation	Number of records	Most recent Date	Within 100m	Within 1km
Myotis daubentonii	Daubenton's Bat	EPS (Sch2), WCA5.9.1	5	1981		Р
Myotis sp.	a Myotis bat	EPS (Sch2), WCA5.9.1	17	2010		Р
Nyctalus noctula	Noctule Bat	EPS (Sch2), WCA5.9.1	13	2010		\boxtimes
Phocoena phocoena	Common Porpoise	EPS (Sch2), WCA5.9.1	2	2009		Ρ
Pipistrellus pipistrellus	Common Pipistrelle	EPS (Sch2), WCA5.9.1	3	2015		Р
Pipistrellus pygmaeus	Soprano Pipistrelle	EPS (Sch2), WCA5.9.1	1	2015		Р
Pipistrellus sp.	a Pipistrelle bat	EPS (Sch2), WCA5.9.1	25	2014		\boxtimes
Plecotus auritus	Brown Long-eared Bat	EPS (Sch2), WCA5.9.1	5	1945		Р
Plecotus sp.	a Long-eared bat	EPS (Sch2), WCA5.9.1	1	1933		Р
Sciurus vulgaris	Red Squirrel	WCA5.9.1	10	1948		Р

Note - **P** relates to records with 4 figure or tetrad grid references that could potentially be anywhere within a 1 km or 2 km square.

3.2 Habitats

3.2.1 General

The target notes referenced below are given in *Appendix B*. The habitats are mapped in *Figure 1*. Within the site boundary there are the following habitats and vegetation:

- amenity grassland;
- rough grassland;
- ruderal vegetation;
- dense scrub; and
- hedgerows.

3.2.2 Amenity Grassland

The majority of the site is amenity grassland (*Target Note 3*) forming playing fields. The grassland typically has a short, dense sward, *c.*5cm high and is regularly mown. It is dominated by *Lolium perenne* (Perennial Rye-grass) with broad-leaved herbs including *Bellis perennis* (Daisy) and *Taraxacum sect. Ruderalia* (Common Dandelion).

3.2.3 Rough Grassland

The western corner of the site is an area of rough grassland around an access point (*Target Note 7*). This has a long, dense sward *c.*20 cm high. It is dominated by the grasses *Arrhenatherum elatius* (False Oat-grass) and *Dactylis glomerata* (Cock's-foot) but also includes broad-leaved herbs and ruderal species such as *Centaurea nigra*



(Common Knapweed), *Epilobium hirsutum* (Great Willowherb) and *Senecio jacobaea* (Common Ragwort).

3.2.4 Tall Ruderal Vegetation

Parts of the boundary of the site, including the northern, eastern and southern boundaries, are a strip of tall ruderal vegetation (*Target Notes 4* and *6*). This borders the railway embankment along the northern boundary, an area of dense woodland along the eastern boundary and a hedgerow along the southern boundary. The ruderal vegetation is dense and dominated by *Pteridium aquilinum* (Bracken) in places (*Target Note 4*) but also includes *Chamerion angustifolium* (Rosebay Willowherb), *Senecio jacobaea* (Common Ragwort) and *Urtica dioica* (Common Nettle).

3.2.5 Dense Scrub

The southern boundary of the site includes a raised bund between the site and adjacent properties. This is predominately dense scrub and scattered young and semi-mature trees including native and ornamental species (*Target Note 5*). The scrub is mainly *Rubus fruticosus* agg. (Bramble) but includes *Cornus sericea* (Red-osier Dogwood), *Hippophae rhamnoides* (Sea-buckthorn) and *Populus tremula* (Aspen).

There are also patches of dense scrub within the rough grassland at the west of the site. This is almost entirely *Rubus fruticosus* agg. (Bramble) but also includes some *Urtica dioica* (Common Nettle).

3.2.6 Hedgerow

There is a single hedgerow along the southern and western boundary of the site adjacent to Otterspool Drive and Jericho Lane (*Target Note* 8). This is formed over the site security fence. It is dense, *c*.2 m x 2 m and composed entirely of *Ligustrum ovalifolium* (Garden Privet). The field layer is mainly rough grassland species.

There are some gaps in the hedgerow, particularly along the western boundary of the site, where the security fence and access gates fill the gaps.

3.3 Non-native Invasive Plant Species

No invasive plant species were recorded on the site.

3.4 Assessment for Protected Species

3.4.1 Badger

No signs of Badgers, or Badger setts were recorded on the site.

3.4.2 Bats

The trees on the site are all in good condition and do not have any features suitable for roosting bats.



There are two buildings on the site. The old changing room facility (*Target Note 1*) is a single storey and constructed of brick and concrete with a flat roof. There is wooden cladding along the roof line and around the water tower on the roof. Both areas of wooden cladding has some gaps and missing boards. There is no internal roof void or false ceiling. The building has some suitability for roosting bats under the peeling cladding and the missing boards provide access points behind the remainder of the cladding.

The second building is a newer changing room facility (*Target Note 2*). This is constructed of brick with a sloping corrugated metal roof. It does not have any suitability for roosting bats.

The hedgerow and woodland adjacent to the site are suitable foraging and commuting routes for bats.

3.4.3 Birds

No nests were recorded on the site. The scrub and hedgerow are suitable for nesting birds and birds almost certainly use these areas for nesting. The open amenity grassland is not suitable for ground nesting birds.



4 EVALUATION

4.1 Designated Sites

The nearest statutory designated site, Mersey Estuary RAMSAR, is 190 m away. In addition, there are nine non-statutory and proposed non-statutory designated sites within 1 km of the site; the nearest, Otterspool Park and Otterspool Park & Gorge, border the site.

No designated sites will be affected by the development.

4.2 Habitats and Plants

The habitats on the site are common, widespread and of low ecological and botanical value.

4.3 Invasive Species

No invasive species were recorded on the site.

4.4 Protected Species

4.4.1 Badger

No evidence of Badgers was recorded on the site. The survey was sufficient to show that Badgers are not present on the site and no further action is required with regard to Badgers.

4.4.2 Bats

No trees suitable for roosting bats were recorded on the site.

The assessment of the building at *Target Note 1* has recorded suitable roosting features. As this building is to be demolished, further bat emergence surveys will be required to determine whether bats are using the building. These surveys can only be carried out between mid April and September (inclusive). If bats are recorded using the building, a European Protected Species licence will be required prior to demolition.

The building at *Target Note 2* is not suitable for bats and is not due to be demolished.

4.4.3 Birds

The scrub and hedgerow are suitable for nesting birds. Removal of any nesting habitat should only take place outside the bird breeding season (March to August inclusive). If this is not possible, areas of suitable nesting habitat should be hand searched by a suitably experienced ecologist prior to removal. Any nests would need to be retained until the young had fledged, and fenced off to prevent disturbance.



4.5 Ecological Enhancements

In line with the latest planning guidance (The National Planning Policy Framework – NPPF) the proposed development should include carefully considered ecological enhancements. There are numerous opportunities on the site including:

- retaining and enhancing the hedgerow and woodland along the boundary of the site; and
- · erection of bird nest boxes on the retained building.



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6 FIGURES

Figure 1. Phase 1 Habitat Map with target notes





APPENDIX A – RELEVANT LEGISLATION

General

This section briefly describes the legal protection afforded to the protected species referred to in this report. It is for information only and is not intended to be comprehensive or to replace specialised legal advice. It is not intended to replace the text of the legislation, but summarises the salient points.

Badger

Meles meles (Badger) is protected in Britain under the *Protection of Badgers Act 1992* and *Schedule 6 of The Wildlife and Countryside Act 1981* (as amended).

The legislation affords protection to Badgers and Badger setts, and makes it a criminal offence to:

- wilfully kill, injure, take, possess or cruelly ill-treat a Badger, or to attempt to do so;
- interfere with a sett by damaging or destroying it;
- to obstruct access to, or any entrance of, a Badger sett; or
- to disturb a Badger when it is occupying a sett.

Bats

All species of British bat are protected by *The Wildlife and Countryside Act 1981 (as amended)*, extended by the *Countryside and Rights of Way Act 2000*. This legislation makes it an offence to:

- intentionally kill, injure or take;
- possess or control;
- intentionally or recklessly damage, destroy or obstruct access to a breeding site or resting place; and
- intentionally or recklessly disturb whilst the animal occupies a breeding site or resting place.

Bats are also European Protected Species listed on *The Conservation (Natural Habitats, & c.)* Regulations 1994 (as amended). This legislation makes it an offence to:

- deliberately capture, injure or kill;
- deliberately disturb, including in particular any disturbance which is likely (a) to impair
 their ability (i) to survive, to breed or reproduce, or to rear or nurture their young; or (ii)
 hibernate or migrate, where relevant; or (b) to affect significantly the local distribution or
 abundance of the species to which they belong.



- damage or destroy a breeding site or resting place; and
- possess, control, transport, sell, exchange, or offer for sale or exchange.

Birds

Birds general protection

All species of bird are protected under *Section 1* of the *Wildlife and Countryside Act 1981* (as amended). The protection was extended by the CRoW Act.

The legislation makes it an offence to intentionally:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built;
 or
- take or destroy an egg of any wild bird.

Birds (specially protected species)

Certain species of bird are listed on *Schedule 1* of the *Wildlife and Countryside Act 1981* (as amended) and receive protection under *Sections 1(4)* and *1(5)* of the Act. The protection was extended by the CRoW Act. The legislation confers special penalties where the above mentioned offences are committed for any such bird and also make it an offence to intentionally or recklessly:

- disturb any such bird, whilst building its nest or it is in or near a nest containing dependant young; or
- disturb the dependant young of such a bird.



APPENDIX B - BOTANICAL TARGET NOTES

Target Note 1 – Single storey, brick built changing room building. This has a flat roof and a water tower on the roof. The roof line of the building and the water tower are clad with wooden boards. Some of the boards are missing and some are peeling. There is no roof void and no false ceiling.

Target Note 2 – Single storey brick built changing room building. This is newer than the building at Target Note 1. This has a sloping corrugated metal roof. There are no features suitable for roosting bats.

Target Note 3 - A large amenity grassland playing field occupying the majority of the site. The grassland sward is c. 5 cm high and is regularly mown. The dense sward is dominated by *Lolium perenne* (Perennial Rye-grass) with patches of *Holcus lanatus* (Yorkshire-fog) also present. The grassland is typically species poor containing only a small number of broad-leaved herbs. These include *Achillea millefolium* (Yarrow), *Bellis perennis* (Daisy), *Plantago major* (Greater Plantain), *Taraxacum* sect. *Ruderalia* (Common Dandelion) and *Trifolium repens* (White Clover).

Target Note 4 – A border of dense ruderal vegetation along the boundary of the amenity grassland field. This is approximately 1 m high. Along the northern boundary it is entirely composed of *Pteridium aquilinum* (Bracken). The eastern boundary is also ruderal vegetation including *Chamerion angustifolium* (Rosebay Willowherb), *Cirsium arvense* (Creeping Thistle), *Hedera helix* (Ivy), *Rubus fruticosus* agg. (Bramble), *Senecio jacobaea* (Common Ragwort) and *Urtica dioica* (Common Nettle).

Target Note 5 – A dense scrub strip with some young and semi-mature trees and ornamental shrubs on a raised bund along the southern boundary of the site. This is dominated by *Rubus fruticosus* agg. (Bramble) with trees including *Populus tremula* (Aspen) and *Prunus spinosa* (Blackthorn). The scrub includes *Chamerion angustifolium* (Rosebay Willowherb), *Cirsium arvense* (Creeping Thistle), *Cornus sericea* (Red-osier Dogwood), *Hippophae rhamnoides* (Seabuckthorn) and *Rubus idaeus* (Raspberry).

Target Note 6 - A border of dense ruderal vegetation along the southern boundary of the amenity grassland field between the site and the boundary hedgerow. This is approximately 0.5 m high. The vegetation includes Anthriscus sylvestris (Cow Parsley), Arrhenatherum elatius (False Oatgrass), Artemisia vulgaris (Mugwort), Centaurea nigra (Common Knapweed), Dactylis glomerata (Cock's-foot), Senecio jacobaea (Common Ragwort) and Urtica dioica (Common Nettle).

Target Note 7 - An area of rough grassland around an access point into the south western corner of the site. This has a long, dense sward c. 20 cm high. It is dominated by *Arrhenatherum elatius* (False Oat-grass) and *Dactylis glomerata* (Cock's-foot). There are also patches of *Agrostis stolonifera* (Creeping Bent), *Holcus lanatus* (Yorkshire-fog) and *Lolium perenne* (Perennial Rye-



grass). There are broad-leaved herbs and ruderal species including *Achillea millefolium* (Yarrow), *Centaurea nigra* (Common Knapweed), *Cirsium arvense* (Creeping Thistle), *Epilobium hirsutum* (Great Willowherb), *Pulicaria dysenterica* (Common Fleabane), *Rumex obtusifolius* (Broadleaved Dock), *Senecio jacobaea* (Common Ragwort), *Taraxacum* sect. *Ruderalia* (Common Dandelion), *Trifolium pratense* (Red Clover) and *Trifolium repens* (White Clover).

Target Note 8 – A hedgerow along the southern and western boundary of the site with a security fence in the centre. The hedgerow is dense and c. 2 m x 2 m. It is composed entirely of Ligustrum ovalifolium (Garden Privet) with a field layer of rough grassland. There are several gaps, particularly along the western boundary, which are filled with the security fence or access gates into the site.



APPENDIX C – NOTEWORTHY SPECIES RECORDS

Table A1 displays noteworthy species records that are located within 1 km of the site boundary. These species records were obtained from Merseyside BioBank. The Latin and common names for species are given as well as their level of designation. A glossary defining abbreviations used in the table is given in *Table A2*, *Appendix B*. If a species is not included in the table below it does not necessarily mean the species is absent from the search area, but rather that data-holding organizations do not have records of it in these locations.

Table A1: Noteworthy Species Records within 1 km of the Site Boundary

Latin Name	Common Name	Designation
Amphibians		
Bufo bufo	Common Toad	WCA5.9.5, UKBAP
Lissotriton vulgaris	Smooth Newt	WCA5.9.5
Rana temporaria	Common Frog	WCA5.9.5
Birds		
Alauda arvensis	Skylark	Red, UKBAP, LBAP
Anser anser	Greylag Goose	WCA1.2, Amber
Apus apus	Swift	Amber, LBAP
Delichon urbicum	House Martin	Amber, LBAP
Emberiza schoeniclus	Reed Bunting	Amber, UKBAP
Linaria cannabina	Linnet	Red, UKBAP
Passer domesticus	House Sparrow	Red, UKBAP, LBAP
Perdix perdix	Grey Partridge	Red, UKBAP, LBAP
Poecile montana	Willow Tit	Red, UKBAP
Prunella modularis	Dunnock	Amber, UKBAP
Pyrrhula pyrrhula	Bullfinch	Amber, UKBAP
Sturnus vulgaris	Starling	Red, UKBAP, LBAP
Turdus philomelos	Song Thrush	Red, UKBAP, LBAP
Vanellus vanellus	Lapwing	Red, UKBAP, LBAP
Fish		
Anguilla anguilla	European Eel	UKBAP
Gadus morhua	Atlantic Cod	RDB (VU), UKBAP
Merlangius merlangus	Whiting	UKBAP
Solea solea	Dover Sole	UKBAP
Plants		
Helleborus foetidus	Stinking Hellebore	NS
Hyacinthoides non-scripta	Bluebell	WCA8, LBAP
Meconopsis cambrica	Welsh Poppy	NS



Latin Name	Common Name	Designation
Nepeta cataria	Cat-mint	RDB (VU)
Sorbus anglica	English Whitebeam	NR
Invertebrates		
Aeshna cyanea	Southern Hawker	LBAP
Aeshna grandis	Brown Hawker	LBAP
Aeshna mixta	Migrant Hawker	LBAP
Anax imperator	Emperor Dragonfly	LBAP
Andrena (Cnemidandrena)	Andrena (Cnemidandrena)	LDAI
nigriceps	nigriceps	Notable:B
Coenagrion puella	Azure Damselfly	LBAP
Enallagma cyathigerum	Common Blue Damselfly	LBAP
Ischnura elegans	Blue-tailed Damselfly	LBAP
Libellula depressa	Broad-bodied Chaser	LBAP
Orthetrum cancellatum	Black-tailed Skimmer	LBAP
Sympetrum striolatum	Common Darter	LBAP
Mammals		
Arvicola amphibius	European Water Vole	WCA5.9.4a, UKBAP, LBAP
Chiroptera	Bats	EPS (Sch2), LBAP
Erinaceus europaeus	West European Hedgehog	UKBAP
Hyperoodon ampullatus	Northern Bottlenose Whale	EPS (Sch2), WCA5.9.1, UKBAP
Myotis daubentonii	Daubenton's Bat	EPS (Sch2), WCA5.9.1, LBAP
		EPS (Sch2), WCA5.9.1,
Myotis sp.	a Myotis bat	LBAP
Nyctalus noctula	Noctule Bat	EPS (Sch2), WCA5.9.1, UKBAP, LBAP
Phocoena phocoena	Common Porpoise	EPS (Sch2), WCA5.9.1, RDB (VU), UKBAP
Pipistrellus pipistrellus	Common Pipistrelle	EPS (Sch2), WCA5.9.1, LBAP
Pipistrellus pygmaeus	Soprano Pipistrelle	EPS (Sch2), WCA5.9.1, UKBAP, LBAP
Pipistrellus sp.	a Pipistrelle bat	EPS (Sch2), WCA5.9.1, LBAP
Plecotus auritus	Brown Long-eared Bat	EPS (Sch2), WCA5.9.1, UKBAP, LBAP
Plecotus sp.	a Long-eared bat	EPS (Sch2), WCA5.9.1, LBAP
Sciurus vulgaris	Eurasian Red Squirrel	WCA5.9.1, UKBAP, LBAP



APPENDIX D – ABBREVIATIONS

Table A2 displays abbreviations of protected species legislation.

Table A2: Glossary of Abbreviations Used in this Report:

Code	Full Title	Explanation	
Amber	Amber list	Amber listed species have a population status in the UK of medium conservation concern.	
ВА	The Protection of Badgers Act 1992	Legislation making it an offence to kill, injure or take a Badger, or to damage or interfere with a sett unless a licence is obtained from a statutory authority.	
ВАР	Biodiversity Action Plan	A plan that identifies threats to significantly important species and habitats, and sets out targets and actions to enhance or maintain biodiversity.	
DA	The Deer Act 1991	All wild deer with the exception of Muntjac (<i>Muntiacus reevesi</i>) and Chinese Water deer (<i>Hydropotes inermis</i>) are protected by a closed season.	
EPS (Sch 2)	European Protected Species (Schedule 2)	Animals protected on Schedule 2 of the Conservation (Natural Habitats &c.) Regulations 1994	
HAP	Habitat Action Plan	A plan that identifies threats to a priority habitat and sets out targets and actions to enhance or maintain that habitat.	
IUCN	International Union for Conservation of Nature and Natural Resources (also known as The World Conservation Union)	A worldwide partnership and conservation network to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.	
LBAP	Local Biodiversity Action Plan	A plan that identifies threats to locally important species and habitats, and sets out targets and actions in Species Action Plans and Habitat Action Plans to enhance or maintain biodiversity at the county or regional level.	
LHAP	Local Habitat Action Plan	A plan that identifies threats to a locally important priority habitat and sets out targets and actions to enhance or maintain that habitat.	
LSAP	Local Species Action Plan	A plan that identifies threats to locally important species, and sets out targets and actions to prevent losing that species from the local area.	



Code	Full Title	Explanation	
Notable	Scarce and threatened invertebrates	Invertebrate species which are estimated to occur within the range of 16 to 100 10km squares but subdivision into Notable A and Notable B categories is not possible as there is insufficient information available).	
Notable:A	Scarce and threatened invertebrates	Taxa which do not fall within Red Data Book 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.	
Notable: B	Scarce and threatened invertebrates	Taxa which do not fall within Red Data Book 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.	
NN	Nationally Notable	Designation for invertebrate taxa that are thought to be notably important in the UK.	
NR	Nationally Rare	Species in 15 or fewer hectads in Great Britain.	
NS	National Scarce	Species in 16-100 hectads in Great Britain.	
Red	Red List	Red listed species have a population status in the UK with high conservation concern.	
RDB	Red Data Book Species	Species identified in one of the UK Red Data books.	
RDB(CR)	Critically Endangered	An IUCN Red List designation for species at an extremely high risk of extinction.	
RDB(EN)	Endangered	An IUCN Red List designation for species at a very high risk of extinction.	
RDB(VU)	Vulnerable	An IUCN Red List designation for species at high risk of extinction.	
SAP	Species Action Plan	A plan that identifies threats to significantly important species, and sets out targets and actions to prevent losing that species to extinction.	
UKBAP	UK Biodiversity Action Plan	A plan that identifies threats to locally important species and habitats, and sets out targets and actions in Species Action Plans and Habitat Action Plans to enhance or maintain biodiversity in the UK.	
UKSAP	UK Species Action Plan	A plan that identifies threats to nationally important species, and sets out targets and actions to prevent the decline or extinction of the species in the UK.	
WCA	The Wildlife and Countryside Act 1981 (as amended)	Containing 4 Parts and 17 Schedules, the Act covers protection of wildlife (birds, and some animals and plants), the countryside, National Parks, and the designation of protected areas,	



Code	Full Title	Explanation
		and public rights of way. All wild plants in Britain are protected from intentional uprooting by an unauthorized person, but land owners, land occupiers, persons authorized by either of these or persons authorized in writing by the Local Authority for the area are exempt. Protection for some species may be limited to certain Sections of the Act (e.g. S13(2).
WCA1	Schedule 1 of The Wildlife and Countryside Act 1981 (as amended)	This Schedule lists birds protected by special penalties at all times, but virtually all wild birds have some protection in law. Acts which are prohibited for all wild birds (except derogated 'pest' species) include intentional killing, injuring or taking; taking, damaging or destroying nests in use or being built; taking or destroying eggs; possessing or having control of (with certain exceptions but including live for dead birds, parts or derivative); setting or permitting certain traps, weapons, decoys or poisons. Selling, offering or exposing for sale, possessing or transporting for sale any live wild bird, egg or part of an egg or advertising any of these for sale, or dead wild bird including parts or derivatives are also prohibited. Many birds must be formally registered and ringed if kept in captivity. Schedule I WCA birds are additionally protected from intentional or reckless disturbance while building a nest, or when such a bird is in, on or near a nest containing eggs or young, or
WCA5	Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	intentional or reckless disturbance of dependent young. Schedule 5 animals are protected from intentional killing, injuring or taking; possessing (including parts or derivatives); intentional or reckless damage, destruction or obstruction of any structure or place used for shelter or protection; selling, offering or exposing for sale, possessing or transporting for the purpose of sale (alive or dead, including parts or derivatives). Protection of some species is limited to certain Sections of the Act (e.g. S9(1), S9(4a), S9(4b), S9(5)).
WCA5.9.1	Section 9 (1) under Schedule 5 of <i>The</i> Wildlife and Countryside Act 1981 (as amended)	Protection limited to intentional killing, injury or taking.
WCA5.9.4a	Section 9 (4a) under Schedule 5 of <i>The</i> Wildlife and Countryside Act 1981 (as amended)	Protection limited to damaging, destroying, or obstructing access to, any structure or place used by the animal for shelter or protection.



Code	Full Title	Explanation
WCA5.9.5	Section 9 (5) under Schedule 5 of <i>The</i> Wildlife and Countryside Act 1981 (as amended)	Protection limited to selling, offering for sale, possessing or transporting for purpose of sale, or advertising for sale, any live or dead animal, or any part of, or anything derived from, such animal. Note that all cetaceans (whales and dolphins) and the Basking Shark (<i>Cetorhinus maximus</i>) are now protected from intentional or reckless disturbance.
WCA8	Schedule 8 of The Wildlife and Countryside Act 1981 (as amended)	Plants and fungi protected from intentional picking, uprooting, destroying, trading (including parts or derivatives), <i>etc</i> .