

Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Preliminary Ecological Appraisal and Day Time Building Inspection

Knowsley Village Stables, L34 9BD

Ref: P.1889.23

Date: August 2023

(See revision dates below)

Rev	Date	Details

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EXECUTIVE SUMMARY

Ascerta has been instructed by **AT Contracting & Plant Hire Ltd** to carry out a Preliminary Ecological Appraisal and Daytime Building Inspection for bats of the land and building at Knowsley Village Stables, L34 9BD (hereafter referred to as **the site**).

The Preliminary Ecological Appraisal and Daytime Building Inspection for Bats comprised of a desk study and biological records search, as well as a site walkover survey in order to map habitat types. The survey was extended to assess the potential for protected species to use the site. The assessment provides baseline data regarding the current site conditions and where appropriate allows recommendations to be made in respect of further potential work in order to satisfy current UK wildlife legislation.

The site comprises a semi-improved grassland field with a stable barn (B1) and hardstanding entrance track and parking to the south. Pockets of scrub and tall ruderal vegetation have encroached the grassland and hardstanding habitats throughout and the site is bordered by species poor hedgerow to the east, scattered trees to the north and south. A wet ditch (D1) flows offsite to the north.

Assessed against the '*Guidelines for Ecological Impact Assessment in the UK and Ireland*' 2nd edition (2018), the sites habitats range in ecological value from negligible to within the zone of influence. The site provides habitat for nesting birds, badger, hedgehog, amphibians and bats. The habitats to be lost to the proposals are small in area and not of high ecological value, it is considered that their loss can be mitigated for, and the proposals will not adversely affect the ecological value of the wider area, provided the recommendations detailed below are followed.

- If works have not begun by August 2024, an updated site visit will be required to assess the habitats within the site;
- If trees T3 and T4, assessed to provide **low** bat roost potential, are to be pruned to accommodate proposals, soft felling within the presence of licenced ecologist is recommended;
- If works are to occur within 5m of ditch D1, a survey for water vole to assess the presence/absence of the species and inform recommendations;
- Sensitive lighting to be used to meet the Bat Conservation Trust lighting guidance so not to cause a detrimental effect to light sensitive species;
- Implementation of a badger and hedgehog RAMS (section 5.2) to avoid any harm to this species during the proposed works;
- Implementation of an amphibian RAMS (section 5.2) to avoid any harm to this species during the proposed works;
- Production of an invasive species method statement to avoid the spread of rhododendron (TN1) into the wider landscape during the proposed works;
- Precautionary check for badger prior to works commencing to assess if badgers are using the habitats within the site for shelter;
- Precautionary check for invasive prior to works commencing;

- Enhancing the site for species through appropriate landscape planting that includes native, species rich hedgerows, trees and areas of wildflowers plus provision of integrated bat and bird features within newly constructed buildings;
- Provision of species (section 5.2) within the landscaping plans to provide forage for red squirrel;
- Production of the Defra Metric Biodiversity Net Gain Calculations to minimise impacts on biodiversity and provide net gains in biodiversity;
- Production of a Management Plan to ensure the long-term commitments to manage the planting, protection and enhancement of biodiversity in and around a new development site; and
- Vegetation clearance or pruning should be undertaken outside of the nesting bird season (1st March to 31st August Inclusive) to avoid any impact on breeding birds. Or a nesting bird check undertaken by a suitably experienced ecologist should be undertaken immediately prior to works commencing.

1.0 Introduction

Ascerta has been instructed by **AT Contracting & Plant Hire Ltd** to carry out a Preliminary Ecological Appraisal and Daytime Building Inspection for bats for the land and building within the site. The site OS grid reference is SJ434960 and the What3Words reference is tilt.feel.buck. The extent of the site is displayed in photograph 1.1 below.



Photograph 1.1: Survey area.

Our client seeks planning consent to redevelop the site for residential dwellings with associated access road and associated access road.

The site was visited on 17th August 2023 by Lizzie Atkinson MSc CIEEM, when a Preliminary Ecological Appraisal, which includes an assessment of the potential for protected species to be using the site or surroundings, was carried out in accordance with the *Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit* (JNCC, 2010). The report was prepared following methods detailed in the CIEEM 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (2018) and 'Guidelines for Ecological Report Writing' (2017).

The site comprises a semi-improved grassland field with a stable barn (B1) and hardstanding entrance track and parking to the south. Pockets of scrub and tall ruderal vegetation have encroached the grassland and hardstanding habitats throughout and the site is bordered by species poor hedgerow to the east, scattered trees to the north and south. A wet ditch (D1) flows offsite to the north.

This report presents the results of the survey including evaluation of habitats on site and potential for protected species to be using the site. The report includes recommendations for further actions where applicable, in order to satisfy current UK wildlife legislation and to achieve our client's objectives. Relevant legislation is detailed within Appendix 4.

2.0 Objectives

Our client's objectives are to assess the potential ecological constraints of the proposed development site.

Our objectives are as follows:

- Identify and evaluate any features of ecological value and the potential of the site to support protected species based on the walkover survey and biological records search;
- Identify designated sites within 2km of the site;
- Review protected species records within 2km of the site;
- Map the habitats within the site using JNCC (2010) methods;
- Provide recommendations for further species-specific surveys and mitigation measures where current legislation requires;
- Provide recommendations that seek to enhance the ecological value of the site;
- Provide recommendations to assist our clients in achieving their objectives whilst satisfying current UK wildlife legislation.

3.0 Survey Methods

The Preliminary Ecological Appraisal involved the collection and review of data from a desk study and field survey, along with assessment of the value of the habitats following CIEEM guidelines.

3.1 Desk Study

A review of the designated sites and habitats within 2km of the site has been undertaken in August 2023 using the Multi-Agency Geographic Information for the Countryside (MAGIC) and the Natural England websites.

A review of UK and Local priority species and habitats known to occur within 2km of the site has been undertaken in August 2023; using the Joint Nature Conservation Committee website, Multi-Agency Geographic Information for the Countryside (MAGIC) and local records from BioBank Merseyside (Appendix 5).

3.2 Field Survey

A walkover survey of the site was conducted on 17th August 2023 by Lizzie Atkinson MSc CIEEM. The habitat types and features of ecological interest were identified and mapped in compliance with *the Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit* (JNCC, 2010). During the survey, weather conditions were recorded to ensure optimal surveying conditions according to guidelines. Any sub-optimal conditions will be discussed in the limitations.

This includes the identification of the main species present and examination of the potential for any protected species. Habitats were mapped (Appendix 1) and target notes (Appendix 2) made for any interesting features.

The surveys particularly focused on the following species and habitat features:

- Mammals (badgers, bats, otter, water vole and red squirrel);
- Birds;
- Amphibians and reptiles;
- Invertebrates;
- Hedgerows and boundaries;
- Invasive plant species; and
- Plant communities and trees.

3.3 Bat Survey Methods

The survey methods followed the guidelines set out by the Bat Conservation Trust's *Bat Surveys for Professional Ecologists Good Practice Guidelines – 3rd Edition* (2016). Habitats, buildings and trees were assessed for suitability for use by bats and categorised independently using table 4.1 page 35 within the Bat Conservation Trust Guidelines (Collins, 2016).

Preliminary Ecological Appraisal for Bats

Habitats on site were assessed for their suitability for bats to use them for roosting, commuting and foraging both on the site and surrounding area. Commuting and foraging habitat suitability was categorised **low** to **high**. Any commuting and foraging habitat valued as **moderate** or above may need further survey effort if lost to the proposals.

Preliminary Roost Assessment Trees

All trees were inspected for Potential Roost Features (PRFs). Features searched for included: Natural or woodpecker holes, cracks/splits in major limbs, loose bark, hollows/cavities, dense epicormic growth, bird and bat boxes. Where such features were found they were investigated for scratches or staining, bat droppings and smoothing of surfaces around entry points. Trees assigned a suitability of **moderate** or above may require further inspection if they are to be lost to the development.

External Inspection of the Building

A daytime partial internal and full external inspection of the building was carried out during the survey by a suitably experienced ecologist. The buildings were searched externally looking for signs of bats, including staining on barge boards, soffits and more commonly droppings on flat surfaces i.e., window ledges that would indicate potential roosting sites. Possible bat access points such as loose tiles, cracks and crevices or crawl spaces beneath and/or behind roofing materials such as roofing felt, panelling, soffits and tiles were identified and were also checked for signs of use by bats.

Any buildings/trees on-site are categorised as per Table 3.1 (below). Buildings/trees assigned a suitability of **Low/Moderate** or above may require further inspection if they are to be lost to the development.

Table 3.1: Guidelines for assessing Potential Roost Features (PRFs), commuting and foraging habitat within a proposed development site. Guidelines taken from table 4.1 page 35 of the Bat Conservation Trust Bat Surveys for Professional Ecologists Good Practice Guidelines – 3rd Edition (2016).

Suitability	Roosting Habitats	Commuting and Foraging Habitats
Negligible	<i>Negligible habitat features on site likely to be used by roosting bats.</i>	<i>Negligible habitat features on site likely to be used by commuting or foraging bats.</i>
Low	<i>A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^a and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation ^b).</i> <i>A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential. ^c</i>	<i>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.</i> <i>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</i>
Moderate	<i>A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions^a and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).</i>	<i>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</i> <i>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</i>
High	<i>A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^a and surrounding habitat.</i>	<i>Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</i> <i>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.</i> <i>Site is close to and connected to known roosts.</i>

^a For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

^b Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al., 2015). This phenomenon requires some research in the UK but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments.

^c This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI,2015).

3.4 Badger Survey Methods

The site was searched for setts and badger field signs including foraging areas, latrines and tracks. Attention was paid to the presence of the following field signs:

- Setts: single holes or a series of holes likely to be interconnected underground;
- Latrines: badgers usually deposit faeces in excavated pits;
- Paths and footprints;
- Scratching posts: at the base of trees;
- Snuffle holes: areas where badgers have searched for insects;
- Day nest: bundles of vegetation where badgers may sleep above ground; and
- Traces of hair.

3.5 Water vole and Otter

The offsite ditch (D1) the flows offsite to the north was briefly assessed for use by otters and water vole from the site to the south of the ditch following methods outlined in *Chanin, P. (2003). Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough* and *Strachan, R., Moorhouse, T., Gelling, M. (2011) Water Vole Conservation Handbook, 3rd Edition. Wildlife Conservation Research Unit: Abingdon.*

3.6 Evaluation

Habitats and species on the site were evaluated following the 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (2018). A geographical frame of reference is assigned to each habitat and species, with **International Value** being most important, then **National, Regional, County, District, Local** and lastly, within the immediate **Zone of Influence (Zoi)** of the proposals only.

Value judgements are based on characteristics that can be used to identify ecological resources or features likely to be important in terms of biodiversity. These include site designations such as SSSIs. For undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological resource are considered. Ecological resource quality can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type), other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.

The recommendations detailed within this report aim to meet requirements of the Environment Act and Biodiversity Metric 4.0 as far as possible at this stage.

3.7 Limitations

The site visit was undertaken in August. This is within the optimal time of year for phase 1 habitat surveys and sufficient vegetation was present to enable habitat identification. It is not considered a limit to the conclusions of the report based on the habitats found within the site and the works proposed.

Access to carry out a full internal inspection of the building was not available due to the presence of horses and electric fencing. The building could partially be inspected through open doorways and is not considered a limitation within the report conclusions.

The absence of biological records does not necessarily mean the absence of species. This has been considered within the report conclusions.

The site was visited on only one occasion. This produces a snapshot of habitats and species on the site and others may be present at different times of the day or year. This limitation has been considered within this report.

4.0 Survey Results

4.1 Desk Study

Statutory sites

Two statutory sites were identified within a 2km radius of the proposed development site.

The following statutory sites were identified within the vicinity of the proposals (with approximate distance and direction from the site):

- Acornfield Plantation Local Nature Reserve (LNR), 1.4km north; and
- Croxteth LNR, 2km south-west.

Non-statutory sites

Eleven non-statutory sites were identified within a 2km radius of the proposed development site.

The following non-statutory sites were identified within the vicinity of the proposals (with distance and direction from the site):

- Acornfield Plantation Local Wildlife Site (LWS), 1.4km north;
- Otis Meadow LWS, 1.2km north-west;
- Kraft Operational Land LWS, 1.2km north-west;
- Knowlsey Brook LWS, 415m east;
- Howards Pits LWS, 1.2km west;
- Meakin's Pit LWS, 1km south-west;
- The Roughs LWS, 1.1km south-west;

- Little Wood LWS, 1.9km south;
- Aker's Pits LWS, 1.1km south;
- Knowsley Park LWS, 400m east; and
- Croxteth Park, River Alt and adjacent to sites through Croxteth LWS, 1.3km south-west.

The full designations for each site are listed within Appendix 5.

The site does not lie within a Natural England SSSI Impact Risk Zone as mapped on Magic Maps.

Priority Habitats

Grassland

One area of good quality semi-improved grassland was returned within 2km of the site and located 1km north-west.

Wetland

One area of lowland fens was returned within 2km of the site and located 1.7km north.

Woodland

Numerous areas of Deciduous Woodland were returned within 2km of the site, with the closest area located approximately 40m north.

Two areas of Wood pasture and Parkland Biodiversity Action Plan (BAP) Priority Habitat were also returned, the closest area 670m east.

The site lies within a Conservation Target area for the following Priority Species:

- Lapwing

The site also falls within a breeding area for the following Grassland Assemblage Farmland Birds:

- Corn bunting
- Grey partridge
- Lapwing
- Tree sparrow
- Yellow wagtail

Two zones of Nature Improvement Area were returned within 2km of the site:

- River Alt and M57 Corridor, 160m south at closest point; and
- Knowsley and St Helens Mosslands, 1.3km east.

The site lies approximately 750m east of the Lancashire Wildlife Trust (LWT) Squirrel Alert Map.

Priority Species

Following a review of records held by BioBank Merseyside, several priority species that have the potential to occur within the vicinity of the proposed development have been identified. These include birds, bats, red squirrel, water vole, badger, hedgehog, reptiles and amphibians. The species records are summarised below, and the detailed records held by BioBank Merseyside within 2km of the site are displayed within Appendix 5. Protected species legislation can be found within Appendix 4.

Birds

One hundred and ninety-three records were returned for bird species within 2km of the site. Species returned include barn owl, bullfinch, dunnock, lapwing, skylark, willow tit and yellowhammer. All species recorded within 2km are displayed within Appendix 5. Table 4.1 below shows a summary of the closest and most recent bird records and related distance to the site.

Table 4.1. Summary of the closest and most recent bird species records and related distance to site.

Bird Species	Distance of record to site (approx.)	Record date
Starling (<i>Sturnus vulgaris</i>)	>2km north-west	25 th May 2010
Song thrush (<i>Turdus philomelos</i>)	>2km north-west	25 th May 2010
Skylark (<i>Alauda arvensis</i>)	>2km north-west	25 th May 2010
Dunnock (<i>Prunella modularis</i>)	>2km north-west	25 th May 2010

Bats

One hundred and eighteen records for bats within 2km of the site. Bat species include common pipistrelle, soprano pipistrelle, nathusius's pipistrelle, pipistrelle bat species, whiskered bat, noctule, daubenton's bat, brown long-eared bat, myotis species and unknown bat species. Below is a summary of the most recent and closest bat records and related distance to the site (see Table 4.2). All species recorded within 2km are displayed within Appendix 5.

Table 4.2. Summary of closest and most recent bat records, record type and related distance to site.

Bat Species	Record type	Distance of record to site (approx.)	Record date
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	Roost	160m south-east	20 th July 2013
Brown long-eared bat (<i>Plecotus auratus</i>)	Field record	1.3km south-east	18 th October 2022
Unknown bat species (<i>Chiroptera sp.</i>)	Field record	150m south	6 th January 2009

Amphibians

Eighty-four records for amphibians were returned within 2km of the site. Species present include smooth newt, great crested newt, common toad and common frog. All species recorded within 2km are displayed within Appendix 5. Below (Table 4.3) is a summary of the closest and most recent amphibian records and related distance to the site.

Table 4.3. Summary of most recent and closest amphibian records to and related distance to site.

Notable and Protected Species	Distance of record to site (approx.)	Record date
Common frog (<i>Rana temporaria</i>)	1.8km north-west	4 th September 2022
Common frog (<i>Rana temporaria</i>)	350m south	2 nd July 2019 – 19 th June 2020
Great crested newt (<i>Triturus cristatus</i>)	1.1km north	26 th June 2007

Reptiles

Eleven records for Reptiles were returned within 2km of the site. All species recorded within 2km are displayed within Appendix 5. Below (Table 4.4) is a summary of the closest and most recent reptile records and related distance to the site.

Table 4.4. Summary of most recent and closest reptile records to and related distance to site.

Notable and Protected Species	Distance of record to site (approx.)	Record date
Common Lizard (<i>Zootoca vivipar</i>)	1.3km south-east	2000
Slow worm (<i>Anguis fragilis</i>)	1.1km south-west	1958

Terrestrial mammals

Two hundred and thirty-nine records for terrestrial mammals were returned within 2km of the site. Species present include badger, hedgehog, water vole, red squirrel, grey squirrel and feral ferret. All species recorded within 2km are displayed within Appendix 5. Below (Table 4.5) is a summary of most notable and/or protected species and related distance to site.

Table 4.5. Summary of most notable mammal species and related distance to site.

Notable and Protected Species	Distance of record to site (approx.)	Record date
European Hedgehog (<i>Erinaceus europaeus</i>)	1.9km south-west	21 st October 2022
Brown hare (<i>Lepus europaeus</i>)	1.5km east	2012
Red squirrel (<i>Sciurus vulgaris</i>)	230m south-east	30 th July 2017
Water vole (<i>Arvicola amphibius</i>)	275m east	1999

There were no European Protected Species Licence (EPSL) applications within 2km of the site since 2017.

4.2 Habitat Survey

A habitat survey was conducted on 17th August 2023 by Lizzie Atkinson for the site. The habitat types and features of ecological interest were identified and mapped in compliance with *The Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit* (JNCC, 2010). A list and a summary description of key habitats identified within the site is tabled below (see Table 4.6). Notes on the presence or potential presence of protected species are provided in Section 4.6. The Phase 1 Habitat map can be found in P.1889.23.E01 *Phase One Habitat Survey*, Appendix 1 and photographs within Appendix 3. The Target Notes (TN) and lists of species recorded during survey are presented in Appendix 2.

Weather conditions during the survey were warm (22°C), dry and sunny (2/8 cloud cover) with a F1 (Beaufort Scale) light air, therefore appropriate for this type of survey.

The site lies on the outskirts of Knowsley Village and is bound by Knowsley Lane (B5202) to the east, equestrian pasture to the west and residential dwellings to the north and south. The immediate surrounding land use is predominately residential dwellings, industrial units and areas of woodland with agricultural land present within the wider landscape. The site comprises a semi-improved grassland field with a stable barn (B1) and hardstanding entrance track and parking to the south. Pockets of scrub and tall ruderal vegetation have encroached the grassland and hardstanding habitats throughout and the site is bordered by species poor hedgerow to the east, scattered trees to the north and south. A wet ditch (D1) flows offsite to the north.

Table 4.6. Habitats present on site including habitat alphanumeric code references from JNCC (2010).

Habitat Description and JNCC Codes	Site Description
<i>Hard standing (J4)</i>	Areas of hardcore are present within the site and comprise the entrance track, space formerly used for carparking and yard to the north of building B1. This habitat is displayed in photograph 1 within Appendix 3.
<i>Building(s) (J3.6)</i>	A single building (B1) is present within the site and comprises a large stable barn. The building is detailed within section 4.3 below. The building is displayed within photographs 2-4 within Appendix 3.
<i>Scattered scrub (A2.2)</i>	Pockets of mixed species scrub is present throughout the site within the semi-improved grassland fields and species include bramble and hawthorn. This habitat is displayed in photographs 5-6 within Appendix 3.
<i>Scattered trees (A3.1)</i>	Scattered trees line the northern and southern site boundaries and species present include sycamore, ash and hawthorn. Non-native invasive species rhododendron (TN1) was noted within this habitat along the northern site boundary and the location can be viewed on drawing P.1889.23.E01 in Appendix 1. It is recommended that the mature trees along the northern site boundary are retained and enhanced. This habitat is displayed in photographs 7-10 within Appendix 3.
<i>Semi-improved grassland (B6) and Tall ruderal vegetation (C3.1)</i>	The site predominantly is a semi-improved grassland field. The grassland is currently unmanaged and has been previously grazed by horses with small patches of bare ground noted. The sward height is approximately 5cm in length and encroached with tall ruderal vegetation, predominately within the field margins. Species present include poa sp., fescue sp., bent sp., broadleaved dock, clover, creeping buttercup, dandelion, common nettle, willowherb, curled dock and creeping thistle. This habitat is displayed in photographs 11-14 within Appendix 3.
<i>Species Poor Hedge (J2.1.2)</i>	Intact, species poor hedgerow lines the eastern site boundary and species present include predominately hawthorn with sycamore and elder saplings. It is recommended that this habitat is retained and enhanced. This habitat is displayed in photograph 15 within Appendix 3.
<i>Running water (G2)</i>	An offsite wet ditch (D1) lies immediately north of the site. The ditch was holding water approximately <20cm deep and flows from east to west and is of a moderate flow. The ditch is surrounded by scrub and tall ruderal vegetation and is culverted at the eastern end, flowing through a bridge under Knowsley Lane (B5202). This habitat is displayed in photograph 16 within Appendix 3.

4.3 Preliminary Bat Roost Assessment of Buildings and Trees

Table 4.7. Preliminary bat roost assessment of buildings within the site

Building B1	Building Description
	Building B1 comprises a large, single-storey stable barn currently used to house horses. The barn is constructed in brickwork walls with corrugated metal cladding with a pitched corrugated metal roof with plastic skylights present. The brickwork is in a good condition with no large gaps noted. The barn is open fronted on the northern elevation due to large doors left open and is well illuminated and constructed in materials which would lead to temperature fluctuations, making for unfavourable conditions for bat. No evidence of bats was identified during the external inspection.
	Assessment of B1
	The building was assessed to have negligible hibernation potential for crevice and void dwelling bats and negligible potential for day and maternity roosts for crevice dwelling bats and negligible potential for void dwelling bats. Overall, the building is classified as having negligible bat roosting potential.

Preliminary Roost Assessment Trees

All trees were inspected for Potential Roost Features (PRFs) and drawing P.1889.23.T01 *Tree Survey* in Appendix 1 should be referenced for tree numbers and locations. Tree T3 (sycamore) was densely ivy-clad and was assessed to provide **low** bat roost potential. Tree T4 (ash) was ivy-clad with a broken branch and was assessed to provide **low** bat roost potential. All other trees within and overhanging the site were assessed to provide **negligible** bat roost potential as no suitable PRF were identified.

4.4 Protected and Notable Species

Table 4.9: Habitat suitability for protected and notable species, including evidence, further survey information and reference to photographs/drawings where applicable.

Birds	Habitat suitability
	The species poor hedgerow, scattered trees, scrub, semi-improved grassland, tall ruderal vegetation and building within the site provide suitable foraging and nesting opportunities for bird species.
	The site lies within a Conservation Target area for lapwing and within a Breeding Area for corn bunting, grey partridge, lapwing, tree sparrow and yellow wagtail, however the site provides limited habitat for these species as the grassland habitats are small in size and prone to regular disturbance from grazing horses.

	Species seen / Evidence of presence / Features identified
	During the survey, house martin, swallow and blackbird were identified within the site.
	Further survey required
	For any vegetation removal and pruning to be undertaken, a nesting bird survey will be required (section 5.2).
Bats	Habitat suitability
	The building on site offers negligible potential to support bat roosts as detailed above in section 4.3.
	Trees T3 (sycamore) and Tree T4 (ash) were assessed to provide low bat roost potential. All other trees within and overhanging the site were assessed to provide negligible bat roost potential as no suitable PRF were identified.
	The species poor hedgerow, scattered trees, scrub, semi-improved grassland and tall ruderal vegetation provide good suitability for commuting and foraging bats, with good connectivity to the surrounding land use, including an area of Priority Habitat Deciduous Woodland that lies 40m north of the site at the closest point.
	Species seen / Evidence of presence / Features identified
	Evidence of bats was not identified within the site during the survey.
Badger, hedgehog, red squirrel, and other small mammals	Suitable features were identified within two trees along the northern site boundary. Tree T3 (sycamore) was densely ivy-clad and tree T4 (ash) was ivy-clad with a broken branch and these features provide some potential to support a small bat roost and/or could lead to further PRFs developing as the trees age.
	Further survey required
	No survey for bats will be required at this time (see section 5.2).
	Habitat suitability
	The species poor hedgerow, scattered trees, scrub, semi-improved grassland and tall ruderal vegetation provide foraging and shelter habitat for badger and other small mammal species such as hedgehog.
	Numerous records for red squirrel have been returned within 2km of the site and the site lies approximately 750m east of the LWT Squirrel Alert Map. The mature trees that line the northern site boundary provide connectivity into the wider landscape including the area of Priority Habitat Deciduous Woodland that lies 40m north of the site. The species poor hawthorn hedgerow that borders the eastern site boundary provides areas of forage for red squirrel.
	Species seen / Evidence of presence / Features identified
	No evidence of badger, hedgehog or red squirrel was identified within the site during the survey.

	Further survey required No further survey effort for badger, hedgehog, red squirrel and other small mammals will be required; however Reasonable Avoidance Measures (RAMS) should be implemented, and the site should be enhanced for these species (see section 5.2).
Water vole and otter	Habitat suitability The offsite ditch (D1) to the north of the site provides some habitat for water vole and historical records have been returned within the ditch, 275m east. The ditch was holding <20cm water deep and is culverted at the eastern end with limited connectivity to surrounding water courses making for unfavourable habitat for otter. Otter will not be impacted by the proposals within the site, therefore, do not require further consideration within this planning application and will not be discussed further within this report. Species seen / Evidence of presence / Features identified No evidence of water vole or otter were identified during the site visit. Further survey required If works are to occur within 5m of the ditch (D1), an updated water vole survey is required.
Amphibians	Habitat suitability No ponds are present within the site or within 500m of the site as mapped on Magic Maps. The offsite ditch (D1) provides unfavourable habitat for GCN and other amphibians due to the fast flow of the water. The species poor hedgerow, scrub, semi-improved grassland and tall ruderal vegetation do provide terrestrial habitats for amphibians and the offsite ditch (D1) will provide some limited aquatic habitat for amphibians. Species seen / Evidence of presence / Features identified No evidence of amphibians was identified within the site during the survey. Further survey required No further survey effort for amphibians will be required; however Reasonable Avoidance Measures (RAMS) should be implemented (see section 5.2).
Reptiles	Habitat suitability The habitats within the site do not offer suitability to support reptiles. Ecotones are not present within the site and the habitats are scattered across the site with no suitable connectivity. Species seen / Evidence of presence / Features identified No evidence of reptiles was identified within the site during the survey Further survey required No further survey for reptile will be required. Reptiles do not required consideration within this planning application and will not be discussed further.

Invasive species

Non-native invasive species rhododendron (TN1) has been identified within the site and location can be viewed on drawing P.1889.23.E01 within Appendix 1.

5.0 Evaluation and Recommendations

5.1 Designated Sites and Habitats

There are no statutory or non-statutory protected sites within the vicinity of the proposals that are likely to be directly impacted by the proposals during the construction phase as all designated sites lie over 400m from the proposals. It is considered that designated sites and priority habitats within the vicinity of the site will receive an increase in recreational pressure however the illustrative proposals indicate the new dwellings will not result in a significant increase in the local population therefore this recreational impact is not considered adverse.

The site does not lie within a Natural England SSSI Impact Risk Zone as mapped on Magic Maps. It is considered that there will be no impact on any SSSIs in the vicinity as a result of the proposals.

Mitigation

The habitats on site comprise hardstanding, tall ruderal vegetation, scattered trees, semi-improved grassland, species poor hedgerow, scrub and building. These habitats are considered to have an ecological value of **within the zone of influence** of the site or lower. The site contains no designated or priority habitats. It is recommended that the mature trees that line the northern site boundary and species poor hedgerow to the east should be retained and enhanced.

The production of the Defra Metric Biodiversity Net Gain Calculations is recommended to minimise impacts of biodiversity and provide net gains in biodiversity and the production of a Management Plan to ensure the long-term commitments to manage the planting, protection and enhancement of biodiversity in and around the new development site.

5.2 Protected and Notable Species Recommendations

Birds

The species poor hedgerow, semi-improved grassland, scattered trees, tall ruderal vegetation and scrub provide suitable habitat for nesting and foraging bird species. It is recommended that vegetation clearance and pruning should be undertaken outside of the nesting bird season (**1st March to 31st August Inclusive**) to avoid any impact on breeding birds. If vegetation clearance cannot be undertaken outside of the breeding bird season, a nesting bird check undertaken by a suitably experienced ecologist should be undertaken immediately prior to works commencing. If an active birds' nest is identified a suitable buffer zone should be implemented where no works are to occur within until the young have fledged the nest.

Bats

The habitats on site provide **low** suitability for commuting and foraging bats. The mature trees and species poor hedgerow along the northern and eastern site boundaries should be retained and enhanced to continue providing foraging habitat and connectivity into the wider landscape including the area of Priority Habitat Deciduous Woodland that lies 40m north. It is recommended that sensitive lighting to be used to meet the Bat Conservation Trust lighting guidance so not to cause a detrimental effect to light sensitive species and that the lighting should avoid illuminating these habitats that line the northern and eastern site boundary where possible.

The building on site was assessed to provide **negligible** bat roost potential and requires no further survey effort in relation to bats.

Trees T3 (sycamore) and tree T4 (ash) were assessed to provide **low** bat roost potential. Both trees are to be retained (see drawing P.1889.23.T01 *Tree Survey*, Appendix 1) however, if at a later stage the trees are to be removed or pruned to accommodate proposals, it is recommended that these trees are soft felled within the presence of a licenced ecologist.

All other trees within and overhanging the site were assessed to provide **negligible** bat roost potential as no suitable PRF were identified at the time of the walkover. As PRF can develop as trees age, if works have not occurred by August 2024, an updated **preliminary bat roost assessment** of all trees to be affected by the proposals is recommended to assess their potential to support a bat roost and to inform further recommendations if required.

Badger, hedgehog, red squirrel and other small mammals

The site provides habitat for badger and hedgehog within the species poor hedgerow, semi-improved grassland, scrub and tall ruderal vegetation.

These habitats are likely to be impacted by the proposals and therefore, it is recommended that a **Badger and Hedgehog Reasonable Avoidance Measures (RAMS) Method Statement** is implemented during the works to avoid harm to this species. The RAMS should include:

- Vegetation clearance applies to all habitats cleared in daytime air temperatures above 5°C. Works must be avoided in cold temperatures or if prior overnight temperatures have been less than 1°C;
- The cut material is to be chipped and placed in discrete piles outside the working areas or removed from the site;
- Existing tracks should be utilised for vehicle movements where possible;
- Throughout the works all trenches must be covered at night or ramps provided to prevent badger and hedgehog from getting stuck. Large pipes must also be covered to prevent badger access and risk of these species getting stuck; and
- Construction material will be stored on pallets to avoid creating habitat for hedgehog and badger.

To enable hedgehog continued use of the site it is advised that gaps of at least 13cm by 13cm are left under any new garden fences to enable hedgehog to roam freely within the area following development.

As badgers are a mobile species it is recommended an **updated badger check of suitable habitats** (scrub and semi-improved grassland) is undertaken prior to works commencing within the site to avoid harm to badger that may have moved into the habitats within the site.

The site provides habitat for red squirrel within the species poor hedgerow and scattered trees. It is recommended that these habitats within the site are retained to maintain the sites value for red squirrel and further enhanced for the species with planting of suitable tree species with small seed-bearing species which encourage red squirrels and discourage grey squirrels. Tree species for red squirrel include:

- Scots pine (*Pinus sylvestris*);
- Willow (*Salix* spp.);
- Rowan (*Sorbus aucuparia*);
- Birch (*Betula pendula* or *B. pubescens*);
- Hawthorn (*Crataegus monogyna*);
- Blackthorn (*Prunus spinosa*);
- Alder (*Alnus glutinosa*); and
- Holly (*Ilex aquifolium*).

Invasive species

Rhododendron (TN1) has been identified within the site. To avoid the spread (complying with the Wildlife and Countryside Act 1981, see Appendix 4) of these species within the site during site clearance, it is recommended that an **invasive species management plan** is produced and adhered to during the works. It is recommended that the management plan details suitable management of these species, biosecurity measures and avoidance measures where possible.

Amphibians

No ponds are present within the site or within 500m of the site as mapped on Magic Maps. The offsite ditch (D1) provides unfavourable habitat for GCN and other amphibians due to the fast flow of the water. The species poor hedgerow, scrub, semi-improved grassland and tall ruderal vegetation do provide terrestrial habitats for amphibians and the offsite ditch (D1) will provide some limited aquatic habitat for amphibians. The terrestrial habitats do provide refuge areas and connectivity corridors for amphibians. These habitats are likely to be impacted by the proposals and therefore, it is recommended as the terrestrial habitat to be lost and are small in size that an **Amphibian Reasonable Avoidance Measures (RAMS) Method Statement** is implemented during the works to avoid harm to this species. The RAMS should include:

- Vegetation clearance applies to all habitats cleared in daytime air temperatures above 5°C. Works must be avoided in cold temperatures or if prior overnight temperatures have been less than 1°C;
- The cut material is to be chipped and placed in discrete piles outside the working areas or removed from the site;
- Existing tracks should be utilised for vehicle movements where possible;
- Throughout the works all trenches must be covered at night or ramps provided to prevent amphibians from getting stuck; and
- Construction material will be stored on pallets to avoid creating habitat for amphibians.

5.3 Enhancements

In order to meet requirements for biodiversity protection and enhancement outlined within the NPPF, it is recommended that ecological enhancements are included. These could include:

1. Provision of 4 bird boxes (25mm and 32mm entrance hole box, house sparrow terrace, tree sparrow box, swift box), attached to a retained tree or integrated within new buildings on site;
2. Provision of 4 bat features (e.g. Vivara Pro WoodStone Bat box or similar) attached to a retained tree on site or provision of a bat box (e.g. Vivara bat bricks or '*bird brick houses*' bat boxes) integrated within new buildings; and
3. Suitable landscaping incorporating species that provide a food or shelter resource to red squirrel (section 5.2) and other wildlife to include hawthorn, hazel, holly, blackthorn, field maple, dog rose and honeysuckle as hedgerow species and oak, alder, field maple, silver birch, crab apple, rowan and bird cherry as tree species together with implementing a relaxed mowing regime and establishing wildflowers in these areas.

6.0 Conclusions

The site was subject to an extended phase one habitat survey and a preliminary bat roost assessment of the building. During the survey and following review of historical species records, it is considered that an impact on birds, bats, amphibians, badger, red squirrel and hedgehog are likely to occur in relation to the proposals for the site. The following recommendations have been made to avoid an impact on these species:

- If works have not begun by August 2024, an updated site visit will be required to assess the habitats within the site;
- If trees T3 and T4, assessed to provide **low** bat roost potential, are to be pruned to accommodate proposals, soft felling within the presence of licenced ecologist is recommended;
- If works are to occur within 5m of ditch D1, a survey for water vole to assess the presence/absence of the species and inform recommendations;
- Sensitive lighting to be used to meet the Bat Conservation Trust lighting guidance so not to cause a detrimental effect to light sensitive species;
- Implementation of a badger and hedgehog RAMS (section 5.2) to avoid any harm to this species during the proposed works;
- Implementation of an amphibian RAMS (section 5.2) to avoid any harm to this species during the proposed works;
- Production of an invasive species method statement to avoid the spread of rhododendron (TN1) into the wider landscape during the proposed works;
- Precautionary check for badger prior to works commencing to assess if badgers are using the habitats within the site for shelter;
- Precautionary check for invasive prior to works commencing;
- Enhancing the site for species through appropriate landscape planting that includes native, species rich hedgerows, trees and areas of wildflowers plus provision of integrated bat and bird features within newly constructed buildings;
- Provision of species (section 5.2) within the landscaping plans to provide forage for red squirrel;
- Production of the Defra Metric Biodiversity Net Gain Calculations to minimise impacts on biodiversity and provide net gains in biodiversity;
- Production of a Management Plan to ensure the long-term commitments to manage the planting, protection and enhancement of biodiversity in and around a new development site; and
- Vegetation clearance or pruning should be undertaken outside of the nesting bird season (1st March to 31st August Inclusive) to avoid any impact on breeding birds. Or a nesting bird check undertaken by a suitably experienced ecologist should be undertaken immediately prior to works commencing.

It is considered that there would be very limited impacts on the local ecology as a result of the proposals, provided the recommendations detailed within section 5.0 above are followed.

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Appendix 1



Key

Survey area

J3.6 - Building

J4 - Hardstanding

SI

B6 - Semi-improved grassland

C3.1 - Tall ruderal vegetation

A2.2 - Scrub

J2.1.2 - Species poor hedgerow

G2 - Wet ditch

A3.1 - Scattered trees

A3.1 - Low BRP

Target notes

TN1 - Rhododendron

TN2 - Muckheap

BRP - Bat Roost Potential

DO NOT SCALE.
ALL COORDINATES RELATED TO LOCAL GRID.
LOCATED TO NG BY BEST FIT TO DETAIL.
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PROJECT:

Knowsley Village Stables

DRAWING TITLE:

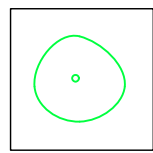
Phase One Habitat Survey

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DATE: 23/08/2023	CHKD BY: LK	REV: -

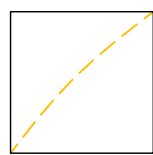
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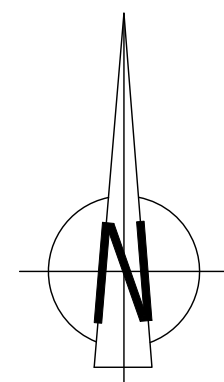
KEY



Existing tree to be retained



Extent of Root Protection Area for retained trees in accordance with BS5837: 2012 *Trees in relation to design, demolition and construction - Recommendations*



REV	DESCRIPTION	DATE
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PROJECT:
Knowsley Village Stables L34 9BD

DRAWING TITLE:
Tree Survey

SCALE: 1:200 @A1	DRAWN BY: KP	DRAWING No:	REV:
DATE: 17/08/2023	CHKD BY: CP	P.1889.23.T01	-



Appendix 2

Appendix 2: Species Lists and Target Notes

Table 1: Flora Species

English Name	Scientific Name
Ash	<i>Fraxinus excelsior</i>
Bindweed	<i>Convolvulus arvensis</i>
Bracken	<i>Pteridium aquilinum</i>
Bramble	<i>Rubus fruticosus agg</i>
Broadleaved dock	<i>Rumex obtusifolius</i>
Broadleaved plantain	<i>Plantago major</i>
Cleavers	<i>Galium aparine</i>
Clover	<i>Trifolium repens</i>
Common daisy	<i>Bellis perennis</i>
Creeping bent-grass	<i>Agrostis stolonifera</i>
Creeping buttercup	<i>Ranunculus repens</i>
Creeping thistle	<i>Cirsium arvense</i>
Crested dog's-tail	<i>Cynosurus cristatus</i>
Cypress	<i>Cupressus sp.</i>
Dandelion	<i>Taraxacum officinale</i>
Elder	<i>Sambucus nigra</i>
Hawthorn	<i>Crataegus monogyna</i>
Herb robert	<i>Geranium robertianum</i>
Holly	<i>Ilex aquifolium</i>
Ivy	<i>Hedera helix</i>
Meadow grass	<i>Poa sp.</i>
Moss	<i>Bryophyta sp.</i>
Perennial ryegrass	<i>Lolium perenne</i>
Ragwort	<i>Senecio jacobaea / Jacobaea vulgaris</i>
Red fescue	<i>Festuca rubra</i>
Reed canary grass	<i>Phalaris arundinacea</i>
Rhododendron *	<i>Rhododendron ponticum</i>
Silver birch	<i>Betula pendula</i>
Stinging nettle	<i>Urtica dioica</i>
Sycamore	<i>Acer pseudoplatanus</i>
Willowherb	<i>Epilobium sp.</i>
Yorkshire fog	<i>Holcus lanatus</i>

* invasive species

Table 2: Target Notes

Target Note Number	Description
TN1	Rhododendron
TN2	Muckheap

Appendix 3

Appendix 3: Photographs

Table 3: Photographs of the site

	
Photograph 1: Hardstanding within the site	Photograph 2: Northern elevation of B1
	
Photograph 3: Eastern elevation of B1 with muckheap (TN2)	Photograph 4: Internal of B1



Photograph 5: Scattered scrub along northern site boundary



Photograph 6: Scattered scrub



Photograph 7: Scattered trees



Photograph 8: Ivy-clad sycamore



Photograph 9: Rot hole on ash tree



Photograph 10: Broken branch on ash tree



Photograph 11: Semi-improved grassland



Photograph 12: Semi-improved grassland



Photograph 13: Tall ruderal vegetation



Photograph 14: Tall ruderal vegetation to the east of B1



Photograph 15: Species poor hedgerow that lines eastern site boundary



Photograph 16: Wet ditch (D1) to the north of the site



Photograph 17: Rhododendron (TN1) along north site boundary

Appendix 4

Appendix 4: Relevant Legislation

European Legislation

The following Directives have been adopted by the European Union and provide protection for fauna and flora species of European importance and the habitats which support them:

- Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive);
- Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive).

UK Legislation

The Habitats Directive has been transposed into national legislation through the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (The Habitats Regulations). This provides for the designation and protection of 'European Sites' (SPAs, SACs and Ramsar Sites, including proposed or potential European Sites) and the protection of 'European Protected Species'.

The key UK legislation relating to nature conservation is the Wildlife and Countryside Act 1981 (as amended) (W&C Act). This Act is supplemented, *inter alia*, by provision in the Countryside and Rights of Way (CROW) Act 2000, and the Natural Environment and Rural Communities Act 2006 (NERC Act). Additional species and habitat specific UK legislation includes the Protection of Badgers Act 1992 and the Hedgerow Regulations 1997.

The Environment Act sets out how the UK will maintain environmental standards following leaving of the EU. The Bill builds on the vision of the 25 Year Environment Plan, with the ambition from the government to leave the environment in a better state than it was when inherited.

The Defra Biodiversity Metric is being implemented to work alongside the Environment Act. This tool calculates potential biodiversity impacts as a result of development and identifies mitigation and compensation requirements to ensure no net loss of biodiversity. In addition, it identifies measures that can be implemented in order to meet Biodiversity gain as a result of development. Defra released a beta version of the biodiversity metric in July 2019, with the most recent revision in March 2023. This metric is likely to be the default metric used by councils, with the most recent version to be submitted to support a planning application.

The National Planning Policy Framework (NPPF) 2021 has been published to provide further planning guidance. Wildlife, biodiversity and ecological networks are referred to in Section 15 '*Conserving and enhancing the natural environment*'. The NPPF states that the planning system should contribute to and enhance the natural and local environment by: recognising the wider benefits of ecosystem services, minimising impacts on biodiversity and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures. Further guidance is provided within Government Circular 06/05: *Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System*.

Species and Habitats of Principal Importance

Species and Habitats of Principal Importance are listed under section 41 of the NERC Act and are a material consideration in planning decisions. Planners require relevant, up to date information from ecological surveys in order to assess the effects of a proposed development on biodiversity as Councils have a statutory obligation under section 40 of the NERC Act to consider biodiversity conservation in the determination of planning applications.

Background information about the lists of priority habitats and species (Species and Habitats of Principal Importance) can be found within the UK Biodiversity Action Plan (UK BAP). Although this has been succeeded by the '*UK Post-2010 Biodiversity Framework*', many of UK BAP tools are still relevant. BAPs identify habitats and species of nature conservation priority on a UK (UK BAP) and Local (LBAP) scale. Most BAP priority habitats and species have Habitat Action Plans (HAP) and Species Action Plans (SAP) and there are also "grouped action plans" for groups of related species with similar conservation requirements. The LBAP relating to this Site is the North Merseyside Biodiversity Action Plan.

Badgers

The legislation protecting badgers in England and Wales is the Protection of Badgers Act 1992.

Under the Protection of Badgers Act 1992 it is an offence *inter alia* to:

- Wilfully kill, injure or take a badger, or to attempt to do so;
- Cruelly ill-treat a badger; or
- Intentionally or recklessly interfere with a badger sett by (a) damaging a sett or any part of one; (b) destroying a sett; (c) obstructing access to or any entrance of a sett; (d) causing a dog to enter a sett; or (e) disturbing a badger when it is occupying a sett.

The Badger Act 1992 defines a badger's sett as "*any structure or place which displays signs indicating current use by a badger*"

Natural England can issue licences to enable works to continue that may affect a protected species. In relation to disturbance of badgers, Natural England (2009) gives guidelines on disturbance which will require a licence. These includes: "*using very heavy machinery (generally tracked vehicles) within 30 metres of any entrance to an active sett; using lighter machinery (generally wheeled vehicles), particularly for any digging operation, within 20 metres; light work such as hand digging or scrub clearance within 10 metres. There are some activities which may cause disturbance at greater distances (such as using explosives or pile driving) and these should be given individual consideration.*"

Bats

In England, all bats and their roosts are protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife & Countryside Act 1981 (as amended). Several species of bat are also highlighted as Priority Species under the UK Biodiversity Action Plan and within the Local BAP.

Under the current legislation as summarised on pages 8 and 9 of the Bat Surveys for Professional Ecologists Good Practice Guidelines – 3rd Edition (2016) it is a criminal offence to:

“To kill, capture, injure or take a wild bat;

- *To damage or destroy a place used by a bat for breeding or resting. All offences of this nature are identified within the Habitats Regulations. This offence is unique in that it can be committed accidentally. No element of intentional, reckless or deliberate action needs to be evidenced;*
- *To disturb bats anywhere (roosts, flight lines or foraging areas) if levels of disturbance can be shown to impair their ability to survive, to breed or reproduce, to rear or nurture their young, to hibernate or migrate or to affect significantly local distribution or abundance;*
- *To intentionally or recklessly disturb a bat, whilst it is occupying a place of shelter or protection;*
- *To intentionally or recklessly obstruct access to any place used by a bat for shelter or protection; and*
- *To be in possession or control of a bat alive or dead (or any part of a bat or anything derived from a bat, although bat droppings are generally considered to be acceptable), or to transport a bat, to sell or exchange a bat or to offer to sell or exchange a bat taken from the wild.”*

Breeding Birds

Breeding Birds are protected under the Wildlife and Countryside Act which make it an offence to:

- *intentionally kill, injure or take any wild bird or take, damage or destroy the nest of any wild bird whilst it is in use or being built;*
- *intentionally take or destroy the egg of any wild bird;*
- *have in one's possession or control any wild bird, dead or alive, or any part of a wild bird (including eggs), which has been taken in contravention of the Act or the Protection of Birds Act 1954;*
- *intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.*

Great Crested Newt

The great crested newt (*Triturus cristatus*) is fully protected under the Wildlife and Countryside Act, 1981 (as amended) and the Habitats Regulations, 2017. It is also a Species of Principal Importance. The legislation makes it an offence to:

- *Deliberately (or intentionally) kill, injure or capture (or take) a great crested newt, or great crested newt egg or eft;*
- *Deliberately (intentionally) damage or destroy any breeding site or resting place (i.e. pond, refuge, hibernaculum);*
- *Deliberately or recklessly obstruct access to any breeding site or resting place;*
- *Deliberately, intentionally or recklessly disturb a great crested newt, in particular disturbance which is likely to:*
 - *impair the ability of the great crested newt to survive, breed, reproduce, or to rear or nurture young;*
 - *impair the ability of the great crested newt to hibernate or migrate; or significantly affect the local distribution or abundance of great crested newts*

Invasive Species

It is an offence under Section 14(2) of the Wildlife and Countryside Act 1981 to ‘*plant or otherwise cause to grow*’ in the wild any plant in Schedule 9 Part II.

Other Aquatic Species

Water vole (*Arvicola amphibious*) are a Species of Principal Importance and also fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to:

- *intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection;*
- *intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose;*
- *intentionally kill, injure or take water voles;*
- *possess or control live or dead water voles or derivatives;*
- *sell water voles or offer or expose for sale or transport for sale; and*
- *publish or cause to be published any advertisement which conveys the buying or selling of water voles.*

It is a criminal offence to intentionally, wilfully kill, injure or take any of the aforementioned protected species or to destroy or disturb its habitat.

Local Policy

The site lies within Knowsley and is covered by The Knowsley Local Plan Core Strategy (adopted 6th January 2016). Policies CS2 (Principal 4) and CS8 aim to ensure biodiversity is retained and enhanced during development and biodiversity protection is referenced in other policies including CS19, CS21, CS23 and CS24. These policies have been taken into account when preparing this report.

Appendix 5

Site Name: Acornfield Plantation

Site Area: 11.62 hectares

National Grid Reference: SJ437977

Date of Designation: 1995

District: Knowsley

Date of Last Revision: July 2003

SBI Number: 38

CITATION: Predominantly a mature/over-mature broadleaf woodland of birch, oak and sycamore with a unique basin mire. Mire provides habitat for breeding dragon and damselflies. Other habitats include: pond, stream, drainage channels, acidic and neutral grasslands, bracken and rhododendron thickets. LNR designated in 1995/6.

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

Guideline		Comment
HABITATS		
H1;	Rarity	4 Priority BAP Habitats, 4 regionally important; 2 locally uncommon.
H2;	Diversity	16 habitats recorded.
H3;	Nearness	--
H4.	Isolation	5 sites within 1 Km.
PLANTS		
SP1;	Rarity	1 regionally important; 46 locally rare species.
SP2;	Diversity	Total of 176 plant species. One of 34 sites with 100 or more species.
SP3;	Naturalness	90.3% of the plants are native to the borough. Colonisation has been aided by man and the site has been physically altered.
SP4.	Nationally Rare	--
ANIMALS		
General SP5;	Rare/priority	--
Birds		
B1;	Non-breeding population	--
B2;	Breeding population	--
B3;	Regional rare/scare	--
B4;	Breeding assemblage	--
B5.	Assemblage, breeding, wintering, passage.	--
Dragonflies		
Od1.	Breeding	Guideline met – breeding confirmed.
Od2.	Regional rare/scarc	Guideline met – breeding confirmed.
Butterflies		
Bf1;	Region rare breeding	--
Bf2.	Breeding assemblage	--
Amphibians		
A1;	Rarity	--
A2.	Exceptional populations	--
Reptiles		
R2;	Exceptional population	--
Bats		
Bat1;	Roost	--
Bat2.	Assemblage	--
Mammals		
Mam1.	Breeding	Guideline met – Water Vole.

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

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

Status of features of nature conservation importance

Habitats

4 Priority BAP habitats

Acid unimproved grassland
Neutral unimproved grassland
Basin Mire
Valley Mire

4 Regionally Important habitats (North West Biodiversity Audit)

Acid unimproved grassland
Neutral unimproved grassland
Basin Mire
Standing water

2 locally uncommon habitats

Basin Mire
Valley Mire

Plants

1 Regionally important species (North West Biodiversity Audit)

Fat duckweed (*Lemna gibba*)

46 Locally rare species

A moss (*Amblystegium serpens*)
A moss (*Aulacomnium androgynum*)
A moss (*Barbula convoluta*)
A moss (*Barbula unguiculata*)
A moss (*Brachythecium rivulare*)
A moss (*Brachythecium rutabulum*)
A moss (*Bryum bicolor*)
A moss (*Bryum capillare*)
A moss (*Calliergon cuspidatum*)
A liverwort (*Calypoeia muelleriana*)
A moss (*Campylopus pyriformis pyriformis*)
Pendulous sedge (*Carex pendula*)
A liverwort (*Cephalozia bicuspidata*)
A moss (*Ceratodon purpureus*)
Greater Celandine (*Chelidonium majus*)
A moss (*Dicranoweisia cirrata*)
A moss (*Eurhynchium praelongum praelongum*)
A moss (*Frunaria hygrometrica*)
Hedge Bedstraw (*Galium mollugo*)
Wood avens (*Geum urbanum*)
A moss (*Hypnum jutlandicum*)
A moss (*Isopterygium elegans*)
Fat Duckweed (*Lemna gibba*)
A liverwort (*Lepidozia reptans*)
A moss (*Lophocolea heterophylla*)
A moss (*Orthodontium lineare*)
A moss (*Orthodontium affine*)
A liverwort (*Pellia epiphylla*)
A liverwort (*Pellia neesiana*)
Pale Persicaria (*Persicaria lapathifolia*)
A moss (*Pohlia nutans*)
A moss (*Polytrichum juniperinum*)
A moss (*Rhynchostegium confertum*)
A moss (*Rhytidiadelphus squarrosus*)
A moss (*Schistidium apocarpum* agg.)
A moss (*Scleropodium apocarpum* agg.)
A moss (*Scleropodium tourettii*)
A moss (*Sphagnum auriculatum auriculatum*)
A moss (*Sphagnum cuspidatum*)
A moss (*Sphagnum fimbriatum*)
A moss (*Sphagnum palustre*)
A moss (*Sphagnum recurvum* var. *mucronatum*)

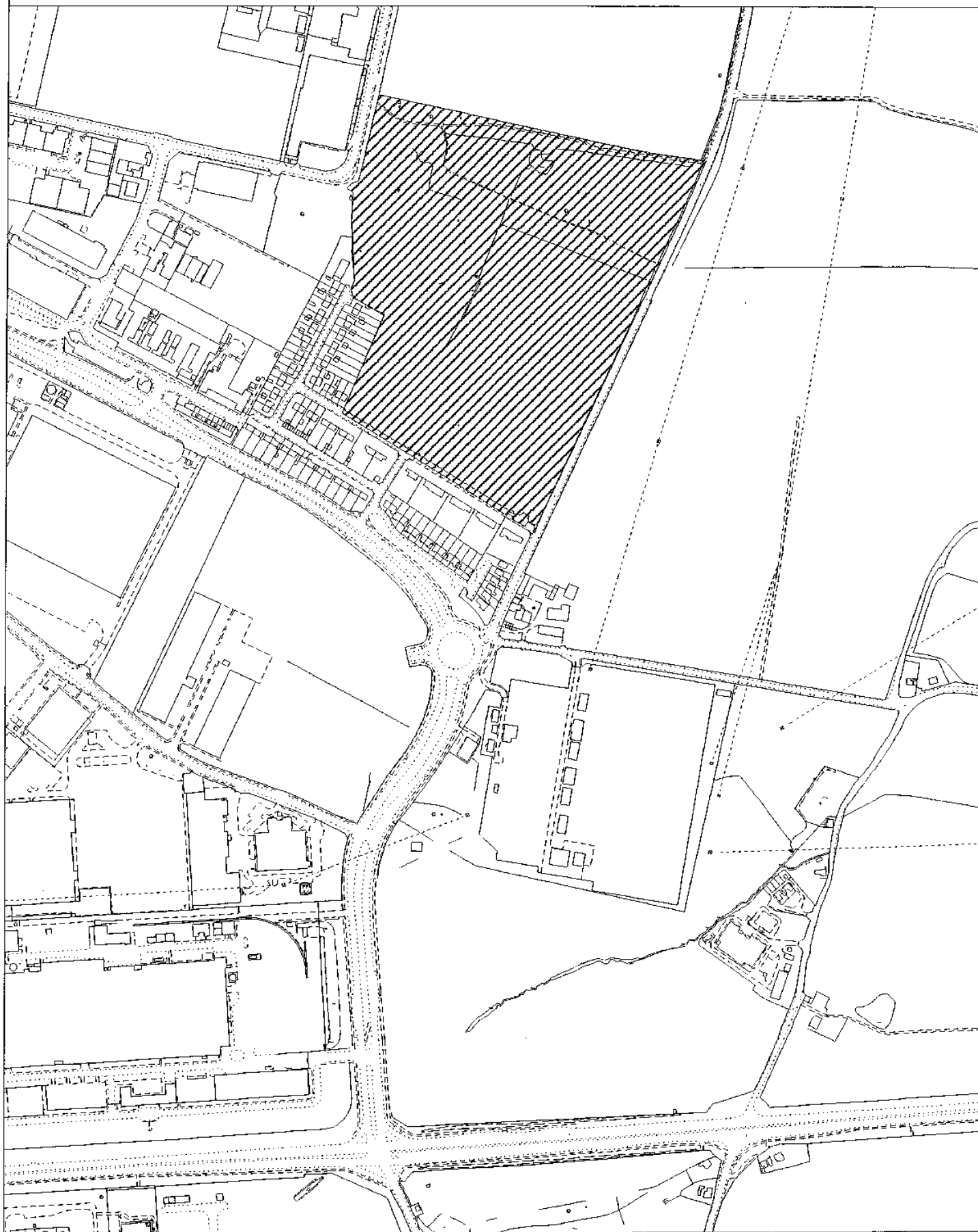
A moss (*Sphagnum squarrosum*)
A moss (*Sphagnum* sp.)
A moss (*Tetraphis pellucida*)
Upright Hedge-parsley (*Torilis japonica*)
A moss (*Tortula muralis*)
A moss (*Ulota crispa*)

SBI 38. Acornfield Plantation
Scale 1:5000

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Environmental
Advisory Service



Status of features of nature conservation importance PROVISIONAL LIST

Habitats

1 Regionally Important habitat

G1 - Standing water

7 Habitats recorded

A121 - Woodland: coniferous, semi-natural

F21 - Marginal/inundation: marginal

G1 - Standing water

G2 - Running water

J21 - Boundaries: intact hedge

J26 - Boundaries: dry ditch

J4 - Bare ground

Plants

1 WCA Schedule 8

Hyacinthoides non-scripta (Native Bluebell)

1 species of conservation concern

Hyacinthoides non-scripta (Native Bluebell)

2 regionally important

Hyacinthoides non-scripta (Native Bluebell)

Rumex longifolius (Northern Dock)

3 locally rare species

Hyacinthoides non-scripta (Native Bluebell)

Rumex longifolius (Northern Dock)

Nuphar lutea (Yellow Water Lily)

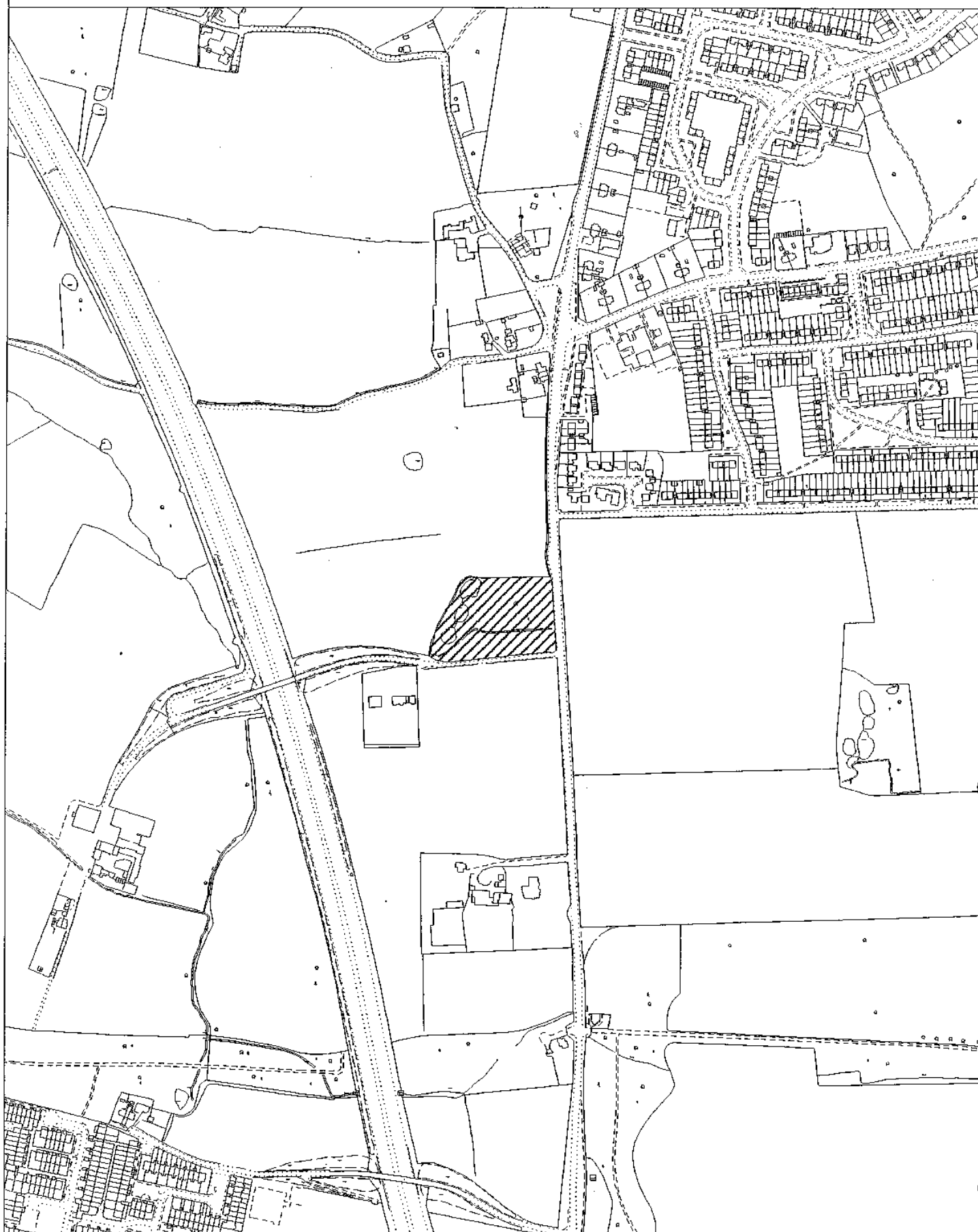
SBI 59. Aker's Pits
Scale 1:5000

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Environmental
Advisory Service



Site Name: Howard's Pits, Huyton

Site Area: 1.85 hectares

National Grid Reference: SJ423957

Date of Designation: 2003

District: Knowsley

Date of Last Revision: July 2003

SBI Number: 43

CITATION: A mature broadleaf woodland with ponds and drainage ditches.

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

Guideline		Comment
HABITATS		
H1; H2; H3; H4.	Rarity Diversity Nearness Isolation	2 Priority BAP Habitats, 2 regionally important. 10 habitats recorded. 22 sites within 1 Km. --
PLANTS		
SP1; SP2; SP3; SP4.	Rarity Diversity Naturalness Nationally Rare	1 WCA Schedule 8; 1 species of conservation concern; 2 regionally important; 2 locally rare species. Total of 85 plant species. 90.6% of the plants are native to North Merseyside. Colonisation has been aided by man and the site has been physically altered. --
ANIMALS		
General SP5; Birds B1; B2; B3; B4; B5. Dragonflies Od1; Od2. Butterflies Bf1; Bf2. Amphibians A1; A2. Reptiles R2; Bats Bat1; Bat2. Mammals Mam1.	Rare/priority Non-breeding population Breeding population Regional rare/scare Breeding assemblage Assemblage, breeding, wintering, passage. Breeding Regional rare/scarce Region rare breeding Breeding assemblage Rarity Exceptional populations Exceptional population Roost Assemblage Breeding	-- -- -- -- -- -- -- -- -- -- -- -- -- -- --

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

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

Status of features of nature conservation importance

Habitats

2 Priority BAP habitats

Standing water
Single species dominant swamp

2 Regionally Important Habitats (North West Biodiversity Audit)

Unimproved acid grassland
Unimproved neutral grassland

Plants

1 Wildlife and Countryside Act - Schedule 8 species

English Bluebell (*Hyacinthoides non-scripta*)

1 Species of Conservation Concern

English Bluebell (*Hyacinthoides non-scripta*)

2 Regionally important species (North West Biodiversity Audit)

English Bluebell (*Hyacinthoides non-scripta*)
Black Bryony (*Tamus communis*)

2 Locally rare species

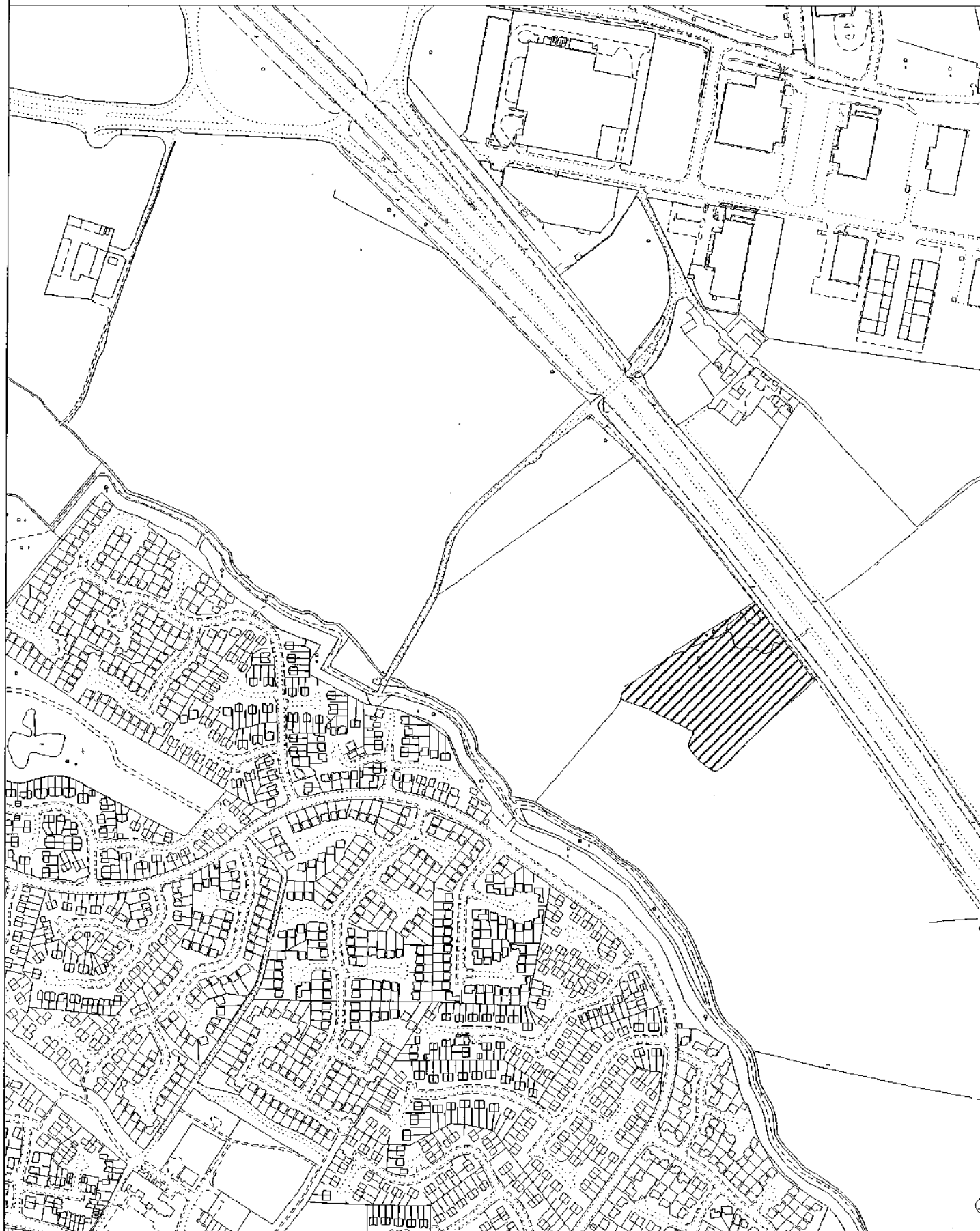
Bifid Hemp-nettle (*Galeopsis bifida*)
Wood Speedwell (*Veronica montana*)

SBI 43. Howard's Pits
Scale 1:5000

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Environmental
Advisory Service



Site Name: Knowsley Brook

Site Area: 2.77 hectares

National Grid Reference: SJ421965

Date of Designation: 2003

District: Knowsley

Date of Last Revision: July 2003

SBI Number: 70

CITATION: An open water course providing good habitat for water voles.

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

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

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

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

Status of features of nature conservation interest

Animals

Mammals

1 Wildlife and Countryside Act – Schedule 5 species

Water vole (*Arvicola terrestris*)

SBI 70. Knowsley Brook
Scale 1:15,000

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Environmental
Advisory Service



Site Name: Knowsley Park

Site Area: 1182.5 hectares

National Grid Reference: SJ455950

Date of Designation: 1995 (part)

District: Knowsley

Date of Last Revision: July 2003

SBI Number: 40

CITATION: Ancient parkland and estate on a mix of acidic(peat) and neutral soils with sandstone exposures along the brooks. Much coniferous planting has taken place although several of the woodlands contain plants indicative of ancient semi-natural woodland. Other habitats include dams with open water, acidic grassland, remnant heath and mire. The Park also has populations of bats and other protected species.

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

Guideline		Comment
HABITATS		
H1; H2; H3; H4.	Rarity Diversity Nearness Isolation	5 Priority BAP habitats; 7 regionally important; 2 locally uncommon. 32 habitats recorded. More than 15 sites within 1 Km. --
PLANTS		
SP1; SP2; SP3; SP4.	Rarity Diversity Naturalness Nationally Rare	1 Species of conservation concern; 4 regionally important; 30 locally rare species. Total of 234 plant species. One of 34 sites with 100 or more species. Colonisation has been aided by man and the site has been physically altered. --
ANIMALS		
General SP5; Birds B1; B2; B3; B4; B5. Dragonflies Od1; Od2. Butterflies Bf1; Bf2. Amphibians A1; A2. Reptiles R2; Bats Bat1; Bat2. Mammals Mam1.	Rare/priority Non-breeding population Breeding population Regional rare/scare Breeding assemblage Assemblage, breeding, wintering, passage. Breeding Regional rare/scarce Region rare breeding Breeding assemblage Rarity Exceptional populations Exceptional population Roost Assemblage Breeding	-- -- -- Guideline met. Guideline met – woodland, open water. -- -- -- -- -- -- -- -- -- Guideline met – Water Voles; Red Squirrels.

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

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

Status of features of nature conservation importance PROVISIONAL LIST

Habitats

7 regionally important.	B1.1 Acidic Grassland Unimproved B2.1 Neutral Grassland Unimproved B5 Marshy Grassland E3.2 Basin Mire F1.2 Swamp tall fen vegetation G1 Standing Water I1.4.1 Other exposure acid/neutral
5 Priority BAP Habitats	B1.1 Acidic Grassland unimproved B2.1 Neutral Grassland Unimproved E3.2 Basin Mire F1.1 Swamp single sp. dominant F1.2 Swamp tall fen vegetation
2 Locally uncommon	E2.1 Flush/spring acid/ neutral E3.2 Basin Mire
32 habitats recorded	

Plants

1 species of conservation concern	Hyacinthoides non-scripta
4 regionally important	Carex pseudocyperus Hyacinthoides non-scripta Myosoton aquaticum Viola palustris
30 locally rare species	Blasia pusilla Carex pendula Carex pilulifera Chaenorhinum majus Circaea lutetiana Conocephalum conicum Dipsacus fullonum Dryopteris affinis Equisetum sylvaticum Euphrasia nemorosa Galium saxatile Hypericum tetrapterum Isopterygium elegans Juncus bulbosus Lysimachia nemorum Myosoton aquaticum Oreopteris limbosperma Pellia epiphylla Potentilla palustris Rhizomnium punctatum Salix repens Scrophularia auriculata Sherardia arvensis Sphagnum fimbriatum Sphagnum palustre Sphagnum recurvum var. mucronatum Symphoricarpos albus Veronica chamaedrys Veronica serpyllifolia Viola palustris

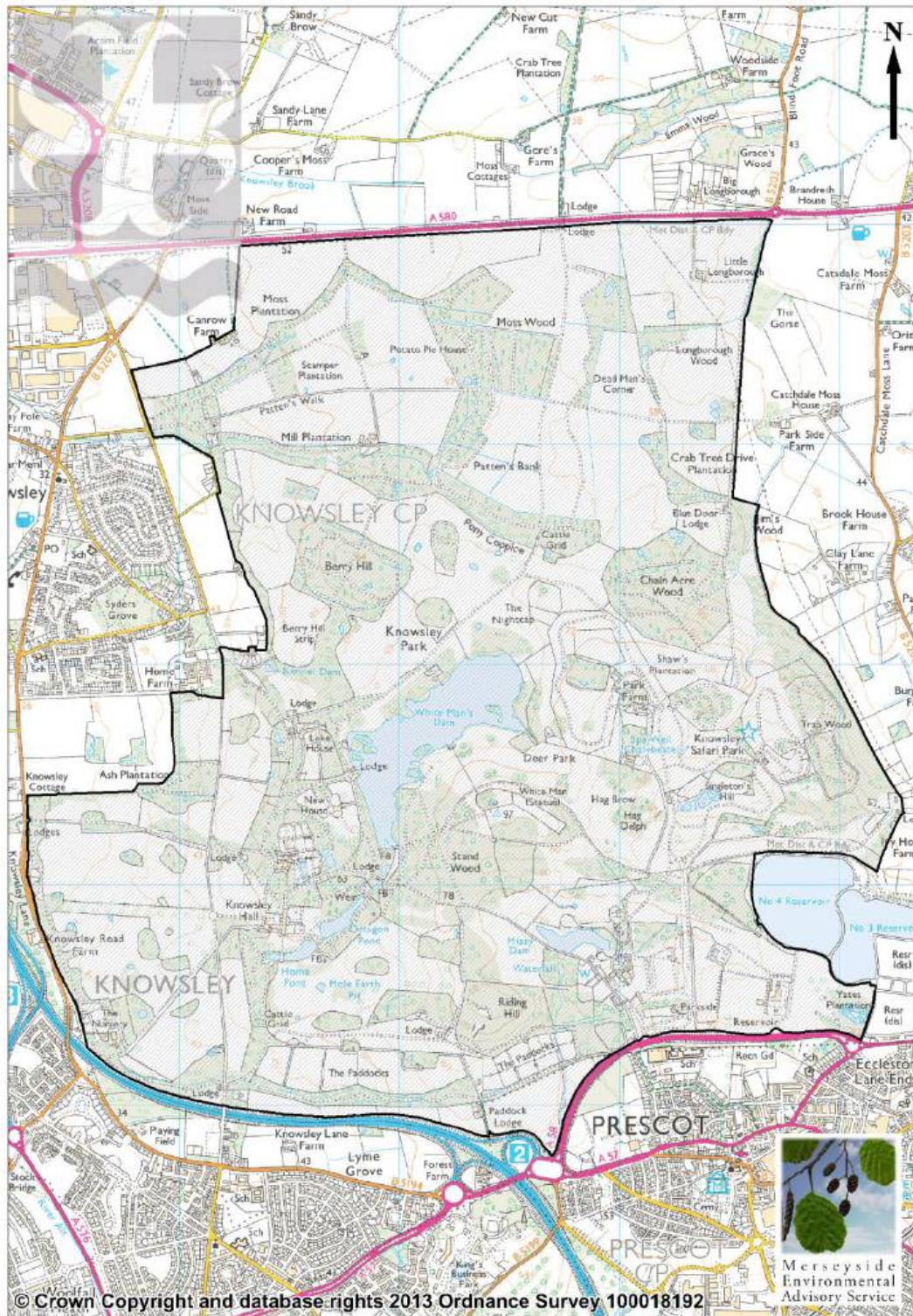
Total of 234 plant species

Mammals

Water voles, red squirrel

LWS 40. Knowsley Park
Scale 1:25,000

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Merseyside
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Advisory Service

Merseyside
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Status of features of nature conservation importance

Habitats

1 Priority BAP habitat Unimproved neutral grassland

**2 Regionally Important habitat
(North West Biodiversity Audit)** Unimproved neutral grassland
Marshy grassland

Plants

**Regionally important species
(North West Biodiversity Audit)** Grey Club-rush (*Schoenoplectus tabernaemontani*)

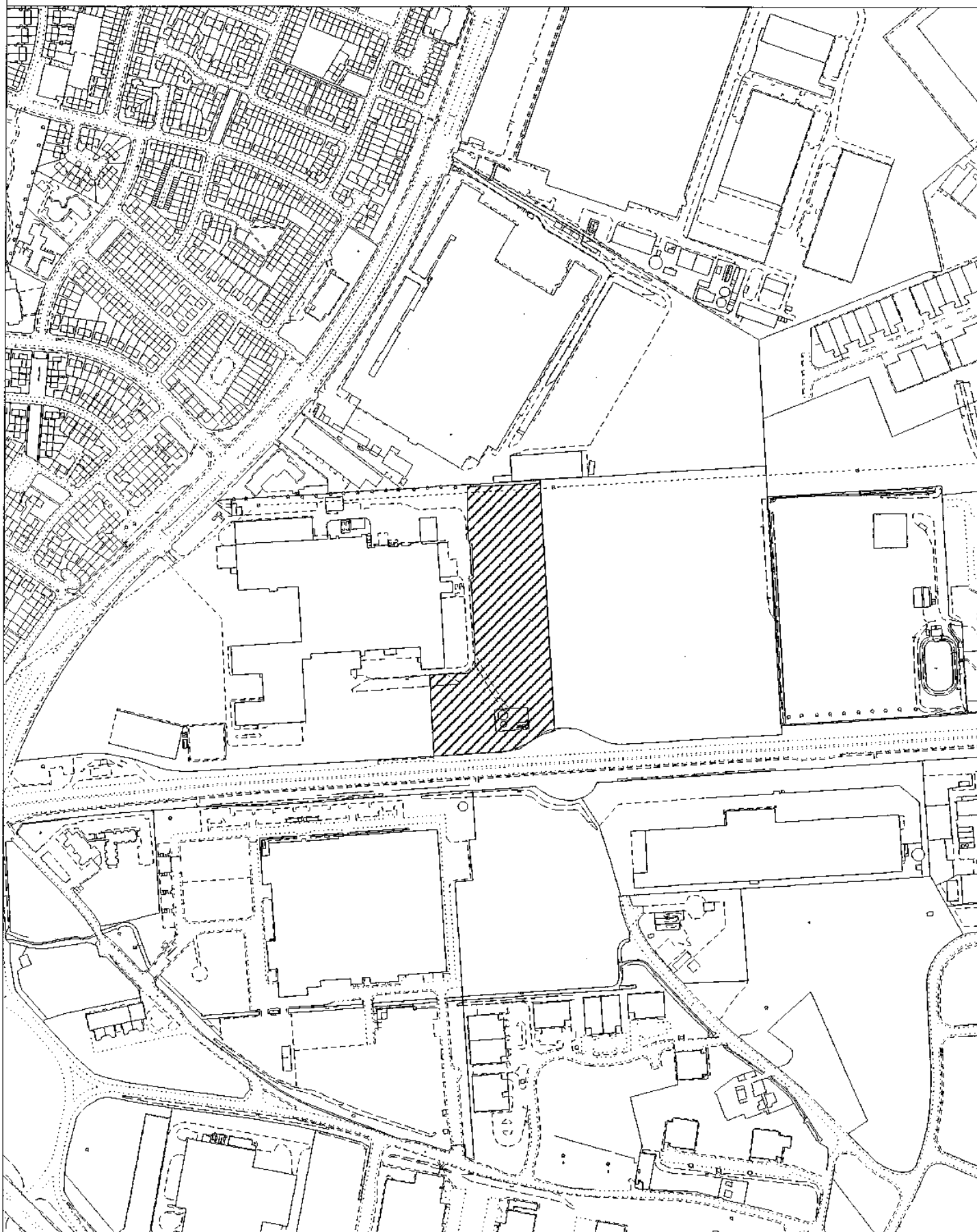
5 Locally rare species Lady's mantle (*Alchemilla vulgaris* agg.)
Dewberry (*Rubus caesius*)
Creeping willow (*Salix repens*)
Grey Club-rush (*Schoenoplectus tabernaemontani*)
Small nettle (*Urtica urens*)

SBI 4. Kraft Operational Land
Scale 1:5000

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Environmental
Advisory Service



Site Name: Little Wood, Stockbridge Village

Site Area: 8.04 hectares

National Grid Reference: SJ426942

Date of Designation: 1995

District: Knowsley

Date of Last Revision: July 2003

SBI Number: 8

CITATION: Predominantly broadleaf woodland with much species diversity and an interesting invertebrate fauna.

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

Guideline		Comment
HABITATS		
H1; H2; H3; H4.	Rarity Diversity Nearness Isolation	1 regionally important. 12 habitats recorded. 17 sites within 1 Km.
PLANTS		
SP1; SP2; SP3; SP4.	Rarity Diversity Naturalness Nationally Rare	1 WCA Schedule 8; 1 species of conservation concern; 2 regionally important; 8 locally rare species. Total of 151 plant species. One of 34 sites with 100 or more species. 87.4% of the plants are native to North Merseyside. Colonisation has been aided by man and the site has been physically altered. --
ANIMALS		
General SP5; Birds B1; B2; B3; B4; B5. Dragonflies Od1; Od2. Butterflies Bf1; Bf2. Amphibians A1; A2. Reptiles R2; Bats Bat1; Bat2. Mammals Mam1.	Rare/priority Non-breeding population Breeding population Regional rare/scare Breeding assemblage Assemblage, breeding, wintering, passage. Breeding Regional rare/scarc Region rare breeding Breeding assemblage Rarity Exceptional populations Exceptional population Roost Assemblage Breeding	Invertebrate interest is high, requires survey. -- -- -- -- -- -- -- -- -- -- -- -- -- --

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

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

Status of features of nature conservation importance

Habitats

1 Regionally Important habitat (North West Biodiversity Audit)

Standing water

Plants

1 Wildlife and Countryside Act – Schedule 8 species

English Bluebell (*Hyacinthoides non-scripta*)

1 Species of Conservation Concern

English Bluebell (*Hyacinthoides non-scripta*)

2 Regionally important species (North West Biodiversity Audit)

English Bluebell (*Hyacinthoides non-scripta*)
Cyperus sedge (*Carex pseudocyperus*)

11 Locally rare species

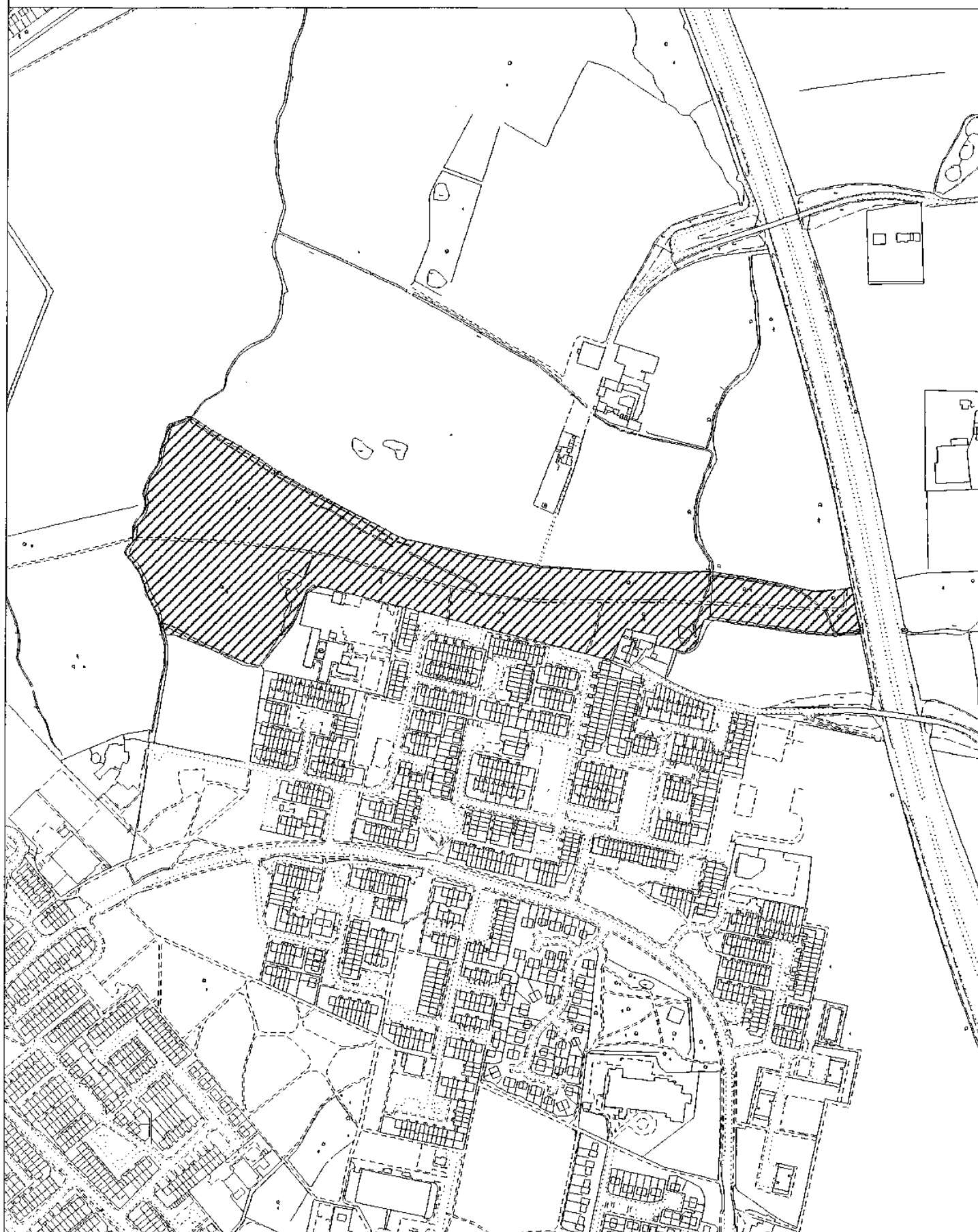
Nodding Bur-marigold (*Bidens cernua*)
Large Bitter-cress (*Cardamine amara*)
Cyperus sedge (*Carex pseudocyperus*)
Enchanter's –nightshade (*Circaea lutetiana*)
Wood Avens (*Guem urbanum*)
Spotted Dead-nettle (*Lamium maculatum*)
Dotted loosestrife (*Lysimachia punctata*)
Yellow loosestrife (*Lysimachia vulgaris*)
Three-nerved Sandwort (*Moehringia trinervia*)
Common bistort (*Persicaria bistorta*)
Feverfew (*Tanacetum parthenium*)

SBI 8. Little Wood
Scale 1:5000

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Environmental
Advisory Service



Site Name: Otis Meadow

Site Area: 2.56 hectares

National Grid Reference: SJ426972

Date of Designation: 2003

District: Knowsley

Date of Last Revision: July 2003

SBI Number: 55

CITATION: A mix of damp and dry grasslands with developing scrub. Unusual habitats within the Knowsley Industrial Estate.

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

Guideline		Comment
HABITATS		
H1;	Rarity	1 Priority BAP Habitats, 3 regionally important.
H2;	Diversity	7 habitats recorded.
H3;	Nearness	--
H4.	Isolation	3 sites within 1 Km.
PLANTS		
SP1;	Rarity	1 regionally important; 2 locally rare species.
SP2;	Diversity	Total of 109 plant species. One of 34 sites with 100 or more species.
SP3;	Naturalness	89.9% of the plants are native to North Merseyside. Colonisation has been unaided by man and the site has been physically altered.
SP4.	Nationally Rare	--
ANIMALS		
General SP5;	Rare/priority	--
Birds		
B1;	Non-breeding population	--
B2;	Breeding population	--
B3;	Regional rare/scare	--
B4;	Breeding assemblage	--
B5.	Assemblage, breeding, wintering, passage.	--
Dragonflies		
Od1;	Breeding	--
Od2.	Regional rare/scarce	--
Butterflies		
Bf1;	Region rare breeding	--
Bf2.	Breeding assemblage	--
Amphibians		
A1;	Rarity	--
A2.	Exceptional populations	--
Reptiles		
R2;	Exceptional population	--
Bats		
Bat1;	Roost	--
Bat2.	Assemblage	--
Mammals		
Mam1.	Breeding	--

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

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

Site Name:

Otis Meadow

SBI Number:

55

Status of features of nature conservation importance PROVISIONAL LIST

Habitats

3 regionally important.

B2.1 Neutral Grassland Unimproved
B5 Marshy Grassland
G1 Standing Water

7 habitats recorded

A2.2 Scrub, scattered
C3.1 Other tall herb and fern: tall ruderal
J2.6 Miscellaneous, Dry Ditch
J1.2 Miscellaneous, Cultivated/disturbed land, amenity grassland
B2.1 Neutral Grassland Unimproved
B5 Marshy Grassland
G1 Standing Water

Plants

1 regionally important

Vicia tetrasperma

2 locally rare species

Vicia tetrasperma
Dacetylorthiza incarnata

Total of 109 plant species

SBI 55. Otis Meadow

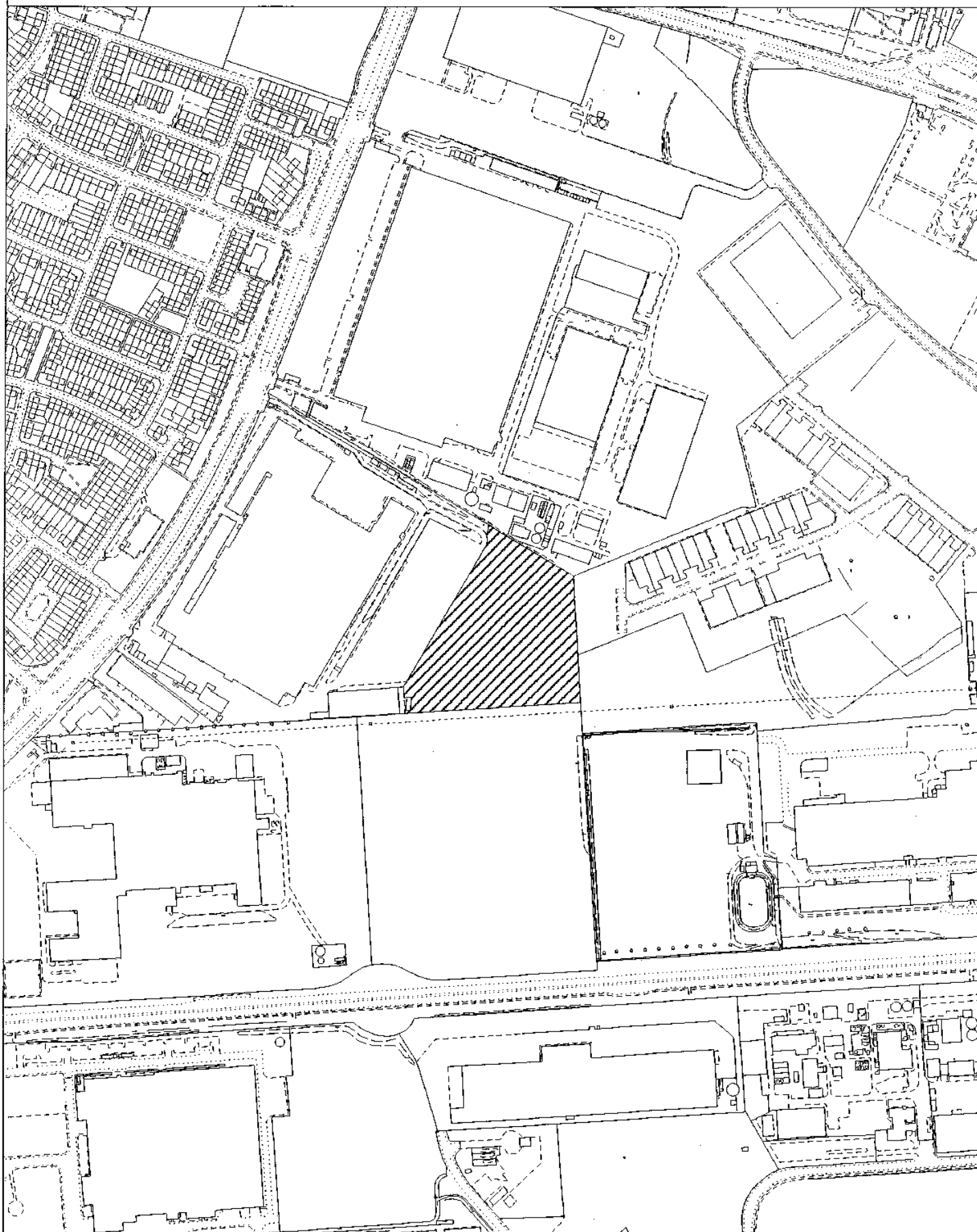
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Environmental
Advisory Service



Site Name: **The Roughs**

Site Area: **4.36 hectares**

National Grid Reference: **SJ427948**

Date of Designation: **2003**

District: **Knowsley**

Date of Last Revision: **July 2003**

SBI Number: **51**

CITATION: A mature broadleaf woodland with associated ponds and stream, possibly part of a garden in the past.

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

Guideline		Comment
HABITATS		
H1; H2; H3; H4.	Rarity Diversity Nearness Isolation	1 regionally important; 1 locally uncommon. 11 habitats recorded. 23 sites within 1 Km. --
PLANTS		
SP1; SP2; SP3; SP4.	Rarity Diversity Naturalness Nationally Rare	1 locally rare species. Total of 84 plant species. 92.9% of the plants are native to North Merseyside. Colonisation has been aided by man and the site has been physically altered. --
ANIMALS		
General SP5; Birds B1; B2; B3; B4; B5. Dragonflies Od1; Od2. Butterflies Bf1; Bf2. Amphibians A1; A2. Reptiles R2; Bats Bat1; Bat2. Mammals Mam1.	Rare/priority Non-breeding population Breeding population Regional rare/scare Breeding assemblage Assemblage, breeding, wintering, passage. Breeding Regional rare/scarce Region rare breeding Breeding assemblage Rarity Exceptional populations Exceptional population Roost Assemblage Breeding	-- -- -- -- -- -- -- -- -- -- -- -- -- -- --

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

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

Status of features of nature conservation importance PROVISIONAL LIST

Habitats

1 regionally important.

G1 Standing water

1 Locally uncommon

G2.2 Running Water, mesotrophic

11 habitats recorded

A1.1.1 Woodland, broadleaved, semi-natural

A1.1.2 Woodland, broadleaved, plantation

G1 Standing water

G2 Running water

A2.1 Scrub, dense/continuous

C1.1 Bracken, continuous

C3.1 Tall herb and fern, other, tall ruderal

G2.2 Running Water, mesotrophic

J1.4 Misc. cultivated/disturbed land, introduced shrub

J2.1.2 Misc. boundaries, hedges-intact, species poor

J4 Misc. bare ground

Plants

0 WCA Schedule 8

0 species of conservation concern

0 regionally important

1 locally rare species

Persicaria lapathifolio

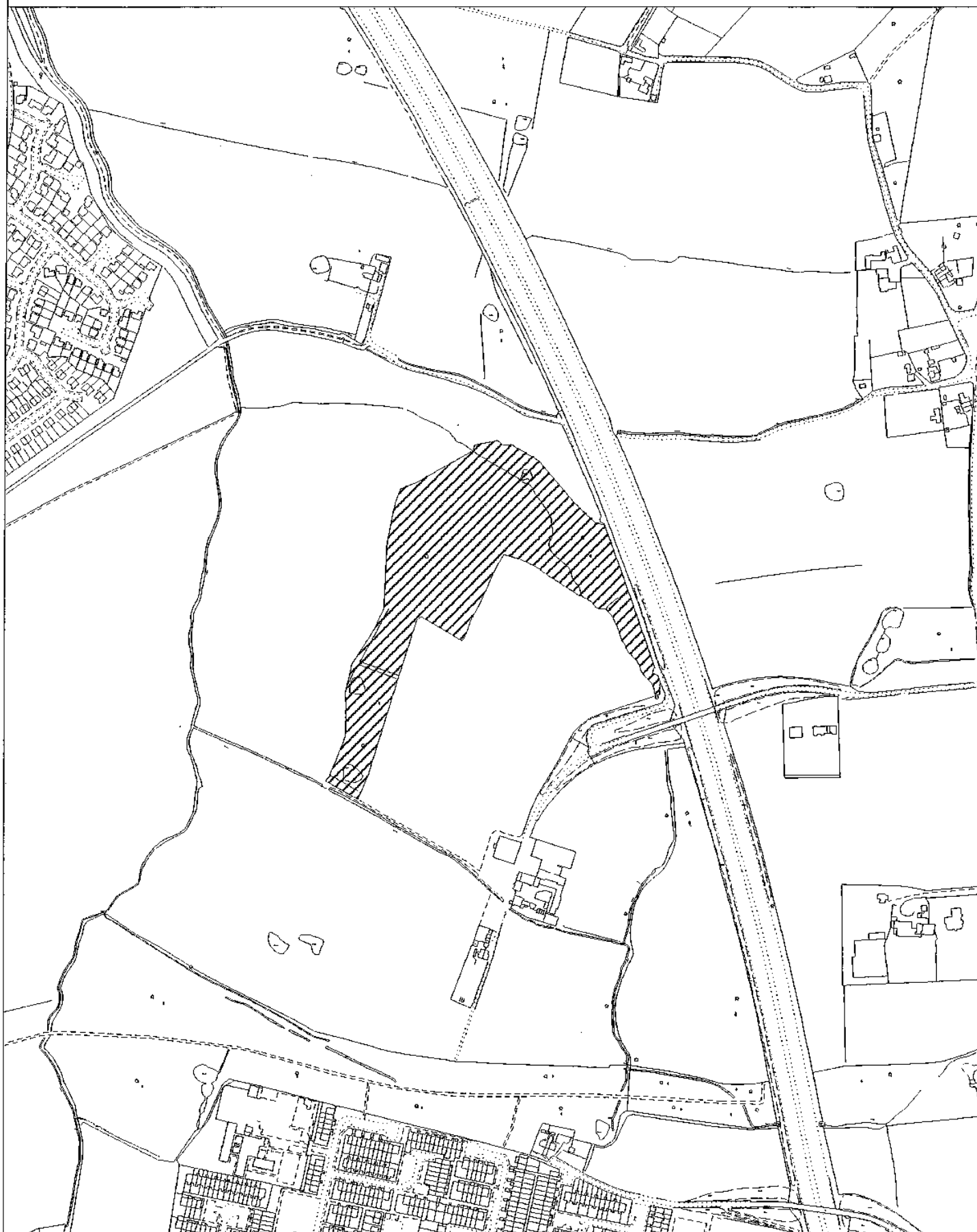
Total of 84 plant species

SBI 51. The Roughs
Scale 1:5000

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Environmental
Advisory Service





Biodiversity Information Report 15/08/2023

**MBB reference: 3952-Ascerta
Site: Knowsley Village Stables, L34 9BD**

Your Ref: None supplied
Your contact: Lizzie Atkinson

MBB Ref: 3952-Ascerta
MBB Contact: Catie Haworth

Date: 15/08/2023

Merseyside BioBank biodiversity information report

These are the results of your data request relating to **an area at Knowsley Village Stables, L34 9BD defined by a buffer of 2000 metres around the centre of grid reference SJ43429606.**

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

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

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

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

Species records

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

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

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

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

UK Protected Species

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

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

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

Group	Common Name	Scientific Name	Records	Dates	Designations
amphibian	Common Frog	<i>Rana temporaria</i>	45	1981-2022	WCA5/9.5a
	Common Toad	<i>Bufo bufo</i>	14	1994-2021	WCA5/9.5a
	Great Crested Newt	<i>Triturus cristatus</i>	5	2007-2014	HabRegs2,WCA5/9.4b,WCA5/9.5a,WCA5/9.4c
	Smooth Newt	<i>Lissotriton vulgaris</i>	20	1981-2020	WCA5/9.5a
bird	Barn Owl	<i>Tyto alba</i>	7	1997-1999	WCA1i
	Crossbill	<i>Loxia curvirostra</i>	2	1997-1999	WCA1i
	Goshawk	<i>Accipiter gentilis</i>	1	1998	WCA1i
	Hobby	<i>Falco subbuteo</i>	1	1997	WCA1i
	Kingfisher	<i>Alcedo atthis</i>	2	1998-1999	WCA1i
	Marsh Harrier	<i>Circus aeruginosus</i>	2	1998-1999	WCA1i
	Peregrine	<i>Falco peregrinus</i>	1	1997	WCA1i
	Quail	<i>Coturnix coturnix</i>	2	1997-1998	WCA1i
flowering plant	Bluebell	<i>Hyacinthoides non-scripta</i>	53	1981-2021	WCA8
	Greater Yellow-rattle	<i>Rhinanthus angustifolius</i>	1	2004-2005	WCA8
	Water Germander	<i>Teucrium scordium</i>	1	1982-1983	WCA8
insect - beetle (Coleoptera)	Stag Beetle	<i>Lucanus cervus</i>	1	1912	WCA5/9.5a
insect - butterfly	White-letter Hairstreak	<i>Satyrrium w-album</i>	1	2013	WCA5/9.5a

Group	Common Name	Scientific Name	Records	Dates	Designations
reptile	Common Lizard	<i>Zootoca vivipara</i>	9	1986-2000	WCA5/9.1k/l, WCA5/9.5a
	Slow-worm	<i>Anguis fragilis</i>	2	1833-1959	WCA5/9.1k/l, WCA5/9.5a
terrestrial mammal	Bat	<i>Chiroptera</i>	15	1985-2020	HabRegs2
	Bats	<i>Vespertilionidae</i>	1	2001	HabRegs2
	Brown Long-eared Bat	<i>Plecotus auritus</i>	7	1990-2022	HabRegs2, WCA5/9.4b, WCA5/9.5a, WCA5/9.4c
	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	36	1989-2022	HabRegs2, WCA5/9.4b, WCA5/9.5a, WCA5/9.4c
	Daubenton's Bat	<i>Myotis daubentonii</i>	5	1989-2017	HabRegs2, WCA5/9.4b, WCA5/9.5a, WCA5/9.4c
	Eurasian Badger	<i>Meles meles</i>	1	2001	PBA
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	24	1970-2017	WCA5/9.1k/l, WCA5/9.1t, WCA5/9.2, WCA5/9.4.a, WCA5/9.4b
	European Water Vole	<i>Arvicola amphibius</i>	42	1864-2015	WCA5/9.4.a, WCA5/9.4b, WCA5/9.4c
	Feral Ferret	<i>Mustela putorius subsp. furo</i>	3	1981-1982	HabRegs4
	Myotis Bat species	<i>Myotis</i>	2	2016	HabRegs2, WCA5/9.4b, WCA5/9.5a, WCA5/9.4c
	Nathusius's Pipistrelle	<i>Pipistrellus nathusii</i>	2	2016-2019	HabRegs2, WCA5/9.4b, WCA5/9.5a, WCA5/9.4c
	Noctule Bat	<i>Nyctalus noctula</i>	7	1990-2022	HabRegs2, WCA5/9.4b, WCA5/9.5a, WCA5/9.4c
	Pipistrelle Bat species	<i>Pipistrellus</i>	12	1974-2019	HabRegs2, WCA5/9.4b, WCA5/9.5a, WCA5/9.4c
	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	26	2014-2022	HabRegs2, WCA5/9.4b, WCA5/9.5a, WCA5/9.4c
	Whiskered Bat	<i>Myotis mystacinus</i>	2	2014	HabRegs2, WCA5/9.4b, WCA5/9.5a, WCA5/9.4c
	Whiskered/Brandt's Bat	<i>Myotis mystacinus/brandtii</i>	3	1977-1997	HabRegs2, WCA5/9.4b, WCA5/9.5a, WCA5/9.4c

Desig. Code	Desig. Name	Designation Description
WCA5/9.5a	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.5a)	Section 9.5 Animals which are protected from being sold, offered for sale or being held or transported for sale either live or dead, whole or part.
HabRegs2	The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 2)	Schedule 2- European protected species of animals.
WCA5/9.4b	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.4b)	Section 9.4 Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.
WCA5/9.4c	Wildlife and Countryside Act 1981 (Schedule 5)	Animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed.
WCA1i	Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Birds and their young, for which it is an offence to intentionally or recklessly disturb at, on or near an active nest. They are protected by special penalties at all times.
WCA8	Wildlife and Countryside Act 1981 (Schedule 8)	Plants which are protected from intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
WCA5/9.1k/l	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.1 (killing/injuring))	Section 9.1. Animals which are protected from intentional killing or injuring.
PBA	Protection of Badgers Act (1992)	The Protection of Badgers Act 1992 protects badgers from taking, injuring, killing, cruel treatment, selling, possessing, marking and having their setts interfered with, subject to exceptions.
WCA5/9.1t	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.1 (taking))	Section 9.1 Animals which are protected from taking.
WCA5/9.2	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.2)	Section 9.2 Animals which are protected from being possessed or controlled (live or dead).
WCA5/9.4.a	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.4, subdivision a)	Section 9.4 subdivision a - Animals which are protected from intentional damage or destruction to any structure or place used for shelter or protection.

Desig. Code	Desig. Name	Designation Description
HabRegs4	The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 4)	Schedule 4- Animals which may not be taken or killed in certain ways

North Merseyside BAP Species

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

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

Group	Common Name	Scientific Name	Records	Dates	Designations
amphibian	Great Crested Newt	<i>Triturus cristatus</i>	5	2007-2014	LBAP
bird	Corn Bunting	<i>Emberiza calandra</i>	6	1997-1999	LBAP
	Grey Partridge	<i>Perdix perdix</i>	9	1997-1999	LBAP
	House Martin	<i>Delichon urbicum</i>	8	1997-1998	LBAP
	House Sparrow	<i>Passer domesticus</i>	12	1997-2001	LBAP
	Lapwing	<i>Vanellus vanellus</i>	11	1974-2002	LBAP
	Skylark	<i>Alauda arvensis</i>	14	1997-2010	LBAP
	Song Thrush	<i>Turdus philomelos</i>	12	1997-2010	LBAP
	Starling	<i>Sturnus vulgaris</i>	10	1997-2010	LBAP
	Swift	<i>Apus apus</i>	8	1997-1998	LBAP
flowering plant	Bluebell	<i>Hyacinthoides non-scripta</i>	53	1981-2021	LBAP
insect - dragonfly (Odonata)	Azure Damselfly	<i>Coenagrion puella</i>	25	1983-2021	LBAP
	Banded Demoiselle	<i>Calopteryx splendens</i>	2	1985	LBAP
	Black Darter	<i>Sympetrum danae</i>	8	1990-1994	LBAP
	Black-tailed Skimmer	<i>Orthetrum cancellatum</i>	2	2017-2019	LBAP
	Blue-tailed Damselfly	<i>Ischnura elegans</i>	21	1989-2017	LBAP
	Broad-bodied Chaser	<i>Libellula depressa</i>	7	1990-2009	LBAP
	Brown Hawker	<i>Aeshna grandis</i>	33	1987-2017	LBAP
	Common Blue Damselfly	<i>Enallagma cyathigerum</i>	39	1924-2020	LBAP
	Common Darter	<i>Sympetrum striolatum</i>	52	1989-2022	LBAP
	Common Hawker	<i>Aeshna juncea</i>	14	1924-2015	LBAP
	Emerald Damselfly	<i>Lestes sponsa</i>	2	1990	LBAP
	Emperor Dragonfly	<i>Anax imperator</i>	9	1995-2017	LBAP
	Four-spotted Chaser	<i>Libellula quadrimaculata</i>	8	1982-2011	LBAP
	Large Red Damselfly	<i>Pyrrhosoma nymphula</i>	11	2006-2022	LBAP
	Migrant Hawker	<i>Aeshna mixta</i>	9	1998-2020	LBAP
	Ruddy Darter	<i>Sympetrum sanguineum</i>	2	2004	LBAP
	Southern Hawker	<i>Aeshna cyanea</i>	43	1982-2019	LBAP
reptile	Common Lizard	<i>Zootoca vivipara</i>	9	1986-2000	LBAP
terrestrial mammal	Bat	<i>Chiroptera</i>	15	1985-2020	LBAP

Group	Common Name	Scientific Name	Records	Dates	Designations
	Bats	<i>Vespertilionidae</i>	1	2001	LBAP
	Brown Hare	<i>Lepus europaeus</i>	53	1979-2012	LBAP
	Brown Long-eared Bat	<i>Plecotus auritus</i>	7	1990-2022	LBAP
	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	36	1989-2022	LBAP
	Daubenton's Bat	<i>Myotis daubentonii</i>	5	1989-2017	LBAP
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	24	1970-2017	LBAP
	European Water Vole	<i>Arvicola amphibius</i>	42	1864-2015	LBAP
	Myotis Bat species	<i>Myotis</i>	2	2016	LBAP
	Nathusius's Pipistrelle	<i>Pipistrellus nathusii</i>	2	2016-2019	LBAP
	Noctule Bat	<i>Nyctalus noctula</i>	7	1990-2022	LBAP
	Pipistrelle Bat species	<i>Pipistrellus</i>	12	1974-2019	LBAP
	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	26	2014-2022	LBAP
	Whiskered Bat	<i>Myotis mystacinus</i>	2	2014	LBAP
	Whiskered/Brandt's Bat	<i>Myotis mystacinus/brandtii</i>	3	1977-1997	LBAP

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

NM BAP species: Lapwing (*Vanellus vanellus*)

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

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

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

NM BAP species: Skylark (*Alauda arvensis*)

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

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

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

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

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

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

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

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

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

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

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

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

NM BAP species: Dragonflies (*Coenagrion puella*; *Calopteryx splendens*; *Sympetrum danae*; *Orthetrum cancellatum*; *Ischnura elegans*; *Libellula depressa*; *Aeshna grandis*; *Enallagma cyathigerum*; *Sympetrum striolatum*; *Aeshna juncea*; *Lestes sponsa*; *Anax imperator*; *Libellula quadrimaculata*; *Pyrrhosoma nymphula*; *Aeshna mixta*; *Sympetrum sanguineum*; *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: Common Lizard (*Zootoca vivipara*)

Populations of the Common Lizard are highly localised in Britain. In North Merseyside this species remains relatively common on the Sefton Coast dune and heath, where it is thought to be stable. Inland it is much less common. There are occasional records from Knowsley where the species is thought to be extremely vulnerable.

Declines are primarily due to the loss and fragmentation of suitable habitat, usually caused by changes in land use, urban expansion and increased forestry and scrub encroachment. Predation by cats and the gassing of rabbit burrows may also be having a detrimental effect.

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

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

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

NM BAP species: Bats (*Plecotus auritus*; *Pipistrellus pipistrellus*; *Myotis daubentonii*; *Nyctalus noctula*; *Pipistrellus pygmaeus*; *Myotis mystacinus*)

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

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

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

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

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

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

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

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

This species is found throughout Britain but localised to areas of suitable habitat near water. Previously

common this species has undergone severe range and population reductions, with a national survey showing a decline of around 89% since 1939, estimated to increased to a loss of 94% by 2000. Merseyside appears to be a stronghold for the species with 75% of sites surveyed having Water Voles present in 1989-90. Though they may still be in decline locally, it is thought to be at a lower level than nationally.

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

NERC Act Section 41 Species

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

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

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

Group	Common Name	Scientific Name	Records	Dates	Designations
amphibian	Common Toad	<i>Bufo bufo</i>	14	1994-2021	Sect.41
	Great Crested Newt	<i>Triturus cristatus</i>	5	2007-2014	Sect.41
bird	Bullfinch	<i>Pyrrhula pyrrhula</i>	6	1997-1999	Sect.41.suppl
	Corn Bunting	<i>Emberiza calandra</i>	6	1997-1999	Sect.41.suppl
	Cuckoo	<i>Cuculus canorus</i>	6	1997-1999	Sect.41
	Dunnock	<i>Prunella modularis</i>	9	1997-2010	Sect.41.suppl
	Grasshopper Warbler	<i>Locustella naevia</i>	6	1997-1999	Sect.41
	Grey Partridge	<i>Perdix perdix</i>	9	1997-1999	Sect.41
	House Sparrow	<i>Passer domesticus</i>	12	1997-2001	Sect.41
	Lapwing	<i>Vanellus vanellus</i>	11	1974-2002	Sect.41
	Lesser Redpoll	<i>Acanthis cabaret</i>	5	1997-2000	Sect.41
	Lesser Spotted Woodpecker	<i>Dryobates minor</i>	3	1997-1998	Sect.41.suppl
	Linnet	<i>Linaria cannabina</i>	7	1997-1998	Sect.41.suppl

Group	Common Name	Scientific Name	Records	Dates	Designations
	Reed Bunting	<i>Emberiza schoeniclus</i>	8	1997-1999	Sect.41
	Skylark	<i>Alauda arvensis</i>	14	1997-2010	Sect.41, Sect.41.suppl
	Song Thrush	<i>Turdus philomelos</i>	12	1997-2010	Sect.41.suppl
	Spotted Flycatcher	<i>Muscicapa striata</i>	6	1997-1999	Sect.41
	Starling	<i>Sturnus vulgaris</i>	10	1997-2010	Sect.41.suppl
	Tree Sparrow	<i>Passer montanus</i>	5	1997-1999	Sect.41
	Turtle Dove	<i>Streptopelia turtur</i>	4	1997-1999	Sect.41
	Willow Tit	<i>Poecile montanus</i>	6	1997-2000	Sect.41.suppl
	Yellow Wagtail	<i>Motacilla flava</i>	5	1997-1998	Sect.41.suppl
	Yellowhammer	<i>Emberiza citrinella</i>	5	1997-1999	Sect.41
flowering plant	Cornflower	<i>Centaurea cyanus</i>	5	2010-2021	Sect.41
	Marsh Stitchwort	<i>Stellaria palustris</i>	3	2017	Sect.41
	Water Germander	<i>Teucrium scordium</i>	1	1982-1983	Sect.41
insect - beetle (Coleoptera)	Stag Beetle	<i>Lucanus cervus</i>	1	1912	Sect.41
insect - butterfly	Small Heath	<i>Coenonympha pamphilus</i>	6	1981-1993	Sect.41
	Wall	<i>Lasiommata megera</i>	18	1981-1997	Sect.41
	White-letter Hairstreak	<i>Satyrrium w-album</i>	1	2013	Sect.41
insect - moth	Buff Ermine	<i>Spilosoma lutea</i>	5	2021-2022	Sect.41
	Sallow	<i>Cirrhia icteritia</i>	1	2021	Sect.41
reptile	Common Lizard	<i>Zootoca vivipara</i>	9	1986-2000	Sect.41
	Slow-worm	<i>Anguis fragilis</i>	2	1833-1959	Sect.41
spider (Araneae)	Triangle Hammock-spider	<i>Saariotia firma</i>	3	1968-1971	Sect.41
terrestrial mammal	Bat	<i>Chiroptera</i>	15	1985-2020	Sect.41
	Bats	<i>Vespertilionidae</i>	1	2001	Sect.41
	Brown Hare	<i>Lepus europaeus</i>	53	1979-2012	Sect.41
	Brown Long-eared Bat	<i>Plecotus auritus</i>	7	1990-2022	Sect.41
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	24	1970-2017	Sect.41
	European Water Vole	<i>Arvicola amphibius</i>	42	1864-2015	Sect.41
	Feral Ferret	<i>Mustela putorius subsp. furo</i>	3	1981-1982	Sect.41
	Myotis Bat species	<i>Myotis</i>	2	2016	Sect.41
	Noctule Bat	<i>Nyctalus noctula</i>	7	1990-2022	Sect.41
	Pipistrelle Bat species	<i>Pipistrellus</i>	12	1974-2019	Sect.41
	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	26	2014-2022	Sect.41
	West European Hedgehog	<i>Erinaceus europaeus</i>	59	1973-2022	Sect.41

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

IUCN Red-listed Species

The IUCN Red List of Threatened Species (sometimes called 'Red Data Book' species) indicates the conservation status of plants and animals that have been globally evaluated using the IUCN Red List Categories and Criteria. The system is designed to determine the

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

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

Group	Common Name	Scientific Name	Records	Dates	Designations
flowering plant	Corn Chamomile	<i>Anthemis arvensis</i>	3	1983-1989	RLGB.EN
	Corn Marigold	<i>Glebionis segetum</i>	2	2021-2022	RLGB.VU
	Corn Spurrey	<i>Spergula arvensis</i>	4	1974-2015	RLGB.VU
	Creeping Spearwort	<i>Ranunculus reptans</i>	1	1987	RLGB.VU
	Field Woundwort	<i>Stachys arvensis</i>	3	1974-2022	RLGB.Lr(NT)
	Lesser Tussock-sedge	<i>Carex diandra</i>	1	2005	RLGB.Lr(NT)
	Marsh Stitchwort	<i>Stellaria palustris</i>	3	2017	RLGB.VU
	Water Germander	<i>Teucrium scordium</i>	1	1982-1983	RLGB.EN
insect - beetle (Coleoptera)	Alder Leaf Beetle	<i>Agelastica alni</i>	30	2015-2022	RLGB.DD
insect - butterfly	Small Heath	<i>Coenonympha pamphilus</i>	6	1981-1993	RLGB.Lr(NT)
	Wall	<i>Lasiommata megera</i>	18	1981-1997	RLGB.Lr(NT)
	White-letter Hairstreak	<i>Satyrus w-album</i>	1	2013	RLGB.EN
insect - dragonfly (Odonata)	Common Darter	<i>Sympetrum striolatum</i>	52	1989-2022	RLGB.DD
	Variable Damselfly	<i>Coenagrion pulchellum</i>	1	1980	RLGB.Lr(NT)
mollusc	Large Black Slug	<i>Arion (Arion) ater</i>	5	1974-2021	RLGB.DD
	Marsh Pond Snail	<i>Stagnicola palustris/fuscus/corvus</i>	1	2016	RLGB.DD
terrestrial mammal	Bat	<i>Chiroptera</i>	15	1985-2020	RLGB.CR,RLGB.DD,RLGB.EN,RLGB.Lr(NT),RLGB.VU
	Bats	<i>Vespertilionidae</i>	1	2001	RLGB.CR,RLGB.DD,RLGB.EN,RLGB.Lr(NT),RLGB.VU
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	24	1970-2017	RLGB.EN
	European Water Vole	<i>Arvicola amphibius</i>	42	1864-2015	RLGB.EN
	Myotis Bat species	<i>Myotis</i>	2	2016	RLGB.CR,RLGB.DD
	Nathusius's Pipistrelle	<i>Pipistrellus nathusii</i>	2	2016-2019	RLGB.Lr(NT)
	Pipistrelle Bat species	<i>Pipistrellus</i>	12	1974-2019	RLGB.Lr(NT)
	West European Hedgehog	<i>Erinaceus europaeus</i>	59	1973-2022	RLGB.VU
	Whiskered Bat	<i>Myotis mystacinus</i>	2	2014	RLGB.DD

Desig. Code	Desig. Name	Designation Description
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.
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.

Desig. Code	Desig. Name	Designation Description
RLGB.DD	IUCN (2001) - Data Deficient	A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat or Lower Risk. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that a threatened category is appropriate.
RLGB.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.

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	Creeping Spearwort	<i>Ranunculus reptans</i>	1	1987	NR-excludes
	Fringed Water-lily	<i>Nymphoides peltata</i>	1	1992	NS-excludes
	Greater Yellow-rattle	<i>Rhinanthus angustifolius</i>	1	2004-2005	NR-excludes
	Large-leaved Lime	<i>Tilia platyphyllos</i>	2	1989-2005	NS-excludes
	Water Germander	<i>Teucrium scordium</i>	1	1982-1983	NR-excludes
	Water-soldier	<i>Stratiotes aloides</i>	2	1994-2011	NR-excludes
	Welsh Poppy	<i>Meconopsis cambrica</i>	7	2020-2022	NS-excludes
insect - beetle (Coleoptera)	Bibloporus minutus	<i>Bibloporus minutus</i>	2	1990	Nb
	Enicmus brevicornis	<i>Enicmus brevicornis</i>	1	1990	N
	Gyrophana manca	<i>Gyrophana manca</i>	2	1989-1990	N
	Melasis buprestoides	<i>Melasis buprestoides</i>	1	1990	Nb
	Notolaemus unifasciatus	<i>Notolaemus unifasciatus</i>	2	1990	Na
	Orthoperus nigrescens	<i>Orthoperus nigrescens</i>	1	1990	Nb
	Polydrusus formosus	<i>Polydrusus formosus</i>	4	2019-2022	Na
	Ptenidium gressneri	<i>Ptenidium gressneri</i>	2	1985	N
	Scaphisoma boleti	<i>Scaphisoma boleti</i>	2	1989-1990	Nb
	Schistoglossa gemina	<i>Schistoglossa gemina</i>	2	1989-1990	N
	Scymnus limbatus	<i>Scymnus limbatus</i>	1	1989	Nb
	Uleiota planatus	<i>Uleiota planatus</i>	1	1988	Na

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.
N	Nationally Notable	Species which are estimated to occur within the range of 16 to 100 10km squares. (subdivision into Notable A and Notable B is not always possible because there may be insufficient information available). 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	Barn Owl	<i>Tyto alba</i>	7	1997-1999	MBB-WCA-S9
	Barnacle Goose	<i>Branta leucopsis</i>	1	1998	MBB-WCA-S9
	Canada Goose	<i>Branta canadensis</i>	2	1997-1998	MBB-WCA-S9
	Goshawk	<i>Accipiter gentilis</i>	1	1998	MBB-WCA-S9
	Ruddy Duck	<i>Oxyura jamaicensis</i>	1	1997	MBB-WCA-S9
fern	Water Fern	<i>Azolla filiculoides</i>	9	2005-2021	MBB-WCA-S9
flatworm (Turbellaria)	Kontikia ventrolineata	<i>Kontikia ventrolineata</i>	1	2022	MBB-WCA-S9
flowering plant	Canadian Waterweed	<i>Elodea canadensis</i>	2	1992-2010	MBB-WCA-S9
	Floating Pennywort	<i>Hydrocotyle ranunculoides</i>	3	2016-2022	MBB-WCA-S9
	Himalayan Balsam	<i>Impatiens glandulifera</i>	41	1974-2022	MBB-WCA-S9
	Himalayan Cotoneaster	<i>Cotoneaster simonsii</i>	1	2015	MBB-WCA-S9
	Japanese Knotweed	<i>Fallopia japonica</i>	27	1981-2022	MBB-WCA-S9
	Japanese Rose	<i>Rosa rugosa</i>	2	2021	MBB-WCA-S9
	Lamium galeobdolon subsp. argentatum	<i>Lamium galeobdolon subsp. argentatum</i>	3	2021-2022	MBB-WCA-S9
	Montbretia	<i>Crocsmia pottsii x aurea = C. x crocosmiiflora</i>	1	1993	MBB-WCA-S9
	Rhododendron ponticum	<i>Rhododendron ponticum</i>	75	1981-2022	MBB-WCA-S9
	Three-cornered Garlic	<i>Allium triquetrum</i>	9	2020-2022	MBB-WCA-S9
	Virginia-creeper	<i>Parthenocissus quinquefolia</i>	1	2019	MBB-WCA-S9
terrestrial mammal	Eastern Grey Squirrel	<i>Sciurus carolinensis</i>	57	1997-2022	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	18.79	kilometres
Lowland Raised Bog	1.38	hectares
Lowland Acid Grassland	0.29	hectares
All Woodland	168.34	hectares
Neutral Grassland	27.65	hectares
Ponds	2.72	hectares
Ponds	83	count

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

Detailed habitat mapping

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

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

Gr1	Grasslands	31.04 ha
Gr5	Lowland Dry Acid Grassland	0.29 ha
Gr6	Lowland Meadow	25.15 ha

Ref: EN-CBA-Mosaic		
Source: Composite layer generated by Merseyside Environmental Advisory Service on behalf of the Liverpool City Region		
Survey date: 01/01/2016		
Notes: LCR Ecological Network Mosaic Core Biodiversity Areas. See http://www.lcreconet.uk/ for further information.		
CBA General features		
Gen3	Local Wildlife Site	315.99 ha

Ref: EN-CBA-Wetland		
Source: Composite layer generated by Merseyside Environmental Advisory Service on behalf of the Liverpool City Region		
Survey date: 01/01/2016		
Notes: LCR Ecological Network Wetland Core Biodiversity Areas. See http://www.lcreconet.uk/ for further information.		
CBA General features		
Gen3	Local Wildlife Site	3.94 ha
Gen4	Reedbeds	0.89 ha
CBA Wetland		
We4	Lowland Fens	1.69 ha
We5	Lowland Raised Bog	0.16 ha

Ref: EN-CBA-Woodland		
Source: Composite layer generated by Merseyside Environmental Advisory Service on behalf of the Liverpool City Region		
Survey date: 01/01/2016		
Notes: LCR Ecological Network Woodland Core Biodiversity Areas. See http://www.lcreconet.uk/ for further information.		
CBA General features		
Gen2	Local Nature Reserve (LNR)	17.83 ha
Gen3	Local Wildlife Site	26.03 ha
CBA Woodland		
Wo10	Wood-Pasture and Parkland	2.65 ha
Wo3	Lowland Mixed Broad-leaf Woodland	365.62 ha
Wo4	Lowland Mixed Deciduous Woodland	321.12 ha
Wo6	Lowland Wood-pasture and Parkland	6.63 ha
Wo9	Wet Woodland	0.16 ha

Ref: EN-LinearFeatures		
Source: Composite layer generated by Merseyside Environmental Advisory Service on behalf of the Liverpool City Region		
Survey date: 01/01/2016		
Notes: LCR Ecological Network Linear features. See http://www.lcreconet.uk/ for further information.		
Linear feature		
Lin3	Dismantled Railway	0.14 km
Lin5	Hedgerow	18.8 km
Lin6	Major road corridor	14.58 km
Lin7	River	12.04 km

Ref: EN-SteppingStones		
Source: Composite layer generated by Merseyside Environmental Advisory Service on behalf of the Liverpool City Region		
Survey date: 01/01/2016		
Notes: LCR Ecological Network Stepping Stone habitats. See http://www.lcreconet.uk/ for further information.		
Stepping stone habitat		
SS1	Ponds	2.92 ha

Ref: Knowsley-1996-98		
Source: Complete phase 1 habitat survey for Knowsley 1996-98.		
Survey date: 1996 - 1998		
Notes: This is the 'default' baseline mapping used by the Council. It is the most recent complete coverage for the borough.		
Woodland and scrub		
A1.1.1	Broadleaved woodland - semi-natural	0.2 ha
A1.1.2	Broadleaved woodland - plantation	1.89 ha
A1.2.2	Coniferous woodland - plantation	0.58 ha
A1.3.2	Mixed woodland - plantation	0.65 ha
A2.1	Scrub - dense/continuous	0.04 ha
A2.2	Scrub - scattered	1.68 ha 7 (count)
A3.1	Broadleaved Parkland/scattered trees	0.6 ha 21 (count)
A3.2	Coniferous Parkland/scattered trees	0.06 ha
A3.3	Mixed Parkland/scattered trees	0.76 ha
Grassland and marsh		
B2.1	Neutral grassland - unimproved	3.84 ha
B6	Poor semi-improved grassland	7.88 ha
Tall herb and fern		
C1.1	Bracken - continuous	0.03 ha
C1.2	Bracken - scattered	20 (count)
Open water		
G1	Standing water	0.01 ha
G2	Running water	0.04 ha
Miscellaneous		
J1.1	Cultivated/disturbed land - arable	22.65 ha
J1.2	Cultivated/disturbed land - amenity grassland	1.96 ha
J1.4	Introduced shrub	0.43 ha
J2.1.2	Intact hedge - species-poor	2.41 km
J2.2.2	Defunct hedge - species-poor	0.29 km
J2.5	Wall	0.22 km
J2.7	Boundary removed	0.6 km
J4	Bare ground	1.27 ha

Ref: SJ49NW		
Source: Commissioned district Phase 1 audit		

Survey date: 1981		
Woodland and scrub		
A1.1.1	Broadleaved woodland - semi-natural	1.31 ha
A3.1	Broadleaved Parkland/scattered trees	0.26 ha
Grassland and marsh		
B2.2	Neutral grassland - semi-improved	1.91 ha
Open water		
G1	Standing water	0.05 ha
Miscellaneous		
J1.1	Cultivated/disturbed land - arable	23.31 ha
J2.1.2	Intact hedge - species-poor	1 km
J2.2.2	Defunct hedge - species-poor	0.59 km

Ref: Composite		
Woodland and scrub		
A1.1.1	Broadleaved woodland - semi-natural	0.37 ha
A1.1.2	Broadleaved woodland - plantation	1.89 ha
A1.2.2	Coniferous woodland - plantation	0.58 ha
A1.3.2	Mixed woodland - plantation	0.65 ha
A2.1	Scrub - dense/continuous	0.04 ha
A2.2	Scrub - scattered	1.68 ha 7 (count)
A3.1	Broadleaved Parkland/scattered trees	0.71 ha 21 (count)
A3.2	Coniferous Parkland/scattered trees	0.06 ha
A3.3	Mixed Parkland/scattered trees	0.76 ha
Grassland and marsh		
B2.1	Neutral grassland - unimproved	3.84 ha
B2.2	Neutral grassland - semi-improved	0.4 ha
B6	Poor semi-improved grassland	7.88 ha
Tall herb and fern		
C1.1	Bracken - continuous	0.03 ha
C1.2	Bracken - scattered	20 (count)
Open water		
G1	Standing water	0.01 ha
G2	Running water	0.04 ha
Miscellaneous		
J1.1	Cultivated/disturbed land - arable	24.07 ha
J1.2	Cultivated/disturbed land - amenity grassland	1.96 ha
J1.4	Introduced shrub	0.43 ha
J2.1.2	Intact hedge - species-poor	2.74 km
J2.2.2	Defunct hedge - species-poor	0.47 km
J2.5	Wall	0.22 km
J2.7	Boundary removed	0.6 km
J4	Bare ground	1.27 ha

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

Designated Areas

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

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

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

Name	Type
Knowsley and St.Helens Mosslands	Nature Improvement Area
River Alt and M57 Corridor	Nature Improvement Area
Acornfield Plantation	Local Nature Reserve
Grey Squirrel Control Zone	LWT Squirrel Alert Maps
Croxteth	Local Nature Reserve
Kraft Operational Land	Knowsley Local Wildlife Site
Acornfield Plantation	Knowsley Local Wildlife Site
Aker's Pits	Knowsley Local Wildlife Site
Otis Meadow	Knowsley Local Wildlife Site
Meakin's Pits	Knowsley Local Wildlife Site
The Roughts	Knowsley Local Wildlife Site
Howard's Pits	Knowsley Local Wildlife Site
Little Wood	Knowsley Local Wildlife Site
Knowsley Brook	Knowsley Local Wildlife Site
Knowsley Park	Knowsley Local Wildlife Site
Croxteth Park, River Alt and adjacent sites through Croxteth	Liverpool Local Wildlife Site



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

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

Citations¹ for Local Wildlife Sites are supplied separately.

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

Interpretation and caveats

Merseyside BioBank records included

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

NBN Atlas records included

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

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

Record location and dates

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

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

Sensitive taxa

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

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

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

Absence of records and 'negative records'

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

Duplicate records

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

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

Validity of records

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

Verification status of records

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

Bird records

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

Steve White
stevewhite102@btinternet.com

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

Appendix 1: Terms and conditions of use

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

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

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

Appendix 2: Maps

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

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

