



Jaguar Land Rover, Halewood

JAGUAR LAND ROVER

PRELIMINARY ECOLOGICAL APPRAISAL





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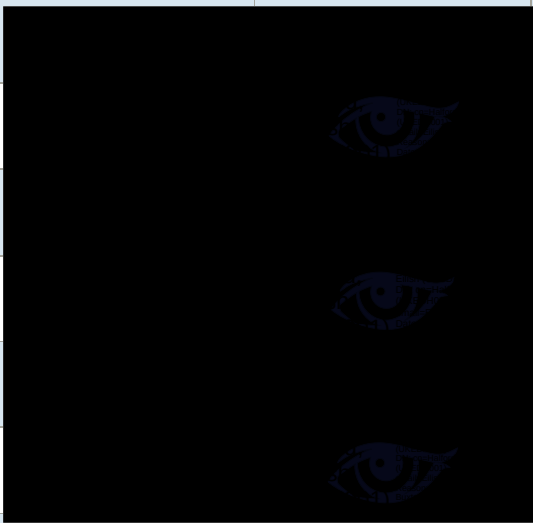
JAGUAR LAND ROVER

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CONTENTS

1.	INTRODUCTION	1
1.1.	BACKGROUND	1
1.2.	RELEVANT LEGISLATION AND POLICY	1
2.	METHODS	3
2.1.	OVERVIEW	3
2.2.	DESK STUDY	3
2.3.	HABITAT SURVEY	4
2.4.	PROTECTED SPECIES ASSESSMENT	4
2.5.	PRELIMINARY BAT ROOST ASSESSMENT	5
2.6.	NOTES AND LIMITATIONS	5
3.	RESULTS	7
3.1.	DESK STUDY	7
3.2.	HABITAT SURVEY	8
3.3.	PROTECTED AND NOTABLE SPECIES ASSESSMENT	10
3.4.	PRELIMINARY BAT ROOST ASSESSMENT	12
4.	DISCUSSION AND RECOMMENDATIONS	13
4.1.	OVERVIEW	13
4.2.	STATUTORY DESIGNATED SITES	13
4.3.	NON-STATUTORY DESIGNATED SITES	13
4.4.	HABITATS	13
4.5.	PROTECTED AND NOTABLE SPECIES	13
4.6.	FURTHER SURVEY REQUIREMENTS	16
4.7.	PRELIMINARY AVOIDANCE, MITIGATION AND COMPENSATION MEASURES	16
4.8.	ECOLOGICAL ENHANCEMENT OPPORTUNITIES	17

5.	CONCLUSIONS	19
6.	REFERENCES	20
	FIGURES	22

TABLES

Table 1 - Roost Potential Categorisation	5
Table 2 - Statutory Designated Sites	7
Table 3 - Non-statutory Designated Sites	8
Table 4 - Phase 1 Habitat Areas	9
Table 5 - PBRA Results	12
Table 6 - Key Ecological Constraints and Further Survey Requirements	16

FIGURES

Figure 1- Site Location Plan	22
Figure 2 - Map of Designated Sites of Conservation Importance	23
Figure 3 - Phase 1 Habitat Plan	24

APPENDICES

APPENDIX A

RELEVANT LEGISLATION AND PLANNING POLICY

APPENDIX B

SUMMARY OF ECOLOGICAL DESK STUDY DATA

APPENDIX C

TARGET NOTES

APPENDIX D

CONTEXT PHOTOGRAPHS



EXECUTIVE SUMMARY

WSP UK Ltd. (WSP) were commissioned by Jaguar Land Rover UK to undertake a Preliminary Ecological Appraisal (PEA), including a Preliminary Bat Roost Assessment (PBRA), of an area of land within their factory grounds in Halewood, Merseyside.

The 'Site', as referred to in this report, is located at Ordnance Survey (OS) National Grid Reference SJ 44557 83706. The Site and land within a 30m buffer of it was subject to survey, hereafter referred to as the 'Survey Area'. The 'Proposed Development' involves the construction of a new logistics and manufacturing facility on existing factory grounds, on land previously for a temporary tent structure approved under planning application reference 16/00452/FUL. This has now been removed with the slab retained.

An extended Phase 1 habitat survey was undertaken on the 28 April 2022 in dry conditions, to provide baseline ecological conditions for the Site. The survey was undertaken to determine whether legally protected / notable species or habitats were present or likely to be present. A background data search for protected and / or notable species records was undertaken as part of a desk study review.

The desk study returned two records of statutory sites of international importance and four non-statutory designated sites of local importance within a 2km radius of the centre of the Site. Records of the following protected / notable species were returned from the data search: bats, terrestrial mammals, birds, reptiles, and amphibians.

Habitats identified on the Site comprised hardstanding and buildings, whilst within the wider Survey Area were a line of trees and amenity grassland. It is anticipated that the Proposed Development would result in the loss of hardstanding, but not result in the loss of the other identified habitats due to their location outside the Site.

No significant ecological constraints were identified during the survey, but specific mitigation and enhancement opportunities have been prescribed to ameliorate potential effects of the Proposed Development to ensure compliance with relevant legislation and planning policy.

Based on the current scope of the Proposed Development and the absence of any semi-natural habitat with the Site due to be impacted, a full Biodiversity Net Gain (BNG) assessment is not considered to be a requirement in this instance. There are, however, still opportunities for biodiversity enhancement and the consideration of a positive outcome for biodiversity within the Proposed Development. Reference to this is made within this report.

1. INTRODUCTION

1.1. BACKGROUND

PROJECT BACKGROUND

- 1.1.1. WSP UK Ltd (WSP) was commissioned by Jaguar Land Rover UK to undertake a Preliminary Ecological Appraisal (PEA) to support a planning application for a new factory warehouse extension on an existing car park in Halewood, Merseyside. A Preliminary Bat Roost Assessment (PBRA) was also carried out alongside the PEA. It is understood that the 'Proposed Development' will consist of a large two-storey warehouse unit on the Site to the south of the main facility.
- 1.1.2. The 'Site', as referred to in this report, is defined by the red line boundary as shown in **Figure 1** and is located at Ordnance Survey (OS) National Grid Reference SJ 44557 83706. The survey element of the PEA covered the Site itself and a 30m buffer beyond the Site boundary, hereafter referred to as the 'Survey Area' (see **Figure 2**).

ECOLOGICAL BACKGROUND

- 1.1.3. The Site was located within the boundary of the Jaguar Land Rover factory facility immediately to the north of the A561 (Speke Boulevard) and covered approximately 1.95ha, with other factory facilities located off-site to the north, east and west. The Site is located between the suburbs of Speke and Halewood, on an extensive industrial estate within a predominantly industrial and commercial landscape.
- 1.1.4. Jaguar Land Rover UK commissioned WSP to complete a PEA of the Site in April 2022. The brief was:
- To provide baseline ecological information about the Site and a surrounding study area with reference to whether legally protected and/or notable sites, species or habitats are present or likely to be present;
 - To undertake a PBRA of all buildings and trees within the Survey Area, identifying any Potential Roost Features (PRFs);
 - To provide recommendations to enable compliance with relevant nature conservation legislation and planning policy; and
 - If necessary, to identify the need for avoidance, mitigation, compensation or enhancement measures and/or further ecological surveys.

1.2. RELEVANT LEGISLATION AND POLICY

- 1.2.1. The appraisal has been compiled with reference to the following relevant nature conservation legislation, planning policy and the UK Biodiversity Framework from which the protection of sites, habitats and species is derived in England. The context and applicability of each item is explained as appropriate in the relevant sections of the report and additional details are presented in **Appendix A**.

Legislation

- The Conservation of Habitats and Species Regulations 2017 (as amended) (Habitats Regulations);
- The Wildlife and Countryside Act 1981 (as amended) (WCA);

- Countryside Rights of Way Act 2000;
- The Natural Environment and Rural Communities (NERC) Act 2006 (England);
- Environment Act 2021.

Policy

- The UK Post-2010 Biodiversity Framework (2011-2020);
- Biodiversity 2020: A strategy for England's wildlife and ecosystem services;
- UK Biodiversity Action Plan (UKBAP)¹; and
- The National Planning Policy Framework (NPPF) 2021.

¹ The UK BAP has now been replaced by the UK Post-2010 Biodiversity Framework; however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant.

2. METHODS

2.1. OVERVIEW

- 2.1.1. This PEA has been prepared with reference to current good practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2017a, 2017b, 2018 and 2020), and Joint Nature Conservation Committee (JNCC, 2010); and guidance contained in the British Standard - Code of Practice for Biodiversity and Development BS42020:2013 (British Standards Institute (2013).
- 2.1.2. This PEA is based on the following data sources:
- An ecological desk study;
 - A Phase 1 habitat survey;
 - A PBRA; and
 - A protected/notable species assessment.

2.2. DESK STUDY

- 2.2.1. The desk study was undertaken in May 2022 to review existing ecological baseline information available in the public domain and to obtain information held by relevant third parties. For the purpose of the desk study exercise, records were collated within various radii around the Site. This approach is consistent with current good practice guidance published by CIEEM (2020). To provide the baseline data for the desk study, the following information was requested from Merseyside Biobank and RECORD (A Biodiversity Information System for Cheshire, Halton, Warrington & Wirral):
- Records of legally protected and notable species within 2km of the Site; and
 - Records of non-statutory sites designated for nature conservation value within 2km of the Site.
- 2.2.2. Freely downloadable datasets (available from Natural England) were consulted for information regarding the presence of statutory designated habitats² within 2km of the Site. This search was extended to 10km for sites of European importance (Special Areas of Conservation (SAC) and Special Protection Areas (SPA)) and internationally designated Ramsar sites.
- 2.2.3. In addition, freely downloadable datasets (available from Natural England) were also consulted for information regarding Habitats of Principal Importance (HPI)³ within 100m of the Site, and woodland listed on the Ancient Woodland Inventory⁴.
- 2.2.4. In addition, open source 1:25,000 Ordnance Survey mapping, MAGIC was used to identify any mapped water bodies and watercourses within 500m of the Site.

² Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR).

³ Mapped locations of HPI are usually not available, but HPI aligns in the most part with UKBAP habitats. Inventories of UKBAP habitat have been prepared by a variety of organisations and at a national (Natural England priority habitat inventory) and local scale (e.g. by local records centres). In some instances these are primarily based on aerial photograph analysis rather than field survey.

⁴ The Ancient Woodland Inventory in England lists areas over two hectares in size which have been continuously wooded since at least 1600.

- 2.2.5. The findings of the desk study have been incorporated within **Section 3** and **Appendix B** of this report. The location of surrounding statutory and non-statutory designated sites are shown on **Figure 2**.

2.3. HABITAT SURVEY

- 2.3.1. A Phase 1 habitat survey of the Site was carried out on the 28 April 2022 in mild weather conditions, led by an ecologist with extensive experience of completing PEAs on a variety of greenfield and brownfield sites. The survey covered the entire Site including boundary features, plus an additional 30m buffer where accessible (the 'Survey Area').
- 2.3.2. Habitats were described and mapped following the standard Phase 1 habitat survey methodology (JNCC, 2010). Phase 1 habitat survey is a standard technique for classifying and mapping British habitats. The dominant plant species are recorded and habitats are classified according to their vegetation types. Where appropriate, consideration was given to whether habitats qualify, or could qualify, as a Habitat of Principal Importance following habitat descriptions published by the JNCC (2008).
- 2.3.3. A list of plant species was compiled (**Appendix C**), with relative plant species abundance estimated using the DAFOR scale⁵. The scientific names for plant species follow those in the New Flora of the British Isles (Stace, 2019) and are also listed in **Appendix C**.
- 2.3.4. Habitats were marked on a paper base map and were subsequently digitised using a Geographical Information System (GIS). See **Figure 3**.
- 2.3.5. Target Notes (TNs) were made to provide information on specific features of ecological interest (e.g. a badger *Meles meles* sett) or habitat features too small to be mapped.
- 2.3.6. Any invasive plant species listed on Schedule 9 of the WCA 1981 (as amended) which were evident during the Phase 1 habitat survey were also target-noted. Detailed mapping of such species, or a full survey of the Site for all invasive plant species, is beyond the scope of this commission and so is not included in this report.
- 2.3.7. Data collected as part of this Phase 1 Habitat survey is suitable for use in retrospective biodiversity unit calculations, if required.

2.4. PROTECTED SPECIES ASSESSMENT

- 2.4.1. The potential for the Site to support legally protected and notable species was assessed using the desk study results and combined with field observations during the habitat survey. The assessment of habitat suitability for protected and notable species was based on professional experience and judgement. This was supplemented by standard sources of guidance on habitat suitability assessment for key faunal groups including birds (Gilbert et al, 1998 and Bibby et al, 2000), great crested newt *Triturus cristatus* (Gent and Gibson, 2003 and English Nature, 2001); reptiles (Froglife, 1999 and Gent and Gibson, 2003) and bats (Collins, 2016 and Mitchell-Jones, 2004).

⁵ The DAFOR scale has been used to estimate the frequency and cover of the different plant species as follows: Dominant (D) - >75% cover, Abundant (A) – 51-75% cover, Frequent (F) – 26-50% cover, Occasional (O) – 11-25% cover, Rare (R) – 1-10% cover., The term 'Locally' (L) is also used where the frequency and distribution of a species are patchy and 'Edge' (E) is also used where a species only occurs on the edge of a habitat type.

2.5. PRELIMINARY BAT ROOST ASSESSMENT

- 2.5.1. All trees, buildings and structures within the Site and the Survey Area were assessed for their potential to support bat roosts.
- 2.5.2. A visual inspection of the exterior of buildings and trees using binoculars was completed to search for features which may provide potential roosting opportunities for bats. Where suitable features were noted, their location and a brief description of their character was recorded. Additionally, each feature was visually inspected for evidence which could indicate the current or historic use by roosting bats such as droppings, urine staining, and scratch marks/characteristic staining (from fur oils).
- 2.5.3. Buildings and trees were categorised in line with best practice guidance, from the Bat Conservation Trust (BCT) (Collins, 2016), descriptions shown in **Table 1**.

Table 1 - Roost Potential Categorisation

Category	Description
Confirmed	Buildings and trees with features confirmed to be used by roosting bats either by historic records (verified appropriately) or evidence recorded during survey.
High	Buildings and trees with highly suitable features capable of supporting larger roosts, and/or multiple roost locations. Generally, these buildings are located in proximity to highly suitable foraging/commuting habitat such that the presence of a roost is considered highly probable.
Moderate	Buildings and trees exhibiting features with definite bat roost potential, but with only one or two suitable features suitable for larger roosts, or multiple features with the potential to be used by individual/small numbers of bats. Surrounding area includes good quality foraging habitat for bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland such that the presence of a roost is considered probable.
Low	Buildings and trees with single, or few features capable of supporting individual/small numbers of bats e.g. external roosting features such as fascia or soffit boards, in which bats are considered less likely to be present. Or, a greater number or variety of features located in sub-optimal habitat such that bats would be less likely to use it e.g. isolated from foraging or commuting habitats.
Negligible	Buildings and trees with no potential opportunities for roosting bats, or very few or minor features in an isolated/unsuitable location such that the presence of a roost is considered highly improbable e.g., isolated from suitable foraging or commuting habitats.

2.6. NOTES AND LIMITATIONS

- 2.6.1. Every effort has been made to provide a comprehensive description of the Site and the Survey Area; however, the following specific limitations apply to this assessment:
- Ecological survey data is typically valid for 18 months to two years unless otherwise specified, for example if conditions are likely to change more quickly due to ecological processes or anticipated changes in management.
 - Records held by local biological record centres and local recording groups are generally collected on a voluntary basis; therefore, the absence of records within a data set does not necessarily demonstrate the absence of species, it may simply indicate a gap in recording coverage.

- A location within the Survey Area (0.79ha) could not be accessed as the area was fenced off from the rest of the Site. This includes the scattered trees and the amenity grassland south of the site as shown on **Figure 1**. Observations and aerial imagery were used to identify which habitats were present in this area. It is, therefore, considered that the Phase 1 habitat types were accurately identified.
- The Phase 1 Habitat survey was carried out over the period of a single day. As such, only a selection of all species that occur within the Survey Area will have been recorded. However, through use of desk study information to supplement site survey data, it is considered that an accurate assessment of the potential for the Site to support protected species or those of conservation concern was possible.
- The extended Phase 1 habitat map (**Figure 1**) has been reproduced from field notes and plans. Whilst this provides a sufficient level of detail to fulfil the requirements of a PEA, the maps are not intended to provide exact locations of key habitats.

3. RESULTS

3.1. DESK STUDY

STATUTORY DESIGNATED SITES

- 3.1.1. The desk study identified one statutory designated site of international importance and three statutory designated sites of national importance within a 10km radius of the Site. A description of these sites is detailed in **Table 2** below.

Table 2 - Statutory Designated Sites

Site Name	Designation	Distance and orientation from Site	Description
Mersey Estuary	SPA, Ramsar, Site of Special Scientific Interest (SSSI)	1.75km S	A sheltered estuary environment comprising of areas of saltmarsh and intertidal sand and mudflats. The site includes brackish marsh, rocky shoreline, and cliffs set in both a rural and industrial environment.
Mill Wood and Alder Wood	LNR	0.85km E	One of two ancient woodlands in the Liverpool area. The woodland consists of mainly oak, ash, alder, elm, birch, sycamore, willow, and hawthorn. The ground flora is mainly bramble and bracken.
Flood Brook Clough	SSSI	9.47km E	Ancient Semi-natural Woodland (ASNW) in Cheshire, near Runcorn. Total area covers 5.35 hectares (ha). It is owned and managed by the Woodland Trust. It is a mixed broadleaved woodland in a long, deep, steep-sided clough with Flood Brook running through the bottom. It has rich assemblages of wet woodland plants and is not publicly accessible due to sheer cliffs and unfavourable wet ground conditions.

NON-STATUTORY DESIGNATED SITES

- 3.1.2. The desk study identified one non-statutory designated site of local importance within a 2km radius of the Site. A description of this site is detailed in **Table 3** below.

Table 3 - Non-statutory Designated Sites

Site Name	Designation	Distance and orientation from Site	Description
Mersey Estuary	Local Wildlife Site (LWS)	1.75km S	A sheltered estuary environment comprising of areas of saltmarsh and intertidal sand and mudflats. The site includes brackish marsh, rocky shoreline, and cliffs set in both a rural and industrial environment.
Old Plantation	LWS	1.95km SE	Predominately semi-natural broadleaf woodland with occasional ASNW. A part of the 2014 Mersey Forest Plan.
Mill Wood and Hopyard Wood	LWS	0.9km E	Habitats include broadleaf woodland, neutral grassland, and ponds. Native bluebell and a range of notable butterflies.
Crabtree Rough and Hopyard Wood	LWS	1.45km NE	Predominantly broadleaf woodland with neutral grasslands and areas of regeneration.

OTHER HABITATS OF CONSERVATION IMPORTANCE

- 3.1.3. The desk study identified no areas of HPI habitat within 100m of the Site.
- 3.1.4. The desk study identified no ponds or watercourses within 500m of the Site.
- 3.1.5. Mill Wood and Alder Wood (LNR) is one of two ancient woodlands in the Liverpool area. This habitat is located 0.9km East of the Site and the woodland consists of mainly oak *Quercus sp.*, ash *Fraxinus excelsior*, alder *Alnus glutinosa*, elm *Ulmus sp.*, birch *Betula sp.*, sycamore *Acer pseudoplatanus*, willow *Salix sp.*, and hawthorn *Crataegus monogyna*. The ground flora is mainly bramble *Rubus fruticosus* agg. and bracken *Pteridium aquilinum*.

3.2. HABITAT SURVEY

OVERVIEW

- 3.2.1. The following account summarises the findings of the Phase 1 habitat survey. Three Phase 1 habitat types were identified in the Site.
- 3.2.2. Another habitat was identified in the 30m buffer Survey Area but not present in the Site.
- 3.2.3. Habitats within the Survey Area are mapped on **Figure 3** and are listed in **Table 4** along with areas in ha (or length for linear features). A description of the dominant and notable species, the

composition and management of each habitat is provided below and an indicative species list is provided in **Appendix B**. Alpha-numeric codes used in this section cross-refer to the JNCC Phase 1 habitat survey classification (JNCC, 2010). The order of the habitat descriptions below reflects their ordering in the Phase 1 habitat survey manual and does not reflect habitat importance.

Table 4 - Phase 1 Habitat Areas

Phase 1 Habitat	Area (ha)	% of Survey Area
(J5) Hardstanding	3.253	78.73
(J3.6) Buildings	0.761	18.41
(J1.2) Amenity grassland	0.118	2.86
TOTAL	4.132	100

(J5) HARDSTANDING

- 3.2.4. The Site was dominated by existing hardstanding (3.253ha), where a temporary storage tent has been previously located, with few species of botanical interest; ragwort *Jacobaea vulgaris* and ivy-leaved toadflax *Cymbalaria muralis* were rarely present.

(J3.6) BUILDINGS

- 3.2.5. Three buildings were identified within the Survey Area adjacent to the Site, associated with the factory facilities.
- 3.2.6. The buildings were noted as B1, B2, and B3 (see **Figure 3**). B1 comprised a corrugated metal facade for the top two thirds of the building with a red brick base and was utilised as a workshop. No PRFs were recorded on B1.
- 3.2.7. B2 was similar in construction to B1; the external facades also comprised corrugated metal and brick. B2 has had several extensions and had a corrugated asbestos roof. B2 was a single-storey structure with a large open interior which was in 24-hour use as a workshop with constant construction noise.
- 3.2.8. B3 was a red brick single-storey structure with a felt roof, and smaller in size in comparison to B1 and B2. The fascia was slightly lifted below the roof overhang; however, the feature had no cavity and was therefore not considered to be suitable for roosting bats.
- 3.2.9. B1, B2, and B3 all had security lights around the perimeters of the buildings which were illuminated at night.

(J1.2) AMENITY GRASSLAND

- 3.2.10. A strip of amenity grassland was present to the south of the Site and was dominated by perennial rye-grass *Lolium perenne*, abundant with dandelion *Taraxacum sp*, and with frequent common daisy.

(A3) BROADLEAVED PARKLAND/SCATTERED TREES

- 3.2.11. There was a line of immature trees located to the south of the amenity grassland within the Survey Area. This was classified as ‘broadleaved parkland/scattered trees’ in accordance with the JNCC criteria. The line of trees was located across an access road and was observed through binoculars as it was outside of the Site and land owned by Jaguar Land Rover. This habitat was not able to be fully assessed due to a lack of access; however, no PRFs were noted during the survey. Species present included silver birch *Betula pendula*, hazel *Corylus avellana*, field maple *Acer campestre*, butterfly-bush *Buddleja davidii*, and sycamore.

3.3. PROTECTED AND NOTABLE SPECIES ASSESSMENT

- 3.3.1. The potential for the Site to support legally protected species and notable species has been assessed using the results of the desk study and observations made during the site survey of habitats within and immediately surrounding the Site. A summary of desk study information is included within **Appendix B**. Desk study records have only been considered below if they are recent (from the last 10 years) and/or if they relate to species that may be supported by habitats at the Site. Habitats present within the Site were considered suitable for the following species; further consideration is given below to the likelihood for these species to be present within the Site.

- Bats;
- Birds;
- Reptiles; and
- Amphibians.

- 3.3.2. The Site did not provide suitable habitat for other protected or notable species and other species, beyond those listed above, will not be considered further in this PEA.

BATS

- 3.3.3. The desk study returned seven records of bats within 2km of the Site. Species included common pipistrelle *Pipistrellus pipistrellus*, brown long-eared bat *Plecotus auritus*, Brandt's bat *Myotis brandtii*, unknown pipistrelle species *Pipistrellus sp.* and long eared bat species *Plecotus sp.*, with most records of common pipistrelle. The closest record to the Site pertained to unidentified bat species located approximately 1.45km east of the Site.
- 3.3.4. One European Protected Species (EPS) licence (Natural England) for bats was identified within 2km of the Site within the past 10 years, located 0.3km to the south of the Site. The licence applied to a common pipistrelle roost in 2021.
- 3.3.5. Commuting and foraging habitat for bats within the Site was limited; however, adjacent amenity grassland and immature line of trees could support commuting and foraging bats within the wider locale. There was security lighting surrounding the buildings on the Site which had the potential to discourage bats from the Site when in use. The urban nature of the landscape as a whole limits the potential for bats due to an overall lack of vegetation to attract insects as a food source and act as corridors for commuting bats.
- 3.3.6. Results of the PBRA for buildings and trees within and adjacent to the Site is provided in **Section 3.4**.

BIRDS

- 3.3.7. The desk study returned 47 records of 42 bird species within 2km of the Site, across two data records centres; this included a record of a single WCA 'Schedule 1' species. This was a record of a barn owl *Tyto alba* and was located approximately 1.7km south-east of the Site. The closest record to the Site pertained to a magpie *Pica pica*, located approximately 0.1km south of the Site.
- 3.3.8. Suitable nesting habitat for breeding birds was present but limited within the Site and Survey Area, in the form of immature trees and building rooftops.

AMPHIBIANS

- 3.3.9. The desk study returned 48 records of amphibians within 2km of the Site; species comprised common toad *Bufo bufo*, common frog *Rana temporaria* and smooth newt *Lissotriton vulgaris*. The closest record to the Site pertained to common toad and was located 0.8km to the south-east. No records of great crested newts (GCN) *Triturus cristatus* were returned during the desk study.
- 3.3.10. No ponds were identified within 500m of the Site, and the habitat present within the Survey Area did not offer any suitable terrestrial habitat for GCN or common amphibian species.

REPTILES

The desk study returned a single record of reptile within 2km of the Site; this pertained to common lizard *Zootoca vivipara* and was located 1.7km west.

- 3.3.11. The habitats present on Site were not considered suitable to support common lizard or other reptile species.

NON-NATIVE INVASIVE PLANT SPECIES

- 3.3.12. The desk study returned 11 records of three species of non-native invasive plants within 2km of the Site; species comprised Japanese rose *Rosa rugosa*, Japanese knotweed *Reynoutria japonica* and Himalayan balsam *Impatiens glandulifera*. The closest record was of Japanese rose, located 0.8km north.

3.4. PRELIMINARY BAT ROOST ASSESSMENT

- 3.4.1. All trees and structures within the Survey Area, where accessible, were subject to PBRA and categorised in line with BCT guidance (Collins, 2016). In total, three buildings (B1, B2, and B3) were surveyed and all assessed to be of negligible suitability for roosting bats.
- 3.4.2. One PRF was noted externally on B2 (TN1 on Figure 3). This was observed as a small gap between the door frame and the corrugated metal sheeting (see Photograph 9 in Appendix D) on the southern aspect of the building; however, based on its characteristics and lack of crevice or cavity beyond the superficial external opening it was categorised as having negligible potential to support roosting bats.
- 3.4.3. A summary of the PBRA results of the buildings can be seen below in **Table 5**.

Table 5 - PBRA Results

Feature ID	Description	Overall Suitability
Building 1 (B1)	Corrugated metal facade for top two thirds of the building. Building had red brick base and foundations. Surveyors observed no noticeable features and the building was currently being utilised as a workshop 24 hours a day. Security lights all around the perimeter which were illuminated at night, resulting in likely disturbance to any bats present in the area.	Negligible
Building 2 (B2)	B2 had several extensions and contained asbestos in the corrugated roof structure. The building was a single-storey structure, large open space which is in 24-hour use as a workshop. The building was constantly in use with constant noise disturbance. Also security lights all around the outside which are illuminated at night. Small gap present between the door frame and the corrugated metal sheeting (see Photograph 9). The PRF was categorised as having negligible potential for roosting bats (TN1).	Negligible
Building 3 (B3)	B3 was a red brick single-storey structure with a felt roof, and smaller in size in comparison to B1 and B2. Fascia was slightly lifted below felt roof on the southern aspect; however, no cavity or crevice present behind therefore the PRF was assessed as being of negligible roosting suitability (See Photograph 17).	Negligible

- 3.4.4. The immature line of trees adjacent to the Site were not accessible inside of the Survey Area boundary. Based on observations using binoculars, no PRFs were noted, and these were categorised as having negligible potential to support roosting bats.

4. DISCUSSION AND RECOMMENDATIONS

4.1. OVERVIEW

- 4.1.1. This section considers the potential for effects on designated sites, legally protected species, notable species, and notable habitats within the Survey Area as a result of the Proposed Development. Where further surveys or detailed assessment of potential effects are required in order to design suitable mitigation, this is identified.

4.2. STATUTORY DESIGNATED SITES

- 4.2.1. The desk study identified one statutory designated site of international importance and two additional statutory designated sites within 2km of the Site – Mersey Estuary SPA/Ramsar/SSSI, Mill Wood and Alder Wood LNR, and Flood Brook Clough SSSI.
- 4.2.2. Due to the distance and lack of connectivity between these designated areas and the Site, it is not anticipated that the Proposed Development will impact directly or indirectly upon them. No further recommendations are made within this report in regard to statutory designated sites.

4.3. NON-STATUTORY DESIGNATED SITES

- 4.3.1. The desk study identified four non-statutory designated sites for nature conservation within 2km of the Site, all designated as LWS – Mersey Estuary, Old Plantation, Mill Wood and Hopyard Wood, and Crabtree Rough and Hopyard Wood.
- 4.3.2. Due to the distance and lack of connectivity between these sites and the Site, it is not anticipated that the Proposed Development will impact directly or indirectly upon them. No further recommendations are made within this report in regard to non-statutory designated sites.

4.4. HABITATS

- 4.4.1. The habitats identified within the Site were of low ecological value, comprising of hardstanding, buildings, and modified grassland. The hardstanding habitat on the site is anticipated to be lost to facilitate construction of the Proposed Development.
- 4.4.2. None of the habitats identified on Site had the potential to be categorised as HPI, nor were they scarce within the locale; therefore, it is not anticipated that any habitats of ecological conservation value will be lost as a result of the Proposed Development. However, enhancement measures are recommended in **Section 4.7** as best practice.

4.5. PROTECTED AND NOTABLE SPECIES

- 4.5.1. The results of the desk study, Phase 1 habitat survey and protected species assessment highlighted the potential presence of several protected species or species of conservation concern within the Site and/or the Survey Area. The legal protection afforded to these species is outlined below and, where appropriate, the requirement for further survey and/ or mitigation measures is identified.

BATS

- 4.5.2. All species of bats recorded within the UK are protected from killing, injury and disturbance⁶ and their roosts protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the WCA 1981 (as amended) with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these. Activities that would otherwise constitute an offence under this legislation may be licensed by Natural England for certain purposes.
- 4.5.3. Certain species of bats, including the Bechstein's bat *Myotis bechsteinii*, greater and lesser horseshoe bats *Rhinolophus hipposideros* *Rhinolophus ferrumequinum*, noctule bat *Nyctalus noctula*, brown long-eared bat, and soprano pipistrelle bat are also listed as Species of Principal Importance (SPI) for the conservation of biodiversity in England in accordance with Section 41 of the NERC Act 2006. Section 40 of the NERC Act obliges public bodies (including Local Planning Authorities) to have regard for the conservation of biodiversity (including SPI) when discharging their duties (including determining planning applications).
- 4.5.4. No habitat with the potential to provide foraging or commuting opportunities for bats was identified within the Site. All structures and trees within and adjacent to the Site were assessed as having negligible potential to support roosting bats based on the PBRA undertaken. It is not anticipated that bats will be impacted by the Proposed Development and no further recommendations are made with regard to roosting bats.

BIRDS

- 4.5.5. The Habitat Regulations 2017 Part 1 Regulation 10(2) & (3) state that local authorities '*must take such steps in the exercise of their functions as they consider appropriate to contribute to...the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the UK including by means of the upkeep, management and creation of such habitat...*'. The legislation continues to state that economic and recreation requirements must be taken into consideration in considering which measures are appropriate.
- 4.5.6. Under the WCA 1981 (as amended) all wild birds are protected from killing and injury, and their nests and eggs protected from taking, damage and destruction whilst in use. Additional protection is extended to species listed under Schedule 1 of the Act, meaning it is also an offence to disturb these species at or near the nest, or whilst they have dependent young.
- 4.5.7. Some limited habitat suitable to support breeding birds was present to the south of the Site, comprising an immature line of trees; however, this habitat will not be lost as a result of the Proposed Development. The building rooftops adjacent to the Site also had limited potential to support breeding birds. These habitats are anticipated to be subject to indirect effects during construction of the Proposed Development through disturbance from lighting, noise and dust; therefore, further recommendations to safeguard bird species are provided within **Section 4.6**.

⁶ Disturbance is defined within the Habitats Regulations as that which is likely to impair a species ability to survive, breed or reproduce, hibernate or migrate or to significantly affect the local distribution or abundance of the species.

AMPHIBIANS

- 4.5.8. GCN are protected from killing, injury and disturbance⁷ and their places of rest or shelter (occupied habitat) protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the WCA 1981 (as amended) with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these. Activities that would otherwise constitute an offence under this legislation may be licensed by Natural England for certain purposes.
- 4.5.9. GCN and common toad are also listed as SPI in accordance with Section 41 of the NERC Act 2006. Public bodies have an obligation under Section 40 to have regard for these species when carrying out their functions.
- 4.5.10. No waterbodies were identified within the Site or within 500m of it, whilst the habitats present on Site were unsuitable to support amphibians during their terrestrial phase. It is not anticipated that amphibians will be impacted by the Proposed Development and no further recommendations are made with regard to amphibians.

REPTILES

- 4.5.11. Native, widespread reptiles (common or viviparous lizard, adder *Vipera berus*, grass snake *Natrix helvetica* and slow-worm *Anguis fragilis*) are partially protected under Schedule 5 of the WCA 1981 (as amended), under part of Section 9(1) and all of Section 9(5). As such it is an offence to 'intentionally or recklessly kill or injure' an individual of these species, to 'sell, offer or expose for sale, or [have in] possession or transport for the purpose of sale, any live or dead [individual] or any part of, or anything derived from' an individual of these species.
- 4.5.12. All species of reptile are also listed as SPI in accordance with Section 41 of the NERC Act 2006. Under Section 40 of the Act, public bodies, including LPAs, have a duty to have regard for SPI when carrying out their functions, including determining planning applications.
- 4.5.13. The desk study identified a single record of common lizard within 2km of the Site. The habitats present on Site were unsuitable to support reptiles; therefore, it is not anticipated that reptiles will be impacted by the Proposed Development. No further recommendations are made with regard to reptiles.

INVASIVE AND NON-NATIVE SPECIES

- 4.5.14. Invasive species listed under Schedule 9 are prohibited from release into the wild and the Act prohibits planting or "causing to grow" in the wild of any plant species listed in Schedule 9.
- 4.5.15. No invasive non-native species were identified on Site, and the closest record of an invasive non-native species was located 0.8km from the Site with no hydrological connectivity. It is not anticipated that invasive non-native species will be impacted by the Proposed Development and no further recommendations are made with regard to them.

⁷ Disturbance is defined within the Habitats Regulations as that which is likely to impair a species ability to survive, breed or reproduce, hibernate or migrate or to significantly affect the local distribution or abundance of the species.

4.6. FURTHER SURVEY REQUIREMENTS

- 4.6.1. Potential ecological constraints for which further surveys are required to ensure legal and planning policy compliance are summarised in **Table 6**.

Table 6 - Key Ecological Constraints and Further Survey Requirements

Ecological Receptor	Potential Constraints	Further Survey Requirements	Seasonal Constraints
Birds	Destruction or disturbance of active nesting sites on rooftops of buildings during site clearance or construction on Site.	Should site clearance be required between March and August (inclusive), a pre-works nesting bird check should be undertaken of the rooftops by a Suitably Experienced Ecologist (SEE) within the 48 hours prior to the clearance, with presence/absence of nests evidenced by a 'permit to clear' note provided by the ecologist following the check. If a bird nest is encountered during works, an exclusion zone of at least 5m radius around the nest/nesting activity would be implemented and kept in place until such time that the nest becomes inactive (when chicks hatch and fledge, or nest attempt fails). Only once the nest has been confirmed inactive by the ecologist can the exclusion zone be removed, and works recommence.	Nesting bird checks to be carried out prior to commencement of construction on suitable rooftops of buildings during the breeding season (March to August inclusive).

4.7. PRELIMINARY AVOIDANCE, MITIGATION AND COMPENSATION MEASURES

MITIGATION MEASURES

- 4.7.1. To enable compliance with relevant legislation and planning policy, as described above within Section 4.2, 4.3 and 4.4 the following avoidance, mitigation and compensation measures should be designed into the Proposed Development.
- The lighting of the Proposed Development should be designed to minimise impacts on nocturnal species, including bats, and should include dark corridors along the Site boundary. Lighting should use hoods, louvres or other luminaire design features to avoid light spill onto retained and newly created areas of vegetation likely to be used by foraging and commuting bats. In addition, narrow-spectrum light sources should be used where possible to lower the range of species

affected by lighting, specifically avoiding shorter wavelength blue light, using instead warm/neutral colour temperature <4,200 kelvin lighting (BCT, 2018).

- As mentioned in Table 6, it is recommended that a pre-construction check is undertaken by an SEE to check for the presence of breeding birds a maximum of 48 hours in advance of clearance works. If active nests or nesting activity are found, an appropriate exclusion zone will be demarcated, within which no works can take place until the nest has come to a natural conclusion.
- Although a Biodiversity Net Gain (BNG) assessment is not considered to be a requirement for the Site based on the absence of any semi-natural habitat and taking in to account the current scope of the Proposed Development, it is recommended that consideration is given to any opportunities for biodiversity enhancement measures within the Proposed Development design. This is further detailed in **Section 4.8**.

ENVIRONMENTAL BEST PRACTICE

4.7.2. In addition, general environmental protection measures must be implemented during the construction phase of the proposed scheme. Such measures include best environmental practice guidance outlined in the Environment Agency's Pollution Prevention Advice and Guidance (see NetRegs.org.uk⁸) and those outlined by the Construction Industry Research and Information Association guidance (CIRIA, 2015). The following minimum standards must be adhered to prevent ecological impacts beyond the Site boundary:

- Measures must be taken to prevent dust and other emissions from construction affecting land beyond the Site.
- Chemicals and fuels must be stored in secure containers located away from watercourses or water bodies. Spill kits must be available at all times.
- Excavations must be covered or securely fenced (with no potential access points beneath fencing) when the Site is closed (e.g. overnight) to prevent entrapment of animals.
- Retained trees must be protected in accordance with BS5837.
- Noise and vibration must be controlled and kept to the minimum necessary.
- Lighting used for construction must be switched off when not in use and positioned so as not to spill on to adjacent land or retained vegetation within the Site.

4.8. ECOLOGICAL ENHANCEMENT OPPORTUNITIES

4.8.1. The NPPF (2021) states that at an overview level the '*planning system should contribute to and enhance the national and local environment by... minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*'.

4.8.2. To encourage compliance with planning policy, the following measures are recommended for inclusion within the Proposed Development; where possible:

⁸ <http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/>

- Landscape and building design should be undertaken with consideration for biodiversity. The inclusion of green roofs/walls or bat bricks within any buildings can be incorporated into the design and provide positive results for biodiversity.
- Provision of bat and bird boxes in suitable locations to provide enhanced roosting and nesting opportunities. The installation of bat boxes should be facing different aspects, to provide a range of temperature conditions suitable for roosting at different times of the year.

5. CONCLUSIONS

- 5.1.1. The PEA identified three habitats within the Site which were of low ecological value but were suitable to support breeding birds.
- 5.1.2. Further survey requirements have been recommended for birds, and recommendations have been made with respect to general environmental protection measures and best practice, including enhancement measures which will ensure the Proposed Development is compliant with current legislation and policy.

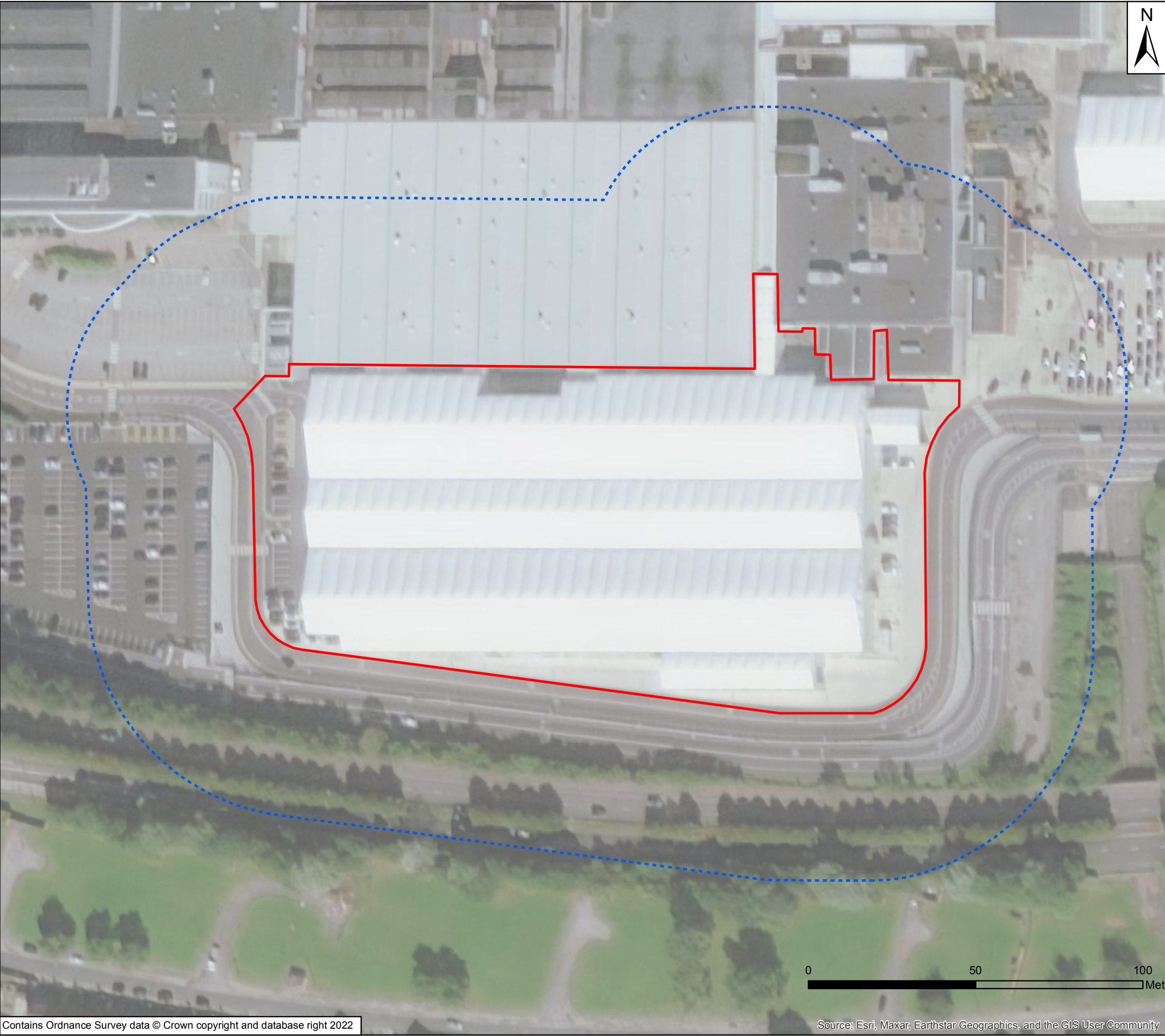
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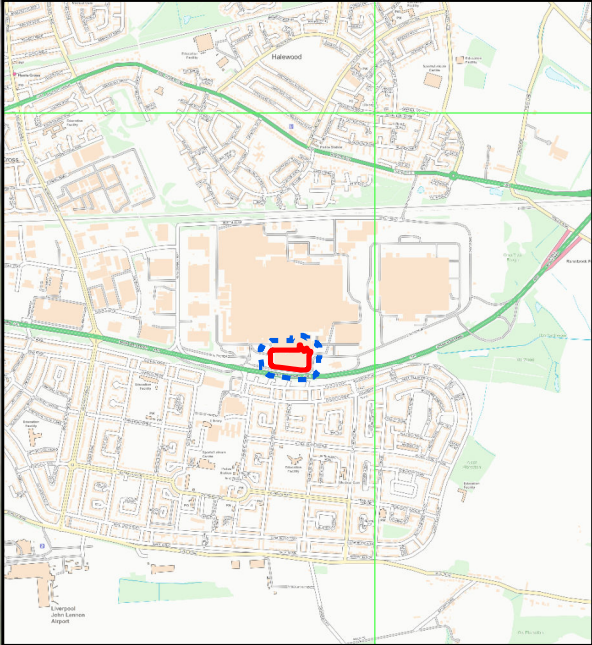
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FIGURES

Figure 1- Site Location Plan



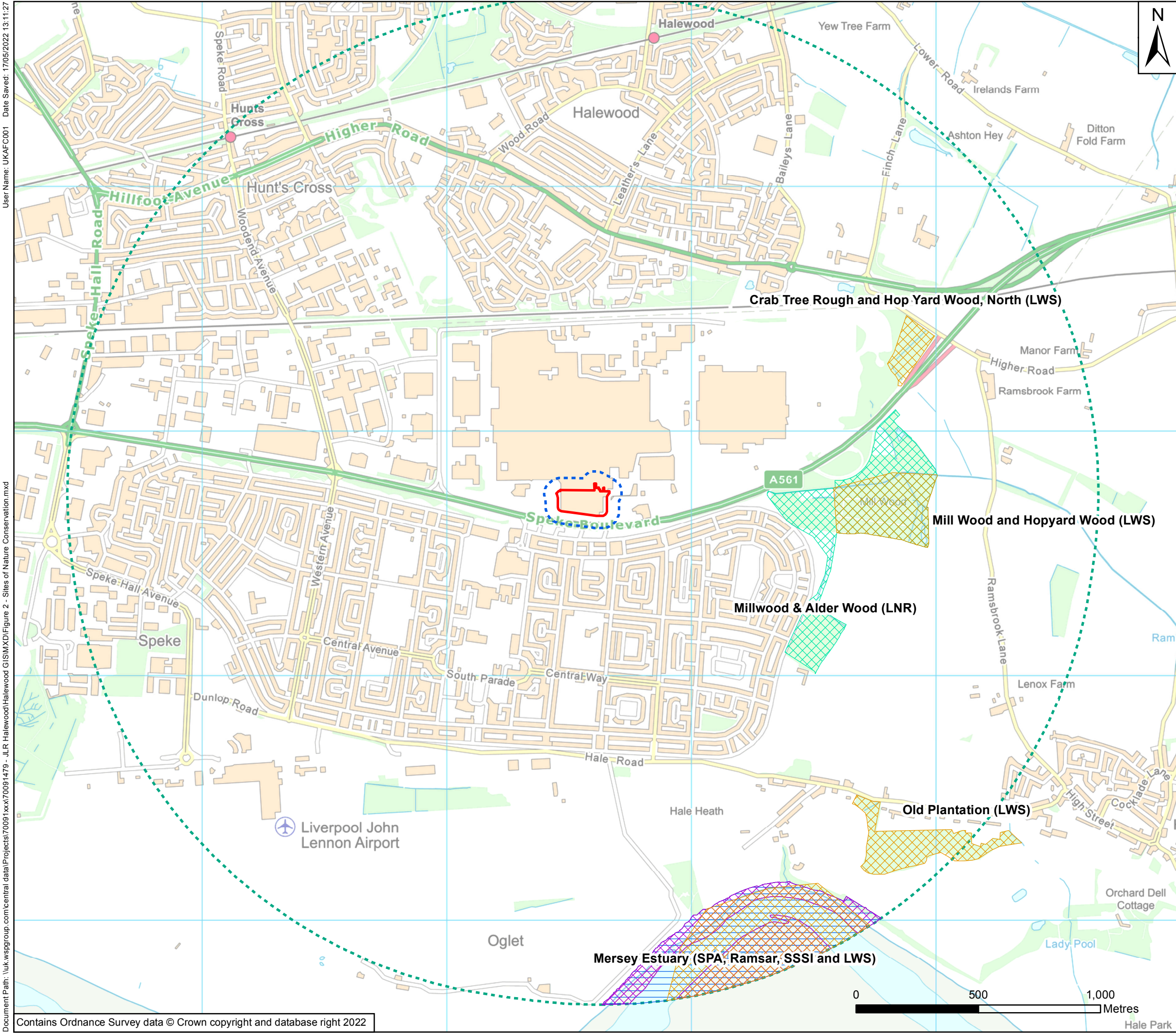
- Key
- Site Boundary
 - Survey Area



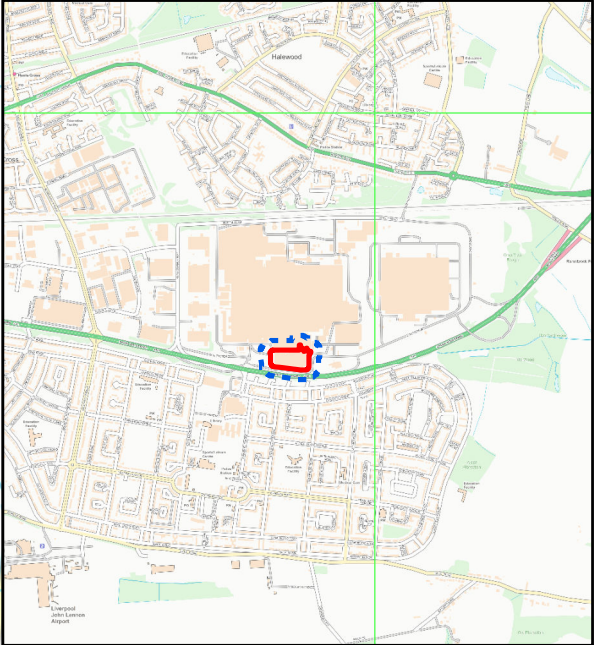
Client:	Jaguar Land Rover		
Project:	70091479 - Jaguar Land Rover Halewood		
Title	Figure 1 - Site Location Plan		
Drawing No:	70091479-EC001	Drawn:	AC
Date:	16/05/2022	Checked:	EH
Scale:	1,100 @ A3	Approved:	MB



Figure 2 - Map of Designated Sites of Conservation Importance

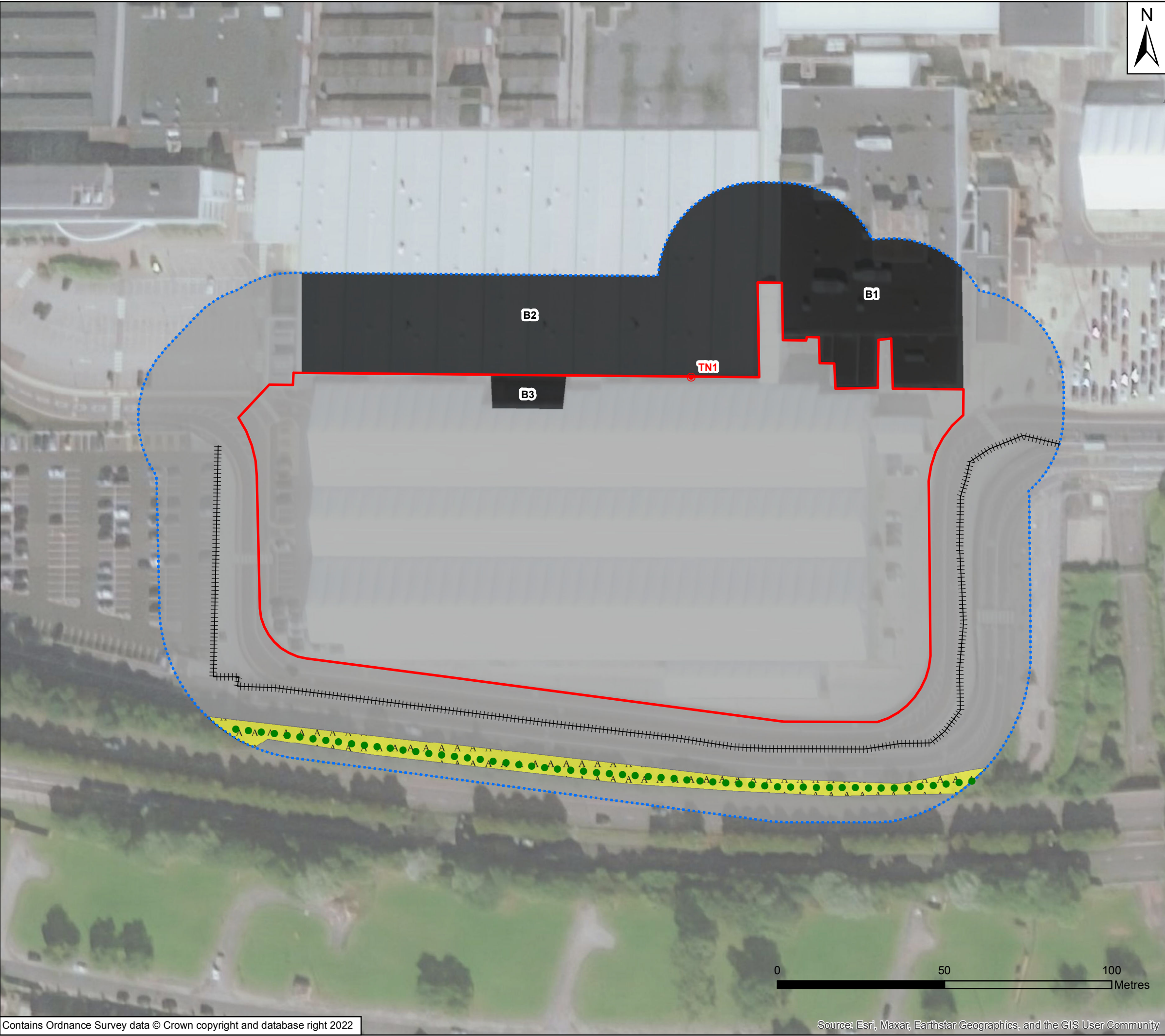


- Key**
- Site Boundary
 - Survey Area
 - Special Protection Area (SPA)
 - Ramsar
 - Site of Special Scientific Interest (SSSI)
 - Local Nature Reserve (LNR)
 - Local Wildlife Site (LWS)



Client:	Jaguar Land Rover		
Project:	70091479 - Jaguar Land Rover Halewood		
Title:	Figure 2 - Designated Sites of Nature Conservation Importance		
Drawing No:	70091479-EC-002	Drawn:	AC
Date:	17/05/2022	Checked:	EH
Scale:	15,000 @ A3	Approved:	MB

Figure 3 - Phase 1 Habitat Plan



N

Key

Site Boundary

Survey Area

Hardstanding

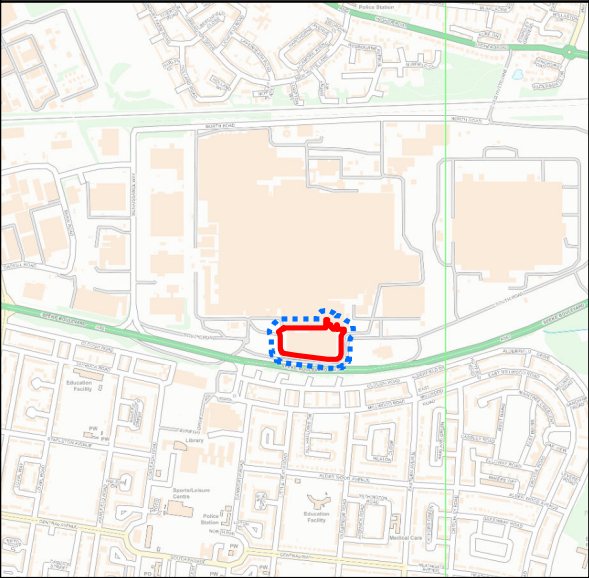
Buildings

Cultivated/Disturbed Land - Amenity Grassland

Broadleaved Parkland/Scattered Trees

Fence

Target Note



Client:	Jaguar Land Rover		
Project:	70091479 - Jaguar Land Rover Halewood		
Title	Figure 3 - Results of Extended Phase 1 Habitat Survey		
Drawing No:	70091479-EC-003	Drawn:	AC
Date:	17/05/2022	Checked:	EH
Scale:	1,100 @ A3	Approved:	MB

Appendix A

**RELEVANT LEGISLATION AND
PLANNING POLICY**

wsp

LEGISLATION AND POLICY CONTEXT

This report has been compiled with reference to relevant wildlife legislation, planning policy and the UK Biodiversity Framework. An overview and context of relevant legislation is provided, with the relevant protection each species groups or species receives summarised in Table 1.

The Wildlife and Countryside Act 1981, (as amended) (WCA)

Protected birds, animals and plants are listed under Schedules 1, 5, 8 respectively of the WCA, while Schedule 9 lists non-native and/or invasive species the spread of which in the wild is prohibited by the WCA. A description of these Schedules and their meaning is provided below.

Under the WCA all birds, their nests and eggs (with exception of species listed under Schedule 2) are protected. It is an offence to:

- Intentionally kill, injure, or take any wild bird,
- Take or destroy an egg of any wild bird.
- Damage or destroy the nest of any wild bird (whilst being built, or in use). Under the WCA the clearance of vegetation within the Survey Area boundary, or immediately adjacent to the Survey Area during the bird nesting season could result in an offence occurring by the disruption or destruction of nest sites. The bird breeding season can be taken to occur between March - August inclusive, although is subject to variations based on species, geographical and seasonal factors.

Schedule 1

Birds listed under Schedule 1 of the WCA⁹ are afforded additional protection with regard to intentional or reckless disturbance whilst nest-building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Schedule 5

Species listed in Schedule 5 can either be fully protected or be partially protected under Section 9, which makes it unlawful to intentionally:

- Part 1: kill, injure or take;
- Part 2: possess or control (live or dead animal, part or derivative);
- Part 4 (a): damage or destruct any structure used for shelter or protection;
- Part 4 (b): disturb them in a place of shelter or protection;
- Part 4 (c): obstruct access to place of shelter or protection;
- Part 5 (a): sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative);
- Part 5 (b): advertise for buying or selling.

Schedule 8

The Act makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of such plants.

Schedule 9

Invasive species listed under Schedule 9 are prohibited from release into the wild and the Act prohibits planting or “causing to grow” in the wild of any plant species listed in Schedule 9. It should be noted that certain bird species listed on Schedule 1 of the WCA are also listed on Schedule 9 to prevent release of non-native and captive individuals, this includes barn owl, red kite, goshawk and corncrake.

Countryside Rights of Way Act 2000 (CRoW Act)

The CRoW Act has amended the WCA in England and Wales strengthening the protection afforded to Sites of Special Scientific Interest (SSSI) and the legal protection for threatened species. It adds the word ‘reckless’ to the wording of the offences listed under Section 9(4) of the WCA. This alteration makes it an offence to recklessly commit an offence, where previously an offence had to be intentional to result in a breach of legislation.

⁹ To view the current list of Schedule 1 listed birds, visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/1> [Accessed May 2022].

Natural Environment and Rural Communities (NERC) Act 2006

Species and Habitats of Principal Importance in England are listed under Section 41 respectively of the NERC Act. The Section 41 list details species that are of principal importance for the conservation of biodiversity in England, and should be used to guide decision-makers such as local and regional authorities when implementing their duty to have regard for the conservation of biodiversity in the exercise of their normal functions – as required under Section 40 of the NERC Act 2006.

If impacts to badgers or their setts are unavoidable then authorised sett disturbance requires a licence.

The UK Post-2010 Biodiversity Framework (2011-2020) (JNCC and DEFRA, 2012)

This Framework lists the UK's most threatened species and habitats and sets out targets and objectives for their management and recovery. The UK Biodiversity Action Plan (BAP) process is delivered nationally, regionally and locally and should be used as a guide for decision-makers to have regards for the targets set by the framework and the goals they aim to achieve. The UK BAP has now been replaced by the UK Post-2010 Biodiversity Framework, however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant (UK Post-2010 Biodiversity Framework, 2012¹⁰).

The Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations came into force on 30th November 2017, and extend to England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters). In Scotland, the Habitats Directive is transposed through a combination of the Habitats Regulations 2010 (in relation to reserved matters) and the Conservation (Natural Habitats &c.) Regulations 1994. The Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) transpose the Habitats Directive in relation to Northern Ireland.

All species listed under Annex IV of the Habitats Directive require strict protection and are known as European Protected Species (EPS). Under Regulation 42 of the Habitats Regulations it is unlawful to:

- Deliberately kill, capture or disturb;
- Deliberately take or destroy the eggs of; and
- Damage or destroy the breeding site/resting place of any species protected under this legislation.

If the Ecologist determines that impacts to an EPS are unavoidable then the works may need to be carried out under a site specific mitigation licence from Natural England (NE). Low Impact Class licences are also available for bats and great crested newts. This enables Registered Low Impact Consultants to undertake certain low impact activities reducing the EPS application paperwork and process length.

Certain EPS are also listed under Annex II of the Habitats Directive and are afforded protection by the establishment of core areas of habitat known as Special Areas of Conservation. This means these species are a relevant consideration in a Habitats Regulations Assessment (HRA).

The Birds Directive seeks to maintain populations of all wild bird species across their natural range (Article 2). All bird species listed under Annex I¹¹ of the Birds Directive are rare or vulnerable and afforded protection by the classification of Special Protection Areas (SPAs), these are also designated under all regularly occurring migratory species, with regard to the protection of wetlands of international importance (Article 4). This means these bird species and communities are a relevant consideration in HRA.

¹⁰ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group), July 2012, UK Post-2010 Biodiversity Framework, Available from: http://jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf [Accessed May 2022].

¹¹ To view birds listed under Annex I visit: http://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index_en.htm [accessed May 2022]

Table A-1 - Key Species and National Wildlife Legislation, Policy and Biodiversity Framework Applicable in England

Species	Legislation, Planning Policy and UK Biodiversity Framework					The Conservation of /Habitats and Species Regulations 2010 (as amended) (Habitats Regulations) - Regulation 41	Natural Environment and Rural Communities (NERC) Act 2006	The Protection of Badgers Act 1992	The UK Post-2010 Biodiversity Framework 2011-2020 (JNCC and DEFRA, 2012)
	Wildlife and Countryside Act 1981 (as amended), (WCA)								
	Schedule1	Schedule 5	Schedule 8	Schedule 9	European Protected Species (Annex IV of the EC Habitats Directive),				
Badger								✓	
Bats		✓ ¹² (part)			✓ ¹³		✓ ¹⁴		✓ ¹⁵
Hazel Dormouse		✓ 5(part)			✓		✓		✓
Otter		✓ 5(part)			✓		✓		✓
Water vole		✓ ¹⁶ (full)					✓		✓
Birds	✓			✓ ¹⁷			✓ ¹⁸		✓ ¹⁹
Reptiles		✓ ²⁰ (part)		✓ ⁹	✓ ²¹		✓ ²²		✓ ²³

¹² These species are partially protected under section 9(4)(b), (4)(c) and (5).

¹³ Only Barbastelle *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros* are listed on Annex II of the Habitats Directive.

¹⁴ Greater horseshoe bat, lesser horseshoe bat, Bechstein's bat, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus* and barbastelle are listed as Species of Principal Importance in England.

¹⁵ Barbastelle bat, Bechstein's bat, noctule, soprano pipistrelle, brown long-eared bat, greater horseshoe bat, lesser horseshoe bat are listed as UK BAP species of bat.

¹⁶ Class Licences are available to Registered Consultants to intentionally disturb, damage or destroy water vole burrows or to displace water voles from their burrows in relation to a development proposal where the licensed action provides a conservation benefit for water voles. Certain displacement operations may be carried out under a Class licence by a registered person in England.

¹⁷ To view plants and animals listed on Schedule 9 Part 1 visit <http://www.legislation.gov.uk/ukpga/1981/69/schedule/9> [accessed May 2022]

¹⁸ There are 49 species of birds listed as Species of Principal Importance in England in Section 41 of the NERC Act 2006 <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

¹⁹ To view the current list of UK BAP priority birds visit: <http://jncc.defra.gov.uk/page-5163> [Accessed May 2022].

²⁰ The four common reptile species, Adder *Vipera berus*, Grass snake *Natrix natrix*, Common lizard *Zootoca vivipara* and Slow worm *Anguis fragilis* are offered partial protection under section 9(5). The rarer UK reptile species (Smooth snake *Coronella austriaca* and Sand lizard *Lacerta agilis*) are partially protected under section 9(4)(b) and (c) and (5).

²¹ Smooth snake and Sand lizard are the only reptiles to be designated as European Protected Species.

²² All 6 reptile species are listed as Species of Principal Importance in England listed under Section 41 of the NERC Act 2006.

²³ To view the current list of UK BAP priority herptile species visit: <http://jncc.defra.gov.uk/page-5166> [Accessed May 2022].

Species	Legislation, Planning Policy and UK Biodiversity Framework				
Amphibians	✓ ²⁴ (part)	✓ ²⁵	✓ ^{26, 27}	✓ ²⁸	
White-clawed Crayfish	✓ ²⁹ (partial)		✓ ³⁰	✓	✓
Invertebrates	✓ ³¹ (full/part)	✓	✓ ^{32, 33}	✓ ³⁴	✓ ³⁵
Fish	✓ ³⁶ (full/part)	✓ ⁹	✓ ^{37, 38}	✓ ³⁹	✓ ⁴⁰

²⁴ The four common reptile species, Adder, Grass snake, Common lizard and Slow worm are offered partial protection under section 9(5). The rarer UK reptile species (Smooth snake and Sand lizard) are partially protected under section 9(4)(b) and (c) and (5).

²⁵ Common frog *Rana temporaria*, Common toad *Bufo bufo*, Smooth newt *Lissotriton vulgaris* and Palmate newt *Lissotriton helveticus* are offered partial protection under section 9(5). Great crested newt *Triturus cristatus* and Natterjack toad *Epidalea calamita* are offered partial protection under section 9(4)(b) and (c) and (5). Pool frog *Pelophylax lessonae* is offered partial protection under section 9(4)(b) and (c)(1) only.

²⁶ Great crested newt, Natterjack toad and Pool frog are the only amphibians to be designated European Protected Species.

²⁷ Great crested newt is the only amphibian listed on Annex II of the Habitats Directive.

²⁸ Great crested newt, Natterjack toad and Common toad are listed as Species of Principal Importance in England in Section 41 of the NERC Act 2006.

²⁹ Under the Wildlife and Countryside Act it is illegal to take or sell white clawed crayfish (WCC) under the WCA. A licence is required to survey (hand net or trap) for the species. To undertake work within WCC inhabited rivers a Class Licence maybe issued by the relevant authority to move WCC away from harm prior to works. Although WCC are not protected from killing or injury Natural England state in their Class licence that due to declining numbers all efforts should be made to conserve the species.

³⁰ White clawed crayfish are listed under Annex II and V of the Habitats Directive.

³¹ To view the current list of invertebrates that are protected under this Act either in part or full visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/5> [Accessed May 2022].

³² The Large blue butterfly *Maculinea arion*, Fisher's estuarine moth *Gortyna borelii lunata* and Lesser whirlpool ram's-horn snail *Anisus vorticulus* are the only invertebrates to be designated European Protected Species.

³³ There are currently twelve invertebrates listed in Annex II of the Habitats Directive; White-clawed crayfish *Austropotamobius pallipes*, Southern damselfly *Coenagrion mercuriale*, Marsh fritillary butterfly *Eurodryas aurinia*, Violet click beetle *Limoniscus violaceus*, Stag beetle *Lucanus cervus*, Freshwater pearl mussel *Margaritifera margaritifera*, Narrow-mouthed whorl snail *Vertigo angustior*, Round-mouthed whorl snail *Vertigo genesii*, Geyer's whorl snail *Vertigo geyeri*, Desmoulin's whorl snail *Vertigo moulinsiana*, Lesser whirlpool ram's-horn snail *Anisus vorticulus* and Fisher's estuarine moth *Gortyna borelii lunata*.

³⁴ There are currently 379 invertebrate species (not including marine species) listed as Species of Principal Importance in England http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0ahUKEwivvu7J9trSAhXiCsAKHX4TBGcQFggvMAM&url=http%3A%2F%2Fpublications.naturalengland.org.uk%2Ffile%2F6518755878240256&usg=AFQjCNEpiUWYUOqhVcfSDvi_3iK2TJytfQ. [Accessed May 2022]

³⁵ To view the current list of UK BAP priority invertebrates visit: <http://jncc.defra.gov.uk/page-5169> [Accessed May 2022].

³⁶ To view the current list of fish either part or fully protected under the Act visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/5> [Accessed May 2022].

³⁷ Sturgeon *Acipenser sturio* is the only fish to be designated a European Protected Species.

³⁸ There are eight fish species listed on Annex II of the Habitats Directive. To view the current list visit: <http://jncc.defra.gov.uk/page-1523> [Accessed May 2022].

³⁹ There are 35 species of fish listed as Species of Principal Importance in England listed under Section 41 of the NERC Act 2006.

⁴⁰ To view the current list of UK BAP priority fish visit: <http://jncc.defra.gov.uk/page-5164> [Accessed May 2022].

Species	Legislation, Planning Policy and UK Biodiversity Framework					
Plants	✓ ⁴¹	✓ ⁹	✓ ^{42, 43}	✓ ⁴⁴		✓ ⁴⁵

⁴¹ To view the current list of Schedule 8 listed plants visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/8> [Accessed May 2022].

⁴² There are nine plant species designated as European Protected Species. To view the current list visit: <http://www.legislation.gov.uk/uksi/2010/490/schedule/5/made> [Accessed May 2022].

⁴³ To view the current list of plant species on Annex II of the Habitats Directive visit: <http://jncc.defra.gov.uk/page-1523> [Accessed May 2022].

⁴⁴ There are currently 152 vascular plants listed as Species of Principal Importance in England listed under Section 41 of the NERC Act.

⁴⁵ To view the current list of UK BAP priority plants visit: <http://jncc.defra.gov.uk/page-5171> and <http://jncc.defra.gov.uk/page-5168> [Accessed May 2022].

Appendix B

**SUMMARY OF ECOLOGICAL DESK
STUDY DATA**

WSP

Table B-1 - Protected and notable bat species for which records have been identified within 2km

Species common name	Species Latin name	No. of records	Distance and orientation from Site	Legal / Conservation Status ⁴⁶	Data Record Centre
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	3	1.9km S	Bern2, CMS_A2, HSDA4, UKBAP, W&CA, NERC, Hab Reg.	Merseyside Biobank
Brown Long Eared Bat	<i>Plecotus auritus</i>	1	1.5km E	Bern2, CMS_A2, HSDA4, UKBAP, W&CA, NERC, Hab Reg.	Merseyside Biobank
Myotis Brandts	<i>Myotis brandtii</i>	1	Within 2km SE	Bern2, CMS_A2, HSDA4, UKBAP, W&CA, NERC, Hab Reg.	Merseyside Biobank
Bat Sp	<i>Chiroptera</i>	2	1.45km E	Bern2, CMS_A2, HSDA4, UKBAP, W&CA, NERC, Hab Reg.	Merseyside Biobank

Table B-2 - Protected and notable birds for which records have been identified within 2km

Species common name	Species Latin name	No. of records	Legal / Conservation Status ⁴⁹	Data Record Centre
Magpie	<i>Pica Pica</i>	3		Cheshire, Halton, Warrington and Wirral
Pied Wagtail	<i>Motacilla alba subsp. yarrellii</i>	1		Cheshire, Halton, Warrington and Wirral
Teal	<i>Anas crecca</i>	1	BoCC Amber	Cheshire, Halton, Warrington and Wirral
Carrion Crow	<i>Corvus corone</i>	1		Cheshire, Halton, Warrington and Wirral
Wood Pidgeon	<i>Columba palumbus</i>	1		Cheshire, Halton, Warrington and Wirral
Blackbird	<i>Turdus merula</i>	3		Cheshire, Halton, Warrington and Wirral

⁴⁶ HabReg = Conservation of Habitats and Species Regulations (2017), W&CA = Wildlife and Countryside Act (1981), NERC = Schedule 41 Natural Environment and Rural Communities Act (2006), LBAP = Local Biodiversity Action Plan, RD1 (UK) = UK Red Data Book listing based on IUCN guidelines, RD2 (UK) = UK Red Data Book listing not based on IUCN guidelines (Nationally Rare and Scarce).

Species common name	Species Latin name	No. of records	Legal / Conservation Status ⁴⁹	Data Record Centre
Starling	<i>Sturnus vulgaris</i>	1	BoCC Red, NERC	Cheshire, Halton, Warrington and Wirral
Dunlin	<i>Calidris alpina</i>	1	BoCC Amber	Cheshire, Halton, Warrington and Wirral
Ringed Plover	<i>Charadrius hiaticula</i>	1	BoCC Red	Cheshire, Halton, Warrington and Wirral
Long-tailed Tit	<i>Aegithalos caudatus</i>	1		Cheshire, Halton, Warrington and Wirral
Greenfinch	<i>Chloris chloris</i>	1		Cheshire, Halton, Warrington and Wirral
Barn Owl	<i>Tyto alba</i>	1	Sch1	Cheshire, Halton, Warrington and Wirral
Snipe	<i>Gallinago gallinago</i>	2	BoCC Amber	Cheshire, Halton, Warrington and Wirral
Blue Tit	<i>Cyanistes caeruleus</i>	1		Cheshire, Halton, Warrington and Wirral
Great Tit	<i>Parus major</i>	1		Cheshire, Halton, Warrington and Wirral
Dunnock	<i>Prunella modularis</i>	1	BoCC Amber, Bern2, S41	Cheshire, Halton, Warrington and Wirral
Song Thrush	<i>Turdus philomelos</i>	1	BoCC Red	Cheshire, Halton, Warrington and Wirral
House Sparrow	<i>Passer domesticus</i>	1		Cheshire, Halton, Warrington and Wirral
Pheasant	<i>Phasianus colchicus</i>	1		Cheshire, Halton, Warrington and Wirral
Reed Bunting	<i>Emberiza schoeniclus</i>	1	BoCC Amber, S41	Cheshire, Halton, Warrington and Wirral
Bullfinch	<i>Pyrrhula pyrrhula</i>	1	BoCC Amber	Cheshire, Halton, Warrington and Wirral
Buzzard	<i>Buteo buteo</i>	1		Cheshire, Halton, Warrington and Wirral
Kestrel	<i>Falco tinnunculus</i>	1	BoCC Amber	Cheshire, Halton, Warrington and Wirral

Species common name	Species Latin name	No. of records	Legal / Conservation Status ⁴⁹	Data Record Centre
Raven	<i>Corvus corax</i>	1		Cheshire, Halton, Warrington and Wirral
Skylark	<i>Alauda arvensis</i>	1	BoCC Red, S41	Cheshire, Halton, Warrington and Wirral
Yellowhammer	<i>Emberiza citrinella</i>	1	BoCC Red, S41	Cheshire, Halton, Warrington and Wirral
Grey Partridge	<i>Perdix perdix</i>	1	BoCC Red, S41	Cheshire, Halton, Warrington and Wirral
Chaffinch	<i>Fringilla coelebs</i>	1		Cheshire, Halton, Warrington and Wirral
Goldfinch	<i>Carduelis carduelis</i>	1		Cheshire, Halton, Warrington and Wirral
Swallow	<i>Hirundo rustica</i>	1		Cheshire, Halton, Warrington and Wirral
Lapwing	<i>Vanellus vanellus</i>	1	BoCC Red, S41	Cheshire, Halton, Warrington and Wirral
Swift	<i>Apus apus</i>	1	BoCC Amber	Cheshire, Halton, Warrington and Wirral
Moorhen	<i>Gallinula chloropus</i>	1		Cheshire, Halton, Warrington and Wirral
Gadwall	<i>Anas strepera</i>	1	BoCC Amber	Cheshire, Halton, Warrington and Wirral
Coot	<i>Fulica atra</i>	1		Cheshire, Halton, Warrington and Wirral
White Wagtail	<i>Motacilla alba subsp. alba</i>	1		Cheshire, Halton, Warrington and Wirral
Mallard	<i>Anas platyrhynchos</i>	1	BoCC Amber	Cheshire, Halton, Warrington and Wirral
Shelduck	<i>Tadorna tadorna</i>	1		Cheshire, Halton, Warrington and Wirral
Robin	<i>Erithacus rubecula</i>	1		Cheshire, Halton, Warrington and Wirral
Wheatear	<i>Oenanthe oenanthe</i>	1		Cheshire, Halton, Warrington and Wirral
Shoveler	<i>Anas clypeata</i>	1	BoCC Amber	Cheshire, Halton, Warrington and Wirral

Table B-3 - Protected and notable amphibians for which records have been identified within 2km

Species common name	Species Latin name	No. of records	Distance and orientation from Site	Legal / Conservation Status ⁴⁷	Data Record Centre
Common Frog	<i>Rana temporaria</i>	24	0.95km E		Merseyside Biobank
Common Toad	<i>Bufo bufo</i>	15	0.82km SE		Merseyside Biobank
Smooth Newt	<i>Lissotriton vulgaris</i>	9	1.75km SW	W&CA	Merseyside Biobank

Table B-4 - Notable invasive non-native plants for which records have been identified within 2km

Species common name	Species Latin name	No. of records	Distance and orientation from Site	Data Record Centre
Japanese Knotweed	<i>Reynoutria japonica</i>	3	0.95km E	Merseyside Biobank
Japanese Rose	<i>Rosa rugosa</i>	5	0.85km N	Merseyside Biobank
Himalayan Balsam	<i>Impatiens glandulifera</i>	3	1.9km N	Merseyside Biobank

Table B-5 - Protected and notable other mammals for which records have been identified within 2km

Species common name	Species Latin name	No. of records	Legal / Conservation Status ⁴⁹	Data Record Centre

⁴⁷ HabReg = Conservation of Habitats and Species Regulations (2017), W&CA = Wildlife and Countryside Act (1981), NERC = Schedule 41 Natural Environment and Rural Communities Act (2006), LBAP = Local Biodiversity Action Plan, RD1 (UK) = UK Red Data Book listing based on IUCN guidelines, RD2 (UK) = UK Red Data Book listing not based on IUCN guidelines (Nationally Rare and Scarce).

Western European Hedgehog	<i>Erinaceus europaeus</i>	39	W&CA	Merseyside Biobank
Brown Hare	<i>Lepus europaeus</i>	5	W&CA	Merseyside Biobank
American Mink	<i>Neovison vison</i>	3	Sch 9 of W&CA	Merseyside Biobank

Appendix C

TARGET NOTES



Table C-1 – Target Notes

Target Note	Photograph
Target Note 1 Missing mortar and displaced brick highlighted a feature potentially used by roosting bats. Assessed as having negligible potential to support roosting bats during PBRA.	

Appendix D

CONTEXT PHOTOGRAPHS

wsp



Photograph 1 – Southern elevation of Building 1 (B1)



Photograph 2 – Southern and eastern elevation of B1



Photograph 3 – Southern elevation of B1



Photograph 4 – Southern elevation of Building 2 (B2) with security lighting



Photograph 5 – Southern elevation of B2



Photograph 6 – Southern elevation of B2



Photograph 7 – Car park



Photograph 8 – Car park



Photograph 9 – Target Note 1



Photograph 10 – Amenity grassland and line of trees.



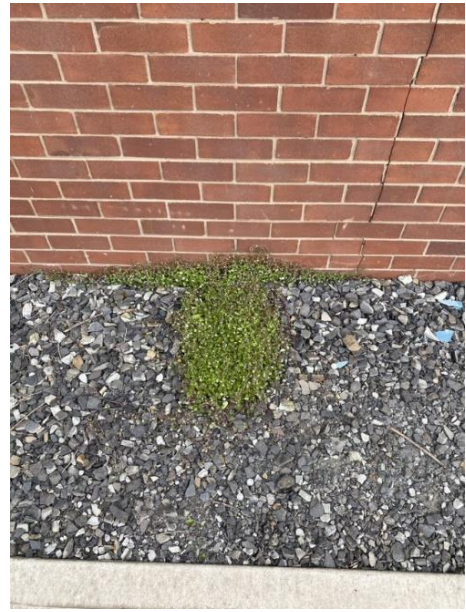
Photograph 11 – Amenity grassland



Photograph 12 – Line of trees



Photograph 13 – Uplifted felt roof on southern elevation of B3.



Photograph 14 – Ragwort



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