



Preliminary Ecological Appraisal (PEA) & Preliminary
Bat Roost Assessment (PRA) Report

30 Liverpool Road, Formby

Client: Kathryn Kenny

December 2020

Quality Assurance

The information which the author has prepared and provided is true, and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Disclaimer

The report has been prepared for the sole use of the client, showing reasonable skill and care, for the intended purposes as stated in the agreement under which this work was completed. The report may not be relied upon by any other party without the express agreement of the client and the author. No other warranty, expressed or implied, is made as to the professional advice included in this report. Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by the author for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the assumption that all relevant information has been supplied by those bodies from whom it was requested. No part of this report may be copied or duplicated without the express permission of the author and the party for whom it was prepared. Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

CONTENTS

1.	INTRODUCTION	7
1.1.	Site Description	7
1.2.	Proposed Development.....	8
2.	METHODOLOGY	8
2.1.	Personnel & Quality Assurance	8
2.2.	Scope of the Assessment.....	8
2.3.	Desk Study	9
2.4.	Field Survey.....	9
2.5.	Assessment and Evaluation	10
2.6.	Zone of Influence	10
3.	CONSTRAINTS	11
4.	BASELINE ECOLOGICAL CONDITIONS	11
4.1.	Designated Sites.....	11
	Statutory Designated Sites	11
	Non-statutory sites	12
4.2.	Habitats.....	12
4.3.	Species	14
5.	PLANNING POLICY AND LEGISLATION	19
5.1.	National Planning Policy.....	19
5.2.	Local Planning Policy	20
5.3.	Relevant Legislation	22
6.	ECOLOGICAL EVALUATION, AND RECOMMENDATIONS FOR MITIGATION, AND FURTHER SURVEY	24
6.1.	Designated Sites.....	24
6.2.	Habitats.....	24
6.3.	Species and Species Groups	25
6.4.	Opportunities for Ecological Enhancement	26
7.	CONCLUSIONS	27
8.	SUMMARY OF RECOMMENDED MITIGATION AND FURTHER SURVEY	28
9.	REFERENCES	29

APPENDICES

APPENDIX 1: SITE LOCATION PLAN

APPENDIX 2: PHASE 1 HABITAT PLAN

APPENDIX 3: SITE PHOTOS & BUILDING REFERENCES

APPENDIX 4: FRAME OF REFERENCE FOR GEOGRAPHICAL VALUE

APPENDIX 5: LOCAL RECORD CENTRE DATA.

Summary

A Preliminary Ecological Appraisal (PEA) and Preliminary Bat Roost Assessment (PRA) was commissioned by Pegasus Group, on behalf of owner Kathryn Kenny, of a proposed residential development at 30 Liverpool Road, Formby. The survey was commissioned to support a planning application for the proposed demolition of the existing building and re-development of the site.

The purpose of the survey and the report is to provide an ecological baseline and an initial assessment of the potential impacts of development proposals upon the nature conservation of the site and other ecological receptors in relation to a proposed planning application for the site.

In view of the results of the desk and field-based assessment of the site, the site is considered to be of relatively low ecological value in the local context and loss of biodiversity as a result of the proposed development is limited and can be mitigated for as part of the proposed development.

The main features of interest are the boundary hedgerows (bird nesting resource) and the potential for Building 1 to support bat roosts, for which further survey is necessary.

The site supports nesting birds, which will require further consideration as part of the planning application and during the works in order to comply with planning policy and legislative requirements.

For the development to proceed in line with UK and EU legislation and Planning Policy relating to biodiversity, the recommendations contained within this report should be considered and adopted as necessary.

Appropriate and proportionate mitigation should be considered at the design stage to ensure the LPA can fully assess the planning application and are aware of measures being taken to avoid an overall adverse impact and aims put in place to maintain and where possible enhance the biodiversity value of the site in the long-term as part of the development proposals

Where appropriate measures as recommended in the report are adopted, the development will be able to proceed having considered and addressed the necessary legislation and both local and national policy relating to biodiversity conservation.

Summary of Further Consideration & Actions

Action	Rationale	When
<p>Further Bat Survey (Building 1). To comprise a minimum of 2 x emergence/re-entry surveys</p>	<p>Required to complete the assessment of the building for bats in line with current professional bat survey guidelines due to the building being of 'moderate potential' for supporting bat roosts.</p>	<p>Surveys to be undertaken between May-September (during the active season for bats).</p>
<p>Avoidance of vegetation/site clearance in nesting bird season or nest checks prior to works</p>	<p>Site likely to support birds during the breeding season. Loss of habitat and disturbance where vegetation/site clearance is scheduled between March-August.</p>	<p>Avoid site/vegetation clearance in March-August.</p>
<p>Installation of Bird and Bat Bricks</p>	<p>To enhance the site and compensate for loss of nesting opportunities post-development.</p>	<p>Winter months/ prior to nesting season and active season for bats. Will need to be installed at construction stage.</p>
<p>Avoidance of artificial light spill on boundary features</p>	<p>Boundary features are likely to be of value for bats (and potentially other wildlife). Increases in lux levels may have an adverse effect upon these features for bats.</p>	<p>At design stage. Any proposed artificial lighting should be designed to avoid increases in ambient lux levels to boundary areas.</p>

1. INTRODUCTION

A Preliminary Ecological Appraisal (PEA) and Preliminary Bat Roost Assessment (PRA) was commissioned by Pegasus Group, on behalf of owner Kathryn Kenny, of a proposed residential development at 30 Liverpool Road, Formby. The survey was commissioned to support a planning application for the proposed demolition of the existing building and re-development of the site.

The purpose of the survey and the report is to provide an ecological baseline and an initial assessment of the potential impacts of development proposals upon the nature conservation of the site and other ecological receptors in relation to a proposed planning application for the site.

1.1. Site Description

The site is located on Liverpool Road in Formby (Grid Reference: SD30090660) and currently consists of a single main residential property with two outbuildings, along with associated gardens comprising of grassland, boundary hedges and ornamental/garden planting.

The site is situated in suburban area close to the central Formby and is surrounded by residential properties in the immediate area, but with arable agricultural land to the east and the Sefton Coast to the west, in the wider context.



Image courtesy of Ordnance Survey accessed via Bing Maps ©Microsoft 2020

Figure 1. Site and surrounding landscape character.

1.2. Proposed Development

It is understood that the proposals are for the demolition of the existing residential property and redevelopment of the site within the redline boundary. However, full details of the proposed development were not available at the time of assessment.

2. METHODOLOGY

2.1. Personnel & Quality Assurance

Rob Nicholson BSc (Hons) MCIEEM is a Class 2 Bat licence holder (Natural England), has over 10 years' relevant experience as an ecologist and is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Rob has also been 'named ecologist' on numerous European Protected Species Licences (EPSL) for bats for a range of species and roost types in both England and Wales.

All field work and assessment was undertaken in accordance with current best practice guidelines (CIEEM, 2016 & Collins, J. (Ed) 2016).

The survey was undertaken on the 4th December and the desk-based assessment was conducted on the 8th December 2020 (following receipt of data requested from Merseyside Biobank, the Local Records Centre for Merseyside).

The report has been prepared in accordance with guidance produced by the Chartered Institute of Ecology and Environmental Management (CIEEM 2017) and the British Standard 42020:2013.

2.2. Scope of the Assessment

The following ecological features / resources were considered during the assessment:

- Statutory and Non-Statutory Designated sites;
- Habitats of principal importance for conservation of biodiversity;
- Protected species;
- Species of principal importance for conservation of biodiversity;
- Other notable species.

No consultations have taken place in relation to determining the scope of the assessment

2.3. Desk Study

To inform the survey, a desk study was conducted in December 2020 using available ecological information relating to ecology for the area surrounding the site.

Online resources, including Multi-Agency Geographic Information Centre (MAGIC), were consulted in relation to the presence of sites and habitats of importance in the wider context.

A data request to the Local Records Centre (LRC) for the area (Merseyside Biobank) was made for full species records and list of non-statutory designated sites (e.g. local wildlife sites) within 1 km of the site (full details available upon request).

Other organisations in the county that may hold relevant ecological data were not consulted (the full extent of data can be provided upon request).

It is important to note that most species are greatly under-recorded and therefore a lack of records for a location should not be taken as an absence of the species concerned.

Furthermore, a historical record for a habitat or species does not necessarily confirm its current presence.

2.4. Field Survey

Phase 1 habitat survey

A Phase 1 Habitat survey was conducted on 4th December 2020 based on the techniques and methodologies described in the Handbook for Phase 1 Habitat Survey (JNCC 2010) and using standard nomenclature (Stace 2010).

The habitats present were recorded on to a field map (Appendix 2) along with digital photographs (Appendix 3), providing supplementary information on, for example, species composition structure and management where relevant.

This was extended to include notes on fauna and habitats which could potentially support protected species, an approach commonly referred to as an Extended Phase 1 Habitat Survey. The presence of, or potential for, protected species was assessed during the survey.

Preliminary Bat Roost Assessment (PRA)

The Preliminary Bat Roost assessment (PRA) comprises of a buildings inspection which was limited to the buildings subject of the planning application.

The buildings were inspected using close-focusing binoculars (Pentax Papilio 8.5 x 21) to determine possible access points such as cavities in brickwork and the roof structure. An internal inspection of all rooms and roof voids within the buildings was conducted where accessible. Using ladders, all accessible features were closely inspected using *Lenser H14* and X21 cool light torches. Where possible, any cracks, crevices and likely access points or potential roost features were checked for signs of use by bats e.g. droppings, scratch marks and staining. An endoscope was used to inspect cavities that could be accessed safely via ladders.

2.5. Assessment and Evaluation

The importance of the habitat features on site were assessed and defined in a geographical context (see Appendix 4). The frame of reference for the habitat features in terms of their geographical importance is in line with guidance set out in CIEEM, 2018.

Species are assessed, where appropriate, against best practice guidelines.

As part of the evaluation, further surveys may be recommended based on the suitability of habitats to support protected species, the habitats themselves and potential impacts posed by the proposed development, and the legal protection afforded to both habitats and species.

2.6. Zone of Influence

The assessment conducted for this report has considered the area in which ecological features could be subject to significant effects from the proposed development. The area of the potential effects is often wider than the actual perimeter of the development site and is known as the Zone of Influence.

The Zone of Influence varies for different ecological features and each designated site, habitat and species has been considered in relation to their sensitivity to the proposed development.

- Special Areas of Conservation (SAC), Special Protection Areas (SPA), Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) – site level only
- Local Nature Reserves (LNR), Local Wildlife Sites (LWS) - site level only
- Great Crested Newt (GCN) ponds - 500m

- Badger – 50m
- Other notable species/habitats – site level only

3. CONSTRAINTS

The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the site. It should not be taken as providing a full and definitive survey of any protected species group.

Even where data for a particular species groups are provided in the desk study, a lack of records of a defined geographical area does not necessarily mean that there is a lack of ecological interest; the area may simply be under recorded.

The Phase 1 Habitat Survey does not constitute a full botanical survey or provide accurate mapping of invasive plant species.

The Preliminary Bat Roost Assessment does not constitute a full species survey but instead determines the 'potential' of the building to support bat roost or identifies evidence that may indicate presence.

This is not an intrusive survey therefore some evidence of the presence of bats can be concealed (e.g. wall cavities).

Not all features of the buildings were fully accessible due to health and safety restrictions.

Despite these limitations, it is considered that this report reflects accurately the habitats present, their biodiversity importance, and the potential for the site to support protected and notable species.

4. BASELINE ECOLOGICAL CONDITIONS

4.1. Designated Sites

Statutory Designated Sites

According to the Natural England online mapping resource MAGIC are two statutory designated sites within 2km of the site. These are:

- Ribble & Alt Estuaries Ramsar Site. Located 2km South West of the site.
- Sefton Coast SSSI & SAC. Locates 2km North West of the site.

Non-statutory sites

According to Record, the following non-statutory designated sites are located within 1 km of the site:

- Red Squirrel Buffer Zone – The site is within this area
- Red Squirrel Refuge Area – 1.8km south west
- Formby Moss (Sefton Local Wildlife Site). 1.9km north east
- River Alt Corridor (Nature Improvement Area) – 1.8km south

4.2. Habitats

The habitats identified during the Extended Phase 1 Habitat Survey are listed and described below. All habitats are marked on the Phase 1 Habitat map in Appendix 2 and each habitat type is illustrated with a photograph in Appendix 3.

The site is situated in the suburban area of Formby, which is comprised primarily of residential properties. The wider area is characterised by agricultural fields to the east (700m) and the Sefton Coast to the West (2km).

The overall character of the site can be described as single detached residential property with garage and timber workshop (dilapidated). The gardens comprise largely of amenity grassland with garden plants, shrub and privet hedges to the front. The rear garden is fenced/walled to all sides.

Desk Study

According to MAGIC there are no areas of mapped priority habitat in the vicinity of the site.

According to Merseyside Biobank there are Ecological Network Mapping areas within 1km of the site. These include the following habitats:

- Grasslands (EN-CBA-Grassland)
- Wetlands (EN-CBA-Wetlands) – Including Fen and Reedbeds
- Woodlands (EN-CBA- Woodlands – Including Broadleaf, Deciduous, Wood-pasture and Parkland; and Wet-Woodland.
- Linear Features (EN-CBA-Linear Features) – Including Rivers, Major Road Corridor, Hedgerow, Active Railway Corridor.

- Stepping Stones (EN-Stepping Stones) – Ditches

None of the above habitats are located within or in close proximity to the redline boundary.

Field Survey

Buildings & Hardstanding

The site comprises of one main residential building, one timber garage and one timber workshop (dilapidated). The buildings were assessed for the potential to support bats (Collins. J (ed) 2016) and inspected for evidence of nest birds.

The main house (Building 1) was assessed as having 'Moderate' potential to support bat roosts due to the presence of potential roost features and access points into the pitched roof void. No evidence confirming the presence of bats was identified during a detailed internal and external inspection of the building. Evidence of the presence of nesting birds was identified within the roof void of the building (nest materials and faeces).

The Garage (Building 2) was considered to be of negligible potential for supporting bat roosts due to an absence of potential roost features. One old birds' nest was present above the interior of the garage door. The dilapidated timber workshop building (Building 3) also was considered to be of negligible potential for supporting bat roosts but is likely to support nesting birds during the breeding season.

Full details are provided in the species section later in this report and in Appendix 3.

Amenity Grassland (poor)

There are two area of amenity grassland, one to the front and one to the rear of the property. These areas are typical of garden lawns, species poor, comprising of Annual Meadow Grass (*Poa annua*) and lawn moss (*Polytrichum* sp.) and Dandelion (*Taraxacum* agg.).

Hedgerows (Species Poor)

There are hedgerows forming the boundary to the front of the site (Eastern aspect). These are species poor and comprise entirely of Privet (*Ligustrum ovalifolium*).

Felled Trees

To the western aspect (rear garden boundary) there are remnants of trees that have recently been felled and chipped. Remaining evidence suggests these were Sycamore and Conifer (e.g. Leyland Cypress). There are no remaining trees on the site.

Ornamental Shrubs

There are a small number of ornamental shrub present in the front garden of the property. These included *Hydrangea* sp. and also *Cotoneaster franchetii* and *Rhododendron* sp.

4.3. Species

Amphibians

There are no records of Great Crested Newt (*Triturus cristatus*) located within 1km of the site. There are records of Natterjack Toad (*Epidalea calamita*) within 1km of the site but these are strictly associated with the Sefton Coast Sand Dune system and associated habitats. Habitats within the site are not suitable for supporting this species.

According to MAGIC website, there are no records of granted European Protected Species Licences for Great Crested Newt within 500m of the site. The nearest Class Licence Survey record provided by MAGIC is approximately 4.8km north of the site associated with Ainsdale Sand Dunes NNR.

There are no mapped water bodies within the site boundary or within 500m of the site.

In view of the existing ecological information and field survey, it is considered that Great Crested Newt or other notable amphibian species are highly unlikely to be present within the site and that the site is not of importance for these species.

Badgers

There are no records of Badgers (*Meles meles*) within 1 km the site.

Habitats within the site are largely unsuitable for supporting Badgers and no evidence of the presence of Badgers was recorded during the field survey.

In view of the existing ecological information and field survey, it is considered that Badgers are highly unlikely to be present within the site and that the site is not of importance for this species.

Bats

There are numerous records of bats within 1 km of the site. Species recorded include Brown Long Eared (*Plecotus auritus*), Common Pipistrelle (*Pipistrellus pipistrellus*), Daubenton's Bat (*Myotis daubentonii*), and Pipistrelle species (*Pipistrellus* sp.). None of the above records were for within or in close proximity to the site boundary.

MAGIC provided the following records of granted European Protected Species for Bats within 1km of the site:

- EPSM2010-2042 Common Pipistrelle resting place (non-breeding). Located 250m south west of the site.


There are three buildings on site (Buildings 1-3). The two out buildings (Buildings 2 & 3) are considered to be unsuitable for supporting bat roosts due to a lack of potential roost features (PRFs) for bats (please see Appendix 3 for further information).

However, the main residential property (Building 1) was assessed as having potential to support bat roosts. This building was subject to a full Preliminary Roost Assessment (PRA) for bats.

Following the detailed inspection of the building, no evidence to suggest the presence of a bat roost was identified in association with the building (Building 1), however several potential access points were identified and given the historic nature of the building and construction material, the building is considered to be of 'Moderate' potential (Collins, J (Ed). (2016) for supporting bat roosts.

Details of the inspection and photographs are provided in Table 1 below.

Table.1 Building Inspection Results

Photo	Description
	<p><u>Building 1</u></p> <p>The residential property is a detached Victorian property of brick and construction with a timber roof frame, overlain with bitumen felt and slate. There is a large roof void in the main roof of the building, along with a smaller roofing associated with a single-story section to the</p>



western aspect. The roof of this section is sloped and also overlain with slate.

Potential Roost Features:

The exterior of the roof has naturally occurring gaps owing to the slate roof covering and age of the roof. There are gaps between slates at the gable end roof edges. In addition, there appears to be a gap in brick work to the apex of the southern gable end. There is a gap leading to a cavity above a timber window frame on the western aspect. Internal inspection of the roof void revealed the roof to be underlined with bituminous felt and gaps at the north east and north western corners of the eaves were also evident. The roof void floor was covered with rockwool insulation. No evidence of void dwelling species such as Brown Long eared bats (which often leave visible field signs) was recorded.

Evidence: No

No evidence to suggest current presence of bats was identified at the time of survey.

Bat Roost Assessment: Moderate potential

Considered to be of Moderate potential to support crevice dwelling bat species such as Pipistrelle species. These are a crevice dwelling species and further evidence of presence may not be visible through non-intrusive survey.

Birds

There are numerous records of notable bird species within 1 km of the site. Those that are species of note (e.g. Schedule 1 or NERC Act S41 'Species of Principal Importance, Birds of Conservation Concern and/or IUCN Red List) and that specifically relate to the habitats present within or adjacent to the site are as follows:

- Barn Owl (*Tyto alba*)
- Corn Bunting (*Emberiza calandra*)

- Cuckoo (*Cuculus canorus*)
- Dunnock (*Prunella modularis*)
- Grasshopper Warbler (*Locustella naevia*)
- Grey Partridge (*Perdix perdix*)
- House Martin (*Delichon urbicum*)
- House Sparrow (*Passer domesticus*)
- Lapwing (*Vanellus vanellus*)
- Linnet (*Linaria canabina*)
- Reed Bunting (*Emberiza schoeniclus*)
- Skylark (*Aluada arvensis*)
- Song Thrush (*Turdus philomelos*)
- Starling (*Sturnus vulgaris*)
- Swift (*Apus apus*)
- Willow Tit (*Poecile montana*)
- Yellowhammer (*Emberiza citrinella*)

Habitats within the site including the buildings and hedgerows have high potential to support nesting birds, such as House Sparrow, Swift or Dunnock during the breeding season (March – August inclusive).

It is considered unlikely that ground nesting birds would be present due to the enclosed nature of the site. There was no evidence of Barn Owl (*Tyto alba*) being present on site or that any of the buildings present would be suitable for supporting this species.

It is not considered likely that the site would be of significance for any other notable bird species.

Invertebrates

There are no notable records of invertebrate species relevant to the site. Ornamental shrubs and garden plants may provide habitat for commoner invertebrate species found locally. It is not considered likely that the site will support any particularly rare or notable invertebrate species.

Otter

There are three records of Otter (*Lutra lutra*) within 1 km of the site (dating from 2012), These are all associated with the River Alt and located 760m south of the site at its nearest point. There are no habitats suitable for supporting Otter (including holts or resting places) within or near to the site.

Red Squirrel

There are numerous records of Red Squirrel (*Sciurus vulgaris*) within 1 km of the site. The majority of these are to the west of the mainline railway and toward habitats associated with the Red Squirrel Refuge area and woodland associated with the Sefton Coast.

There is limited potential for Red Squirrel to frequent gardens in the vicinity of the site (the site is located within the Red Squirrel Buffer Zone). However, the proposed development site lacks any habitat of note for supporting this species.

In view of the above, the site is considered highly unlikely to support or be of significance for Red Squirrel.

Reptiles

There a small number of historic records of reptiles within 1 km of the site and Sand Lizard (*Lacerta agilis*) are a highly notable species known to occur along the Sefton Coast sand dune habitats and those areas in close proximity.

Habitat within the site is unsuitable for supporting reptiles. Given the residential surroundings, location of the site and absence of records, the likelihood of common reptiles to use the site is considered to be negligible.

Water Vole

There are no recent records of Water Vole (*Arvicola amphibius*) within 1 km of the site. The most recent record is dated from 1999 at Downholland Brook, Alt Bridge, which is remote and disconnected from the development site.

There is no habitat suitable for supporting this species within or in close proximity to the site. As such the site is considered to be of negligible value to Water Vole.

Other Notable Species

There are numerous records of Hedgehog (*Erinaceus europaeus*) within 1km of the site and it is considered likely that Hedgehog may frequent the site due to the presence of hedgerows and absence of fences in some sections of the gardens.

Non-native Invasive Species

There are records of non-native invasive weeds (notifiable under Schedule 9 of the Wildlife and Countryside Act 1981) within 1km of the site. These include:

- Indian Balsam (*Impatiens glandulifera*)
- Japanese Knotweed (*Fallopia japonica*)
- Japanese Rose (*Rosa rugosa*)

- Rhododendron (*Rhododendron ponticum*)
- Yellow Archangel (*Lamium galeobdolon subsp. argentatum*)
- Perfoliate Alexanders (*Smyrniolium perfoliatum*)
- Three Cornered Garlic (*Allium triquetrum*)

There is one non-native invasive species, Rhododendron, which is notifiable under Schedule 9 of the Wildlife and Countryside Act 1981, present within the site. This is located in the front garden with two shrubs present.

Notable Flora

There are no recent records of notable flora within 1 km of the site that are relevant to the site and habitats present. Those records provided are associated with specific sites or habitats such as those present along the Sefton Coast.

No rare or particularly notable plant species were recorded during the field survey or are considered likely to occur.

Note: Full Local Records Centre Data provided by Record is available upon request.

5. PLANNING POLICY AND LEGISLATION

5.1. National Planning Policy

The National Planning Policy Framework (NPPF) February 2019, is an update to the previous version issued in March 2012, and is a policy framework document which provide a range of important principles. Paragraph 170 of the NPPF states that decisions should contribute to and enhance the natural local environment by:

'Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.'

Paragraph 171 goes on to state:

'... take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.'

When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles (paragraph 175):

'Development proposals where the primary objective is to conserve or enhance biodiversity should be supported.'

'Opportunities to incorporate biodiversity in and around developments should be encouraged.'

5.2. Local Planning Policy

Table 2 details the policies within Chapter 11 'Natural Heritage Assets' of the of the Local Plan for Sefton (Adopted April 2017) which are relevant to the ecological features.

Table 2: Summary of relevant local planning policy

Policy	Description
<p>NH1</p> <p>Natural Assets</p>	<p>1. Sefton's natural assets together with its landscape character should continue to contribute to the Borough's sense of place, local distinctiveness and quality of life. Development proposals and other initiatives should contribute positively towards achieving this.</p> <p>2. A hierarchical approach will be taken to the protection and enhancement of Sefton's natural assets, according to their designation and significance.</p> <p>3. Development should seek to protect and manage Sefton's natural assets (including natural habitats, sites, the Ecological Network and green infrastructure). Where possible, development should:</p> <ul style="list-style-type: none"> a. Maintain, restore, enhance or extend these natural assets; and b. Create new habitats and green infrastructure; and c. Secure the long-term management of these natural assets. <p>4. Where it has been demonstrated that appropriate protection or retention of natural assets cannot be achieved, and there are no alternatives, mitigation and/or as a last resort compensatory provision will be required.</p> <p>5. The main priorities are improving access, quality, linkages and habitat within the city region ecological network (including the Nature Improvement Area), improving access to and the quality of public open space and other outdoor facilities available to the public and urban trees.</p>
<p>NH2</p> <p>Nature</p>	<p>1. Development which may result in a likely significant effect on an internationally important site must be accompanied by sufficient evidence to enable the Council to make a Habitats Regulations Assessment. Adverse effects should be avoided, or where this is not possible they should be mitigated, to make sure that the integrity of internationally important sites is protected. Development which may adversely affect the integrity of internationally important sites will only be permitted where there are no alternative solutions and there are imperative reasons of overriding public interest, and where suitable compensatory provision has been made. Such mitigation or compensation must be identified before development commences. Any mitigation or compensation must be functional before any likely adverse effect arises and should be accompanied by a dedicated project related Habitats Regulations Assessment. This also applies to sites and habitats outside the designated boundaries that support species listed as being important in the designations of the internationally important sites (i.e. supporting habitat).</p> <p>2. Development which may affect other designated sites of nature and/or geological conservation importance, Priority Habitats, legally protected species and/or Priority Species will be permitted where it can be demonstrated that there is no significant harm.</p>

	<p>3. Development which may cause significant harm will only be permitted in:</p> <ul style="list-style-type: none"> a. National sites (including Sites of Special Scientific Interest, National Nature Reserves): where there are no alternatives and where the reasons for and the benefits of development clearly outweigh the impact on the nature conservation value of the site and its broader contribution to the national network, b. Local Sites (including Local Nature Reserves, Local Wildlife Sites and Local Geological Sites): where the reasons for and the benefits of development clearly outweigh the impact on the nature conservation value of the site and its broader contribution to the ecological network, c. Priority Habitats: where the reasons for and the benefits of development on balance clearly outweigh the impact on the nature conservation value of the habitat and its broader contribution to the LCR Ecological Network, and d. Protected and Priority Species: where it is demonstrated that no significant harm will result. <p>4. Where it has been demonstrated that significant harm cannot be avoided, appropriate mitigation, replacement or other compensatory provision may be required, to accord with the hierarchy of sites. The location of appropriate mitigation, replacement or other compensatory measures will be targeted, using a sequential approach as follows:</p> <ul style="list-style-type: none"> a. On site b. Immediate locality and / or within the Core Biodiversity Area c. LCR Nature Improvement Area within the Borough, and lastly d. LCR Nature Improvement Area outside the Borough. <p>5. Where significant harm resulting from development cannot be avoided, adequately mitigated or, as a last resort, compensated, then planning permission will be refused.</p> <p>6. Development proposals which affect sites of nature conservation importance, Priority Habitats, legally protected species or Priority Species must be supported by an Ecological Appraisal and include details of avoidance, mitigation and / or compensation, and management, where appropriate.</p>
<p>NH3</p> <p>Development in the Nature Improvement Area</p>	<p>Development within the Nature Improvement Area will be permitted where it:</p> <ul style="list-style-type: none"> a. Enables the functioning of the Nature Improvement Area b. Contributes to the opportunities for habitat creation and / or habitat management as set out in the NIA Focus Area profiles, and c. Is consistent with other policies in the Plan.
<p>NH4</p> <p>The Sefton Coast</p>	<p>1. Development must not:</p> <ul style="list-style-type: none"> a. Increase the risk of tidal flooding or coastal erosion through their impact on coastal processes, b. Impair the capacity of the coast to form a natural sea defence or adjust to changes in conditions without risk to life or property, c. Adversely affect water quality including the quality of the dune aquifer and bathing water quality, d. Adversely affect the integrity of sites of international nature conservation importance, taking into account appropriate mitigation, or as a last resort, compensation. <p>Development which may have an adverse effect on internationally important nature sites will only be permitted where it can be demonstrated that there are both no alternatives and imperative reasons of overriding public interest and where compensatory provision has been made.</p>

	<p>2. Proposals which protect or enhance informal recreation, proposals for new coastal flood defences, flood risk management measures, and essential landfall facilities for offshore installations will be supported, subject to other Plan policies.</p> <p>3. Within the Coastal Change Management Area as shown on the Policies Map, development must take into account the risk of coastal change and the vulnerability of the development and must:</p> <ul style="list-style-type: none"> a. Be located in accordance with a sequential approach to risk and vulnerability, b. Be safe over its planned lifetime, and c. Provide wider sustainability benefits.
--	--

5.3. Relevant Legislation

National Legislation

The Wildlife and Countryside Act 1981

The Wildlife and Countryside Act 1981 (as amended) consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the conservation of wild birds (Birds Directive) in Great Britain.

Natural Environment & Rural Communities Act 2006

Section 40 of the NERC Act 2006 places a duty upon all local authorities in England to promote and enhance biodiversity in all of their functions. Section 41 lists habitats and species of principal importance to the conservation of biodiversity. Fifty-six habitats and 943 species of Principal Importance for Conservation are included on the Section 41 list and draws upon the UK BAP List of Priority Species and Habitats.

The Conservation of Habitats and Species (Amendment) Regulations 2017

The Conservation of Habitats and Species Regulations 2017 transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law and transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations provide for the designation and protection of 'European sites' (Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)), the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European sites.

Species Legislation

Bats

Bats are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. Under the Wildlife and Countryside Act 1981 it is illegal to:

- *Kill or injure bats;*
- *Cause disturbance at their resting places; or*
- *To block access to, damage or destroy their roost sites.*

Under the Conservation of Habitats and Species Regulations 2017 it is an offence to:

- *Deliberately capture or kill a bat;*
- *To damage or destroy a breeding site or resting place of any bat. (This is an absolute offence and intent or recklessness does not have to be proved); and*
- *Deliberately disturb a bat (this applies anywhere, not just at its roost).*

Birds

Breeding wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). Under the Wildlife and Countryside Act, a wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Game birds however are not included in this definition (except for limited parts of the Act). They are covered by the Game Acts, which fully protect them during the close season. All birds, their nests and eggs are protected and it is thus an offence, with certain exceptions to:

- *intentionally kill, injure or take any wild bird;*
- *intentionally 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, which has been taken in contravention of the Act or the Protection of Birds Act 1954;*

have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act or the Protection of Birds Act 1954;

- *use traps or similar items to kill, injure or take wild birds; and*

- *have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations.*

Additionally, for some species listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) it is an offence to intentionally or recklessly disturb the adults while they are in and around their nest or intentionally or recklessly disturb their dependent young.

6. ECOLOGICAL EVALUATION, AND RECOMMENDATIONS FOR MITIGATION, AND FURTHER SURVEY

6.1. Designated Sites

Due to the scale of the proposed development (small scale residential development within the existing site boundary) and distance from any statutory or non-statutory designated sites, no impacts upon such sites are anticipated because of the proposed development.

6.2. Habitats

Habitats present on site include the following:

- Amenity Grassland
- Hedgerows (Species Poor)
- Ornamental Shrubs
- Buildings (and Hardstanding)

None of the above habitats on site are considered to be of any particular note, but may support nesting birds or roosting bats.

The grassland areas are all former amenity grassland which has been mown regularly. This has resulted in a sward which is short and dominated by only a few species. There are no notable herbaceous species present and lawn moss is frequent in patches. The structure of the grassland does not provide any notable cover or habitat for small mammals or invertebrate species.

The hedgerows forming the site boundary to the front of the property species poor and comprise of Privet. These may have some value for nesting birds and cover for small mammals.

It is recommended that where these hedgerows are removed, replacement hedgerow planting is considered within the design of the site (species rich native hedgerow) to ensure biodiversity

is maintained and where possible net-gain achieved on site, in line with Local and National Planning policies.

Buildings on site are largely of limited value for biodiversity. However, one building (Building 1) has been assessed as being of 'Moderate Potential' to support bat roosts. This potential is largely limited to the main roof structure.

It is understood that the proposals include the demolition of this building. As such further consideration is required with respect to Bats and roost habitat. Please see section 6.3 for further information.

6.3. Species and Species Groups

Bats

The site provides potential habitat for roosting bats and also foraging bats in the surrounding area. Building 1 has been identified as being of 'Moderate Potential' for supporting bat roosts. As such the following actions are required in relation to bat and Building 1 (only):

- Further survey to include a minimum of 2 dusk emergence / dawn re-entry surveys of Building 1. To be undertaken between May – September (during the active season for bats).
- Only where a roost is identified via the above surveys, an application to Natural England for a European Protected Species Licence for Bats would be required. This will require the data collected in the current and recommended surveys and will need to detail appropriate mitigation and compensation measures.
- At the appropriate stage of planning, any artificial specification should ensure light spill kept to a minimum at both construction and post construction stages. Where a roost is identified, any proposed bat bricks/boxes should be protected from direct light-spill.

Birds

The site contains habitat that supports nesting birds (hedgerows and buildings). Where possible hedges should be retained as part of the development and managed appropriately in the long term to ensure nesting habitat is retained for the breeding season.

These habitats are highly likely to support nesting birds during the breeding season (March – August). It is recommended that any required vegetation removal works are scheduled for outside of the breeding period (ideally September – February) to avoid any potential conflicts with nesting birds (which are protected under the Wildlife and Countryside Act 1981). Where full removal is not possible, heavy pruning will make hedges less attractive as nest sites.

Where this is not possible a check for nesting birds should be undertaken prior to site clearance (though there is a risk that if a nest is present, this could lead to delays in works in the areas occupied by nests).

Incorporation of hedges into landscaping proposals for the site will provide compensatory nesting habitat for species that may presently use the site in the long term.

Invasive Non-Native Species

Ornamental shrubs on site include Rhododendron (a non-native invasive species). This species should be removed from site and disposed of.

Planting of species listed in Schedule 9 of the WCA should be avoided in any proposed landscaping plans.

<https://www.legislation.gov.uk/ukpga/1981/69/schedule/9/part/II?view=plain>

Other Notable Species

With respect to Hedgehog, clearance of ground cover and any brash should take care to avoid harm to Hedgehogs if present. Where present they should be left undisturbed and allowed to disperse of their own accord. Brash piles should be created in retained areas of the site to provide habitat, especially for during the winter months.

6.4. Opportunities for Ecological Enhancement

It is recommended that development proposals incorporate a number of bat boxes to provide new roost opportunities for bats in the long term and in doing so potentially enhance the biodiversity of the site. Habitat 3S bat bricks (or similar designs) are recommended.

Bird Boxes should also be considered for inclusion in the design any new buildings to provide enhanced nesting habitat for birds within the site. These could include nest sites for migratory species such as Swift (*Apus apus*) and Sparrow terraces.

Incorporation of hedgerows (using locally native species) in to the proposed design of the site would maintain and potentially enhance with biodiversity of the site in the long term.

7. CONCLUSIONS

In view of the results of the desk and field-based assessment of the site, the site is considered to be of relatively low ecological value in the local context and loss of biodiversity as a result of the proposed development is limited and can be mitigated for as part of the proposed development.

The main features of interest are the boundary hedgerows (bird nesting resource) and the potential for Building 1 to support bat roosts, for which further survey is necessary.

The site supports nesting birds, which will require further consideration as part of the planning application (see above recommendations) and during the works in order to comply with planning policy and legislative requirements.

For the development to proceed in line with UK and EU legislation and Planning Policy relating to biodiversity, the recommendations contained within this report should be considered and adopted as necessary.

Appropriate and proportionate mitigation should be considered at the design stage to ensure the LPA can fully assess the planning application and are aware of measures being taken to avoid an overall adverse impact and aims put in place to maintain and where possible enhance the biodiversity value of the site in the long-term as part of the development proposals

Where appropriate measures as recommended in the report are adopted, the development will be able to proceed having considered and addressed the necessary legislation and both local and national policy relating to biodiversity conservation.

8. SUMMARY OF RECOMMENDED MITIGATION AND FURTHER SURVEY

Table 3. Summary of Further Considerations & Actions.

Action	Rationale	When
<p>Further Bat Survey (Building 1). To comprise a minimum of 2 x emergence/re-entry surveys</p>	<p>Required to complete the assessment of the building for bats in line with current professional bat survey guidelines due to the building being of 'moderate potential' for supporting bat roosts.</p>	<p>Surveys to be undertaken between May-September (during the active season for bats).</p>
<p>Avoidance of vegetation/site clearance in nesting bird season or nest checks prior to works</p>	<p>Site likely to support birds during the breeding season. Loss of habitat and disturbance where vegetation/site clearance is scheduled between March-August.</p>	<p>Avoid site/vegetation clearance in March-August.</p>
<p>Installation of Bird and Bat Bricks</p>	<p>To enhance the site and compensate for loss of nesting opportunities post-development.</p>	<p>Winter months/ prior to nesting season and active season for bats. Will need to be installed at construction stage.</p>
<p>Avoidance of artificial light spill on boundary features</p>	<p>Boundary features are likely to be of value for bats (and potentially other wildlife). Increases in lux levels may have an adverse effect upon these features for bats.</p>	<p>At design stage. Any proposed artificial lighting should be designed to avoid increases in ambient lux levels to boundary areas.</p>

9. REFERENCES

BS 42020:2013 Biodiversity - Code of Practice for Planning and Development.

Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. Technical Guidance Series. www.cieem.net.

Chartered Institute of Ecology and Environmental Management (2015). Guidelines for Ecological Report Writing. Technical Guidance Series. www.cieem.net.

Collins, J (Ed). (2016). *Bat Surveys for Professional Ecologists - Good Practice Guidelines*, 3rd edition. Bat Conservation Trust.

JNCC (2010). Handbook for Phase 1 Habitat Survey. A technique for environmental audit.

Joint Nature Conservation Committee, Peterborough.

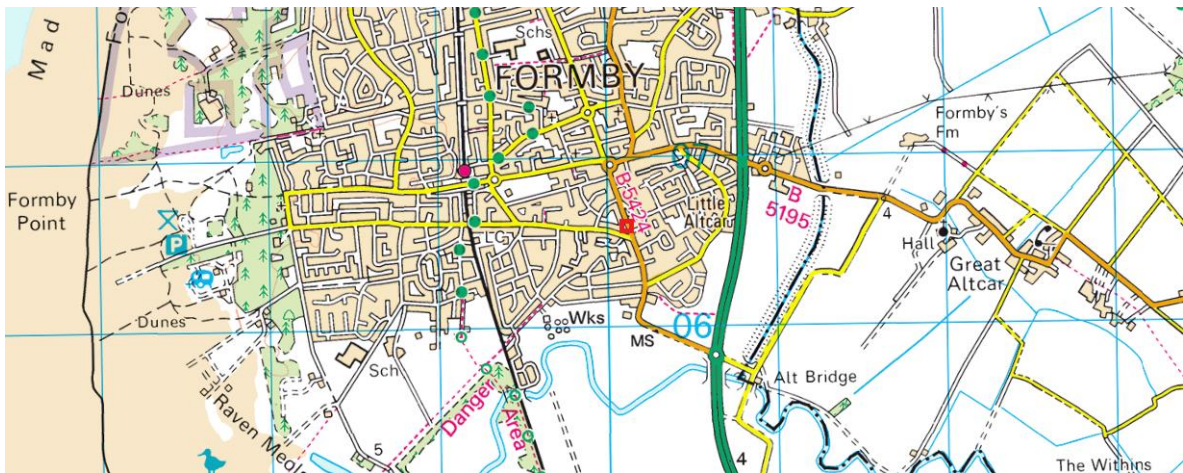
Mitchell-Jones, A.J. (2004). *Bat Mitigation Guidelines*. English Nature

Multi-Agency Geographic Information Centre: <http://magic.defra.gov.uk/>

Sefton MBC (2017) A Local Plan for Sefton. <https://www.sefton.gov.uk/media/1270013/A-Local-Plan-for-Sefton-for-ADOPTION-FINAL.pdf>

Stace. C. (2010). *New British Flora of the British Isles*. 2nd Edition. Cambridge University Press.

APPENDIX 1: SITE LOCATION PLAN



Images courtesy of Ordnance Survey accessed via Bing Maps ©Microsoft 2020

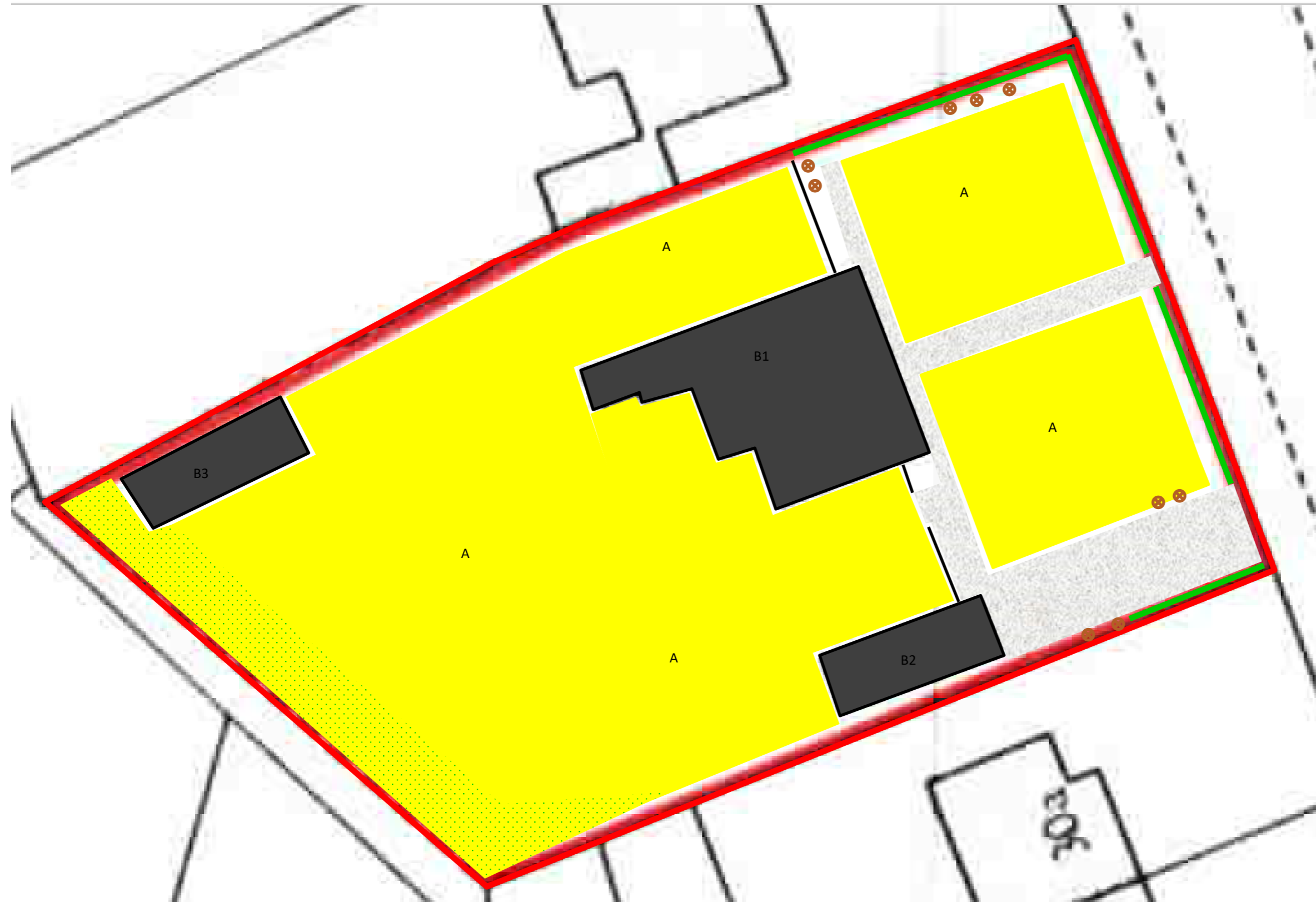
APPENDIX 2: PHASE 1 HABITAT PLAN

Phase 1 Habitat Plan

30 Liverpool Rd, Formby

December 2020

Client: Pegasus Group



Key:

- Semi-improved neutral grassland (poor)
- Existing Buildings
- Hardstanding
- Bare garden borders
- Hedgerow (species poor)
- Redline Boundary
- Felled /cleared trees
- Ornamental Shrub

APPENDIX 3: SITE PHOTOS & BUILDING REFERENCES

Buildings within the site

Each of the buildings was inspected under the Preliminary Roost Assessment as per the methodology described in section 2.4.2. Those assessed as being of 'negligible potential' were deemed so based on a) an absence of potential roost features (PRFs) or access points and b) on an absence of evidence of the presence of bats within the accessible areas of the buildings c) based upon the construction of the building being unsuitable for supporting bats (e.g. single skin).

	
<p>Building 1 – Victorian Town House, 2 storey with roof void. Assessed as being of 'Moderate Potential' for supporting bat roosts due to gaps associated with slate roof, eaves and hole in brick to apex at gable end.</p>	<p>Building 2 – Corrugate metal garage with timber frame. Negligible potential for supporting bat roosts due to lack of access points and PRFs.</p>
	
<p>Building 3 – Dilapidated workshop/garage. Negligible potential for supporting bat roosts due to lack of access points and PRFs.</p>	<p>Building 3 Interior – Corrugate metal over timber frame (collapsing). Negligible potential for supporting bat roosts due to lack of access points and PRFs.</p>

Habitats within the site



Amenity Grassland (Front)



Amenity Grassland / Cleared Trees (Rear)



Hedgerows (species poor)



Ornamental Planting (Garden plants)

APPENDIX 4: FRAME OF REFERENCE FOR GEOGRAPHICAL VALUE

<p>International and European value</p>	<p>Ramsar Sites, Special Protection Areas, Biosphere Reserves, Special Areas of Conservation. Sites supporting populations of internationally important species.</p> <p>Any regularly occurring population of an internationally important species, which is threatened or rare in the UK. i.e. it is a UK Red Data Book species or listed as occurring in 15 or fewer 10km squares in the UK (categories 1 and 2 in the UK BAP) or of uncertain conservation status or of global conservation concern in the UK BAP.</p> <p>A regularly occurring, nationally significant population/number of any internationally important species.</p>
<p>National value</p>	<p>SSSIs or non-designated Sites meeting SSSI selection criteria, NNRs, Marine Nature Reserves, NCR Grade 1 Sites. Sites containing viable areas of key habitats identified in the UK Biodiversity Action Plan.</p> <p>Any regularly occurring population of a nationally important species which is threatened or rare in the region or county (see local BAP).</p> <p>A regularly occurring, regionally or county significant population/number of any nationally important species.</p>
<p>Regional value</p>	<p>Sites containing viable areas of threatened habitats listed in a Regional BAP (or some Natural Areas), comfortably exceeding SINC criteria, but not exceeding SSSI criteria.</p> <p>Any regularly occurring, locally significant population of a species listed as being nationally scarce which occurs in 16-100 10km squares in the UK or in a Regional BAP or relevant Natural Area on account of its regional rarity or localisation;</p> <p>A regularly occurring, locally significant number of a regionally important species.</p>
<p>County / Metropolitan</p>	<p>Sites meeting the criteria for county or metropolitan designation (SINC, CWS, etc.). Ancient semi-natural woodland, LNRs or viable areas of key habitat types listed in county BAPs/Natural Areas.</p> <p>Any regularly occurring, locally significant population of a species which is listed in a County/Metropolitan "red data book" or BAP on account of its regional rarity or localisation;</p> <p>A regularly occurring, locally significant number of a County/Metropolitan important species.</p>
<p>Local</p>	<p>Undesignated Sites or features considered to appreciably enrich the habitat resource in the District or Borough or within a zone of influence.</p> <p>A population of a species that is listed in a District/Borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation;</p> <p>A regularly occurring, locally significant number of a District / Borough important species during a critical phase of its life cycle.</p>

APPENDIX 5: LOCAL RECORD CENTRE DATA.

Available upon request.



Biodiversity Information Report 10/12/2020

**MBB reference: 3263-COM01
Site: 30 Liverpool Rd, Formby**

Your Ref: None supplied
Your contact: Rob Nic

MBB Ref: 3263-COM01
MBB Contact: Ben Deed

Date: 10/12/2020

Merseyside BioBank biodiversity information report

These are the results of your data request relating to **an area at 30 Liverpool Rd, Formby defined by a buffer of 1000 metres around the centre of grid reference SD30090660.**

You have been supplied with the following:

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

Merseyside BioBank (MBB) is the Local 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 appendix 2 of this report. Note that the date ranges in the summary tables (headed 'Dates') show the earliest and latest years for which records have been summarised for each taxon.

UK Protected Species

'UK Protected species' are those taxa specifically identified by UK legislation including: Wildlife & Countryside Act 1981 (as amended); Protection of Badgers Act 1992; Conservation of Habitats and Species Regulations 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>	3	2014-2020	WCA5/9.5a
	Natterjack Toad	<i>Epidalea calamita</i>	3	1977-1992	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c
bird	Barn Owl	<i>Tyto alba</i>	3	1997-1999	WCA1i
flowering plant	Bluebell	<i>Hyacinthoides non-scripta</i>	6	1981-2003	WCA8
marine mammal	Bottle-Nosed Dolphin	<i>Tursiops truncatus</i>	1	1967	HabRegs2,WCA5/9.5a
	Common Dolphin	<i>Delphinus delphis</i>	1	1996	HabRegs2,WCA5/9.5a
	Common Porpoise	<i>Phocoena phocoena</i>	1	1938	HabRegs2,WCA5/9.5a
reptile	Sand Lizard	<i>Lacerta agilis</i>	2	1900-1970	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c
	Slow-worm	<i>Anguis fragilis</i>	2	1833-1959	WCA5/9.1k/l,WCA5/9.5a
terrestrial mammal	Bats	<i>Chiroptera</i>	6	1988-2017	HabRegs2
	Brown Long-eared Bat	<i>Plecotus auritus</i>	1	1988	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c
	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	13	1993-2012	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c
	Daubenton's Bat	<i>Myotis daubentonii</i>	4	2014	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	618	1984-2019	WCA5/9.1k/l,WCA5/9.1t,WCA5/9.2,WC A5/9.4.a,WCA5/9.4b
	European Otter	<i>Lutra lutra</i>	3	2012	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c
	European Water Vole	<i>Arvicola amphibius</i>	3	1973-1999	WCA5/9.4.a,WCA5/9.4b,WCA5/9.4c

Pipistrelle Bat species	<i>Pipistrellus</i>	10	1985-2010	HabRegs2,WCA5/9.4b,WCA5/9.5a,WC A5/9.4c
-------------------------	---------------------	----	-----------	--

Desig. Code	Desig. Name	Designation Description
WCA5/9.5a	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.5a)	Section 9.5 Animals which are protected from being sold, offered for sale or being held or transported for sale either live or dead, whole or part.
HabRegs2	The Conservation (Natural Habitats, &c.) Regulations 2017 (Schedule 2)	Schedule 2- European protected species of animals.
WCA5/9.4b	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.4b)	Section 9.4 Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.
WCA5/9.4c	Wildlife and Countryside Act 1981 (Schedule 5)	Animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed.
WCA1i	Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Birds and their young, for which it is an offence to intentionally or recklessly disturb at, on or near an active nest. They are protected by special penalties at all times.
WCA8	Wildlife and Countryside Act 1981 (Schedule 8)	Plants which are protected from intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
WCA5/9.1k/l	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.1 (killing/injuring))	Section 9.1. Animals which are protected from intentional killing or injuring.
WCA5/9.1t	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.1 (taking))	Section 9.1 Animals which are protected from taking.
WCA5/9.2	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.2)	Section 9.2 Animals which are protected from being possessed or controlled (live or dead).
WCA5/9.4.a	Wildlife and Countryside Act 1981 (Schedule 5 Section 9.4, subdivision a)	Section 9.4 subdivision a - Animals which are protected from intentional damage or destruction to any structure or place used for shelter or protection.

North Merseyside BAP Species

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

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

Group	Common Name	Scientific Name	Records	Dates	Designations
amphibian	Natterjack Toad	<i>Epidalea calamita</i>	3	1977-1992	LBAP
bird	Corn Bunting	<i>Emberiza calandra</i>	2	1999-2002	LBAP
	Grey Partridge	<i>Perdix perdix</i>	6	1997-2001	LBAP
	House Martin	<i>Delichon urbicum</i>	7	1997-2006	LBAP
	House Sparrow	<i>Passer domesticus</i>	11	1997-2001	LBAP
	Lapwing	<i>Vanellus vanellus</i>	4	1997-2002	LBAP
	Skylark	<i>Alauda arvensis</i>	8	1997-2002	LBAP
	Song Thrush	<i>Turdus philomelos</i>	5	1997-1999	LBAP
	Starling	<i>Sturnus vulgaris</i>	4	1997-1999	LBAP
	Swift	<i>Apus apus</i>	4	1997	LBAP
flowering plant	Bluebell	<i>Hyacinthoides non-scripta</i>	6	1981-2003	LBAP
	Purple Ramping-fumitory	<i>Fumaria purpurea</i>	2	2017-2019	LBAP

	Willow	<i>Salix viminalis x repens = S. x friesiana</i>	1	1978-1981	LBAP
insect - beetle (Coleoptera)	Northern Dune Tiger Beetle	<i>Cicindela hybrida</i>	1	1980	LBAP
insect - butterfly	Grayling	<i>Hipparchia semele</i>	1	1979	LBAP
insect - dragonfly (Odonata)	Azure Damselfly	<i>Coenagrion puella</i>	13	2005-2014	LBAP
	Banded Demoiselle	<i>Calopteryx splendens</i>	80	2005-2018	LBAP
	Blue-tailed Damselfly	<i>Ischnura elegans</i>	58	2003-2016	LBAP
	Broad-bodied Chaser	<i>Libellula depressa</i>	1	2017	LBAP
	Brown Hawker	<i>Aeshna grandis</i>	6	2003-2007	LBAP
	Common Blue Damselfly	<i>Enallagma cyathigerum</i>	6	2010	LBAP
	Common Darter	<i>Sympetrum striolatum</i>	13	2003-2012	LBAP
	Emerald Damselfly	<i>Lestes sponsa</i>	1	1987	LBAP
	Emperor Dragonfly	<i>Anax imperator</i>	5	2006-2007	LBAP
	Four-spotted Chaser	<i>Libellula quadrimaculata</i>	3	2012	LBAP
	Migrant Hawker	<i>Aeshna mixta</i>	7	2000-2008	LBAP
	Southern Hawker	<i>Aeshna cyanea</i>	1	2012	LBAP
	insect - moth	Sandhill Rustic	<i>Luperina nicklerlii gueneei</i>	1	1995
reptile	Sand Lizard	<i>Lacerta agilis</i>	2	1900-1970	LBAP
terrestrial mammal	Bats	<i>Chiroptera</i>	6	1988-2017	LBAP
	Brown Hare	<i>Lepus europaeus</i>	10	1972-2019	LBAP
	Brown Long-eared Bat	<i>Plecotus auritus</i>	1	1988	LBAP
	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	13	1993-2012	LBAP
	Daubenton's Bat	<i>Myotis daubentonii</i>	4	2014	LBAP
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	618	1984-2019	LBAP
	European Water Vole	<i>Arvicola amphibius</i>	3	1973-1999	LBAP
	Pipistrelle Bat species	<i>Pipistrellus</i>	10	1985-2010	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: Natterjack Toad (*Epidalea calamita*)

The Natterjack Toad has significantly declined in the UK during the 20th century and is now restricted to a few highly localised sites in Scotland (4) and England (48).

In 2000 the Natterjack Toad was present in 13 sites on the Sefton Coast between Southport and Hightown, with an estimated breeding population of around 1,000 females.

Current local declines in the species are attributed to stabilization of the dunes, the increase in tall grasses due to the decline in rabbit grazing, competition from Common Toad and loss of habitat due to increased urban development.

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 is causes a reduction in numbers.

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

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

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

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

NM BAP species: Purple Rampion (*Fumaria purpurea*)

This species is endemic to Britain and here it is nationally scarce. Previously thought to be widespread throughout the arable farmland of the UK, the species has undergone a drastic decline in its numbers and range, with all recent records originating in the North-West and Cornwall.

Declines are thought to be linked to the increased use of weed-killers on farmland and the lack of available disturbed ground, on which the species depends for new seed germination (due to more intensive farming methods).

NM BAP species: Sefton Coast Rare Plants (*Salix viminalis x repens* = *S. x friesiana*)

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

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

NM BAP species: Northern Dune Tiger Beetle (*Cicindela hybrida*)

This species is very localised in the UK and limited to 10 1km squares from Drigg in Cumbria and a 15km stretch of the Sefton Coast. It favours bare sand on fixed dunes such as vegetated blow-outs.

The Sefton Coast population accounts for around 75% of the total British population, and it occurs almost continuously from Hightown to Birkdale where it is found on mobile fore-dunes as well as fixed dunes and sandy clearings.

Loss of suitable habitat on the Sefton Coast is mainly due to over-stabilisation of the dune systems and a lack of new open dune formation. Increases in scrub cover, urban/holiday development and afforestation are also threats to this species.

NM BAP species: Grayling Butterfly (*Hipparchia semele*)

Grayling butterflies are strongly dependant on coastal grassland habitat and a number of localised populations survive around the UK. The Sefton Coast provides abundant suitable habitat, and the species is often found on western facing dunes.

Declines in the species are attributed to the loss of suitable habitat and locally this includes scrub encroachment, excessive erosion due to public access and over fixation of the dune system.

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

Twentyone species of dragonfly and damselfly are included in the NM BAP Dragonflies Species Action Plan. These include vagrant species and some which are thought to be undergoing range expansions in the UK. Eighteen of these species are known to breed in our local area, with significant breeding sites in St Helens and Sefton.

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

NM BAP species: Sand Lizard (*Lacerta agilis*)

The Sand Lizard has undergone large declines and natural populations have become extinct through much of the UK and are declining throughout Europe. In Merseyside the Sand Lizard population is thought to have declined by about 80% during the 20th Century, and the current estimate is that 1,000 adults remain in isolated populations along the Sefton Coast dunes and surrounding area.

Local declines in the species have been caused by a combination of factors, including the loss of habitat due to scrub encroachment and development, recreational pressure, dune fixation by planting of trees and scrub, predation by domestic cats and pheasants, uncontrolled fires and gassing of rabbit burrows that are being used by Sand Lizards.

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*)

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 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	Natterjack Toad	<i>Epidalea calamita</i>	3	1977-1992	Sect.41
bird	Corn Bunting	<i>Emberiza calandra</i>	2	1999-2002	Sect.41.suppl
	Cuckoo	<i>Cuculus canorus</i>	2	1997-1998	Sect.41
	Dunnock	<i>Prunella modularis</i>	4	1997	Sect.41.suppl
	Grasshopper Warbler	<i>Locustella naevia</i>	3	1997-2000	Sect.41
	Grey Partridge	<i>Perdix perdix</i>	6	1997-2001	Sect.41
	House Sparrow	<i>Passer domesticus</i>	11	1997-2001	Sect.41
	Lapwing	<i>Vanellus vanellus</i>	4	1997-2002	Sect.41
	Linnet	<i>Linaria cannabina</i>	4	1997	Sect.41.suppl
	Reed Bunting	<i>Emberiza schoeniclus</i>	6	1997-2001	Sect.41
	Skylark	<i>Alauda arvensis</i>	8	1997-2002	Sect.41,Sect.41.suppl
	Song Thrush	<i>Turdus philomelos</i>	5	1997-1999	Sect.41.suppl
	Starling	<i>Sturnus vulgaris</i>	4	1997-1999	Sect.41.suppl
	Willow Tit	<i>Poecile montana</i>	1	1997	Sect.41.suppl
Yellowhammer	<i>Emberiza citrinella</i>	1	1998	Sect.41	
bony fish (Actinopterygii)	European Eel	<i>Anguilla anguilla</i>	5	1996-2012	Sect.41
fern	Pillwort	<i>Pilularia globulifera</i>	4	1851-1880	Sect.41
flowering plant	Purple Ramping-fumitory	<i>Fumaria purpurea</i>	2	2017-2019	Sect.41
insect - beetle	Northern Dune Tiger	<i>Cicindela hybrida</i>	1	1980	Sect.41

(Coleoptera)	Beetle					
insect - butterfly	Grayling	<i>Hipparchia semele</i>	1	1979	Sect.41	
	Wall	<i>Lasiommata megera</i>	8	1979-2007	Sect.41	
insect - moth	Broom Moth	<i>Ceramica pisi</i>	7	1981-1984	Sect.41	
	Buff Ermine	<i>Spilosoma lutea</i>	55	1981-2018	Sect.41	
	Dark Brocade	<i>Mniotype adusta</i>	1	1982	Sect.41	
	Forester	<i>Adscita statices</i>	1	1953	Sect.41	
	Ghost Moth	<i>Hepialus humuli humuli</i>	1	1981	Sect.41	
	Goat Moth	<i>Cossus cossus</i>	2	1982-2010	Sect.41	
	Latticed Heath	<i>Chiasmia clathrata clathrata</i>	1	1981	Sect.41	
	Rosy Minor	<i>Litoligia literosa</i>	7	1987-2013	Sect.41	
	Sallow	<i>Cirrhia icteritia</i>	10	1981-2013	Sect.41	
	Shoulder-striped Wainscot	<i>Leucania comma</i>	13	2007-2018	Sect.41	
	marine mammal	Bottle-Nosed Dolphin	<i>Tursiops truncatus</i>	1	1967	Sect.41
		Common Dolphin	<i>Delphinus delphis</i>	1	1996	Sect.41
Common Porpoise		<i>Phocoena phocoena</i>	1	1938	Sect.41	
moss	Warne's Thread-moss	<i>Bryum warneum</i>	1	2003	Sect.41	
reptile	Sand Lizard	<i>Lacerta agilis</i>	2	1900-1970	Sect.41	
	Slow-worm	<i>Anguis fragilis</i>	2	1833-1959	Sect.41	
terrestrial mammal	Bats	<i>Chiroptera</i>	6	1988-2017	Sect.41	
	Brown Hare	<i>Lepus europaeus</i>	10	1972-2019	Sect.41	
	Brown Long-eared Bat	<i>Plecotus auritus</i>	1	1988	Sect.41	
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	618	1984-2019	Sect.41	
	European Otter	<i>Lutra lutra</i>	3	2012	Sect.41	
	European Water Vole	<i>Arvicola amphibius</i>	3	1973-1999	Sect.41	
	Pipistrelle Bat species	<i>Pipistrellus</i>	10	1985-2010	Sect.41	
	West European Hedgehog	<i>Erinaceus europaeus</i>	65	1970-2020	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
fern	Pillwort	<i>Pilularia globulifera</i>	4	1851-1880	RLGB.Lr(NT)
flowering plant	Corn Marigold	<i>Glebionis segetum</i>	1	1981	RLGB.VU
	Corn Spurrey	<i>Spergula arvensis</i>	2	1981-2019	RLGB.VU
	Large-flowered Hemp-nettle	<i>Galeopsis speciosa</i>	1	1981	RLGB.VU
	Prickly Poppy	<i>Papaver argemone</i>	2	2007-2011	RLGB.VU
insect - beetle (Coleoptera)	Alder Leaf Beetle	<i>Agelastica alni</i>	1	2019	RLGB.DD
	Northern Dune Tiger Beetle	<i>Cicindela hybrida</i>	1	1980	RLGB.VU
insect - butterfly	Grayling	<i>Hipparchia semele</i>	1	1979	RLGB.VU
	Wall	<i>Lasiommata megera</i>	8	1979-2007	RLGB.Lr(NT)
terrestrial mammal	Bats	<i>Chiroptera</i>	6	1988-2017	RLGB.CR,RLGB.DD,RLGB.EN,RLGB.Lr(NT),RLGB.VU
	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	618	1984-2019	RLGB.EN
	European Water Vole	<i>Arvicola amphibius</i>	3	1973-1999	RLGB.EN
	Pipistrelle Bat species	<i>Pipistrellus</i>	10	1985-2010	RLGB.Lr(NT)
	West European Hedgehog	<i>Erinaceus europaeus</i>	65	1970-2020	RLGB.VU

Desig. Code	Desig. Name	Designation Description
RLGB.Lr(NT)	IUCN (2001) - Lower risk - near threatened	Taxa which do not qualify for Lower Risk (conservation dependent), but which are close to qualifying for Vulnerable. In Britain, this category includes species which occur in 15 or fewer hectads but do not qualify as Critically Endangered, Endangered or Vulnerable.
RLGB.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.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.
RLGB.EN	IUCN (2001) - Endangered	A taxon is Endangered when it is not Critically endangered but is facing a very high risk of extinction in the wild in the near future.

Nationally Notable Species

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

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

Group	Common Name	Scientific Name	Records	Dates	Designations
fern	Pillwort	<i>Pilularia globulifera</i>	4	1851-1880	NS-excludes
flowering plant	Chives	<i>Allium schoenoprasum</i>	1	2019	NS-excludes
	Purple Ramping-fumitory	<i>Fumaria purpurea</i>	2	2017-2019	NS-excludes
insect - beetle (Coleoptera)	Adonis' Ladybird	<i>Hippodamia variegata</i>	1	1901	Nb
	Loosestrife Flea Beetle	<i>Lythararia salicariae</i>	1	1981	Nb
	Musk Beetle	<i>Aromia moschata</i>	6	1920-1986	Nb
	Polydrusus formosus	<i>Polydrusus formosus</i>	1	2019	Na
insect - moth	Alder Signal	<i>Stathmopoda pedella</i>	3	2007	Nb

	Bulrush Veneer	<i>Calamotropha paludella</i>	1	2013	Nb
	Scarce Grass-veneer	<i>Crambus pratella</i>	2	2018	Nb
moss	Cernuous Thread-moss	<i>Bryum uliginosum</i>	1	1918	NR-excludes

Desig. Code	Desig. Name	Designation Description
NS-excludes	Nationally Scarce. Excludes Red Listed taxa	Nationally Scarce - Occurring in 16-100 hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria
Nb	Nationally Notable B	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in between 31 and 100 10km squares of the National Grid or, for less-well recorded groups between eight and twenty vice-counties. Superseded by Nationally Scarce, and therefore no longer in use.
Na	Nationally Notable A	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in 30 or fewer 10km squares of the National Grid or, for less well-recorded groups, within seven or fewer vice-counties. Superseded by Nationally Scarce, and therefore no longer in use.
NR-excludes	Nationally Rare. Excludes Red Listed taxa	Nationally Rare - Occurring in 15 or fewer hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria.

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

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

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

Group	Common Name	Scientific Name	Records	Dates	Designations
bird	Barn Owl	<i>Tyto alba</i>	3	1997-1999	MBB-WCA-S9
flowering plant	Indian Balsam	<i>Impatiens glandulifera</i>	8	1997-2019	MBB-WCA-S9
	Japanese Knotweed	<i>Fallopia japonica</i>	1	2019	MBB-WCA-S9
	Japanese Rose	<i>Rosa rugosa</i>	1	2019	MBB-WCA-S9
	New Zealand Pigmyweed	<i>Crassula helmsii</i>	1	1971	MBB-WCA-S9
	Perfoliate Alexanders	<i>Smyrnium perfoliatum</i>	3	2018-2019	MBB-WCA-S9
	Rhododendron ponticum	<i>Rhododendron ponticum</i>	2	1999-2003	MBB-WCA-S9
	Three-cornered Garlic	<i>Allium triquetrum</i>	1	2014	MBB-WCA-S9
	Yellow Archangel	<i>Lamium galeobdolon subsp. argentatum</i>	1	2019	MBB-WCA-S9
terrestrial mammal	Eastern Grey Squirrel	<i>Sciurus carolinensis</i>	229	1996-2019	MBB-WCA-S9

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

BAP priority habitats

In 2007 the Local Biodiversity Manager (responsible for the North Merseyside Biodiversity Action Plan) undertook a review of the extent of UK BAP priority habitats in North Merseyside and produced GIS layers to show their extents. In most cases these inventories were derived from two main sources: the latest Phase 1 habitat surveys which were conducted for the four North Merseyside local authorities between 1996 and 2007; and an NVC survey of the Sefton Coast carried out between 2003 and 2004. A separate NVC survey of the Ribble estuary carried out in 2002 (which also included saltmarsh at the Alt) was also useful as were one or

two other sources. Because of the diverse nature of habitat classifications, it was not always possible to produce inventories with a one-to-one correspondence with UK BAP priority habitats. The table below shows the BAP habitat inventories for North Merseyside and their correspondence with UK BAP priority habitats.

North Merseyside habitat inventory	Correspondence with UK BAP priority habitats
Lowland Acid Grassland	Lowland Dry Acid Grassland
Lowland Heathland	Lowland Heathland
Lowland Raised Bog	Lowland Raised Bog
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	1.06	kilometres
All Woodland	0.42	hectares

The table above indicates the extent of each of the BAP habitat inventories (see previous table) occurring within your search area (see appendix 3 for maps).

Detailed habitat mapping

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

Ref: 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	4.55 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	0.52 ha
Gen4	Reedbeds	0.13 ha
CBA Wetland		
We4	Lowland Fens	0.07 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 Woodland		
Wo3	Lowland Mixed Broad-leaf Woodland	1.15 ha
Wo4	Lowland Mixed Deciduous Woodland	0.8 ha
Wo6	Lowland Wood-pasture and Parkland	0.15 ha
Wo9	Wet Woodland	0.08 ha

Ref: EN-LinearFeatures		
Source: Composite layer generated by Merseyside Environmental Advisory Service on behalf of the Liverpool City Region		
Survey date: 01/01/2016		
Notes: LCR Ecological Network Linear features. See http://www.lcreconet.uk/ for further information.		
Linear feature		
Lin1	Active railway corridor	4.11 km
Lin5	Hedgerow	1.06 km
Lin6	Major road corridor	3.21 km
Lin7	River	2.51 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	0.01 ha

Ref: Composite		
Woodland and scrub		
A2.2	Scrub - scattered	0.15 ha
A3	Parkland/scattered trees	0.17 ha 1 (count)
A3.1	Broadleaved Parkland/scattered trees	0.23 ha 20 (count)

Grassland and marsh		
B4	Improved grassland	0.19 ha
B6	Poor semi-improved grassland	0.35 ha
Tall herb and fern		
C1.2	Bracken - scattered	0 ha
C3.1	Other tall herb and fern - ruderal	0 ha
Miscellaneous		
J1.1	Cultivated/disturbed land - arable	0.02 ha
J1.2	Cultivated/disturbed land - amenity grassland	3.6 ha
J1.4	Introduced shrub	1 (count)
J2.1.2	Intact hedge - species-poor	0.27 km
J2.3.2	Hedge with trees - species-poor	0.03 km

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 3 for maps).

Name	Type
River Alt Corridor	Nature Improvement Area
Formby Moss	Sefton Local Wildlife Site
Red Squirrel Refuge Area	LWT Squirrel Alert Maps
Red Squirrel Buffer Zone	LWT Squirrel Alert Maps

