



HIVE Projects Ltd

North Manchester General Hospital

Preliminary Ecological Appraisal Report – REV01

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RSK
biocensus
EXPERTS IN ECOLOGY

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EXECUTIVE SUMMARY

This report presents the results of a preliminary ecological appraisal, comprising a background data search and a Phase 1 habitat survey with an assessment for protected species carried out on 28 May 2021. This report has been produced to support a planning application on behalf of HIVE Projects Ltd for a proposed re-development of the site. The appraisal was based on the red line boundary plan of the development site (*Figure 1*).

The c. 28.5 ha site is in Crumpsall, Manchester. The site is dominated by hardstanding, bare ground, amenity grassland and some broadleaved woodland with scattered buildings throughout. The northern part of the site also includes some areas of poor semi improved grassland as well as part of the River Irk. To the north, east and west of the site are major road networks as well as areas of housing. Directly to the east of the hospital is a large area of broadleaved woodland as well as the River Irk.

The following habitat types are found at the site.

- bare ground
- poor semi-improved grassland
- broadleaved semi-natural woodland
- river/running water
- amenity grassland
- buildings
- hardstanding

These habitats, as well as the man-made structures across the site, are suitable for the following notable or protected species.

- invertebrates
- birds
- bats
- badgers
- invasive non-native plant species

A minimum of five invasive non-native plant species were recorded at the site: Japanese Knotweed (*Reynoutria japonica*), Japanese Rose (*Rosa rugosa*), Himalayan Balsam (*Impatiens glandulifera*), Rhododendron (*Rhododendron ponticum*) and Cotoneaster species (*Cotoneaster* sp.). These species are listed on Schedule 9 of the Wildlife and Countryside Act and/or Schedule 2 of The Invasive Alien Species (Enforcement and Permitting) Order 2019. It is therefore an offence to plant or otherwise cause these species to grow in the wild. Multiple species of Cotoneaster were identified across the site, but due to the time of year at which the survey was completed and the possibility of genetic hybridization between invasive and non-invasive

Cotoneasters, it was not possible to accurately determine which species were present at the time of the survey.

Further surveys to determine the extent of potential constraints, and to inform the planning decision are recommended for the following species or groups of species:

- invasive non-native plant species
- birds
- invertebrates
- bats
- badgers

As the current proposal involves the significant changes to the structure of the habitats on the site, a biodiversity impact assessment using the DEFRA Biodiversity Metric 2.0 may be required to ensure that the development meets national planning policy in relation to biodiversity net-gain. A habitat management plan may also be required to prescribe habitat enhancement and creation measures.

Although not a legal requirement, eradication of any invasive non-native plant species present at the site is recommended. Should this not be possible, then measures should be devised to avoid these species or prevent their spread where avoidance is not possible.

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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) completed at the North Manchester General Hospital (NMGH) site (OS Grid Ref SD 84958 02377). The PEA comprised a background data search and a phase 1 habitat survey with assessment for both invasive and protected species. The survey area included the land within the red-line boundary (the site), plus adjacent land where it was visible from the within the site boundary; the site and survey area are shown in *Figure 1*.
- 1.1.2 The report identifies ecological constraints on the project, specifies any further survey or mitigation requirements, gives recommendations for avoidance and protection through design changes and suggests opportunities for ecological enhancement. The appraisal was carried out on behalf of HIVE Projects Ltd.

1.2 Landscape context

- 1.2.1 The c. 28.5 ha site is in Crumpsall, Manchester. The site is dominated by hardstanding, bare ground, amenity grassland and some broadleaved woodland with scattered buildings throughout. The northern part of the site also includes some areas of rough grassland as well as part of the River Irk.
- 1.2.2 Directly to the east of the hospital is a large area of broadleaved woodland as well as the River Irk and Crumpsall Park is situated immediately south-west of the site. The wider landscape to the north, east 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 Current development proposals have the potential to affect the whole site, with the exception of much of the woodland to the east of the site, which will remain largely unaffected. The scope of works includes the demolition and refurbishment of multiple existing buildings to accommodate the construction of the new acute, wellbeing, education, administration and supporting buildings (such as a multi-storey car park (MSCP)). In addition, other areas of hospital land are also likely to be impacted for the purposes of re-developing them into new open areas such as car parks and the new village green.

1.4 Validity of data

- 1.4.1 According to Chartered Institute of Ecology and Environmental Management (CIEEM) advice (CIEEM 2019), survey data are valid for a period of 12 to 18 months from the date of the survey. The report highlights any circumstances where data may be valid for

less than 18 months. Between 18 months and 3 years a professional ecologist will need to undertake a site visit and may also need to update desk study information (effectively updating the PEA) and then review the validity of the report.

2.0 METHODS

2.1 Overview

- 2.1.1 The preliminary ecological appraisal (PEA) was undertaken in line with guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017), and it therefore included:
- a desk study (including a review of aerial photographs; obtaining information from the DEFRA and JNCC websites, and the local authority website; and requesting data from the local records centre) here called a background data search (BDS); and
 - 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 mammal species are also provided. The results are to update those of the survey undertaken by RammSanderson (2020).
- 2.1.3 The survey was carried out on 28 May 2021 by Adam Penney of RSK Biocensus. Adam is an ecological consultant with over three years' experience in ecological consultancy. He is an associate member of CIEEM and is experienced in carrying out PEAs.
- 2.1.4 Due to the nature of the site, a separate external update preliminary roost assessment (PRA) for bats was undertaken covering all buildings within the red line boundary, updating those undertaken by RammSanderson (2020). These were undertaken on 8 June 2021 by Tom West of RSK Biocensus. Tom is a senior consultant with over four years' experience in ecological consultancy. He is an associate member of CIEEM and holds a Natural England Class 2 Bat Licence (Ref: 2019-40871-CLS-CLS).

2.2 Background data search

- 2.2.1 A search was made in May 2021 for reference materials relating to the ecology of the Manchester North General Hospital site, and a list of sources is given in *Table 1*.

Table 1: Data sources for background data search

Information Obtained	Available From
Protected and noteworthy species-records	Greater Manchester Local Record Centre
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 Local Record Centre
Designations and legal protection of noteworthy species	Joint Nature Conservation Committee (JNCC) website
Details of species and habitats listed on the Greater Manchester LBAP	Local BAP website https://www.gmwildlife.org.uk/projects/gm_bap/

2.2.2 A search was made for information on statutory designated sites (often internationally and nationally important sites for ecology) within 2 km of the site boundary and non-statutory designated sites (often important in a local context) within 1 km. The search was extended to 10 km for internationally designated sites.

2.2.3 A search was also made for records of noteworthy species within 1 km of the site. Species included in the search parameters are:

- European protected species (listed on Schedules 2 and 5 of The Conservation of Habitats and Species Regulations 2017);
- nationally protected species under Schedules 1, 5 and 8 of The Wildlife & Countryside Act 1981 and The Protection of Badgers Act 1992;
- species listed as critically endangered, endangered or vulnerable based on the IUCN Red List Categories and Criteria 2001;
- all species listed on the RSPB Birds of Conservation Concern 4 as red or amber;
- nationally rare or nationally scarce species;
- notable invertebrates; and
- species that are of principal importance under The Natural Environment and Rural Communities (NERC) Act (2006) or are priority species under the local biodiversity action plan.

2.3 Plants and habitats

Phase 1 habitat survey

2.3.1 The field survey was based on the Phase 1 habitat survey approach (JNCC, 2010) as extended for use in environmental impact assessment (Institute of Environmental Assessment 1995). This is 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 Phase 1 habitat map (*Figure 2*); and

- a description of features of possible ecological or nature conservation interest in notes relating to numbered locations on the Phase 1 habitat map, called ‘target notes’ (*Appendix A*).
- 2.3.2 Vascular plant species were recorded during the survey, though at this level of survey, no species lists should be regarded as exhaustive (additional species would almost certainly be found in more detailed surveys or repeat surveys at various times of the year). A plant species list was recorded for the site and is given in *Appendix B*.
- 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 common names with the scientific names in brackets afterwards on the first occurrence only. Doubtful identifications are preceded by ‘cf.’ placed before the specific epithet where the plant is very probably the species indicated, but it could not be distinguished from similar members of the genus with certainty.

Invasive non-native species (INNS)

- 2.3.4 Phase 1 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 invasive non-native species (even though some things may be evident). However, we have noted any such species seen during the course of the survey, e.g. Giant Hogweed (*Heracleum mantegazzianum*), Himalayan Balsam (*Impatiens glandulifera*) or Japanese Knotweed (*Reynoutria japonica*) among others, as well as any invasive non-native species of animals recorded during the survey.

2.4 Protected and notable animals

General

- 2.4.1 The site was assessed for its suitability for the protected animals that are likely to occur in the area. Taking into account the results of the BDS, the geographic location, connectivity to natural habitats in the wider landscape, and the nature and extent of habitats at the site, specific assessment was also carried out for the species/species groups outlined below.

Invertebrates

- 2.4.2 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. The assessment focused on the presence of features and habitats suitable for the notable species identified in the BDS.

Great crested newts and other amphibians

- 2.4.3 The suitability of aquatic and terrestrial habitat on the site and in the immediate vicinity to support great crested newts (*Triturus cristatus*) was considered, taking into consideration habitat connectivity between suitable habitat areas. Aerial photography and Ordnance Survey maps were examined for ponds or other suitable breeding habitat within 500 m of the site.

Reptiles

- 2.4.4 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).
- 2.4.5 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 open habitats with some cover but are most often found in dry heath (Beebee & Griffiths, 2000).

Birds

- 2.4.6 Birds nest and forage in a wide variety of habitats including scrub, woodland, hedges and trees, open ground and man-made structures. The site was assessed for its suitability to support nesting and foraging birds, with an emphasis on the Schedule 1 and notable species recorded in the BDS. This included any nests or incidental signs of nesting such as feathers or pellets in locations suitable for nests.

Bats

- 2.4.7 Habitats were assessed in respect of their suitability for foraging and commuting bats according to Collins (2016). 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.
- 2.4.8 All buildings on the site were assessed for their suitability for roosting bats and each building was then given a grading based on the guidance as shown in *Table 2*, Collins (2016). Any incidental signs of bats or other evidence found (such as droppings, urine stains, odour, grease stains or feeding remains), were also recorded.

Table 2: Classification criteria for ground level tree assessment and preliminary roost assessment

Category (Potential to support roosting bats)	Description
Negligible potential	Negligible habitat features on site likely to be used by roosting bats.
Low potential	A structure or tree with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter,

	protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Moderate potential	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High potential	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Confirmed roost	Bats or evidence of bats recorded within the building during the initial inspection surveys or during dusk/dawn surveys. A confirmed record (supplied by records centre/local bat group) would also apply.

- 2.4.9 A ground level tree assessment (GLTA) was also undertaken to provide an overview as to whether trees within the area possess suitable features for bats. However, individual trees were not targeted at this stage as tree and woodland removal scope is not known at this stage.

Water Voles

- 2.4.10 The site was assessed to determine whether it is suitable for water voles (*Arvicola amphibius*). Suitable habitats include vegetated earth banks, reed beds, flowing water and wet ditches. Incidental signs of water vole activity, including burrows, feeding platforms, food remains and latrines, were recorded if they were encountered.

Otters

- 2.4.11 The site was assessed to determine whether it was suitable for otters (*Lutra lutra*). Suitable habitats include flowing water with earth banks, reed beds, scrub and overhanging tree roots. Incidental signs of otter activity including holts, foraging signs, paths (runs), footprints and spraints, were recorded if they were encountered.

Badgers

- 2.4.12 An initial assessment was carried out to identify areas that might be used by badgers (*Meles meles*) for commuting, foraging or sett building within 30 m of all areas potentially affected by works (where access was possible). The area was also systematically searched for other signs of badgers including latrines, bark scratching and snagged fur where possible. The category of sett and levels of recent activity visible at each sett were recorded.

Other species of Principal Importance

- 2.4.13 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 Section 41 of

the 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 appraisal is based on the suitability of habitat, the known distribution of relevant species in the local area (from on-line 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 Broadleaved woodland areas to the east of the site were not accessed in their entirety to identify ecological constraints. This was due to accessibility issues.
- 2.5.4 The survey was undertaken in May, which is not considered as an optimal time for identifying many species of invasive plants. It is therefore possible that some invasive non-native plant species were overlooked, and extent not fully identified at the time of the survey.
- 2.5.5 All recommendations made in this report are based on the red line boundary. If the red line boundary changes at a later date, further surveys may be required.

3.0 RESULTS

3.1 Background Data Search

Biodiversity Action Plans

- 3.1.1 The river habitat identified on site qualifies as a priority habitat under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.
- 3.1.2 The latest Great Manchester local biodiversity action plan (LBAP) lists nine habitat action plans (HAPs) and nine species or species group action plans (SAPs). The local HAPs and SAPs that are relevant to the proposed development are;

Habitats:

- grasslands
- native woodlands

Species:

- bats (all species)
- native black poplar
- water vole

3.2 Designated Sites

Statutory Sites

- 3.2.1 There are two statutory designated sites within 2 km of the site boundary, both of which are local nature reserves (LNRs). These sites are listed in
- 3.2.2 *Table 3* in order of proximity to the site; short descriptions are given for the sites.

Table 3: Statutory sites within 2 km of the site boundary

Site Name	Designation	Approximate Distance (m)
Boggart Hole Clough	LNR	710
Boggart Hole Clough LNR is a large site with areas of ancient woodland, broad-leaved semi-natural woodland, grassland, a lake and reedbeds. The woodland is dominated by beech (<i>Fagus sylvatica</i>), downy birch (<i>Betula pubescens</i>), oak (<i>Quercus</i> sp.), silver birch (<i>Betula pendula</i>) and sycamore (<i>Acer pseudoplatanus</i>). Most of the site has a poorly developed ground flora due to disturbance and bare ground caused by trampling. In more secluded parts the ground flora includes ancient woodland indicator species. There are also extensive liverwort and moss carpets. Standing dead elms (<i>Ulmus glabra</i>) persist and there is fallen deadwood that provides substrates for a variety of fungi. The invasive Japanese Knotweed (<i>Reynoutria japonica</i>) and Himalayan Balsam (<i>Impatiens glandulifera</i>) are both locally abundant. The areas between the woodland are generally species-poor mown amenity grassland. Small areas of acidic grassland with wavy hair-grass (<i>Deschampsia flexuosa</i>) and red fescue (<i>Festuca rubra</i>) occur locally on the steep slopes. There is an ornamental		

Site Name	Designation	Approximate Distance (m)
lake that has a wooded island that supports a heronry and there is also a fishing lake. The site is important for breeding birds; species include dunnock, great crested grebe, reed bunting, song thrush and tufted duck. Butterflies recorded include speckled wood and meadow brown.		
Blackley Forest	LNR	795
Blackley Forest comprises planted and semi-natural woodland, neutral grassland, dry heath / acid grassland mosaic, marsh and flush together with reservoirs and a section of the River Irk. There are several areas with different woodland types, the canopy of the woodland in most of the site includes beech (<i>Fagus sylvatica</i>), sycamore (<i>Acer pseudoplatanus</i>), oak (<i>Quercus</i> sp.), ash (<i>Fraxinus excelsior</i>), birch (<i>Betula</i> sp.) and alder (<i>Alnus glutinosa</i>). The woodland areas as a whole have a diverse ground flora. The river is generally within a stone-lined channel in the LNR, associated vegetation includes locally abundant bistort (<i>Persicaria bistorta</i>). The reservoirs are fished. Marginal and aquatic vegetation is present, and the banks have areas of acid grassland, rough grassland, swamp and woodland. The site is important for birds; species include bullfinch, dunnock, kingfisher and song thrush. A good diversity of dragonfly species is present, including brown hawker, common darter, emperor, migrant hawker and southern hawker. Common toad, frog and smooth newt are recorded across the site.		

Internationally Designated Sites

- 3.2.3 There is one internationally designated site within 10 km of the site boundary, namely the Rochdale Canal special area of conservation (SAC). The Rochdale Canal SAC is 4.06 km to the east of the site boundary.

SSSI Impact Risk Zones

- 3.2.4 There are several SSSIs in the wider area, but none within 2km of the site. The proposed development is also not of a type that matches specified types in respect of which the planning authority is recommended to consult with Natural England (the special types reflect sensitivities at particular SSSIs and may therefore differ from one BDS search-location to another).

Non-statutory Sites

- 3.2.5 There are five non-statutory designated sites within 1 km of the site boundary, all of which are sites of biological importance (SBIs). These sites are listed in *Table 4* in order of proximity to the site; short descriptions are given for the sites.

Table 4: Non-statutory sites within 1 km of the site boundary

Site Name	Designation	Approximate Distance (m)
Reservoirs at Harpurhey	SBI	420

Site Name	Designation	Approximate Distance (m)
Reservoirs at Harpurhey SBI covers a series of reservoirs, two with open water and a third completely colonised by swamp. There are areas of marsh, neutral to acid species-poor grassland and scrub between the reservoirs. The site supports a rich aquatic flora, species of note include frogbit (<i>Hydrocharis morsus-ranae</i>), greater spearwort (<i>Ranunculus lingua</i>) and water-soldier (<i>Stratiotes aloides</i>). The swamp is dominated by lesser pond sedge (<i>Carex acutiformis</i>) and water horsetail (<i>Equisetum fluviatile</i>). The banksides of the reservoirs support scrub with some trees and the invasive Himalayan Balsam (<i>Impatiens glandulifera</i>) occurs abundantly. The open water areas of both the upper and lower reservoirs are fished. The site supports a range of invertebrates and birds. Species include blue-tailed damselflies, brown hawkers, broad-bodied chaser, kingfisher, little grebe and tufted duck. Smooth newts have been recorded in the reservoirs.		
Bowker Vale Reservoirs	SBI	675
Bowker Vale Reservoirs SBI comprises two small ex-industrial reservoirs and an area of steeply sloped woodland supporting areas of flushed and wet woodland. The reservoirs support a range of aquatic, marginal and emergent vegetation. The reservoir banks are lined with shrubs and tree species. The woodland to the south and east on the steep valley side slope supports a well-developed woodland structure with the canopy supporting ash (<i>Fraxinus excelsior</i>), crack willow (<i>Salix fragilis</i>) and sycamore (<i>Acer pseudoplatanus</i>). The woodland ground flora is predominantly dry with areas of flushed seepages and wet woodland at the toe of the slope. The invasive Himalayan Balsam (<i>Impatiens glandulifera</i>) is abundant in the wet woodland communities and Japanese Knotweed (<i>Fallopia japonica</i>) is abundant on the northern boundary. The site has a high aquatic and terrestrial invertebrate species diversity; species of note include the water bug <i>Miconecta scholtzi</i> , the 'angler's curse' mayfly <i>Caenis robusta</i> and the craneflies <i>Molophilus variispinus</i> , <i>Paradelphomyia fuscata</i> and <i>Scleroprocta sorocula</i> . Smooth newt, frog and common toad are recorded breeding from the site. The site supports a range of bird species including bullfinch, duncock, great crested grebe, song thrush and willow warbler.		
Boggart Hole Clough	SBI	710
Boggart Hole Clough SBI is also a LNR as described in Table 3.		
Bailey's Wood	SBI	790
Bailey's Wood SBI comprises broad-leaved semi-natural woodland with areas of scrub, neutral grassland, acid grassland, marshy grassland and running water on a steep sided slope. Parts of the woodland are ancient semi-natural woodland. The woodland is dominated by ash (<i>Fraxinus excelsior</i>), sessile oak (<i>Quercus petraea</i>) and sycamore (<i>Acer pseudoplatanus</i>). There is a diverse shrub and ground layer and standing dead wood is present. In the west of the site, areas of acid grassland with scattered scrub and developing woodland occur and there are areas of marshy grassland and a pond in the north. The site is important for birds and butterflies.		
Blackley Forest and Heaton Vale Reservoirs	SBI	795
Blackley Forest and Heaton Vale Reservoirs SBI is also a LNR as described in Table 3.		

Other Notable Sites

- 3.2.6 There is one area of ancient woodland within 1 km of the site boundary, namely Boggart Hole Clough that is 725 m to the north-east of the site.

Protected and Noteworthy Species

- 3.2.7 At least 43 noteworthy species are recorded from places within 1 km of the site boundary, extending to 2 km for bat records. Of these, 1 is an amphibian, 31 are birds, 1 is an invertebrate and at least 10 are mammals. Species that are protected by law under Schedules 2 and 5 of The Conservation of Habitats and Species Regulations 2017, Schedules 2, 5 and 8 of The Wildlife and Countryside Act 1981 or The Protection of Badgers Act 1992 have been recorded in the search and are listed in *Table 5* below (excluding species protected only against collection for sale); A full species list is given in *Appendix C*.

Table 5: Protected species records within 1 km of the site boundary, extending to 2 km for bat records:

Latin Name	Common Name	Designation	Most Recent	No of Records	Within 100m	Within 1km	Within 2km
Birds							
<i>Alcedo atthis</i>	kingfisher	WCA1.1	2020	10	P	☑	
<i>Charadrius dubius</i>	little ringed plover	WCA1.1	2010	23	☑		
<i>Falco peregrinus</i>	peregrine falcon	WCA1.1	2011	1		☑	
Mammals							
<i>Arvicola amphibius</i>	water vole	WCA5,	2015	1		☑	
Chiroptera	unidentified bat	EPS(Sch2)	2014	14	☑		
<i>Lutra lutra</i>	otter	EPS(Sch2), WCA5	2013	1		☑	
<i>Meles meles</i>	badger	BA	2004	2		☑	
<i>Myotis daubentonii</i>	Daubenton's bat	EPS(Sch2), WCA5	2011	7		☑	
<i>Myotis nattereri</i>	natterer's bat	EPS(Sch2), WCA5	2006	2		☑	
<i>Myotis</i> sp.	myotis bat	EPS(Sch2), WCA5	2009	3		☑	
<i>Nyctalus noctula</i>	noctule	EPS(Sch2), WCA5	2005	5		☑	
<i>Pipistrellus pipistrellus</i>	common pipistrelle	EPS(Sch2), WCA5	2019	75	☑		
<i>Pipistrellus pygmaeus</i>	soprano pipistrelle	EPS(Sch2), WCA5	2008	8		☑	
<i>Pipistrellus</i> sp.	a pipistrelle bat	EPS(Sch2), WCA5	2019	15		☑	
<i>Plecotus auritus</i>	brown long-eared bat	EPS(Sch2), WCA5	2006	1		☑	

3.3 Plants and habitats

Phase 1 Habitat Survey

- 3.3.1 The Phase 1 habitat map is provided as *Figure 2* and shows the location of the target notes referred to in the text below. A full description for each target note is given in *Appendix A*.

Broadleaved Semi Natural Woodland

- 3.3.2 Areas of broad leaved semi-natural woodland are present mainly along the eastern site boundary (*Target Note 1*). The woodland is comprised of multiple 'woody' species, woody understory species and other flowering plants. Dominant species included Ash (*Fraxinus excelsior*), Pedunculate Oak (*Quercus robur*), Sycamore (*Acer pseudoplatanus*) and Poplar species (*Populus sp.*), Hawthorn (*Crataegus monogyna*), Common Nettle (*Urtica dioica*), Cow Parsley (*Anthriscus sylvestris*) and Hogweed (*Heracleum sphondylium*). Trees within the woodland were c.60 years old, with an average height of c.12 m. Not all trees within the woodland were seen due to access constraints, but those which were visible appeared to be in good condition. A photograph of the woodland is seen below in *Plate 1*.



Plate 1: Broad Leaved Semi Natural Woodland

Poor Semi-Improved Grassland

- 3.3.3 Small areas of poor semi-improved grassland (*Target Note 2*) were identified in the northern half of the site. Most of these areas are adjacent to Delaunays Road on the north-eastern outskirts of the hospital site boundary. The grasslands are reasonably diverse, supporting many grasses and flowering plants. The grassland is rough and swards are dense with a height of c. 30 cm. Meadow Foxtail (*Alopecurus pratensis*), Yorkshire-fog (*Holcus lanatus*) and Cock's-foot (*Dactylis glomerata*) appeared to be the dominant grass species, with Creeping Buttercup (*Ranunculus repens*), Meadow Buttercup (*Ranunculus acris*), Creeping Thistle (*Cirsium arvense*), Spear Thistle

(*Cirsium vulgare*) and Broad-leaved Dock (*Rumex obtusifolius*), and Dandelion (*Taraxacum agg.*) being the dominant flowering plants.



Plate 2: Poor Semi-Improved Grassland

Amenity Grassland

Large patches of amenity grassland were found throughout the site (*Target Note 3*). These areas have a short, dense sward c. 10 cm high. Much of the areas of amenity grassland throughout the site are located adjacent to roads, footpaths, and buildings and are well managed. These areas of grassland support a poor diversity of species, but primarily consist of Red Fescue (*Festuca rubra*), Cock's-foot, a Bent (*Agrostis sp.*), Yorkshire-fog, Creeping Buttercup, White Clover (*Trifolium repens*) and Lesser Trefoil (*Trifolium dubium*). A photograph of the amenity grassland is seen in *Plate 3*.



Plate 3: Amenity Grassland

Rivers/Running Water

- 3.3.4 At the northernmost point of the site, the River Irk flows adjacent to Crumpsall Vale Road in the additional survey area (*Target Note 4*). The river is c. 4m – 6m wide, and the depth could not be determined at the time of the survey due to inaccessibility issues and water turbidity. The banks in the area are vertical and concrete on either side, with much of the bank on one side being heavily shaded by mature trees. There was very little in channel vegetation which could be seen, except for some species which were growing alongside the riverbank from an area of bare ground/loose stone (*Plates 4 and 5*).



Plates 4 & 5: Rivers/Running Water

Bare Ground

A single area of bare ground was identified in the northern half of the site (*Target Note 5*). This area has low botanical diversity, supporting very few short successional species. A photograph of the bare ground is seen below in *Plate 6*.



Plate 6: Bare Ground

Hardstanding

- 3.3.5 The hospital is dominated by areas of hardstanding (*Target Note 6*) which have very little ecological value. A photograph of the hardstanding is seen below in *Plates 7 and 8*.



Plates 7 and 8: Hardstanding

Buildings

- 3.3.6 Many of the buildings were identified as having ecological value for nesting birds and bats. An example of one of the buildings can be seen above in *plate 7*.

Invasive Non Native Plant Species

- 3.3.7 At least five species listed on Schedule 9 of the Wildlife and Countryside Act (1981) were recorded on, or adjacent to, the site. These were Rhododendron (*Rhododendron ponticum*), Himalayan Balsam, Japanese Knotweed, Japanese Rose (*Rosa rugosa*) and several Cotoneaster species.
- 3.3.8 It is possible that invasive species are present elsewhere and were not seen by the surveyor at the time of the survey. Photographs of these species can be seen in *Plates 9-12*. The location of these species can be seen in (*Figure 3*).



Plate 9: *Rhododendron ponticum*

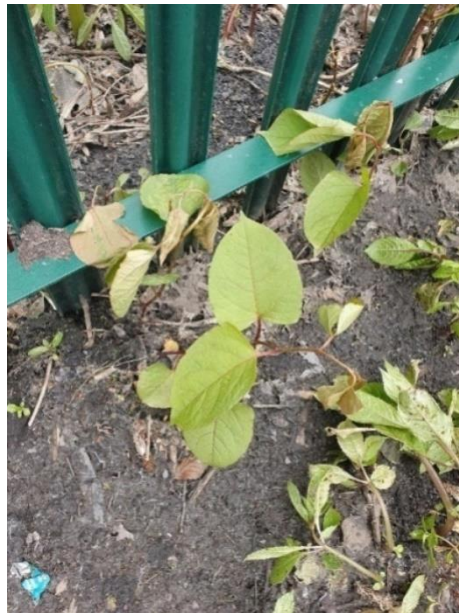


Plate 10: Japanese Knotweed



Plate 11: Himalayan Balsam



Plate 12: Cotoneaster species

3.4 Protected and notable animals

Invertebrates

- 3.4.1 The desk study returned a result of one notable invertebrate species within 1 km of the site, Buff Ermine (*Spilosoma lutea*), which is listed on under Section 41 of NERC Act 2006. This species feeds on a number of common herbaceous species such as Common Nettle and Honeysuckle (*Lonicera periclymenum*).
- 3.4.2 The habitats on the site are all common and not particularly extensive or species-rich. They are therefore unlikely to support important invertebrate assemblages. Invertebrates are therefore not discussed further within this report.

Great crested newts and other amphibians

- 3.4.3 The desk study revealed one record of record of an amphibian species – common toad (*Bufo bufo*) within 1 km of the site boundary.
- 3.4.4 When undertaking the PEA survey at the site, no ponds were found. Six ponds have, however, been identified within 500m of the site boundary. These ponds are separated from the site by the River Irk or roads, so it is unlikely that great crested newts are present at the site. As such, they are not discussed further within this report.

Reptiles

- 3.4.5 The desk study showed that there are no records of reptiles within 1km of the site (*Appendix C*).
- 3.4.6 In addition, the habitats on site are heavily disturbed and of minimal ecological value for use by reptiles. As such, it is unlikely that they are present at the site, so they are not discussed further within this report.

Birds

- 3.4.7 Areas of bare ground and rough grassland may provide nesting locations for little ringed plover (*Charadrius dubius*) at the site. These areas are typical of their breeding habitat. This is a possible concern, as the background desk-study shows 23 records of little ringed plover within 100m meters of the site, with the most recent record being from 2010. Little ringed plover have been identified within the site boundary to the north of the site, as well as c.110 m and c. 285 m from the site boundary to the east of the woodland area.
- 3.4.8 There is one previous record of peregrine falcon (*Falco peregrinus*) within 1 km of the site from 2011. This record was recorded in Harpurhey Reservoirs c.450 m to the south-east of the site. BDS data shows 10 records of kingfisher (*Alcedo atthis*) within 1km of the site, with the most recent record from 2020.
- 3.4.9 It is considered that peregrine falcon and kingfishers are unlikely to be present near the site, as though there are records of them in the area, habitats within the site are not suitable to support these species.

- 3.4.10 The buildings, woodland and grassland habitats at the site provide opportunities for other nesting birds, with some opportunities for ground-nesting on the bare ground.
- 3.4.11 The desk study returned records of 31 bird species of conservation concern from the 1km radius around the site, with many of these being associated with the habitats on the site (*Appendix C*).
- 3.4.12 Eight of these species are listed on Section 41 of the NERC act 2006. This includes lesser redpoll (*Acanthis cabaret*), reed bunting (*Emberiza schoeniclus*), common grasshopper warbler (*Locustella naevia*), house sparrow (*Passer domesticus*), dunnoek (*Prunella modularis subsp. Occidentalis*), common bullfinch (*Pyrrhula pyrrhula subsp. pileata*), starling (*Sturnus vulgaris*) and northern lapwing (*Vanellus vanellus*). There are records of Northern Lapwing, Starling and Linnet from within the hospital site boundary.

Bats

- 3.4.13 The desk study returned records of at least six species within 2km of the site boundary. This included brown long-eared bat (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus*), Daubenton's bat (*Myotis daubentonii*), Natterer's bat (*Myotis nattereri*), noctule (*Nyctalus noctula*) and soprano pipistrelle (*Pipistrellus pygmaeus*), as well as unidentified *Myotis* and *Pipistrellus* bats.
- 3.4.14 PRAs were undertaken in September 2020 (RammSanderson, 2020), the previous and update results are found in *Table 6*. Where discrepancy between suitability ratings occur, justification is given.

Table 6: Update PRA and bat suitability ratings (refer to *Figure 4*).

RammSanderson Ref.	RSK Ref.	Initial Suitability Rating	Update Suitability Rating	Justification for change
1	G6	Negligible	Negligible	N/A
2	G3	Negligible	Moderate	Ridge tile gaps, soffit box gaps on all aspects allowing access for bats. Well-lit in places so not suitable for 'high' potential.
3	H8	Negligible	Negligible	N/A
4	G7	Negligible	Negligible	N/A
5	A8	High	High	N/A
6	A9	High	High	N/A
7	B1	High	High	N/A
8	B4	High	High	N/A
9	B4	High	High	N/A
10	B4	High	High	N/A
11	B5/3	High	High	N/A

RammSanderson Ref.	RSK Ref.	Initial Suitability Rating	Update Suitability Rating	Justification for change
12	B6/7/9	High	High	N/A
13	C4	High	High	N/A
14	C5	High	High	N/A
15	D5	Negligible	Negligible	N/A
16	D8	Moderate	High	Collapsed roof, numerous mortar gaps, roof holes, lifted tiles, open vents, wall crevices, potential access to cavity wall. Too many features to discount.
17	E1	Negligible	Negligible	N/A
18	U1	Negligible	Negligible	N/A
19	E7	Low	High	Missing and slipped tiles, lifted flashing, missing bricks, ridge tile gaps, open access to basement, possible hibernation potential.
20	E7	Negligible	Negligible	N/A
21	G8	Low	Low	N/A
22	G9	Low	High	Likely cavity wall access and roof access possible through soffits, ridge gaps and tile gaps.
23	F7	Negligible	Negligible	N/A
24	G2	Negligible	Moderate	Open ridge vents, mortar gaps at eastern gable apex, soffit access on south and north aspect, open barge boards.
25	65	Negligible	Negligible	N/A
26	G1	Low	High	Numerous slipped ridge tiles, mortice joint mortar gaps, large brick gaps, open vent panels, weep holes, lifted roof tiles. Possible cavity wall access.
27	78, 80, 82, 83, 84, 85, 81, 94, 95	Negligible	Moderate	A high number of weep gaps lifted led flashing; some tile gaps viewable, likely to be several across roof which could not be fully viewed.
28	90	Negligible	Negligible	N/A
29	59	Negligible	Negligible	N/A

RammSanderson Ref.	RSK Ref.	Initial Suitability Rating	Update Suitability Rating	Justification for change
33	75	Negligible	Moderate	Damaged fascias along northern and western elevations, gaps between fascia and brickwork on southern elevation.
34	-	Negligible	-	Demolished / not present.
35	52	Negligible	Low	Numerous gaps between tiles and ridge tiles.
36	53	Negligible	Negligible	N/A
37	50	Negligible	Moderate	Gap underneath north-eastern and south-western gable, open ventilation tiles, broken soffits on western elevation.
44	76	Negligible	Negligible	N/A
45	44	Negligible	Negligible	N/A
47	87	Negligible	Negligible	N/A
48	32	Negligible	Negligible	N/A
49	23	Negligible	Low	Slight tile gaps, ridge tile gap, gap between flat roof extension and main block.
50, 51, 64, 65	15, 16, 73	Moderate	Moderate	N/A
52	6	Negligible	Negligible	N/A
53	1, 2, 4	Moderate	High	Roof in poor state of repair, numerous slipped tiles, missing bricks, gaps in mortar, vent panels. Numerous entrance points to roof voids and potentially into cavity walls. Roof above light line so less prone to light disturbance.
54	5, 8, 10	Moderate	High	Roof in poor state of repair, numerous slipped tiles, missing tiles, missing bricks, gaps in mortar, vent panels, service holes. Numerous entrance points to roof voids and potentially into cavity walls. Roof above light line so less prone to light disturbance.

RammSanderson Ref.	RSK Ref.	Initial Suitability Rating	Update Suitability Rating	Justification for change
55	13, 14, 17, 18, 19	Moderate	High	As per 54 above.
56, 58	20	Moderate	High	As per 54 above.
57	21	Moderate	High	Gaps in mortar, lifted tiles, lifted led flashing, some missing tiles. Roof above light line so less prone to disturbance and likely to possess more gaps than could be observed from ground level.
59	25, 28, 92	Moderate	High	As per 54 above.
60	27	Negligible	Negligible	N/A
61	29, 36	Moderate	High	As per 54 above.
62	30, 31, 33, 72	Moderate	High	As per 54 above.
63	38, 89	Moderate	High	As per 54 above.
64	96	Negligible	Low	Note bat boxes are present.

- 3.4.15 The scattered trees within the hospital grounds are largely unsuitable for roosting bats. However, there is potential for suitable trees to be present within the woodland to the east of the site, an area which has not been surveyed to individual tree level.
- 3.4.16 The woodlands to the east, and the River Irk offer suitable commuting habitat for bats, whilst these and rough grassland offer suitable foraging habitat. These habitats are largely within the peripheries of the site, with the bulk of habitats on site consisting of hardstanding and buildings, which are of negligible suitability for foraging and commuting bats. Given the distribution of suitable habitats and their connectivity to the wider landscape, the site is considered to offer moderate suitability for foraging bats.

Otters and Water Voles

- 3.4.17 The desk study returned results of otter and water vole within 1km of the site.
- 3.4.18 One record for otter was provided from 2013 with one water vole record from 2015. The most recent record of otter was c.600 m to the north-west of the site. Water vole data was recorded c.1 km to the north-west of the site.
- 3.4.19 No field signs of otter or water vole were seen when undertaking the field survey. The section of river which flows through the site is unsuitable for water vole as due to the lack of suitable vegetation and concrete banks present along the section of river on site.

Similarly, habitat along the river is either inaccessible or unsuitable for otter holt creation, but may still be used by foraging and commuting otter.

Badgers

- 3.4.20 Two records of badger were returned during the desk study, the most recent of which identified badgers within 1km of the site in 2004. This data was recorded c.500 m to the south of the site in a residential area which borders a section of woodland.
- 3.4.21 When completing the PEA survey, much of the site appeared to be unsuitable for badgers, with the exception of the woodland belt which stretches from the north-east to the south-east of the site (*Figure 2*). This area is suitable for badgers, but due to access constraints most of this woodland could not be assessed at the time of the survey. No signs of badger setts, tracks, latrines, snuffle holes, hairs on boundary fences, scratching and footprints were noted during the survey in the areas which could be accessed.
- 3.4.22 Based on the PEA survey alone, it is not possible to rule out badger presence within the woodland to the east of the site.

Other Notable Species - Hedgehog

- 3.4.23 Hedgehogs occupy a range of lowland habitat with enough cover to allow nesting. They are common in parks in urban and suburban environments, farmland, and gardens. The desk study returned records of hedgehog, which is listed on the NERC Section 41 list of species of principal importance for the conservation of biodiversity in England. The area of woodland and grassland at the site are suitable habitats for this species.

Other Notable Species – Common Toad

- 3.4.24 Common toads occupy woodlands, rough grasslands, hedgerow and garden habitats, typically in close proximity to water bodies. This species is listed on section 41 of the NERC act 2006 as a species of principal importance for the conservation of biodiversity in England. The areas of woodland and poor semi-improved grassland habitats at the site are suitable for this species.

4.0 EVALUATION

Statutory designated sites

- 4.1.1 There is one internationally designated site within 10 km of the site boundary, namely the Rochdale Canal SAC, c. 4 km to the east of the site boundary. Given the distance of the site from this SAC, lack of hydrological connectivity and lack of other obvious impact pathways, it is unlikely that the site proposals will significantly impact the integrity of this designated site.
- 4.1.2 There are two national statutory designated sites within 2 km of the site boundary, both of which are local nature reserves (LNRs). These sites are Boggart Hole Clough (c.710 m away) and Blackley Forest (c.795 m away). For similar reasons as above no significant impacts on these sites is anticipated.
- 4.1.3 There development proposals do not fall within criteria that requires LPA consultation with Natural England regarding SSSI IRZs.

Non-statutory designated sites

- 4.1.4 There are five non-statutory designated sites within 1km of the site boundary, the closest, Reservoirs at Harpurhey, is located c. 420 m from site. No significant impacts on these sites is anticipated.

Habitats and Plants

- 4.1.5 Most of the natural habitats on site are present on the LBAP including broadleaved woodland, rivers/running water and grasslands. The examples found on the site are not particularly rare and have a low to moderate species-richness, with all plant species found on the site being common or introduced. However, all of these habitats, particularly the woodland and river (and to a lesser extent the grasslands), should still be retained as far as is possible, and / or protected through the implementation of a construction environmental management plan (CEMP).
- 4.1.6 Retained woodland and individual trees should be protected in line with *BS5837:2012 – Trees in relation to design, demolition and construction*. The details of this may be included within the CEMP.
- 4.1.7 At least five invasive non-native plant species were recorded at the site, Japanese Knotweed, Japanese Rose, Himalayan Balsam, Rhododendron, and multiple Cotoneaster species. These species are listed on Schedule 9 of the Wildlife and Countryside Act, as well as Schedule 2 of The Invasive Alien Species (Enforcement and Permitting) Order 2019. Although not a legal requirement, it is recommended that these invasive species are treated and/or removed by a specialist contractor to eradicate them from site and prevent their spread.

Protected and notable animals

- 4.1.8 The woodland, grassland and buildings on the site offer suitable nesting habitat for a wide range of species. In addition, the bare ground in the northern portion of site is considered suitable for ground nesting species, including one species listed on Schedule 1 of the Wildlife and Countryside Act 1981 namely, little ringed plover. Precautionary measures will be required to prevent destruction and disturbance of bird nests during the works if works will occur during the breeding bird season (March to August inclusive).
- 4.1.9 Some of the buildings offer potential for roosting bats, and these are to be demolished. While most trees on the site are unlikely to be suitable for roosting bats, they were not surveyed in detail, and it is possible that at least some will have potential, particularly within the woodland. Further surveys will be required to assess the presence or likely absence of a roost.
- 4.1.10 The site offers moderate suitability for foraging and commuting bats, although these habitats exist largely in the peripheries of the site and mostly appear to be retained within site proposals. Should these habitats require removal or will be subject to increases in light levels (by 1 Lux or more) or disturbed by works within 10 m of these areas (via noise and vibration) then activity surveys are recommended to establish bat activity levels on site.
- 4.1.11 Though the section of the river which flows through the site does not offer good quality habitat for use by otters and water voles, other sections of the river upstream have increased suitability for these species as shown by the BDS results. Therefore, additional measures may need to be taken depending on the nature of the proposed works.
- 4.1.12 The majority of the site was unsuitable for badgers to build setts. The woodland is thought to offer suitable habitat for foraging and sett building, but due to access constraints was not fully surveyed. A dedicated badger survey should therefore be undertaken within the woodland to be removed (including a 30m buffer of any works).
- 4.1.13 If works do not commence within 3 months of the survey detailed above it is recommended that a pre-construction survey is undertaken to ensure badgers remain absent from habitats on and within 30 m of site.
- 4.1.14 The site provides suitable habitat for hedgehogs and common toads, therefore precautionary measures are required during the works to prevent any negative impacts on these species.

5.0 RECOMMENDATIONS

5.1 Key constraints to design and construction

Invasive plant species

- 5.1.1 At least five invasive non-native plant species were recorded at the site, Japanese Knotweed, Japanese Rose, Himalayan Balsam, Rhododendron, and multiple Cotoneaster species. Although not a legal requirement, these species should be eradicated from the site by a suitably experienced contractor. If the plants, or soil within the vicinity of the plants need to be taken off the site, they should be disposed of as contaminated waste to a suitably licensed landfill site in accordance with best-practice guidance (DEFRA & EA, 2019). Additionally, all machinery and footwear that has been within the vicinity of any of these plants during their removal should be cleaned of any plant material or soil that may contain seeds before leaving the area.

Nesting Birds

- 5.1.2 Woodland, grassland and buildings on the site offer suitable nesting habitat for a wide range of species. In addition, the bare ground in the northern portion of site is considered suitable for ground nesting species, including one species listed on Schedule 1 of the Wildlife and Countryside Act 1981 namely, little ringed plover. Precautionary measures will be required to prevent destruction and disturbance of bird nests during the works if works will occur during the breeding bird season (March to August inclusive).

Bats

- 5.1.3 Buildings with low to high roosting potential will require further survey to identify whether bats are roosting in them in line with BCT guidelines (Collins, 2016). This information would be required to support a licence application if bats are found to be roosting. The survey requirements differ in relation to roosting potential as follows:
- High potential building – one emergence, one re-entry survey, and one additional emergence or re-entry survey;
 - Moderate potential building – one emergence and one re-entry survey spaced a minimum of two weeks apart between May and September;
 - Low potential building - one emergence or re-entry survey between May and September;
 - Negligible potential building or tree – no further surveys required.
- 5.1.4 Given the complex shape of the buildings and difficulty associated with accessing all viewpoints and number of surveyors that may be required; a more bespoke survey methodology has been designed using activity surveys to identify activity hotspots

and subsequent back tracking to allow targeted further survey throughout different phases of the proposed development.

- 5.1.5 The site is rated as offering moderate suitability for foraging and commuting habitat for bats, with suitable habitats on site around the peripheries and reasonable connectivity to green spaces in the wider area. Activity levels on site are assessed as part of the bespoke methodology referenced in section 5.1.4.

Otters and Water Voles

- 5.1.6 Though the section of the river which flows through the site does not offer good quality habitat for use by otters and water voles, other sections of the river upstream have increased suitability for these species as shown by the BDS results. Due to the risk of their presence being low, presence absence surveys are not recommended, but a specific sensitive working/lighting strategy will be required should any habitats along or near the river require removal, be subject to increases in light levels (by 1 Lux or more) or be disturbed by works within 10 m (via noise and vibration). A suitable sensitive lighting strategy is discussed briefly in 5.3.5.

Badgers

- 5.1.7 Woodland on the site offers suitable habitat for foraging and sett building, but due to access constraints was not fully surveyed. A dedicated badger survey should therefore be undertaken within the woodland.

5.2 Further Surveys

Invasive plant species

- 5.2.1 It is recommended that a dedicated invasive species survey is undertaken by a suitably experienced contractor (those who will be appointed for control and eradication) to accurately identify the extent of the invasive species on site. This will allow for an invasive species method statement and management plan to be drafted. These surveys are best undertaken during the optimal botanical window (April – September).

Bats

- 5.2.2 At the time of writing, further surveys are being undertaken to identify activity hotspots and identify roosts via back-tracking methodology. These will be reported separately.
- 5.2.3 Traditional surveys will be required as different phases of development proceed, due to the shelf life of bat survey reports (12 months). The number of surveys required is highlighted in *section 5.1.3*.
- 5.2.4 Targeted ground level tree assessments will be required in the woodland to be removed. This can be undertaken any time of year, however, follow up surveys are largely time constrained as with building surveys (*section 5.1.3*).

Badgers

- 5.2.5 A dedicated badger survey should be undertaken within the woodland on the site, checking for field signs such as setts, latrines, snagged fur, snuffle marks, footprints, and bark scratching. The survey can be completed at any time of the year but is best undertaken during winter or early spring when vegetation cover is sparse.
- 5.2.6 If works do not commence within 3 months of the survey detailed above it is recommended that a pre-construction survey is undertaken to ensure badgers remain absent from habitats on and within 30 m of site.

5.3 Mitigation Requirements

CEMP

- 5.3.1 Mitigation measures should be outlined within a CEMP for the site incorporating the measures outlined below.

Ecological clerk of works

- 5.3.2 If suitable bird nesting habitat is to be cleared this should be carried out outside of the bird breeding season (March to August inclusive). If it must be removed during the breeding season, an ECoW will be required to perform a nesting bird check before any removal of suitable nesting habitat. This would involve watching the 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.

Precautionary working measures

- 5.3.3 To safeguard any hedgehogs or other nocturnal animals that may be present, excavations should be covered overnight to prevent animals from becoming trapped. If it is not possible to cover excavations, an access route should be provided to allow animals to climb out.
- 5.3.4 Woodland and long grassland clearance. Should ideally be completed in September or October to minimize risks to nesting birds and hibernating hedgehogs, reptiles or amphibians (common toad). If this is not possible, a pre-site check should be completed by an ecologist and the works should be completed under the supervision of an ECoW. If any hedgehogs or common toads are found during the works, they should be left to disperse of their accord before works continue. If any reptiles are found these should be left undisturbed and the advice of an ecologist sought. If any nesting birds are found the information written above in section 5.3.2 should be referred to.
- 5.3.5 Night working should be avoided to prevent any unnecessary disturbance on species including bats, hedgehogs and otters. If night working is required, artificial lighting should be hooded to reduce spill and should be directed away from any linear features

(including hedgerows, woodland edges) that could be used for foraging and commuting, and away from any buildings or trees which may be suitable for roosting bats.

- 5.3.6 If any protected species are encountered during the works, works must stop, and an ecologist be contacted about how to proceed.

Habitat retention and protection

- 5.3.7 LBAP habitat including broadleaved woodland, streams, mature trees and built structures and urban habitats are present on site. These should be retained as far as practicable and protected through implementation of the CEMP.
- 5.3.8 Retained woodland and individual trees should be protected in line with *BS5837:2012 – Trees in relation to design, demolition and construction*. The details of this may be included within the CEMP.

Sensitive lighting strategy

- 5.3.9 External lighting as part of proposals should be designed in line with the Institute of Lighting Professionals (ILP, 2018) Guidance Note 08/18 'Bats and Artificial Lighting in the UK' and aim to keep a <1 lux increase in light levels of current and any newly established potential foraging and commuting resources both during the construction and operational phases.

5.4 Opportunities for enhancement

- 5.4.1 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

- 5.4.2 The planting of native species including flower-, berry- and fruit-bearing species would benefit badgers, birds and other protected species. The volume of planting and species diversity should be maximised wherever possible. Furthermore, planting trees and hedgerows on site would 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.
- 5.4.3 Amenity grassland on the site should be created using a wildflower-lawn seed mix or turf, and only cut once per month at most (even during the summer) to allow plants to flower and encourage the growth of a more diverse range of species. Where possible, areas of grassland should also be created with a low-nutrient substrate or soil and treated as a wildflower meadow, only being cut once or twice a year from late summer to the end of winter.

Bird and bat boxes

- 5.4.4 Bird boxes should be incorporated into the development design, including those suitable for sparrow species, dunnock (*Prunella modularis*) and/or starling (*Sturnus vulgaris*) which are all species of conservation concern and have been recorded within 2 km of the site. Additionally, integrated bat boxes e.g. Schwegler 1FR should be incorporated within new buildings fabric, orientated south, south east, or south west to provide additional roosting opportunities for the local bat population.

Log piles and 'hedgehog highways'

- 5.4.5 Log piles should be incorporated into quiet and varied habitats in the development to offer refuge for hedgehogs and other species e.g., reptiles and amphibians (common toads). Ideally, they should be created using any logs generated from vegetation clearance, or from native and local wood. Furthermore, gaps (c.13 x 13 cm) should be maintained in any perimeter fencing to prevent disrupting hedgehog movement.

Amphibian Habitat Creation

- 5.4.6 The incorporation of artificial hibernacula into habitats on site should be considered as an enhancement method which will benefit common toads within the site. Tree roots, deep leaf litter, compost heaps, log/wood piles and rock/rubble piles can be great refuges and over-wintering sites (hibernacula) which provide habitat, cover and food resources for amphibians.
- 5.4.7 The creation of artificial waterbodies and incorporation of these into the wider terrestrial landscaping should also be considered as part of the development, as this will provide additional habitat for use by breeding amphibian species such as common toads.

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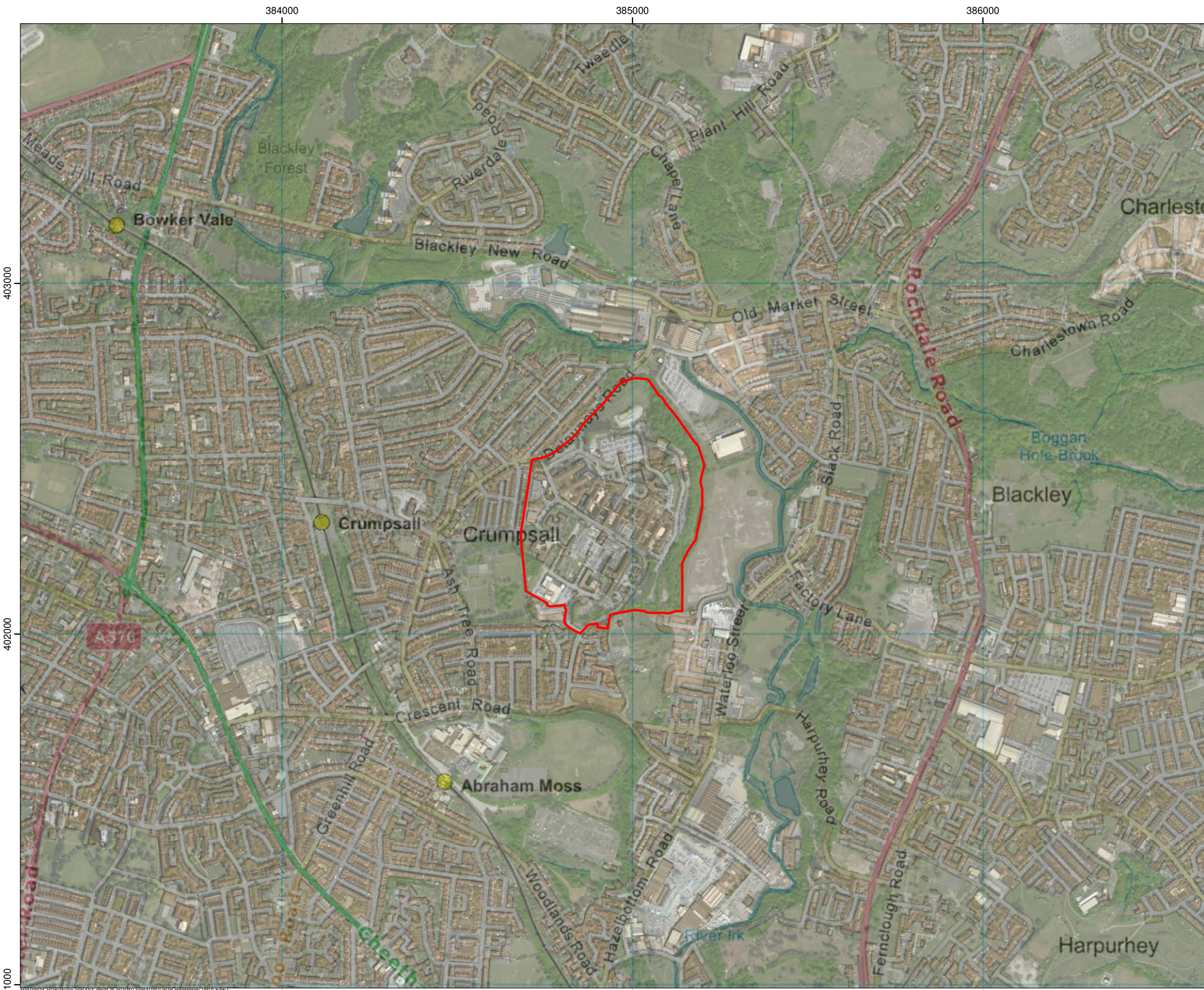
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FIGURES

Figure 1 – Site Location Plan

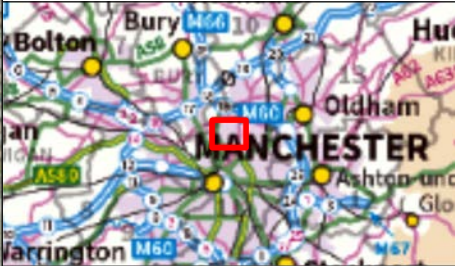
Figure 2 – Phase 1 Habitat Survey Map

Figure 3 – Invasive Species Survey Map



Legend:
 Site_Boundary

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

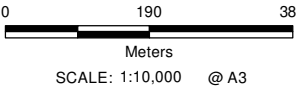


Rev	Date	Description	Drm	Chk	App
00	19/05/2021	2481604	SP	RG	TW

North Manchester General Hospital



TITLE: Figure 1:
Site Location Plan



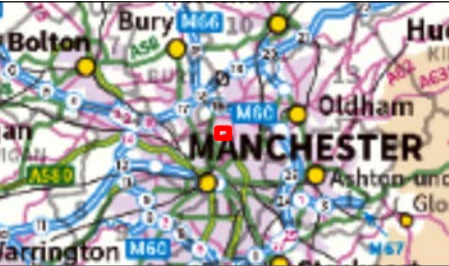
REV 00



Legend:

- Site boundary
- Phase 1 Habitats**
 - Broad-leaved semi-natural woodland
 - Poor semi-improved grassland
 - Running water
 - Amenity grassland
 - Building
 - Bare ground
 - Hardstanding
- Target note

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter



00	02/07/2021	2481604	SP	RG	TW
Rev	Date	Description	Drm	Chk	App

North Manchester General Hospital



TITLE: Figure 2:
Phase 1 Habitat Survey

060120

Meters

SCALE: 1:3,500 @ A3

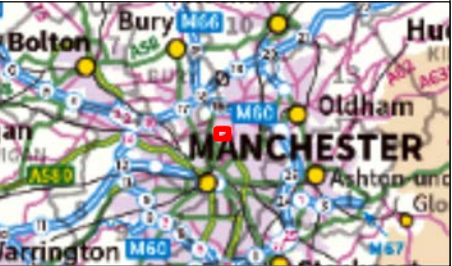
N
W
E
S

REV 00



- Legend:**
- Site boundary
 - Additional survey area
- Indicative locations of invasive plant species**
- Fallopia japonica (Japanese Knotweed)
 - Fallopia japonica (Japanese Knotweed)
 - Himalayan Balsam and Japanese knotweed
 - Impatiens glandulifera (Indian Balsam)
 - Rhododendron Ponticum
 - Cotoneaster species (possibly invasive)
 - Cotoneaster species (possibly invasive)
 - Rosa rugosa (Japanese Rose)

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

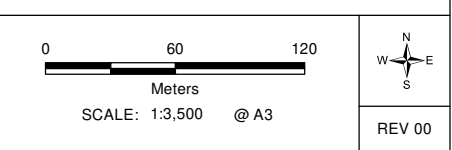


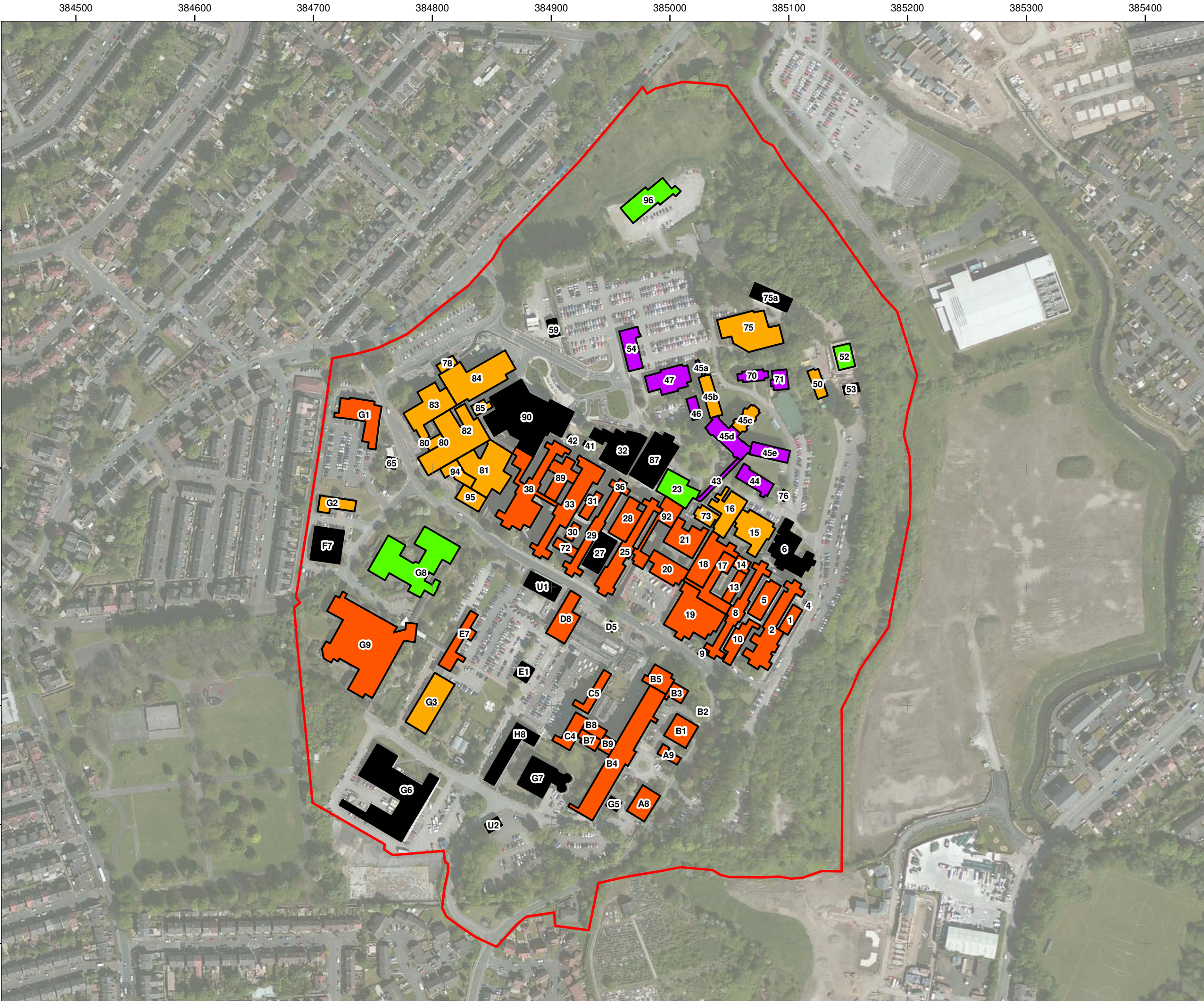
00	02/07/2021	2481604	SP	RG	TW
Rev	Date	Description	Drm	Chk	App

North Manchester General Hospital



TITLE: Figure 3:
Invasive Plants Survey

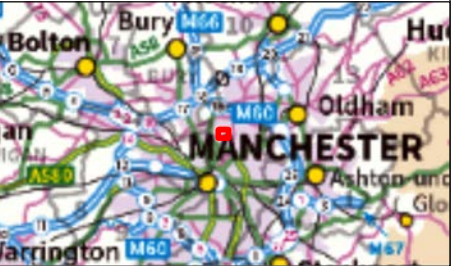




Legend:

- Site Boundary
- Building
- Bat roost potential**
 - High
 - Moderate
 - Low
 - Negligible
 - surveyed as part of separate planning application

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter



00	02/07/2021	2481604	SP	RG	TW
Rev	Date	Description	Drm	Chk	App

North Manchester General Hospital



EXPERTS IN ECOLOGY

TITLE: Figure 4:
Building Bat Roost Potential

050100

Meters

SCALE: 1:3,000 @ A3

N

W

E

S

REV 00

APPENDIX A – TARGET NOTES

Target Note 1:

Areas of broadleaved semi-natural woodland are present in both the northern and southern halves of the site, with most of the woodland situated along the eastern site boundary. This woodland was largely inaccessible at the time of the survey due to fencing. It was therefore only possible for the woodland to be assessed from adjacent areas such as hardstanding car parks. The woodland is comprised of multiple 'woody' species including Ash (*Fraxinus excelsior*), Rowan (*Sorbus aucuparia*), Cherry species (*Prunus sp.*), Pedunculate Oak, Sycamore (*Acer pseudoplatanus*), Willows (*Salix sp.*), Poplar species (*Populus sp.*), Alder (*Alnus glutinosa*), Silver Birch (*Betula pendula*), Field Maple (*Acer campestre*) and Beech (*Fagus sylvatica*). Woody understory species such as Holly (*Ilex aquifolium*), Common Privet (*Ligustrum vulgare*), Hawthorn (*Crataegus monogyna*), and Dog-rose (*Rosa canina*) were also seen, along with several tall herbs and other flowering plants such as Common Nettle (*Urtica dioica*), Garlic Mustard (*Alliaria petiolata*), Cow Parsley (*Anthriscus sylvestris*), Hogweed (*Heracleum sphondylium*), Herb-Robert (*Geranium robertianum*) and Wood Avens (*Geum urbanum*). A full list of species recorded can be found in *Appendix B*.

Target Note 2:

Multiple small areas of poor semi-improved grassland were identified in the northern half of the site. Most of these areas are located adjacent to Delaunays Road on the north-eastern outskirts of the hospital site boundary. The grasslands in this area of the site are reasonably diverse and include the grass species False Oat-grass (*Arrhenatherum elatius*), Red Fescue, Meadow Foxtail, Crested Dog's-tail (*Cynosurus cristatus*), Yorkshire-fog, and Cock's-foot. Meadow Foxtail, Yorkshire-fog and Cock's-foot appeared to be the dominant grass species.

Dominant broad-leaved herb species which were the most noticeable at the time of the survey included Creeping Buttercup, Meadow Buttercup, Cow Parsley, Dandelion species, Creeping Thistle, Spear Thistle, Broad-leaved Dock, Common Ragwort (*Jacobaea vulgaris*), Common Sorrel (*Rumex acetosa*) and Hogweed.

Small patches of woody species and scrub were also found within the rough grassland. Woody and scrub species included Bramble (*Rubus sp.*), Butterfly-bush (*Buddleja davidii*), Cherry Laurel (*Prunus laurocerasus*) and Hawthorn. A full list of species recorded can be found in *Appendix B*.

Target Note 3:

Large patches of amenity grassland were found throughout the site. The size of these areas varies, but they are present in both the northern and southern sections. Much of the areas of amenity grassland throughout the site are located adjacent to roads, footpaths, and buildings and are well managed whilst supporting a poor diversity of species.

Grass species found in these areas included Cock's-foot, Red Fescue, Yorkshire-fog, Perennial Rye-grass (*Lolium perenne*) and a Bent species (*Agrostis* sp.).

Dominant broad-leaved herb species which were the most noticeable at the time of the survey included Creeping Buttercup, Dandelion species, Yarrow (*Achillea millefolium*), Groundsel (*Senecio vulgaris*), White Clover, Red Clover (*Trifolium pratense*), Lesser Trefoil and Black Medick (*Medicago lupulina*). A full list of species recorded can be found in *Appendix B*.

Target Note 4:

At the northernmost point of the map, the River Irk is present adjacent to Crumpsall Vale Road. Most of the river was inaccessible due to the depth of the banks, as well as barriers which prohibited access to the river. Therefore, an assessment of the river's suitability to support protected and invasive plant species was made from a hardstanding carpark. c. 165 m of the river was assessed at the time of the survey.

The river itself is c. 4m – 6m wide, and the depth could not be determined at the time of the survey due to inaccessibility issues and water turbidity. The banks in the area are vertical and concrete on either side, with much of the bank on one side being heavily shaded by mature trees. There was very little in channel vegetation which could be seen, except for some species which were growing alongside the riverbank from an area of bare ground/loose stone. The dominant species included two schedule 9 invasive plant species, namely Himalayan Balsam and Japanese Knotweed, as well as Butterfly-bush, Cow Parsley and Hogweed.

Target Note 5:

A single area of bare ground was identified in the northern half of the site. This area has low botanical diversity. Very few short successional species were identifiable in this area, however, a few did show early signs of growth. This included Silver Birch saplings as well as Creeping Buttercup and Colt's-foot (*Tussilago farfara*).

Target Note 6:

The hospital is dominated by areas of hardstanding which have very little ecological value. These areas are primarily roads and walkways as well as car parking and storage areas. Hardstanding primarily includes concreted and tarmacked areas.

APPENDIX B – BOTANICAL SPECIES LISTS

Table 8: Vascular plant species recorded from the North Manchester General Hospital Site on 28 May 2021.

Plant Species
Woody Species
Alder (<i>Alnus glutinosa</i>)
Ash (<i>Fraxinus excelsior</i>)
Beech (<i>Fagus sylvatica</i>)
Black Poplar (<i>Populus nigra</i>)
Bramble (<i>Rubus fruticosus</i>)
Butterfly-bush (<i>Buddleja davidii</i>)
Cherry (<i>Prunus sp</i>)
Cherry Laurel (<i>Prunus laurocerasus</i>)
Common Privet (<i>Ligustrum vulgare</i>)
Crack Willow (<i>Salix fragilis</i>)
Crested Dog's-tail (<i>Cynosurus cristatus</i>)
Dog-rose (<i>Rosa canina</i>)
Field Maple (<i>Acer campestre</i>)
Grey Willow (<i>Salix cinerea</i>)
Hawthorn (<i>Crataegus monogyna</i>)
Holly (<i>Ilex aquifolium</i>)
Horse Chestnut (<i>Aesculus hippocastanum</i>)
Norway Maple (<i>Acer platanoides</i>)
Pedunculate Oak (<i>Quercus robur</i>)

Rhododendron (<i>Rhododendron ponticum</i>)
Rowan (<i>Sorbus aucuparia</i>)
Scots Pine (<i>Pinus sylvestris</i>)
Silver Birch (<i>Betula pendula</i>)
Sycamore (<i>Acer pseudoplatanus</i>).
Herbaceous Species
Bentspecies (<i>Agrostis</i> sp.)
Black Medick (<i>Medicago lupulina</i>)
Broad-leaved Dock (<i>Rumex obtusifolius</i>)
Cleavers (<i>Galium aparine</i>)
Cock's-foot (<i>Dactylis glomerata</i>)
Colt's-foot (<i>Tussilago farfara</i>)
Columbine (<i>Aquilegia vulgaris</i>)
Common Chickweed (<i>Stellaria media</i>)
Common Mouse-ear (<i>Cerastium fontanum</i>)
Common Nettle (<i>Urtica dioica</i>)
Common Ragwort (<i>Jacobea vulgaris</i>)
Common Sorrel (<i>Rumex acetosa</i>)
Cow Parsley (<i>Anthriscus sylvestris</i>)
Creeping Buttercup (<i>Ranunculus repens</i>)
Creeping Thistle (<i>Cirsium arvense</i>)
Cuckooflower (<i>Cardamine pratensis</i>)
Cut-leaved Cranesbill (<i>Geranium dissectum</i>)
Dandelion (<i>Taraxacum</i> agg.)

False Oat-grass (<i>Arrhenatherum elatius</i>)
Fat-hen (<i>Chenopodium album</i>)
Field Forget-me-not (<i>Myosotis arvensis</i>)
Field Horsetail (<i>Equisetum arvense</i>)
Garlic Mustard (<i>Alliaria petiolata</i>)
Greater Willowherb (<i>Epilobium hirsutum</i>)
Groundsel (<i>Senecio vulgaris</i>)
Hairy Bittercress (<i>Cardamine hirsuta</i>)
Hedge Bindweed (<i>Calystegia sepium</i>)
Herb-Robert (<i>Geranium robertanum</i>)
Hogweed (<i>Heracleum sphondilium</i>)
Ivy (<i>Hedera helix</i>)
Lesser Trefoil (<i>Trifolium dubium</i>)
Meadow Buttercup (<i>Ranunculus acris</i>)
Meadow Foxtail (<i>Alopecurus pratensis</i>)
Perennial Rye-grass (<i>Lolium perenne</i>)
Red Clover (<i>Trifolium pratense</i>)
Red Fescue (<i>Festuca rubra</i>)
Ribwort Plantain (<i>Plantago lanceolata</i>)
Rosebay Willowherb (<i>Chamaenerion angustifolium</i>)
Spanish Bluebell (<i>Hyacinthoides hispanica</i>)
Spear Thistle (<i>Cirsium vulgare</i>)
Weld (<i>Reseda luteola</i>)
White Clover (<i>Trifolium repens</i>)

Yarrow (<i>Achillea millefolium</i>)
Yorkshire-fog (<i>Holcus lanatus</i>)

APPENDIX C – NOTEWORTHY SPECIES RECORDS

Table 6 displays noteworthy species records that are located within 1 km of the site boundary. These species records were obtained from **RECORD**. 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 7, Appendix D. 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 organizations do not have records of it in these locations.

Table 6 6: Noteworthy species records within 1 km of the site boundary, extending to 2 km for bat records.

Latin Name	Common Name	Designation
Amphibians		
<i>Bufo bufo</i>	common toad	WCA5, S41
Birds		
<i>Acanthis cabaret</i>	lesser redpoll	S41, Red
<i>Alcedo atthis</i>	kingfisher	WCA1.1, Amber
<i>Anas crecca</i>	teal	Amber
<i>Anas platyrhynchos</i>	mallard	Amber
<i>Anser brachyrhynchus</i>	pink-footed goose	Amber
<i>Anthus pratensis</i>	meadow pipit	Amber
<i>Apus apus</i>	swift	Amber, GB RDB(EN)
<i>Charadrius dubius</i>	little ringed plover	WCA1.1
<i>Charadrius hiaticula</i>	ringed plover	Red, GB RDB(VU)
<i>Chroicocephalus ridibundus</i>	black-headed gull	Amber, GB RDB(VU)
<i>Cinclus cinclus</i>	dipper	Amber
<i>Delichon urbicum</i>	house martin	Amber, GB RDB(VU)
<i>Emberiza schoeniclus</i>	reed bunting	S41, Amber
<i>Falco peregrinus</i>	peregrine falcon	WCA1.1
<i>Ficedula hypoleuca</i>	pie flycatcher	Red, GB RDB(VU)
<i>Gallinago gallinago</i>	snipe	Amber
<i>Larus argentatus</i>	herring gull	Red, GB RDB(EN)
<i>Larus canus</i>	common gull	Amber
<i>Larus fuscus</i>	lesser black-backed gull	Amber
<i>Linaria cannabina subsp. autochthona</i>	linnet	GB RDB(EN)
<i>Locustella naevia</i>	common grasshopper warbler	S41, Red

Latin Name	Common Name	Designation
<i>Motacilla cinerea</i>	grey wagtail	Red
<i>Passer domesticus</i>	house sparrow	S41, Red
<i>Phylloscopus trochilus</i>	willow warbler	Amber
<i>Prunella modularis subsp. occidentalis</i>	dunnock	S41
<i>Pyrrhula pyrrhula subsp. pileata</i>	common bullfinch	S41
<i>Strix aluco</i>	tawny owl	Amber
<i>Sturnus vulgaris</i>	starling	S41, Red, GB RDB(VU)
<i>Turdus philomelos</i>	song thrush	Red
<i>Turdus viscivorus</i>	mistle thrush	Red, GB RDB(VU)
<i>Vanellus vanellus</i>	northern lapwing	S41, Red, GB RDB(EN)
Invertebrates		
<i>Spilosoma lutea</i>	buff ermine	S41
Mammals		
<i>Arvicola amphibius</i>	water vole	WCA5, S41, GB RDB(EN), LBAP
Chiroptera	unidentified bat	EPS(Sch2), LBAP
<i>Erinaceus europaeus</i>	West European hedgehog	S41, GB RDB(VU)
<i>Lutra lutra</i>	otter	EPS(Sch2), WCA5, S41
<i>Meles meles</i>	badger	BA
<i>Myotis daubentonii</i>	Daubenton's bat	EPS(Sch2), WCA5, LBAP
<i>Myotis nattereri</i>	natterer's bat	EPS(Sch2), WCA5, LBAP
<i>Myotis</i> sp.	myotis bat	EPS(Sch2), WCA5, LBAP
<i>Nyctalus noctula</i>	noctule	EPS(Sch2), WCA5, S41, LBAP
<i>Pipistrellus pipistrellus</i>	common pipistrelle	EPS(Sch2), WCA5, LBAP
<i>Pipistrellus pygmaeus</i>	soprano pipistrelle	EPS(Sch2), WCA5, S41, LBAP
<i>Pipistrellus</i> sp.	a pipistrelle bat	EPS(Sch2), WCA5, LBAP
<i>Plecotus auritus</i>	brown long-eared bat	EPS(Sch2), WCA5, S41, LBAP

APPENDIX D – ABBREVIATIONS

Table 7 displays abbreviations of protected species legislation.

Table 7 7: 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.
BA	The Protection of Badgers Act 1992	Legislation making it an offence to kill, injure or take a badger, or to damage or interfere with a sett unless a licence is obtained from a statutory authority.
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 (listed on Schedules 2 of The Conservation of Habitats and Species Regulations 2017)
EPS (Sch 5)	European Protected Species (Schedule 5)	European protected species (listed on Schedules 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.

Code	Full Title	Explanation
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 (also known as The World Conservation Union)	A worldwide partnership and conservation network to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.
LBAP	Local Biodiversity Action Plan	A plan that identifies threats to locally important species and habitats, and sets out targets and actions in Species Action Plans and Habitat Action Plans to enhance or maintain biodiversity at the county or regional level.
LHAP	Local Habitat Action Plan	A plan that identifies threats to a locally important priority habitat and sets out targets and actions to enhance or maintain that habitat.
LSAP	Local Species Action Plan	A plan that identifies threats to locally important species, and sets out targets and actions to prevent losing that species from the local area.
Notable	Scarce and threatened invertebrates	Invertebrate species which are estimated to occur within the range of 16 to 100 10km squares but subdivision into Notable A and Notable B categories is not possible as there is insufficient information available).
Notable:A	Scarce and threatened invertebrates	Taxa which do not fall within Red Data Book categories but which are none-the-less uncommon in Great Britain and thought to occur in 30 or fewer 10km squares of the National Grid or, for less well-recorded groups, within seven or fewer vice-counties.
Notable: B	Scarce and threatened invertebrates	Taxa which do not fall within Red Data Book categories but which are none-the-less uncommon in Great Britain and thought to occur in between 31 and 100 10km squares of the National Grid or, for less-well recorded groups between eight and twenty vice-counties.
NN	Nationally Notable	Designation for invertebrate taxa that are thought to be notably important in the UK.

Code	Full Title	Explanation
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	<i>The Wildlife and Countryside Act 1981</i> (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 <i>The Wildlife and Countryside Act 1981</i> (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

Code	Full Title	Explanation
		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 <i>The Wildlife and Countryside Act 1981</i> (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 <i>The Wildlife and Countryside Act 1981</i> (as amended)	Plants and fungi protected from intentional picking, uprooting, destroying, trading (including parts or derivatives), etc.

APPENDIX E - LEGISLATION AND POLICY

This section provides an overview of relevant specific legislation and policy.

Legislation

International and national legislation relating to this assessment include:

- Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 (Ramsar Convention);
- Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds 2009 (Birds Directive);
- Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora 1992 (Habitats Directive);
- Convention on the Conservation of European Wildlife and Natural Habitats 1979 (Bern Convention);
- Convention on the Conservation of Migratory Species of Wild Animals 1979 (Bonn Convention).
- Wildlife and Countryside Act 1981 as amended (WCA);
- Conservation of Habitats and Species Regulations 2017 (Habitat Regulations);
- Countryside and Rights of Way (CROW) Act 2000:
- Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (England)
- Protection of Badgers Act 1992;
- UK Biodiversity Action Plan BAP (now superseded by the UK Post-2010 Biodiversity Framework)

The Conservation of Habitats and Species Regulations 2017

The Conservation of Habitats and Species Regulations 2017 provide comprehensive protection to a range of animals and plants listed in Schedules 2 and 5 of the Regulations, respectively (known as 'European protected species' (EPS)). The key part of this legislation in relation to the proposed works is Regulation 43, copied below:

“43. (1) A person who—
(a) deliberately captures, injures or kills any wild animal of a European protected species,
(b) deliberately disturbs wild animals of any such species,
(c) deliberately takes or destroys the eggs of such an animal, or
(d) damages or destroys a breeding site or resting place of such an animal,
is guilty of an offence.
(2) For the purposes of paragraph (1)(b), disturbance of animals includes in particular any disturbance which is likely—
(a) to impair their ability—

- (i) to survive, to breed or reproduce, or to rear or nurture their young, or
- (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate;
- or
- (b) to affect significantly the local distribution or abundance of the species to which they belong.”

Wildlife and Countryside Act 1981

An addition to the Regulations, above, the Act provides additional protection for EPS, and protection of a range of other animals and plants listed in Schedules 5 and 8 of the Act, respectively. The key part of this legislation in relation to the proposed works are in Section 9, copied below:

“9 Protection of certain wild animals

- ...
(4) Subject to the provisions of this Part, a person is guilty of an offence if intentionally or recklessly—
- ...
(b) he disturbs any such animal while it is occupying a structure or place which it uses for shelter or protection; or
- (c) he obstructs access to any structure or place which any such animal uses for shelter or protection.”

There is no provision within the Act for a derogation licences to be issued for the purposes of development, although Section 10 Part (3)(c) provides a defence in cases that may be considered to be: *“the incidental result of a lawful operation and could not reasonably have been avoided.”*

(Note: Section 16 of the Act does make provision for derogation licences to be issued *“for the purposes of preserving public health or public ... safety”*, which might be applicable to the proposed works. For confirmation of this, it would be appropriate to consult Natural Resources Wales.)

General

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

Invasive plant species

It is illegal to ‘plant or otherwise cause to spread’ and plant species listed under Part 2 of Schedule 2 of the Invasive Alien Species (Enforcement and Permitting) Order 2019, or Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) with respect to England and Wales. Additionally, the Environmental Protection Act 1990 classes any soil and waste containing propagules of a Schedule 9 plant species that is being discarded, or is intended to be discarded, as “Controlled Waste”.

Great crested newt

Great crested newts are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and receives full protection under Section 9. Great crested newts are also European Protected Species listed on The Conservation of Habitats and Species Regulations 2017 (as amended). This legislation makes it an offence to:

- deliberately capture, injure or kill a great crested newt;
- deliberately disturb a great crested newt (in such a way as to be likely to significantly affect, (i) the ability of a significant group of great crested newt to survive, breed or rear/nurture their young; and (ii) the local distribution or abundance of the species concerned);
- deliberately take or destroys the eggs of such an animal;
- damage or destroy a breeding site or resting place of a great crested newt; and
- possess, control, transport, sell, exchange a great crested newt, or offer a great crested newt for sale or exchange.

All resting and breeding places of great crested newts receive legal protection even when great crested newts are not present.

Reptiles

Common lizard, grass snake, slow-worm and adder are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), in respect of Section 9(5) and part of Section 9(1). Under the above legislation it is an offence to:

- intentionally or deliberately kill or injure any individual of such a species; or
- sell or attempt to sell any part of the species alive or dead.

Birds

Birds - general protection

All species of bird are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended). The protection was extended by the CRow Act. The legislation makes it an offence to intentionally:

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

Birds (specially protected species)

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

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

Bats

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

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

Bats are also European protected species listed on The Conservation of Habitats and Species Regulations 2017. This legislation makes it an offence to:

- deliberately capture, injure or kill;
- deliberately disturb, including in particular any disturbance which is likely (a) to impair their ability - (i) to survive, to breed or reproduce, or to rear or nurture their young; or (ii) hibernate or migrate, where relevant; or (b) to affect significantly the local distribution or abundance of the species to which they belong;
- damage or destroy a breeding site or resting place; and
- possess, control, transport, sell, exchange, or offer for sale or exchange.

Badger

Badgers (*Meles meles*) are protected in Britain under the Protection of Badgers Act 1992 and Schedule 6 of The Wildlife and Countryside Act 1981 (as amended). The legislation affords protection to badgers and badger setts, and makes it a criminal offence to:

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

Water vole

Water voles are fully protected under Section 9 of Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Protection was extended by the Countryside and Rights of Way Act 2000.

Under this legislation, it is an offence to:

- intentionally kill, injure or take (capture) a water vole;
- possess or control a live or dead water vole, or any part of a water vole;
- intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection, or to intentionally or recklessly disturb water voles while they are using such a place; or
- sell, offer for sale or advertise for live or dead water voles.

The water vole is included as a priority species in Section 41 of the Natural Environment and Rural Communities Act 2006.

Otter

Otters are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and receives full protection under Section 9. This species is also listed as a European Protected Species on Schedule 2 of The Conservation of Habitats and Species Regulations 2017 (as amended). Protection was extended by the Countryside and Rights of Way Act 2000 (the CRoW Act).

Under the above legislation it is an offence to:

- kill, injure or take an individual of such a species;
- possess any part of such species either alive or dead;
- intentionally or recklessly damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
- intentionally or recklessly disturb such a species whilst using any place of shelter or protection; or
- sell or attempt to sell any such species.

The otter is included as a priority species in Section 41 of the Natural Environment and Rural Communities Act 2006.

The otter is also protected under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended). This protection relates specifically to trapping and direct pursuit of the species.

The European sub-species is also listed as globally threatened on the IUCN/WCMC RDL.

Other mammals

All wild mammals are protected by The Wild Mammals (Protection) Act 1996 (as amended). This legislation makes it an offence to mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal.