



Manchester University NHS Foundation Trust

North Manchester General Hospital

Preliminary Ecological Appraisal Report

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EXECUTIVE SUMMARY

This report presents the results of a preliminary ecological appraisal (PEA), comprising a background data search and an extended UKHab habitat survey with an assessment for protected species. The survey also included a Ground Level Tree Assessment (GLTA) for their suitability to support roosting bats. The survey was carried out on 8 April 2024. This report has been produced on behalf of Manchester University NHS Foundation Trust to support a planning application for the proposed conversion of an existing car park into a waste compound at North Manchester General Hospital (Grid Ref SD 85022 02118). The appraisal was based on the red line, as shown in *Figure 1*.

The site comprises hard standing and built linear features. The adjacent habitats comprises other broadleaved woodland, line of trees, modified and other neutral grassland.

The results of the survey combined with the results of the desk study have highlighted the following requirements for mitigation or further surveys in relation to protected and/or notable habitats and species:

- **Breeding birds** – any tree maintenance works should take place outside of the breeding bird season and should not be undertaken from March to August inclusive. If not possible and works need to take place during this period, a targeted nest survey is to be undertaken or an ecological clerk of works appointed to oversee the works.
- **Bats** – One tree was identified as having suitable features to support roosting bats and three trees require further assessment to establish if potential roosting features (PRFs) are present. If any increase in artificial lighting cannot be directed away from these trees, an aerial tree assessment by a suitably licensed ecologist, with possible further surveys, will need to be undertaken.
- **Invasive non-native species** – *Rhododendron (Rhododendron ponticum)* is present within adjacent habitats. This is non-native plant species for which it is illegal to cause to spread in the wild. Eradication or adherence to an invasive species management plan is recommended to prevent the spread of this species during works.

The further survey results will need to be submitted as part of the planning application and will inform further mitigation or compensation measures. It should be noted that these further measures may include an application for a European protected species (EPS) mitigation licence or bat mitigation class licence (BMCL) from Natural England (NE).

The development also presents an opportunity to improve the habitats on the site for wildlife such as bats, birds and hedgehogs. The inclusion of nest boxes and bat boxes will provide suitable nesting and roosting features in the long term, while the creation of log piles will provide breeding and hibernation opportunities for hedgehogs.

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1.0 INTRODUCTION

1.1 Purpose of this report

- 1.1.1 This report presents the results of a preliminary ecological appraisal (PEA), comprising a background data search and a UKHab habitat survey, with assessment for protected or otherwise notable species, at North Manchester General Hospital (Grid Ref SD 85022 02118). The survey area included the land within the red-line boundary (the site), plus land up to 10 m. The site and survey area are shown in Figure 1.
- 1.1.2 A ground-level tree assessment (GLTA) was completed on all trees along the boundaries to determine if potential roost features (PRFs) for bats are present.
- 1.1.3 The report identifies ecological receptors relevant to the project, specifies any further survey requirements to complete an impact assessment, gives recommendations for avoidance, mitigation or compensation strategies, and suggests opportunities for ecological enhancement

1.2 Landscape context

- 1.2.1 The c. 0.15 ha site is a car park located within the North Manchester General Hospital in Crumpsall, Manchester. The site is dominated by hardstanding with woodland boarded to the north, east and south and road with line of trees to the west.
- 1.2.2 Directly to the east of the car park there is a large area of broadleaved woodland. The wider landscape to the north, east, south and west of the site are major road networks as well as areas of mixed residential and commercial properties.

1.3 Development proposals

- 1.3.1 The proposals for the site involve the conversion of an existing car park into a waste compound for the storage of waste containers and a welfare unit for the porters. Additionally, the proposals include white external lighting, set at 4000k, within the main entrance areas of the compound, roadways, pathways, and service yard areas.

2.0 METHODS

2.1 Overview

- 2.1.1 The PEA was undertaken in line with guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017); it therefore included:
- a desk study (here called a background data search (BDS)), which included a review of aerial photographs, information from the DEFRA, JNCC and Natural England websites, Trafford Metropolitan Borough Council planning policy documents and data from Greater Manchester Local Records Data Centre.
 - a field survey that informed habitat mapping, an assessment of the possible presence of protected or priority species and the likely importance of habitat features.
- 2.1.2 The PEA report includes an ecological description of the site and information about species that may occur there. Notes and mapping of any incidental sightings of invasive non-native plant species and protected or priority fauna species are also provided.
- 2.1.3 The survey was carried out on 8 April 2024 by Danielle Langton and assisted by Iveta Nikandrovaite. Danielle is a suitably qualified and experienced ecological consultant at RSK Biocensus, a member of CIEEM and experienced in carrying out preliminary ecological appraisals.

2.2 Background data search

- 2.2.1 A search was made in April 2024 for relevant reference materials. A list of sources is given in *Table 1*.

Table 1: Data sources

Information Obtained	Available From
Protected and noteworthy species-records	Greater Manchester Ecology Unit
Designated site locations and citations	Natural England website
Designated site locations and citations	Joint Nature Conservation Committee (JNCC) website
Designated site locations and citations	Greater Manchester Ecology Unit
Designations and legal protection of noteworthy species	Joint Nature Conservation Committee (JNCC) website
Areas / Habitats of Strategic Significance	Greater Manchester Biodiversity Action Plan https://gmlrc.org/projects/gm_bap/#:~:text=%22To%20promote%20the%20conservation%2C%20protection,t%20o%20conserve%20and%20protect%20them
Areas / Habitats of Strategic Significance	National Habitat Networks https://www.data.gov.uk/dataset/0ef2ed26-2f04-4e0f-9493-ffbdbfaeb159/habitat-networks-england
Areas / Habitats of Strategic Significance	National Priority Focus Areas

	https://www.data.gov.uk/dataset/c20a40c5-c975-43e1-9abd-d1257aa58432/natural-england-national-priority-focus-areas
Areas / Habitats of Strategic Significance	Nature Improvement Areas https://www.data.gov.uk/dataset/a19c95e3-9657-457d-825e-3d2f3993b653/nature-improvement-areas

2.2.2 A search was made for the following statutory internationally, nationally and locally designated sites of ecological importance:

- Within 10 km of the site boundary - Ramsar sites, Special Areas of Conservation (SAC) and Special Protection Areas (SPA).
- Within 2 km of the site boundary - Sites of Special Scientific Interest (SSSI) including consideration of SSSI risk zones and Local Nature Reserves (LNR).

2.2.3 A search was also made for non-statutory designated (often important in a local context) within 1 km of the site boundary.

2.2.4 The BDS also included a search for records within 1 km of the site boundary of noteworthy species, which might pose a constraint to the proposed development. Species included in the search were:

- European protected species (listed on Schedules 2 and 5 of The Conservation of Habitats and Species Regulations 2017 (as amended));
- nationally protected species under Schedules 1, 5 and 8 of The Wildlife & Countryside Act 1981 (as amended) and The Protection of Badgers Act 1992;
- species listed as critically endangered, endangered or vulnerable based on the IUCN Red List Categories and Criteria 2001;
- all species listed on the RSPB's Birds of Conservation Concern 5 (Stanbury *et al.*, 2021) as red' or 'amber';
- nationally rare or nationally scarce species;
- notable invertebrates; and
- species of principal importance listed under The Natural Environment and Rural Communities (NERC) Act 2006 or priority species under The Greater Manchester Biodiversity Action Plan.

2.3 Plants and habitats

UK Hab habitat survey

2.3.1 The field survey was based on the UK habitats (UK Hab) survey methodology (Version 2; Butcher *et al.* 2023), as extended for use in environmental impact assessment (Institute of Environmental Assessment 1995). The UK Hab classification system is the habitat classification that underpins the DEFRA Biodiversity Metric and is therefore the favoured habitat classification to use when surveys need to inform a Biodiversity Net

Gain Calculation. This field survey was undertaken in line with CIEEM 2017 and involved the following elements:

- habitat mapping using a set of standard colour codes to indicate habitat types on a habitat map; and
- a description of features of possible ecological or nature conservation interest in notes relating to numbered locations on the habitat map, called 'target notes'.

2.3.2 Vascular plant species were recorded during the survey, although no attempt was made to produce an exhaustive species list (additional species would almost certainly be found during more detailed surveys or repeat surveys at various times of the year).

2.3.3 Plant nomenclature in this report follows Stace (2019) for native and naturalised species of vascular plant, and mosses and liverworts follow Hill *et al.* (2008). Introduced species and garden varieties were identified using relevant Floras. Plant names in the text are given with common names with the scientific name (in italics) immediately following the first time it is mentioned.

Invasive non-native species (INNS)

2.3.4 UK Hab habitat survey does not involve exhaustive surveying for individual plant species, and various invasive species may be little in evidence at various times of year (depending on the species). A survey seeking to identify habitat types cannot therefore be relied upon to provide firm information about the presence or extent of any INNS. However, any INNS that were encountered during the habitat survey were noted, as well as any invasive non-native species of animals.

2.4 Protected and notable animals

General

2.4.1 The site was assessed for its suitability to support protected or otherwise notable animals that are likely to occur in the area.

2.4.2 Great crested newt (*Triturus cristatus*) was excluded from this assessment as there were no potentially suitable breeding ponds within 250 m of the site and the BDS returned no records within 500 m of the site. Otters (*Lutra lutra*) and water voles (*Arvicola amphibius*) were excluded due to a lack of suitable aquatic habitat in the site or immediate surrounding area. Hazel dormice (*Muscardinus avellanarius*) were also excluded from the assessment as the site is located outside of the range of this species.

2.4.3 Taking into account the results of the BDS, the geographic location, connectivity to natural habitats in the wider landscape, the nature and extent of habitats at the site, and the proposed development, specific assessment was also carried out for the species/species groups outlined below.

Invertebrates

2.4.4 The site was assessed for its suitability to support notable species and/or assemblage of invertebrates, but no specific surveys were undertaken. The habitat requirements of particular invertebrates are often species-specific, so consideration was given to the

presence of features and habitats that might be suitable for the notable species identified in the BDS.

Reptiles

- 2.4.5 The site was assessed for its suitability for the four most widespread reptile species with particular attention given to those features that provide suitable basking areas (e.g. south-facing slopes), hibernation sites (e.g. banks, walls, piles of rotting vegetation) and opportunities for foraging (e.g. rough grassland and scrub).
- 2.4.6 Specific habitat requirements differ between species. Common lizards (*Zootoca vivipara*) and slow-worms (*Anguis fragilis*) favour rough grassland. Grass snakes (*Natrix helvetica*) have broadly similar requirements, with a greater reliance on ponds and wetlands. Adders (*Vipera berus*) use a range of fairly open habitats with some cover but are most often found in dry heath.

Birds

- 2.4.7 Birds nest, forage and roost in a wide variety of habitats including scrub, woodland, hedgerows and trees, wetland, arable and pastoral farmland and rough grassland. Some species also use open bare ground and man-made structures.
- 2.4.8 The site was assessed for its suitability to support diverse assemblages and/or uncommon species of breeding and non-breeding birds, with an emphasis on those species that are listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended), the red and amber lists of the RSPB's Birds of Conservation Concern 5 (Stanbury *et al.*, 2021) and other notable species recorded in the BDS, including any species that are qualifying features of nearby designated sites. Consideration was given to the site's connectivity to landscape features that are likely to be of particular importance to birds, such as extensive areas of semi-natural woodland or wetlands.

Bats

- 2.4.9 Habitats were assessed for their suitability for foraging and commuting bats, in line with guidance provided in Collins (2023). Areas of particular interest vary between species, but generally include sheltered areas and habitats with good numbers of insects, such as woodland, scrub, rivers and species-rich or rough grassland.
- 2.4.10 Trees were noted if they had potential suitability for roosting bats (Collins, 2023). This involved identifying features that roosting bats may favour (e.g. holes, cracks and cavities that might be used as bat access points or roost sites).
- 2.4.11 All trees within the site were surveyed from ground level where access allowed. Features that might be used by roosting bats were described and categorised according to accepted guidelines (Collins, 2023). Each tree was given a category during the ground-level surveys (see *Table 2*) based on its potential for roosting bats.

Table 2: Categorisation of the suitability of trees for roosting bats (Collins 2023)

Category (Bat roosting suitability)	Description
None	Either no Potential Roost Features (PRFs) in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

- 2.4.12 Trees may also be categorised as unknown if the surveyor's view of the tree is obscured. This can be caused by dense Ivy (*Hedera helix*) covering the trunk and major limbs which conceals potential roosting features.

Badgers

- 2.4.13 An initial assessment was carried out to identify areas that might be used by badgers (*Meles meles*) for foraging or sett creation within 30 m of all areas potentially affected by works (where access was possible). The area was systematically searched for signs of badgers including setts, foraging signs, paths (runs) and latrines where possible, and the category of sett and levels of activity visible at each sett was recorded.

Other species of principal importance (S41)

- 2.4.14 The UK countries of England, Wales, Scotland and Northern Ireland are obliged by their individual laws to maintain lists of species and habitats of principal importance for biodiversity conservation. In England, this obligation derives from the Natural Environment and Rural Communities (NERC) Act 2006. An assessment of the suitability and likelihood of the site supporting such species was made (for example, hedgehog (*Erinaceus europaeus*)).

2.5 Constraints and limitations

- 2.5.1 This preliminary ecological appraisal as to whether protected or otherwise notable species might occur on the site is based on the suitability of habitat, the known distribution of relevant species in the local area (from online sources and desk study), and any signs of the relevant species. It does not constitute a full and definitive survey of any protected species group.
- 2.5.2 Field signs for protected and valuable species are often difficult to find or absent from a site. The survey conducted was not intended to be a comprehensive presence/absence survey for all species, but rather to provide an indication of the likely presence of such species based on the field signs found, and the nature of the habitats present.
- 2.5.3 Access was not made to adjacent land, and therefore it remains possible that a badger sett (or other evidence of protected or notable species) beyond the site boundary could have been missed.
- 2.5.4 All recommendations made in this report are based on the proposed red line boundary provided, as shown in Figure 1. If the plans change significantly, then an ecologist must be consulted and further surveys may be required.

3.0 RESULTS

3.1 Background Data Search

Statutory designated sites

- 3.1.1 There is one Special Area of Conservation (SAC) site which is statutory designated site of international importance within 10 km of the site boundary. The qualifying features of the site are detailed in *Table 3*.

Table 3: Statutory sites of international importance within 10 km of the site boundary.

Site name	Reasons for designation	Approximate distance and direction from site
Rochdale Canal SAC	The Rochdale Canal contains important habitats for submerged aquatic plants and emergent vegetation, including extensive colonies of the nationally scarce floating water-plantain <i>Luronium natans</i> . The site also supports a diverse assemblage of aquatic flora, in particular nine species of pondweed <i>Potamogeton</i> spp. The plant communities found in the Rochdale Canal are characteristic of mesotrophic water bodies, i.e. those which are moderately nutrient-rich.	4.2 km SE

- 3.1.2 There are two statutory designated sites of national importance within 2 km of the site boundary consisting of local nature reserves. These sites are listed in *Table 4* in order of proximity to the site and short descriptions are given for the sites.

Table 4: Statutory sites of national importance within 2 km of the site boundary.

Site name	Reasons for designation	Approximate distance and direction from site
Boggart Hole Clough LNR	The site is the largest woodland clough in Manchester and part is ancient woodland.	935 m E
Blackley Forest LNR	The forest makes up most of the reserve along with grassland. The River Irk flows through the park and is a main feature. Habitats include broadleaved and plantation woodland, grassland, lake, marsh and a river.	1.3 km NW

3.1.3 SSSI Impact Risk Zone (IRZ)

- 3.1.4 The site interacts with one SSSI Impact Risk Zones buffers. This proposed development does not meet the criteria for consultation with the local authority and Natural England in relation to impacts upon the SSSI.

Non-statutory designated sites

- 3.1.5 There is one site of biological importance which is a non-statutory designated site within 1 km of the site boundary. The qualifying features of the site are detailed in *Table 5*.

Table 5: Non-statutory sites within 1 km of the site boundary.

Site name	Reasons for designation	Approximate distance and direction from site
Reservoir at Harpurhey SBI	A series of reservoirs, two with open water and a third completely colonised by swamp, supporting a rich aquatic flora and fauna with marginal swamp, marsh and scrub. One of the few important wildlife sites in close proximity to the conurbation within the River Irk valley. Ponds & lodges are Greater Manchester Biodiversity Habitats.	525 m SE

Habitats

- 3.1.6 The Greater Manchester local biodiversity action plan lists nine habitats as local formal targets but only native woodland and urban managed greenspace habitats are found along the red line boundary of the site.
- 3.1.7 There is one area of ancient semi-natural woodland c. 980 m east of the site boundary.

Protected and Notable Species

- 3.1.8 The desk search returned at least 21 records of noteworthy species within 1 km of the site boundary. Records include species of principal importance that are listed under Section 41 of The Natural Environment and Rural Communities (NERC) Act 2006.
- 3.1.9 Of these, one is amphibians, 14 are birds, two are invertebrates and three are mammals (of these two are bats). Species that are protected by law under Schedules 2 and 5 of The Conservation of Habitats and Species Regulations 2017 (as amended), Schedules 1, 2, 5 and 8 of The Wildlife and Countryside Act 1981 (as amended) or The Protection of Badgers Act 1992 that have been recorded in the search area are highlighted in the full species list is given in *Appendix A*. Those of relevance to the site and the current proposals are discussed in Sections 4.2 and 4.3.

3.2 Plants and habitats

UK Hab Habitat Survey

- 3.2.1 The survey area included the area within the red-line boundary. The UK Hab habitat map is provided as *Figure 2* and shows the location of habitats referred to in the text below. The site comprises of the following:
- Other neutral grassland (g3c)

- Modified grassland (g4)
- Other broadleaved woodland (w1g)
- Urban Trees
- Line of trees
- Developed land; sealed surface (u1b)
- Artificial unvegetated unsealed surface (u1c)
- Built linear features (u1e)

Other neutral grassland (g3c)

- 3.2.2 A small strip of other neutral grassland is present along the western boundary of the site (*Plate 1*) comprises Herb-Robert (*Geranium robertianum*), Cleavers (*Galium aparine*), Common Nettle (*Urtica dioica*), Rosebay Willowherb (*Chamaenerion angustifolium*), Dandelion (*Taraxacum officinale* agg.), Mouse-ear Chickweed (*Cerastium fontanum*), Daffodil (*Narcissus poeticus*), Meadow Buttercup (*Ranunculus acris*), Curled Dock (*Rumex crispus*), Ribwort Plantain (*Plantago lanceolata*) and Bramble (*Rubus fruticosus*) with patches of bare ground.



Plate 1: Other neutral grassland along the western boundary

Modified grassland (g4)

- 3.2.3 Regularly mown modified grassland is present along the western boundary of the site (*Plate 2*) with dense Ivy (*Hedera helix*) cover, Ragwort (*Jacobaea vulgaris*), Meadow Buttercup, Creeping Buttercup (*Ranunculus repens*), Red Fescue (*Festuca rubra*), Perennial Rye-grass (*Lolium perenne*) and White Clover (*Trifolium repens*).

- 3.2.4 Seven Leylandii Cypress (*Cupressus x leylandii*), Apple (*Malus* sp.) and Privet (*Ligustrum ovalifolium*) semi-mature scattered urban trees are present within the modified grassland parcels.



Plate 2: Modified grassland along the western boundary

Other broadleaved woodland (w1g)

- 3.2.5 To the north, east and south the site is boarded by other broadleaved woodland (Plate 3). Species of tree in the woodland include Horse-chestnut (*Aesculus hippocastanum*), Ash (*Fraxinus excelsior*), Cherry (*Prunus* sp.), Willow (*Salix* sp.), Elm (*Ulmus procera*), Birch (*Betula* sp.) and Rowan (*Sorbus aucuparia*). Hawthorn (*Crataegus monogyna*) and Privet (*Ligustrum* sp.) scrub is present. Introduced shrub and Rhododendron (*Rhododendron ponticum*) is present in the northern part of the woodland along the road.



Plate 3: Other broadleaved woodland

Line of trees

- 3.2.6 Two lines of trees are present along the western side of the fence comprising Rhododendron, Cherry, Holly (*Ilex aquifolium*), Hawthorn, Horse-chestnut, Apple (*Malus* sp.) and Privet.

Developed land; sealed surface (u1b)

- 3.2.7 The entire site is an active car park (*Plate 4*).



Plate 4: Car park

Artificial unvegetated unsealed surface (u1c)

- 3.2.8 A small patch of artificial unvegetated, unsealed surface is present in the northern corner of the car park with some brash, ivy and soil piles.

Built linear features (u1e)

- 3.2.9 A metal fence surrounds the site area.

Invasive Non-native Species

- 3.2.10 Rhododendron was recorded within the northern part of the woodland along the road and within the line of trees. This species is an invasive non-native species (INNS) and is listed under schedule 9 of the Wildlife and Countryside Act 1981.

3.3 Protected and notable animals

Invertebrates

- 3.3.1 The BDS returned three records of notable invertebrates within 1 km of the site.
- 3.3.2 The habitats preset within the site were considered unlikely to support any invertebrate species, but the surrounding habitats are likely to support a common assemblage of

invertebrate species, typical of neutral and modified grassland, woodland habitats. Therefore, no further survey or mitigation works are required and invertebrates are not discussed any further within this report.

Reptiles

- 3.3.3 No records for reptiles were returned within 1 km of the site boundary.
- 3.3.4 The site itself offers no suitable habitat for reptiles. The surrounding woodland and brash piles within it offers potential habitat for reptiles, however the woodland will not be affected by the development proposals. Therefore, reptiles are considered unlikely to be present within the proposed site boundary and are not discussed further within this report.

Birds

- 3.3.5 The BDS returned numerous records for protected or otherwise notable species within 1 km of the site boundary. The majority of the records are associated with Reservoirs at Harpurhey SBI.
- 3.3.6 The surrounding woodland and line of trees offer suitable foraging and nesting habitat for birds, including bullfinch (*Pyrrhula pyrrhula*), dunnock (*Prunella modularis*), and house sparrow (*Passer domesticus*) which have been recorded within 1 km of the site.

Bats

- 3.3.7 The BDS returned multiple records of bats within 1 km of the site:
 - Daubenton's bat (*Myotis daubentonii*)
 - Common pipistrelle (*Pipistrellus pipistrellus*)
- 3.3.8 Three common pipistrelle roosts have been recorded within the North Manchester General Hospital
- 3.3.9 A GLTA was undertaken of trees along the site boundary. One tree (T4) was assessed as having potential roosting features (PRF) and three trees (T1, T2 and T3) were assessed as requiring further assessment to determine if PRFs are present (FAR). T4 contained features suitable for supporting individual bats or very small numbers of bats (PRF-I). Trees with potential suitability to support roosting bats are listed in *Table 6* and their location is shown in *Figure 2*.

Table 6. Ground level tree assessment results

Tree/PRF	Description	Photo	Suitability
T1	Semi-mature tree with dense Ivy cover potentially disguising PRFs. The Ivy itself may also act as a roosting feature.		FAR
T2	Semi-mature tree with dense Ivy cover potentially disguising PRFs. The Ivy itself may also act as a roosting feature.		FAR
T3	Pollarded tree with dense Ivy cover potentially disguising PRFs. The Ivy itself may also act as a roosting feature.		FAR
T4	Damaged semi-mature tree.	No photograph available	PRF

Tree/PRF	Description	Photo	Suitability
T4 PRF A	Some loose bark and deadwood.		PRF-I

- 3.3.10 The woodland and line of trees surrounding the site offer suitable foraging and commuting habitat for bats. The site is well connected to River Irk by line of trees and woodland.

Badgers

- 3.3.11 No records for badger (*Meles meles*) were returned from within 1 m of the proposed site boundary.
- 3.3.12 No badger setts, tracks, latrines, snuffle holes or other signs of badger activity were noted during the walkover survey. The hard standing is unsuitable for badgers, but the surrounding grassland and woodland offer suitable foraging habitat for badgers, and the woodland also provide opportunities for sett creation. However, the proposed development will not affect the surrounding habitats in any way, therefore badgers are not discussed further within this report.

Other species

- 3.3.13 No other animals of nature conservation importance were recorded during the PEA survey. However, the surrounding habitats including grassland and woodland are suitable for European hedgehog (*Erinaceus europaeus*). Furthermore, three records for hedgehogs within 1 km of the site were returned. Hedgehogs occupy a range of lowland habitats with enough cover to allow nesting; they are common in parks in urban and suburban environments, farmland and gardens.

4.0 EVALUATION

Statutory designated sites

- 4.1.1 Rochdale Canal Special Area of Conservation (SAC) is an international statutory designated site situated 4.2 km southeast of the site boundary. Given the distance from the site and the scale of the proposed development, it is unlikely that the proposed development will have any direct or indirect impact on this designated site.
- 4.1.2 There are two nationally designated sites within 2 km of the proposed development. The closest site is Boggart Hole Clough Local Nature Reserve (LNR) which lies 0.9 km east of the site and is designated for ancient woodland habitat. Given the nature and scale of the development, the distance and intervening habitat between the proposed development and this LNR and lack of hydrological connection, it is unlikely that the development will have any direct or indirect impacts on this site or any other nationally designated site.

SSSI Impact Risk Zone (IRZ)

- 4.1.3 The site interacts with one SSSI Impact Risk Zones buffer. This proposed development does not meet the criteria for consultation with the local authority and Natural England in relation to impacts upon the SSSI.

Non-statutory designated sites

- 4.1.4 There is one Site of Biological Interest (SBI) which is a non-statutory designated site within 1 km of the site. The Reservoir at Harpurhey SBI lies 0.5 km southeast of the site and is designated for swamp, reedbed and pond habitats that supports aquatic flora and fauna. Given the distance of the proposed development from this designated site and lack of hydrological connection, no direct or indirect impacts are anticipated to this SBI and its qualifying features as a result of the proposed development.

Habitats and plants

- 4.1.5 The surrounding habitats are not species-rich and little intrinsic botanical value. They are common and widespread in the surrounding landscape. However, woodland, scrub and other neutral grassland habitats should be retained and enhanced where possible.
- 4.1.6 Modified grassland qualifies as urban managed greenspace and woodland habitats are listed in the Greater Manchester local biodiversity action plan as local formal target. The proposed development will not affect these habitats.
- 4.1.7 A Biodiversity Net Gain (BNG) assessment is not required as the site consists only of hardstanding with no ecological value, and the development will not affect the surrounding habitats.

Invasive Non-Native Species

- 4.1.8 The invasive species *Rhododendron* (WCA9) was recorded within the site. In the absence of mitigation, the proposed development has the potential to cause this species to spread into adjacent habitats.

Protected and other notable species

Birds

- 4.1.9 The line of trees and surrounding woodland around the car park are suitable for nesting and foraging birds, and grassland habitats offer additional foraging habitat. Given that the woodland habitat are subject to disturbance from recreation, these habitats are likely to support only a common assemblage of birds.
- 4.1.10 There is a risk of causing damage or disturbance to nesting birds during the breeding bird season (March to August inclusive) if any tree maintenance works as part of the development take place during this time.
- 4.1.11 The proposed development will not result in any habitat loss, as the development does not require vegetation removal.

Bats

- 4.1.12 One tree (T4) was assessed as having potential roosting features (PRF) for bats and three trees (T1, T2 and T3) were assessed as requiring further assessment to determine if PRFs are present (FAR). T4 contained features suitable for supporting individual bats or very small numbers of bats (PRF-I).
- 4.1.13 If any maintenance pruning of any of these is required there is a risk of causing harm or disturbance to roosting bats, if present, and/or damage or destruction of potential bat roosting habitat.
- 4.1.14 There is also the potential for disturbance to roosting, commuting and foraging bats via increased lighting levels as a result of increased lighting and light spill from external lighting during the construction or operational phases.

Other species

- 4.1.15 The surrounding woodland offer suitable habitat for hibernating and nesting hedgehogs. Hedgehogs may be present within the surrounding habitat and there is no risk of proposed development causing harm to this species as no vegetation clearance is required as part of the development.

Validity of Data

- 4.1.16 Unless the site changes significantly, the surveys carried out for this report should remain valid for 18 months (CIEEM 2019)

5.0 RECOMMENDATIONS

5.1 Key Constraints to Design and Construction

Habitats

- 5.1.1 Where possible, habitats on the site should be enhanced, particularly habitats suitable for supporting protected and notable fauna such as the other broadleaved woodland and other neutral grassland.
- 5.1.2 Rhododendron is listed under schedule 9 of the Wildlife and Countryside Act 1981 (as amended). It is illegal to cause the spread of this species in the wild. It is recommended that this invasive species is treated or removed by a specialist contractor to eradicate it from the site and to prevent its spread.

Protected and notable species

Birds

- 5.1.3 All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). Any tree maintenance works should be undertaken outside of the bird breeding season (March to August inclusive). However, if works must take place within the breeding season, then a nesting bird check will be required prior to any vegetation clearance. These checks must be made no more than 48 hours prior to vegetation clearance.
- 5.1.4 The nesting bird check will involve watching vegetation for at least 30 minutes to watch for nesting behaviour before performing a hand search for nests. If nesting birds are found, then the ecologist will outline how to proceed; this may include creating a buffer around the nest or possible delays to the works until the chicks have fledged.

Bats

- 5.1.5 As part of the development the lighting levels will be increased to 4000k along the main entrance areas of the proposed compound. The provision of external lighting in the development proposals should be designed in line with the Institute of Lighting Professionals (ILP, 2023) Guidance Note 08/23 'Bats and Artificial Lighting in the UK' and aim to keep 2700k or lower increase in light levels of any potential roosting, foraging and commuting resources for bats.
- 5.1.6 If the increased lighting cannot be directed away from the trees listed in Table 6 then further aerial tree inspection surveys will be required. All trees can be inspected using ladders by a suitability licenced ecologist to further determine the trees suitability to support roosting bats.
- 5.1.7 Following aerial tree inspections, if trees are assessed as having suitable features to support roosting bats, further presence / absence surveys will be required. The further presence / absence surveys should be undertaken during the bat survey season (May to September inclusive). These surveys can be undertaken by an aerial assessment if the features can be fully inspected. However, if the features cannot be fully inspected then emergence surveys will be necessary.

- 5.1.8 If required, the survey results will need to be submitted as part of the planning application and will inform further mitigation or compensation measures. It should be noted that these further measures may include an application for a European protected species (EPS) mitigation licence or bat mitigation class licence (BMCL) from Natural England (NE).

5.2 Opportunities for Enhancement

- 5.2.1 The below enhancement measures are recommended in line with the following conservation objectives of relevant local HAPs and SAPs, as well as the National Planning Policy Framework 2019.

Landscaping

- 5.2.2 The planting of native species including flower-, berry- and fruit-bearing species would benefit a range of wildlife species. The volume of planting and species diversity should be maximised wherever possible. Furthermore, landscaping should aim to create commuting corridors for many species including bats and hedgehogs. These features should be kept as dark corridors and should have strips of rough native grassland planted adjacent to them to attract invertebrates.

Bat and bird boxes

- 5.2.3 Where possible, bird boxes should be incorporated into the development, including those suitable for swifts (*Apus apus*), starlings and house sparrows which are all species of conservation concern and have been recorded near to the site. Additionally, bat boxes should be attached to retained mature trees, orientated south, south east, or south west mature to provide additional roosting opportunities for the local bat population.

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FIGURES

Figure 1 : Site Location Plan

Figure 2: UKHab Habitat Survey



Legend:

Site boundary

00	10/04/2024	2487123	TG	SP	IN
Rev	Date	Project Code	Drm	Chk	App

Eco Survey North Manchester Hospital

RSK
biocensus
EXPERTS IN ECOLOGY

TITLE: Figure 1:
Site Location Plan

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Metres
SCALE: 1:1,500 @ A3

REV 00



APPENDIX A - PROTECTED AND NOTABLE SPECIES RECORDS

Table 7 and Table 8 display protected and notable species records, respectively, that are located within 1 km of the site boundary. These species records were obtained from Greater Manchester Ecology Unit. The scientific and common names for species are given as well as their level of designation. A glossary defining abbreviations used in the table is given in Table 9, Appendix B. If a species is not included in the table below it does not necessarily mean the species is absent from the search area, but that data-holding organisations do not have records of it in these locations.

Table 7: Protected species records within 1 km of the site boundary

Latin Name	Common Name	Designation	Most Recent	Any Records in 100m
Amphibians				
<i>Triturus cristatus</i>	Great Crested Newt	EPS(Sch2), WCA5, S41	2011	
Birds				
<i>Alcedo atthis</i>	Kingfisher	WCA1.1	2020	
<i>Charadrius dubius</i>	Little Ringed Plover	WCA1.1	2009	
<i>Falco peregrinus</i>	Peregrine	WCA1.1	2021	
<i>Tyto alba</i>	Barn Owl	WCA1.1	2021	
Mammals				
<i>Myotis daubentonii</i>	Daubenton's Bat	EPS(Sch2), WCA5	2011	
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	EPS(Sch2), WCA5	2021	

Table 8: Notable species records within 1 km of the site boundary

Latin Name	Common Name	Designation
Amphibians		
<i>Bufo bufo</i>	common toad	WCA5, S41
Birds		
<i>Acanthis cabaret</i>	Lesser Redpoll	S41, Red
<i>Carduelis cannabina</i>	Linnet	S41, Red
<i>Emberiza schoeniclus</i>	Reed Bunting	S41, Amber
<i>Larus argentatus</i>	Herring Gull	S41, Red, GB RDB(EN)
<i>Passer domesticus</i>	House Sparrow	S41, Red
<i>Prunella modularis</i>	Dunnock	S41, Amber
<i>Pyrrhula pyrrhula</i>	Bullfinch	S41, Amber
<i>Sturnus vulgaris</i>	Starling	S41, Red, GB RDB(VU)
<i>Turdus philomelos</i>	Song Thrush	S41, Amber
<i>Vanellus vanellus</i>	Lapwing	S41, Red, GB RDB(EN)
Invertebrates		
<i>Hepialus humuli</i>	Ghost Moth	S41

Latin Name	Common Name	Designation
<i>Spilosoma lutea</i>	Buff Ermine	S41
Mammals		
<i>Erinaceus europaeus</i>	hedgehog	S41, GB RDB(VU)

APPENDIX B – ABBREVIATIONS

Table 9 displays abbreviations of protected species legislation.

Table 9: Glossary of abbreviations used in this report

Code	Full Title	Explanation
Amber	Amber list	Amber listed species have a population status in the UK of medium conservation concern.
BAP	Biodiversity action plan	A plan that identifies threats to significantly important species and habitats, and sets out targets and actions to enhance or maintain biodiversity.
DA	The Deer Act 1991	All wild deer with the exception of Muntjac (<i>Muntiacus reevesi</i>) and Chinese Water deer (<i>Hydropotes inermis</i>) are protected by a closed season.
ENG BSBI RDB	A Vascular Plant Red List for England	A list published in 2014 by the Botanical Society of Britain and Ireland of the red list status of plants in England. Measured against standardised IUCN criteria.
ENG BSBI RDB(CR)	Critically endangered	A BSBI Red List designation for species at an extremely high risk of extinction.
ENG BSBI RDB(EN)	Endangered	A BSBI Red List designation for species at a very high risk of extinction.
ENG BSBI RDB(VU)	Vulnerable	A BSBI Red List designation for species at high risk of extinction.
EPS (Sch 2)	European protected species (Schedule 2)	European protected species of animals, listed on Schedule 2 of The Conservation of Habitats and Species Regulations 2017.
EPS (Sch 5)	European protected species (Schedule 5)	European protected species of plants, listed on Schedule 5 of The Conservation of Habitats and Species Regulations 2017.
GB RDB	Red data book species	Species identified in one of the UK Red Data 2001.
GB RDB(CR)	Critically endangered	An IUCN Red List designation for species at an extremely high risk of extinction.
GB RDB(EN)	Endangered	An IUCN Red List designation for species at a very high risk of extinction.
GB RDB(VU)	Vulnerable	An IUCN Red List designation for species at high risk of extinction.
HAP	Habitat action plan	A plan that identifies threats to a priority habitat and sets out targets and actions to enhance or maintain that habitat.
IUCN	International Union for Conservation of Nature and Natural Resources	A worldwide partnership and conservation network to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.
LBAP	Local biodiversity action plan	A plan that identifies threats to locally important species and habitats, and sets out targets and actions in Species Action Plans and Habitat Action Plans to enhance or maintain biodiversity at the county or regional level.
Notable	Scarce and threatened invertebrates	Invertebrate species which are estimated to occur within the range of 16 to 100 10km squares but subdivision into Notable A and Notable B categories is not possible as there is insufficient information available).
Notable: A	Scarce and threatened invertebrates	Taxa which do not fall within Red Data Book categories but which are none-the-less uncommon in Great Britain and thought to occur in 30 or fewer 10km squares of the National Grid or, for less well-recorded groups, within seven or fewer vice-counties.
Notable: B	Scarce and threatened invertebrates	Taxa which do not fall within Red Data Book categories but which are none-the-less uncommon in Great Britain and thought to occur in between 31 and 100 10km squares of the National Grid or, for less-well recorded groups between eight and twenty vice-counties.

Code	Full Title	Explanation
NN	Nationally notable	Designation for invertebrate taxa that are thought to be notably important in the UK.
NR	Nationally rare	Species in 15 or fewer hectads in Great Britain.
NS	National scarce	Species in 16-100 hectads in Great Britain.
OSPAR	OSPAR	Species listed on The Convention for the Protection of the Marine Environment of the North-East Atlantic
Red	Red list	Red listed species have a population status in the UK with high conservation concern.
SAP	Species action plan	A plan that identifies threats to significantly important species, and sets out targets and actions to prevent losing that species to extinction.
S41	Species of principal importance	Species of Principal Importance in England under The Natural Environment and Rural Communities (NERC) Act (2006)
UKBAP	UK biodiversity action plan	A plan that identifies threats to locally important species and habitats, and sets out targets and actions in species action plans and habitat action plans to enhance or maintain biodiversity in the UK.
WCA	The Wildlife and Countryside Act 1981 (as amended)	Containing 4 Parts and 17 Schedules, the Act covers protection of wildlife (birds, and some animals and plants), the countryside, National Parks, and the designation of protected areas, and public rights of way. All wild plants in Britain are protected from intentional uprooting by an unauthorized person, but land owners, land occupiers, persons authorized by either of these or persons authorized in writing by the local authority for the area are exempt. Protection for some species may be limited to certain Sections of the Act (e.g. S13(2)).
WCA1	Schedule 1 of The Wildlife and Countryside Act 1981 (as amended)	This Schedule lists birds protected by special penalties at all times, but virtually all wild birds have some protection in law. Acts which are prohibited for all wild birds (except derogated 'pest' species) include intentional killing, injuring or taking; taking, damaging or destroying nests in use or being built; taking or destroying eggs; possessing or having control of (with certain exceptions but including live for dead birds, parts or derivative); setting or permitting certain traps, weapons, decoys or poisons. Selling, offering or exposing for sale, possessing or transporting for sale any live wild bird, egg or part of an egg or advertising any of these for sale, or dead wild bird including parts or derivatives are also prohibited. Many birds must be formally registered and ringed if kept in captivity. Schedule I WCA birds are additionally protected from intentional or reckless disturbance while building a nest, or when such a bird is in, on or near a nest containing eggs or young, or intentional or reckless disturbance of dependent young.
WCA5	Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	Schedule 5 animals are protected from intentional killing, injuring or taking; possessing (including parts or derivatives); intentional or reckless damage, destruction or obstruction of any structure or place used for shelter or protection; selling, offering or exposing for sale, possessing or transporting for the purpose of sale (alive or dead, including parts or derivatives). Protection of some species is limited to certain Sections of the Act (e.g. S9(1), S9(4a), S9(4b), S9(5)).
WCA8	Schedule 8 of The Wildlife and Countryside Act 1981 (as amended)	Plants and fungi protected from intentional picking, uprooting, destroying, trading (including parts or derivatives), etc.



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