



Red Bank, Manchester

Ecological Appraisal and Bat Survey Report



Lambert Smith Hampton

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Executive Summary

Contents	Summary
Site Location	The 'site' is located at Red Bank just north of the Victoria district of Manchester City Centre and is centred at Ordnance Survey National Grid Reference SJ 84325 99479.
Proposals	The current development proposal is to demolish building 1 (unit 54) and retain building 2 (unit 50). The client is planning to let building 2 to small businesses which may involve some minor work to the building, however this has yet to be confirmed. The client has not confirmed what will happen to the vegetation on site, but the small area of scattered trees is likely to be effected as building 2 is demolished and the Japanese knotweed and scrub will need to be removed to open access to building 2.
Existing Site Information	No existing site information was made available for this assessment.
Scope of this Survey(s)	Extended Phase 1 habitat survey including desktop survey and building inspection for bats and nesting birds. Dusk bat emergence survey of building 1.
Results	Designated sites: All designated sites are a sufficient distance from the proposed works not to be significantly impacted. Habitats: There are no habitats of principal importance on site. Protected/Notable Species • No bat roosts found on site. • Habitats on-site (scattered trees, scrub and tall ruderal) are suitable for foraging and commuting bats along with nesting birds. • The ephemeral and short perennial on hard standing/bare ground has the potential to provide black redstart foraging habitat. • Habitats present on site have potential to support the foraging and / or hibernation requirements of SPI West European hedgehog. Invasive species: Japanese Knotweed present on site.
Recommendations	Reasonable Avoidance Measures: Protected and / or notable species • Foraging / commuting bats: All lighting systems used within the proposed development should avoid illuminating scattered tree line, as this could potentially disrupt valuable bat commuting and foraging areas. • Nesting birds: It is recommended vegetation clearance works are avoided during the bird nesting season (March–September inclusive) or, if necessary, preceded by a search for nesting birds by a suitably experienced ecologist. If birds are found to be nesting in any vegetation then work on or near these areas should be postponed until all of the young birds have fledged. • Black redstart: Retain ephemeral and short perennial on hard standing/bare ground habitats on site or replace if being removed in order to maintain black redstart foraging suitability on site. • West European hedgehog: A toolbox should be given by a suitable qualified ecologist to all on-site personnel before work commences. Ideally site clearance should take place between March and October under ecological supervision, outside the hibernation period. Any animals discovered during vegetation



	clearance should be placed inside a ventilated cardboard box and relocated to a suitable site. • Invasive species: A 7m buffer should be maintained around areas with Japanese knotweed. However if work needs to be undertaken in areas colonised by Japanese Knotweed a detailed control and eradication method statement should be commissioned. Additionally a specialist contractor will be required to implement a treatment plan to eradicate. Enhancement • Install 2 bird boxes on retained trees after construction work has finished. • Install 3 bat boxes on retained trees or pole after construction work has finished.
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Glossary

ACIEEM	Associate Member of CIEEM
Badger Act	Protection of Badgers Act 1992
BCT	Bat Conservation Trust
BoCC	Bird(s) of Conservation Concern
BSI	British Standard Institute
CIEEM	Chartered Institute of Ecology & Environmental Management
CRoW Act	Countryside and Rights of Way Act 2000
DEFRA	Department for the Environment, Food and Rural Affairs
EcIA	Ecological Impact Assessment
ECOW	Ecological Clerk of Works
EPS	European Protected Species
EPSL	European Protected Species Licence
GCN	Great Crested Newt
GMEU	Greater Manchester Ecological Unit
Habitat Regulations	Conservation of Habitats and Species Regulations 2017 (as amended)
HAP	Habitat Action Plan
HPI	Habitat(s) of Principal Importance
JNCC	Joint Nature Conservation Committee
LBAP	Local Biodiversity Action Plan
LNR	Local Nature Reserve
LWS	Local Wildlife Site
MCIEEM	Member of Chartered Institute of Ecology & Environmental Management
Natura 2000 site	A European site designated for its nature conservation value
NE	Natural England
NERC Act	Natural Environment and Rural Communities Act 2006
NPPF	National Planning Policy Framework
PEA	Preliminary Ecological Appraisal
SBI	Site of Biological Importance
SAP	Species Action Plan
SPA	Special Protection Area
SPI	Species of Principal Importance
SSSI	Site(s) of Special Scientific Interest
W&CA	Wildlife & Countryside Act 1981 (as amended)



1.0 Introduction

1.1 Background

WYG was commissioned by Lambert Smith Hampton on 26th July 2019 to undertake an Ecological Appraisal and a subsequent dusk bat emergence survey of one building at 50-54 Red Bank, Manchester, M4 4HF (hereafter referred to as 'the site').

This report has been prepared by Assistant Ecologist Grace Bishop Student-CIEEM and the conditions pertinent to it are provided in Appendix A.

1.2 Site Location

The 'site' is located at Red Bank just north of the Victoria district of Manchester City Centre and is centred at Ordnance Survey National Grid Reference SJ 84325 99479 – see Figure 1.

It comprises two large industrial units, with associated hardstanding. Unit 54 (referenced as building 1) is on the northern end of the site whilst unit 52 (referenced as building 2) is on the south of the site. The majority of the site is hardstanding with scrub, tall ruderal and ephemeral habitats scattered around the site. The surrounding area to the north, south and west is predominantly urban development. There is a strip of scattered trees along the eastern boundary on the site which extends into an area of woodland to the north east.

1.3 Development Proposals

The development proposal are to demolish building 1 (unit 54) and retain building 2 (unit 50). The client is planning to let building 2 to small businesses which may involve some minor work to the building, however this has yet to be confirmed. The client has not confirmed what will happen to the vegetation on site, but the small area of scattered trees is likely to be effected and the knotweed and scrub will need to be removed to open access to building 2.

1.4 Purpose of the Report

The purpose of this report is to complete:

- A desk study to obtain existing information on statutory and non-statutory sites of nature conservation interest and relevant records of protected/notable species within the site and its zone of influence;
- An extended Phase 1 Habitat Survey, involving a walkover of the site to record habitat types and dominant vegetation, including any invasive species, and a reconnaissance survey for evidence of protected fauna or habitats capable of supporting such species;
- An assessment of the potential ecological receptors present on site, identify any constraints they pose to future development and (if possible) any recommendations for any further surveys, avoidance, mitigation or enhancement measures that are needed (as appropriate);
- An external bat roost potential survey of both buildings to identify any features suitable for roosting bats; and
- A dusk emergence survey on building 1 to establish if there are any bats using the building to roost and to determine the number and species using the site for foraging or commuting.



Note that scientific names are provided at the first mention of each species and common names (where appropriate) are then used throughout the rest of the report for ease of reading.

A summary of the key legislation is also provided in Appendix B.

2.0 Methodology

2.1 Desk Study

2.1.1 Previous Reports

At the time of writing WYG was not aware of any previous reports.

2.1.2 Local Ecological Records Centre

Information was requested from the Greater Manchester Ecology Unit (GMEU) for information on any nature conservation designations and protected or notable species records within 2km of the site.

The data search covered:

- Statutory designated sites for nature conservation, namely SACs, SPAs, Ramsar sites, SSSIs, NNRs and LNRs;
- Non-statutory designated sites for nature conservation, namely LWS;
- Legally protected species, such as great crested newts *Triturus cristatus*, badger *Meles meles* and bats;
- Notable habitats and species, such as those listed as Habitats or Species of Principal Importance (HPIs or SPIs); and
- Priority habitats or species within the Greater Manchester LBAP.

The data search did not cover:

- Tree Preservation Orders (TPOs); or
- Conservation Areas designated for their special architectural and historic interest.

2.1.3 Online Resources

A search for relevant information was also made on the following websites:

- MAGIC www.magic.gov.uk - DEFRA's interactive, web-based database for statutory designations and information on any EPSL applications that have been granted in the local area; and
- NBN Atlas <https://nbnatlas.org/> - for records of protected and notable species.

Note that the use of some NBN Atlas data is limited (e.g. commercial use of data provided under a CC BY-NC licence is not possible) therefore we may not be able to report full details of those records in such cases.

2.2 Extended Phase 1 habitat survey

The following methodologies have been used to identify the ecological receptors present on or near the site, which are relevant to the proposed development.

2.2.1 Habitats

An extended Phase 1 habitat survey was undertaken on the site on 27th August 2019 by WYG Consultant Ecologist Jess Yorke ACIEEM. The weather conditions were dry with highs of 21°C.

The vegetation and broad habitat types within the site were noted during the survey in accordance with the categories specified in the Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit (JNCC, 2010). Dominant plant species were recorded for each habitat present using nomenclature according to Stace (2019). The site was also appraised for its suitability to support notable flora, with regard to the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017).

2.2.2 Protected & Notable Species

The site was inspected for evidence of, and its potential to support, protected or notable species, especially those listed under the Schedule 2 of the Habitat Regulations, Schedule 5 of the W&CA, the CRoW Act, those given extra protection under the NERC Act, and species included in the Greater Manchester LBAP.

Great Crested Newt

The site was appraised for its suitability to support GCN. The assessment was based on Guidance outlined in the *Herpetofauna Workers' Manual* (Gent & Gibson, 2003) and the *Great Crested Newt Conservation Handbook* (Langton, Becket & Foster, 2001).

Bats

Roosting Bats – Buildings / Structures / Trees

Any suitable buildings, structures or trees on site were assessed externally from the ground for their suitability to support breeding, resting and hibernating bats using survey methods based on the BCT *Bat Surveys for Professional Ecologists: Good Practice Guidelines* 3rd edition (Collins, 2016) – hereafter referred to as the 'BCT Guidelines'. The following system has therefore been used to categorise the bat roost suitability of any features found:

Table 1: Categories of Bat Roost Suitability (BCT Guidelines)

Suitability	Typical Roosting Features
Negligible	Negligible habitat feature on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions 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). A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	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	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 & potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

Foraging/commuting Bats

The BCT Guidelines use the following criteria to categorise the potential value of habitats and features for use by foraging and commuting bats and these have been used to characterise the value of this site:

Table 2: Categories of Habitat Suitability (BCT Guidelines)

Suitability	Typical Foraging & Commuting Features
Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Reptiles

The site was appraised for its suitability to support reptiles. The assessment was based on guidance outlined in the *Herpetofauna Workers' Manual* (Gent & Gibson, 2003).

Badgers

The site was surveyed for evidence of badger setts or other badger activity such as paths, latrines or signs of foraging. Methodologies used and any setts recorded were classified according to the publication *Surveying badgers. An occasional publication of the mammal society – No. 9.* (Harris, Cresswell & Jefferies, 1989).

Other Species

The site was also appraised for its suitability to support other protected or notable fauna including mammals, amphibians, birds and invertebrates with regard to the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017) and *BS42020:2013 Biodiversity – Code of Practice for Planning and Development* (BSI, 2013). Evidence of any current or historical presence of such species was recorded.

2.2.3 Invasive Species

The site was searched for evidence of invasive plant species, such as Japanese knotweed *Reynoutria japonica* (formerly *Fallopia japonica*), Indian (Himalayan) balsam *Impatiens glandulifera*, giant hogweed *Heracleum mantegazzianum*, wall cotoneaster *Cotoneaster horizontalis* and rhododendron

Rhododendron ponticum × *Rhododendron maximum*. A full list of all invasive plant species is provided in Appendix B.

2.3 Bat Presence/Likely Absence Survey

As building 1, assessed as offering low bat roost suitability (see below), is scheduled for demolition this was subject to presence/likely absence survey. To determine presence/likely absence of roosting bats at a structure with low bat roost suitability a minimum of one survey is required; either a dusk emergence or dawn-re-entry survey to be completed between May and August inclusive.

A dusk emergence survey of building 1 was undertaken on 29th August 2019. Four surveyors were positioned around the building to observe all potential roost features identified, as shown in Figure 4. The survey was led by Assistant Ecologist Grace Bishop, assisted by Principal Ecologist Philip Preston, Field Ecologist Andrew Crone and Field Ecologist Mike Brown. Surveyors used Elekon Batlogger M detectors to record bat activity. Batloggers record in full spectrum and allow subsequent analysis of files using BatExplorer software.

The dusk emergence survey commenced 15 minutes before sunset and continued for 1.5 hours after sunset. All bat surveys were completed during the period when bats are active, within the optimum survey season and within suitable weather conditions (above 10°C at start, dry and with calm winds). Table 3 summarises the survey times and weather conditions.

Table 3: Date and weather conditions for dusk emergence survey

Date of survey	Start and end time and sunrise/sunset	Equipment used	Weather
29.08.19	Start: 19:52 End: 21:37 Sunset: 20:07	Elekon Batlogger M	Start: Temp: 18 Ppt: N Cloud: 5/8 Wind: 4 Finish: Temp: 17 Ppt: N Cloud: 5/8 Wind: 4

2.4 Limitations

The optimal period to undertake an extended Phase 1 habitat survey is April-September. The survey was completed in August which is in the optimal survey window. As such this is not considered to be a limitation to the accurate assessment of the habitats and the dominant species of the respective vegetation types were visible and identifiable.

Access was restricted at the north elevation of building 1 due to dense scrub and a narrow gap between building and fence line. Access was not possible at the eastern elevation due to security fencing and area of scattered trees. Visibility of the roof for both buildings was limited due to restricted sightlines. There was no access internally for both buildings due to access and safety issues. This made it difficult



to assess building elevation and roof for any bat roost features. The eastern elevation could not be covered during the bat survey due to the above reasons. However during the survey no bats were seen foraging or commuting along this section of the building. Additionally the low potential of the building to support bat roosts limits the impact this would have had on the results.

To determine presence or likely absence of protected species usually requires multiple visits at suitable times of the year. As a result, this survey focuses on assessing the potential of the site to support species of note, which are considered to be of principal importance for the conservation of biodiversity with reference to those given protection under UK or European wildlife legislation. This report cannot therefore be considered a comprehensive assessment of the ecological interest of the site. However, it does provide an assessment of the ecological interest present on the day the site was visited and highlights areas where further survey work may be recommended. Further bat surveys have been carried out, the results of which are detailed within this report.

The dusk emergence survey was undertaken during the optimal survey season and during optimal weather conditions; warm enough, dry and no strong winds. Therefore it is considered that there were no seasonal or weather constraints to the nocturnal surveys.

The surveys were completed using specialist bat detectors. All survey techniques are subject to bias, and bat detector surveys may under-record species with weak echolocation calls, such as brown long-eared bats *Plecotus auritus*. However, these biases were considered when interpreting the results. (It is also of note that Batloggers are very effective at picking up quiet calls from brown long-eared bats). Some bat calls are variable and extremely similar between species. Where identification to species level was not possible (for example in the *Myotis* bat group), bats were identified to family level (e.g. *Myotis* sp.).

The details of this report will remain valid for a period of **one years** from the date of the survey, after which the validity of this assessment should be reviewed to determine whether further updates are necessary. Note that the recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the red line boundary or development proposals which this report was based on.

3.0 Baseline Conditions

3.1 Designated Sites

Designated sites with a 2km radius of the site are listed in Table 4.

Table 4: Designated sites within a 2km radius.

Designation	Site Name	Distance & Direction	Summary of features
SBI	Rochdale Canal Scott's Lane – Ducie Street Basin	1.4km SE	Canal supporting regionally important aquatic habitat and species, including internationally important populations of floating water plantain <i>Luronium natans</i> .
SBI	Ashton Canal (West)	1.6km SE	Important for its submerged aquatic flora.
SBI	Irwell River	2km SW	Information not available.

In addition to the above designations, the nearest Nature 2000 site is the Rochdale Canal SAC located approximately 5km north east of the site. The area is also designated as the Rochdale Canal SSSI.

The Rochdale Canal SAC and SSSI is designated due to the presence of Annex II species floating water plantain *Luronium natans*.

The site is within the Impact Risk Zone of the Rochdale Canal SSSI. The proposed development plans are not listed on MAGIC as activities likely to result in an impact upon the designated site.

3.2 Habitats

The following habitats of principal importance within 2km have been identified in the desk study.

Table 5: Habitats of Principal Importance under the NERC Act.

Habitat of Principal Importance	Number within 2km	Distance & Direction of the nearest habitat
Deciduous woodland	26	0.1km East
Woodpasture and Parkland	1	1.6km North East
Good quality semi-improved grassland	2	1.1km North West

The following habitats have been identified through our assessment, with detailed Target Notes included in Appendix C as appropriate, and shown on Figure 2:

3.2.1 Dense/Continuous Scrub

Dense continuous scrub dominated by bramble *Rubus fruticosus agg.* was present along the north eastern edge of building 1 up to the site boundary (Target note 6, Figure 2).

3.2.2 Dense/Continuous Scrub and Tall Ruderal

Dense continuous scrub underneath tall ruderal species located in the centre of the site stretching east to west over the site. Species included bramble, buddleia *Buddleja davidii* and Japanese knotweed. An old brick wall was present within the dense habitat (Target note 3, Figure 2).



3.2.3 Scattered Scrub and Tall Ruderal

Scattered scrub underneath tall ruderal species located around the south eastern edge of the site and on certain sections of both buildings. Buddleia dominated the habitat with abundant common nettle *Urtica dioica* and bramble (Target note 2, Figure 2).

3.2.4 Broad-leaved scattered trees

A strip of scattered trees was recorded along the north eastern boundary of the site. Species include willow species *Salix sp.* and silver birch *Betula pendula*. Japanese knotweed *Reynoutria japonica* was also present (Target note 13, Figure 2).

3.2.5 Tall Ruderal

A small section of tall ruderal habitat, dominated by common mugwort *Artemisia vulgaris* and great willowherb *Epilobium hirsutum*, was recorded adjacent to the scattered trees habitat on the north east boundary (Target note 10, Figure 2).

3.2.6 Scattered Ephemeral/Short Perennial and Bare Ground/Hardstanding

A small section of short ephemeral/perennial habitat interspersed with bare ground was recorded in the centre of the site (Target note 7, Figure 2). Additional ephemeral habitat interspersed within hardstanding across the majority of the site (Target note 2 & 5, Figure 2).

3.2.7 Buildings

There are two buildings constructed from brick. Building 1 at the northern end of the site has evidence of fire damage and was structurally unsafe, with the majority of the windows being boarded up or damaged. Building 2 is vacant but in fairly good condition with a pitched roof (Target notes 11 & 12, Figure 2).

3.2.8 Brick wall

A 3m high brick wall on the eastern edge of the site (Target note 1, Figure 2).

3.2.9 Invasive species

Three areas colonised by Japanese Knotweed were recorded on site, the first in the scattered tree habitat on the north eastern boundary, the second across the centre of the site (Target Note 3, Figure 2) and the third in the south of the site (Target note 4, Figure 2). Japanese knotweed was recorded encroaching onto the pavement on the south western edge of the site (Target note 9, Figure 2).

3.3 Protected & Notable Species

3.3.1 Great Crested Newts

The desk study found no results for great crested newts or EPSL applications in the data search area. During the site visit, no water bodies were observed on site. A review of aerial imagery revealed there were no water bodies within a 500m radius. In addition, the site contains poor quality terrestrial habitat to support foraging, commuting or sheltering GCN. There is also no aquatic habitat for breeding on site or in the surrounding area. **Consequently, GCN are not considered to be a potential constraint to the proposed development and are not discussed further in this report.**

3.3.2 Bats

The desk study found 1 record of Daubenton's bat *Myotis daubentonii*, 16 records of common pipistrelle *Pipistrellus pipistrellus*, 1 record of brown long-eared, 1 records of soprano pipistrelle *Pipistrellus pygmaeus*, 55 records of unidentified pipistrelle species and 4 records of unidentified bats. Additionally 11 common pipistrelle roosts were identified as well as 1 soprano pipistrelle roost and 12 unidentified pipistrelle species roosts. Table 6 illustrates the nearest record for each species recorded and roost.

Table 6: Bat records and Roost locations

Species	Distance & Direction
Daubenton's	Recording: 0.9km SW
Common pipistrelle	Recording: 0.4km SW Roost: 0.7km SW
Soprano pipistrelle	Recording: 0.8km SE Roost: 1.5km SE
Brown long-eared	Recording: 1.5km SW
Unidentified bat species	Recording: 1.4km SE
Unidentified Pipistrelle species	Recording: 0.3km SW Roost: 1.4km SE

A review on MAGIC revealed that 12 EPSLs had been granted for bats within a 2km radius (Table 7).

Table 7: EPSLs granted within 2km of site

Species	Date	Description	Distance & Direction
Common pipistrelle Soprano pipistrelle	2010	Destruction of resting place	1.2km NE
Brown long-eared	2012	Destruction of resting & breeding place	1.7 km SW
Common pipistrelle	2012	Destruction of resting place	1.7 km SW
Common pipistrelle	2013	Destruction of resting place	1.1km SE
Common pipistrelle Soprano pipistrelle	2014	Destruction of resting place	1.5km SE
Common pipistrelle	2014	Destruction of resting place	1km SW
Common pipistrelle	2014	Destruction of resting place	1.8km SW
Common pipistrelle	2015	Destruction of resting place	2km SW
Common pipistrelle	2015	Destruction of resting place	0.7km S
Common pipistrelle	2016	Destruction of resting place	0.9km SE
Common pipistrelle	2016	Destruction of resting place	0.9km SE
Common pipistrelle	2017	Destruction of resting place	1km SW

Roosting bats – Buildings

The buildings were externally assessed for any bat roost potential. Table 8 summarises the features for both buildings. Figure 3 shows the location of the identified features.

Table 8: External Building Inspection – Bat Roost Potential Assessment

Building reference	Building description	Bat roost features and Figure 3 reference colour	Bat roost
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			potential category
1 (unit 54)	A two storey brick building with a flat roof and uPVC windows. The ground floor windows are covered by metal grids and are in good condition. The first floor windows are in a poorer condition, with some windows boarded up with plywood and cracks present in the window frames. There is a small additional single storey section on the south elevation alongside a corrugated iron structure acting as a delivery bay for the building. The building had evidence of fire damage and was structurally unsafe.	White circle – Air vents Some cracks and crevices near air vents. Red circle – Cracks There are 2 cracks around 2m long, one between the ground and first floor and the second between the first floor and roof, leading to gaps in the roof concrete panels. Orange circle – Cracks and gaps in façade 1-2cm gaps in the paint work. Yellow circle – Gaps in brickwork above drainpipe Gaps above drainpipe where roof meets the top of the wall. Green Circle – Gaps in mortar Gap where wall meets the roof, mortar in sections is eroding away. Dark blue circle – Loose brick top of wall Loose brick 6.5m above ground. Gaps around 1cm wide. Pink circle – Loose brick 2m long Loose brick on corner of the building at the top approximately 8m above ground. Purple circle – Rotten wooden frames on window Rotten wooden frames on the western elevation. Grey circle – Small crack in brickwork Very small cracks(0.5-1cm wide) approximately 6-7m above ground.	Low
2 (unit 52)	The building has two storey and single storey sections as the elevation changes where the road descends towards the A664. It is constructed from brick and has a pitched roof. The majority of the ground floor windows are boarded up with plywood and the first floor	Light blue circle – Gaps in roofing panel A 2m long crack going up the wall to east of metal porch between ground and first floor. White circle – Air vents	Low

	windows are uPVC with metal grids covering them. There is a single storey garage on the northern elevation and a large metal door on the south elevation, used for deliveries.	There are air vents approximately 3m above the ground. Green Circle – Gaps in mortar Gaps approximately 3.4-4m above ground. Dark blue circle – Loose brick top of wall Loose brick creating gaps where wall meets roof. Yellow circle – Gaps in brickwork above drainpipe Gaps where wall meets roof. Grey circle – Small crack in brickwork Gap originates from wires, size between 4-10cm.	
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Roosting Bats – Trees

All of the trees on site had negligible bat roost potential.

Foraging and commuting bats

The site offers limited habitat for foraging bats in the form of scrub and tall ruderal habitats which may support flying invertebrates. The strip of scattered trees to the east of the site likely provides good commuting routes for bats and connectivity with the woodland habitat to the north east. However, it is considered that the site itself offers only low potential for commuting and foraging bats.

Dusk emergence Survey

No bats were seen emerging from building 1.

During the dusk survey there was multiple recordings of common pipistrelle commuting over building 1, the earliest recording was at 20:10 (3 minutes after sunset) and the last recording was at 21:27 (1 hour and 20 minutes after sunset). The first and last recordings were not seen but heard, but in between these times bats were seen commuting and foraging across the site, see figure 4 for flight lines. Bats were seen commuting towards and foraging above the areas of scattered trees and tall ruderal adjacent to the building. The survey also recorded common pipistrelle social calls, the first being at 20:38.

3.3.3 Reptiles

Desk study returned no results for reptiles within the search area. Habitats recorded on site are considered to form poor suitability for foraging, commuting and resting reptile species. In addition, although there is a good commuting route with the scattered trees on the east of the site (which connect to areas of woodland to the east), the surrounding area as a whole is very urban and offers no suitability for reptiles. **Therefore reptiles are not considered to be a potential constraint to the proposed development and are not discussed further in this report.**

3.3.4 Badger

Desk study revealed 1 badger sett along with 2 other signs for badgers within the 2km search area.

No evidence of badgers or their field signs was observed on site during the survey and the site is considered to offer no potential for badgers. Suitable habitat for foraging and sett creation was recorded adjacent to the site to the east within linear habitat of scattered trees/woodland. However, as the site does not offer any foraging or sett creation habitat it is unlikely that badgers will be using the site. Additionally to the west, north and south of the site the surrounding area is predominantly urban offering little habitat to support badgers. **Consequently, badgers are not considered to be a constraint to the proposed development of the site and are not considered further in this report.**

3.3.5 Otter & Water Vole

Desk study returned no results for water vole *Arvicola amphibius* or otter *Lutra Lutra* in the data search area. No evidence of otters or water voles was observed during the survey and the site completely lacked suitability for these species. The river Irk is located 0.2km east from the site boundary. The river itself is constrained either side by industrial development and appears to be of a poor quality, with evidence of fly tipping when viewing aerial photography. The river does not provide any suitable habitat for water voles and is considered unlikely to form valuable habitat for otters. Therefore otter and water vole are considered highly unlikely to be present within the river Irk or the site itself.

Consequently, water voles and otters are not considered to be a constraint to the proposed development of the site and are not considered further in this report.

3.3.6 Birds

Desk study found records for 16 species of birds within a 2km radius of the site. The nearest record to the site for each species is listed in the Table 9.

Table 9: Bird records from the desk study with number of records and distance and direction for the closest record.

Species	Number of records	Status	Nearest record: Distance and Direction
Black redstart <i>Phoenicurus ochruros</i>	23	W&CA	0.7km SW
Kingfisher <i>Alcedo atthis</i>	19	W&CA	0.8km SW
Little ringed plover <i>Charadrius dubius</i>	2	W&CA	1.4km SE
Peregrine <i>Falco peregrinus</i>	13	W&CA	0.6km SW
Bullfinch <i>Pyrrhula pyrrhula</i>	5	NERC Act	0.4km SE
Cuckoo <i>Cuculus canorus</i>	1	NERC Act	1km SW
Dunnock <i>Prunella modularis</i>	17	NERC Act	1km SW
Herring gull <i>Larus argentatus</i>	1	NERC Act	2km E
House sparrow <i>Passer domesticus</i>	11	NERC Act	1km S
Lapwing <i>Vanellus vanellus</i>	6	NERC Act	1.5km S
Lesser redpoll <i>Acanthis cabaret</i>	2	NERC Act	1km SW
Linnet <i>Linaria cannabina</i>	1	NERC Act	2km E
Song thrush <i>Turdus philomelos</i>	8	NERC Act	1km SW



Spotted flycatcher <i>Muscicapa striata</i>	2	NERC Act	1km SW
Starling <i>Sturnus vulgaris</i>	17	NERC Act	1km SW
Yellow wagtail <i>Motacilla flava</i>	1	NERC Act	1.4km SE

The site itself offers potential for nesting birds due to the scattered trees on site and adjacent to the site and areas of scrub. It is noted that the site could offer potential habitat for black redstart (a Schedule 1 species) for nesting and foraging. Local records also indicate that this species is present in the area.

Building 1 (unit 54) has a flat roof which could provide ledges for nesting black redstart, however, the building as a whole does not provide the complex structures and height required for black redstarts breeding sites. Building 2 (unit 50) is considered unsuitable for nesting and foraging as its pitched roof structures offers negligible suitability for nesting. As a whole the site offers sub-optimal nesting opportunities for this species and it is considered unlikely that nesting black redstart will be present. The ephemeral/short perennial vegetation over bare ground/hard standing and the River Irk (located 150m south east) provides the sparsely vegetated, rubbly or rocky terrain close to water required black redstart foraging habitat.

3.3.7 Invertebrates

No rare or notable invertebrates were recorded during the survey and the site has no potential to support rare or notable invertebrates due to the lack of suitable habitat. Therefore, invertebrates are not considered a constraint to the proposed development and are not discussed further in this report.

3.3.8 Other notable fauna

The desk study found 2 records of west European hedgehog *Erinaceus europaeus* approximately 1.5km southwest and 1.9km west of the site. No signs of the presence of this or other notable fauna were observed during the survey. The site did have suitable habitat for hedgehogs to nest and forage, in the dense scrub habitats and areas for shelter in the piles of wood near building 1 (Target note 8, Figure 2).

3.3.9 Notable Flora

Desk study returned results for yellow birds-nest *Hypopitys monotropa* approximately 0.4km north east of the site and grass-wrack pondweed *Potamogeton compressus* approximately 1.9km south west. Both species are listed as Species of Principal Importance under the NERC Act.

No rare or notable plants were recorded during the survey. The habitats occurring on site are not considered to be suitable for any rare and notable plants (particularly those noted above) to grow on the site. Therefore rare and notable plants are not considered to be a potential constraint to the proposed development and are not discussed further in this report.

3.3.10 Invasive Non-Native Species

Desk study returned no results for invasive species within a 2km radius of the site. Japanese Knotweed *Reynoutria japonica* was found on site in three areas, in dense stands and encroaching onto the road side in certain areas.

3.4 Importance of Ecological Features

In line with the CIEEM PEA Guidelines, and based on the above baseline information, each ecological feature recorded within the study area is considered to have the following importance, using the Methodology as defined in Section 4 of the CIEEM EcIA Guidelines (2019):

Table 10: Importance of Ecological Features

Feature	Importance	Rationale
Rochdale Canal SAC	International	Internationally designated for supporting floating water plantain.
Rochdale Canal SSSI	National	Notified for supporting a population of floating water plantain.
SBI - Rochdale Canal Scott's Lane – Ducie Street Basin	County	A Site of Biological Importance designated site for its submerged aquatic flora including floating water plantain.
SBI - Ashton Canal (West)	County	A Site of Biological Importance designated site for its submerged aquatic flora.
SBI - Irwell River	County	A designated Site of Biological Importance
Scrub and tall ruderal	Negligible	This habitat is of negligible importance in terms of the diversity of plant species.
Broad leaved scattered trees	Negligible	This habitat is of negligible importance in terms of the diversity of tree species; it is made up of self-seeded immature trees of low conservation value.
Ephemeral/short perennial vegetation on bare ground/hardstanding	Negligible	This habitat is of negligible importance in terms of the diversity of plant species.
Bats – foraging and commuting	Local	Commuting over site and using the scrub and scattered trees as foraging habitat.
Bats – building 1	Negligible	Building 1 has low suitability to support roosting bats with no emergences during the dusk survey.
Bats – building 2	Unknown	Building 2 had low suitability to support bat roosts. An emergence survey was not carried out to determine if bats were roosting in the building.
Birds - Nesting	Local	Common birds could nest in scrub and scattered trees.
Birds – black redstart nesting	Local	The ephemeral/short perennial vegetation on bare ground/hardstanding habitats in close proximity to water provides suitable foraging habitat for black redstart. It is not considered likely that black redstart would nest on either building on site.
Either: International (incl. European) / National / Regional / County / Local / Negligible Or: Unknown (i.e. further surveys/information needed)		

The potential for the proposals to have adverse or beneficial impacts on these features, along with the need for any mitigation or enhancement measures are discussed in detail below.



4.0 Relevant Planning Policy & Legislation

4.1 Revised National Planning Policy Framework

A revised NPPF was issued on 19th February 2019 (Ministry of Housing Communities and Local Government, 2019) and currently supplements government Circular 06/2005, *Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System* (Office of the Deputy Prime Minister, 2005).

Circular 06/2005 states that the presence of protected species is a material consideration in the planning process. Paragraph 170 of the NPPF also states that:

'Planning policies and decisions should contribute to and enhance the natural environment by:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan)*
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland*
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate*
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.*

The conservation and enhancement of wildlife is also specifically reference re: development within the National Parks or the Broads.

Paragraph 174 then goes on to confirmed that:

When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*



- c) *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- d) *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

Regarding EcIA's and HRA's – any sites identified, or required, as compensatory measures for adverse effects on any Natura 2000/habitats site should also be given the same level as protection as the pSPA's and cSAC's themselves. In addition, when an application is being determined, Paragraph 177 clarifies that:

"The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site."

Paragraph 180 is also relevant as;

Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:...

- c) *limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.*

4.2 Biodiversity 2020: A strategy for England's Wildlife & Ecosystem Services

Biodiversity 2020 (DEFRA, 2011) replaces the previous UK Biodiversity Action Plan and sets national targets to be achieved. The intent of Biodiversity 2020, however, is much broader than the protection and enhancement of less common species, and is meant to embrace the wider countryside as a whole.

The priority species and habitats considered under Biodiversity 2020 are the SPI & HPI detailed under NERC Act (see Appendix B for further details).

4.3 Local Biodiversity Action Plan

Local Biodiversity Action Plans (LBAPs) identify habitat and species conservation priorities at a local level (typically County by County) and are usually drawn up by a consortium of local Government organisations and conservation charities. Although they are no-longer managed at a national level many are still reviewed and updated at a local level.

The Greater Manchester LBAP is the relevant document for this site and it contains the following Habitat & Species Action Plans:

Table 11 LBAP SAPs

Species Action Plans	
Bats <i>Chiroptera</i>	Great crested newts
Hares <i>Lepus spp.</i>	Black redstart
Farmland birds	Native black poplar <i>Populus nigra</i>
Twite <i>Linaria flavirostris</i>	Water voles
Willow tit <i>Poecile montanus</i>	

Table 12 LBAP HAPs

Habitat Action Plans	
Grassland	Hedgerows
Lowland Mosslands	Reedbeds and Bittern
Ponds and Lodges	Canals
Native Woodlands	Uplands
Urban Managed Greenspace	

It should be noted that the existence of a SAP or HAP does not always infer an elevated level importance for those features. These plans may be designed to encourage an increase in these habitats/species, rather than to protect a county-scarce feature (for example).

4.4 Local Plan

The Manchester Core Strategy 2012-2027 (2012) has relevant policies include in objective 6 of the plan, which aims to maintain and improve the built and natural environment in Manchester. The following policies that are relevant are included below.

Policy EN 9 relates to green infrastructure and states that "*...Green Infrastructure Strategies the Council will encourage developers to enhance the quality and quantity of green infrastructure, improve the performance of its functions and create and improve linkages to and between areas of green infrastructure.*"

Policy EN 15 relates to Biodiversity and geological conservation and states that - "*Developers will be expected to identify and implement reasonable opportunities to enhance, restore or create new biodiversity, either on-site or adjacent to the site, contributing to linkages between valuable or potentially valuable habitat areas...*" This policy is supplemented by reference from:

- Manchester Biodiversity Strategy;
- Green Infrastructure Framework for Greater Manchester;
- Open Space, Sport & Recreation Study;
- Manchester's Climate Change Action Plan;
- Strategic Flood Risk Assessment (SFRA) for Manchester;
- Habitats Regulations Assessment (HRA) for Manchester;
- River Basin Management Plan for the North West; and
- Manchester Tree Strategy.



4.5 Legislation

Full details of the UK legislation and offences which are relevant to the ecological receptors identified are included in Appendix B. However, based on the findings of our assessment, it is considered that the proposals will need to consider the following legal provisions:

- Disturbance or killing of an SPI (West European hedgehog);
- Disturbance of nesting wild birds;
- Disturbance of nesting Schedule 1 bird species or their dependant young (black redstart); and
- Cause of permit the spread of an invasive species into the wild.



5.0 Discussion

5.1 Designated Sites

Natura 2000 Sites

The nearest Nature 2000 site is the Rochdale Canal SAC located approximately 5km north east of the site. The area is also designated as the Rochdale Canal SSSI. The Rochdale Canal SAC and SSSI is designated due to the Annex II species floating water plantain *Luronium natans*. It is considered that the designated site is a sufficient distance from the site and the development will not directly effect the qualifying features of the SAC. In addition, it is not considered that there will be any indirect impacts (air, noise or water pollution) on the qualifying features of the SAC.

Sites of Special Scientific Interest

There are no SSSIs with a 2km radius of the site. Although the site does fall within Rochdale Canal SAC, SSSI IRZ the proposed development does not fall within categories of projects which may have an adverse effect upon the site (as listed in MAGIC). It is therefore considered that works associated with this project will not result in any direct or indirect effect upon this SSSI and no further assessment is required in relation to this project.

Local Wildlife Sites

There are three SBIs with a 2km radius, designated for their aquatic habitats. The proposed development on site is not anticipated to impact upon these SBIs as they are not connected hydrologically. In addition the site is located a sufficient distance from these SBI's to avoid causing direct or indirect effects upon their respective conservation interest, therefore no further assessment is required in relation to this project.

5.2 Habitats

All habitats on site are of negligible conservation value and would not require further surveys to establish their value, the potential effects of development on them or the potential mitigation approaches for any loss.

5.3 Protected & Notable Species

Bats

All bats and their roosts receive full protection both under The Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to:

- Intentionally kill, injure or take a bat;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat; or
- Disturb a bat while it is occupying a structure or place which it uses for that purpose.

Additionally the ODPM Circular for Biodiversity and Geological conservation 2005, protects foraging and commuting.



Roosting

No roosts were found within building 1 and therefore demolition of this building can proceed with no further survey, licencing or mitigation. In the unlikely event of bats or evidence of bats being found during demolition works then all work must stop and advice sought from a bat licenced ecologist.

Foraging / Commuting

It is recommended that a sensitive lighting scheme is implemented during the construction and operational phases to reduce the impact of light pollution on bats foraging and / or commuting within and adjacent to the site boundaries. All lighting systems used within the proposed development should avoid illuminating retained scattered trees and the woodland to the east at night as this could potentially disrupt valuable bat commuting and foraging areas. The use of dark buffers and appropriate luminaire specifications are recommended to minimise any impact on foraging and commuting bats as detailed in *Bats and artificial lighting in the UK: Bats and the Built Environment series* (ILP, 2018).

Birds

All breeding wild birds, their nests and eggs are protected by the Wildlife and Countryside Act 1981 (as amended) against intentional disturbance, damage and destruction during the nesting season (generally considered to be March to September inclusive although some species are known to breed throughout the year).

To prevent a breach in UK legislation it is recommended that any future works (e.g. vegetation clearance / site preparation works) that will likely disturb, damage or destroy an active nest be avoided during the bird breeding season. Please note that birds can nest outside the main bird breeding season therefore should any active nests be identified or suspected to be present on site at any time, then works should cease and an ecologist contacted to attend site and provide advice on appropriate working methods.

Should site works require to be undertaken during the bird breeding season, then it is recommended that an ECoW conducts a check for nesting birds across the site 48 hours in advance of any works commencing. If a nesting bird is identified, the ECoW will advise on suitable working methods and an appropriate buffer zone. Measures will depend on the nature of the works in that area as well as any bird species identified to be nesting. Note that suitable working methods may result in delay(s) to undertaking site works within specific areas of site. Delays may be avoided by including allowance for conducting a search for nesting birds and potential phasing of the works in certain areas should this be required.

It is considered that the site provides potential foraging habitat for black redstart, a W&CA Schedule 1 species, in the form of ephemeral/short perennial vegetation over bare ground/hard standing with a nearby water source of the River Irk located 150m south east. It is recommended that this habitat type is retained onsite. Where it cannot be retained, it is recommended that a replacement habitat, designed to encourage black redstart foraging, is incorporated into the site. The two buildings on site were considered suboptimal as breeding sites and it is not considered necessary to undertake black redstart surveys.



Notable fauna

If the scrub habitats for hedgehogs is to be removed or damaged as part of the proposed works, an ECoW will deliver a Toolbox talk to site personnel regarding the best practice with regard to ecological issues in advance of working.

Any hedgehogs found should be picked up in gloved hands and carefully placed (where capture is possible and humane) in a ventilated box and released into suitable habitat adjacent / nearby to the site that will be unaffected by the proposed works. If injured or sickly animals are found then the animal should be admitted to a wildlife rescue, rehabilitation and release organisation. It should be noted that by conducting site preparation works at an appropriate time of year i.e. between March and October, outside the hibernation period, would avoid disturbance of these notable species during periods when they would be most vulnerable to harm.

Invasive Non-native species

Suitable precautions should be undertaken when working near Japanese knotweed. A 7m buffer should be created to avoid contamination and spread of the plant off site. However, if work needs to be carried out within areas colonised by Japanese Knotweed a detailed control and eradication method statement should be prepared and implemented by a specialist contractor prior to undertaking works on site.

Enhancements

Opportunities should be sought where possible for nature conservation enhancement of the site in line with current policy guidance (NPPF, 2019) and the Manchester Core Strategy Policy EN 15.

- Install 2 bird boxes on retained trees after construction work has finished. Bird boxes should be securely installed (using aluminium nails) at least 3-4 metres above the ground in a sheltered position.
 - At least one 1B Schwegler Nest Box with 32mm entrance hole to attract small-medium crevice dwelling species such as Black redstart or House sparrow: <https://www.nhbs.com/1b-schwegler-nest-box>
 - At least one 2H Schwegler 2H Nest box (or equivalent) with open front to attract species such as robin *Erithacus rubecula* and Black redstart: <https://www.nhbs.com/2h-schwegler-robin-box>
- Install 2 bat boxes on retained trees on or installed pole along site boundary (telegraph pole) after construction work has finished. Bat boxes should be sited 3-4 metres high to avoid disturbance by cats, the public or roads. The boxes should also be positioned so as to be high enough to avoid direct illumination, placed out of the way of strong winds and positioned where they can get sun for part of the day. Bats can use boxes as hibernation roosts in winter and as maternity roosts in the summer. Therefore to create a range of temperature variations the boxes should be installed facing different directions.



6.0 Summary

6.1 Designated Sites

All designated sites mentioned will not be significantly impacted by the proposed development as they are all sufficient distance away to avoid adverse impacts as a result of development on site.

6.2 Habitats

There are no habitats of principle importance on site; all habitats are of negligible conservation concern.

6.3 Protected & Notable Species

Reasonable avoidance measures

- **General:** It is recommended that an ecologist (ECoW) delivers a toolbox talk regarding best practice to site personnel with regard to ecological issues in advance of any works commencing.
- **Nesting birds:** To ensure legal compliance, it is recommended vegetation clearance / site preparation works is avoided during the bird nesting season (March–September inclusive) or, if necessary, preceded by a search for nesting birds by a suitably experienced ecologist. If birds are found to be nesting in any vegetation or near these areas will not be able to legally proceed until all of the young birds have fledged.
- **Black redstart:** Retain or replace lost ephemeral habitats suitable for foraging black redstarts.
- **Foraging / commuting bats:** All lighting systems used within the proposed development should avoid illuminating retained tree lines and adjacent woodland as this could potentially disrupt valuable bat commuting and foraging areas.
- **Hedgehogs:** Ideally site clearance should take place during March and October, outside the hibernation period. Any animals discovered during vegetation clearance should be placed inside a ventilated cardboard box and relocated to a suitable site. Boundary fencing should include gaps suitable to allow hedgehog dispersal throughout the site.
- **Invasive species:** Suitable precautions should be undertaken when working near Japanese knotweed, a 7m buffer should be created to avoid contamination and spread of the plant further. However if work needs to be carried out within areas of Japanese Knotweed a suitable methods statement needs to be commissioned and carried out by a suitably qualified contractor.

Enhancements

- **Birds:** Install 2 bird boxes on retained trees after construction work has finished.
- **Bats:** Install 2 bat boxes on retained trees or pole after construction work has finished.



7.0 References

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Please note that the legislation which is relevant to this report is not included in the list above, but details are included in Appendix B below.



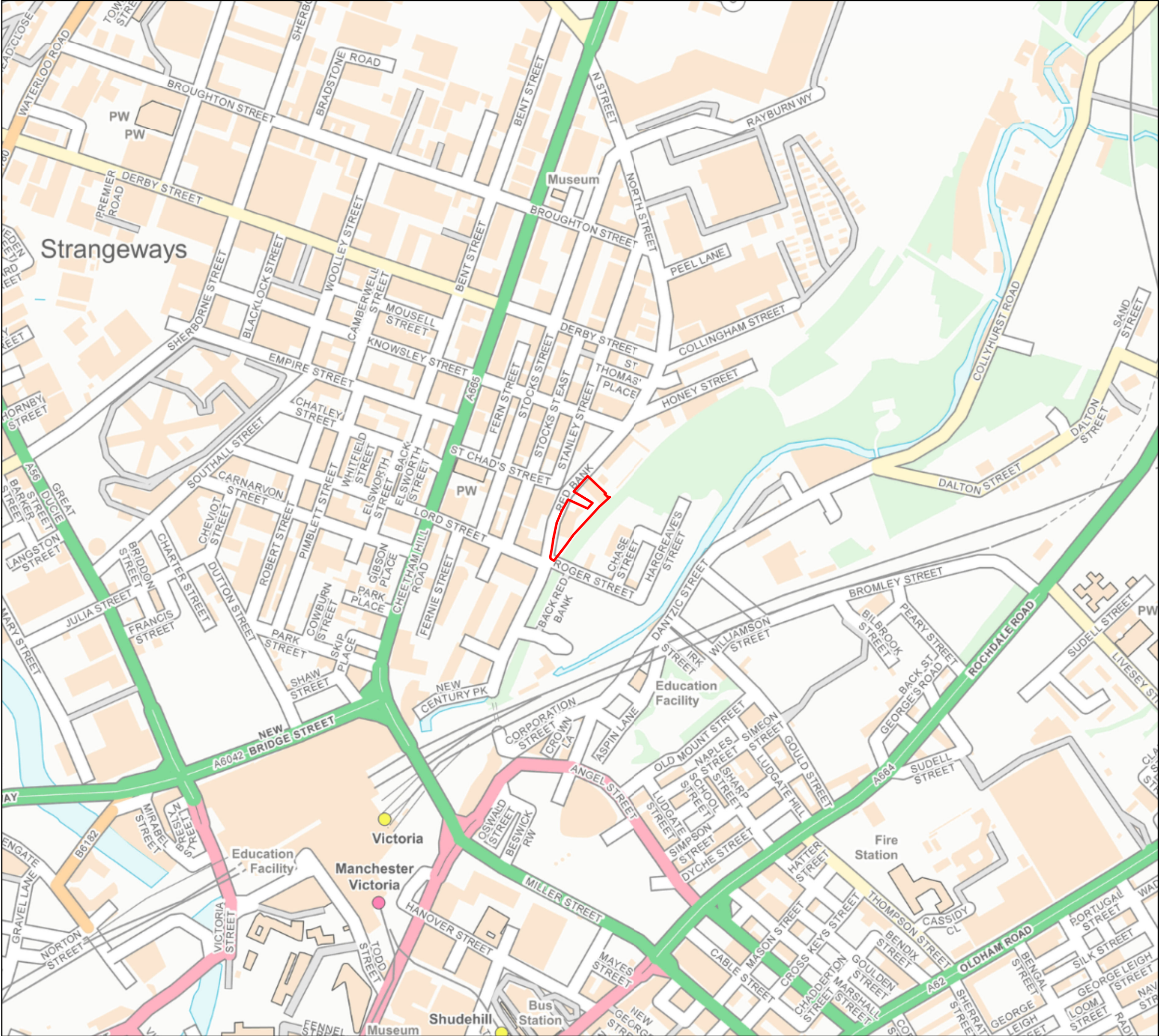
FIGURES

Figure 1 – Site Location Plan

Figure 2 – Phase 1 Habitat Plan

Figure 3 – Bat Roost Potential

**Figure 4 – Surveyor Location Plan
and Bat Foraging and Commuting
Routes**



Rev	Date	Notes
A	28/08/19	Initial map production

Legend

Site boundary

0 50 100 200 Metres



Site Location Plan

Red Bank, Manchester
Client Name

Scale at A3: 1:5,000	Project No: A114725	Drawing No: Figure 1	Revision: A
Drawn by: Ben Blowers	Drawn date: 28/08/2019	Approved by: Grace Bishop	

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Rev	Date	Notes
A	06/09/19	Initial map production

Legend

- Site boundary
- Scrub - dense/continuous
- Scrub - dense/continuous & tall ruderal
- Scrub - scattered & tall ruderal
- Broadleaved parkland/scattered trees
- Tall ruderal
- Buildings
- Hardstanding
- Bare ground
- Wall
- Scattered ephemeral
- Target note

0 3.75 7.5 15 Metres



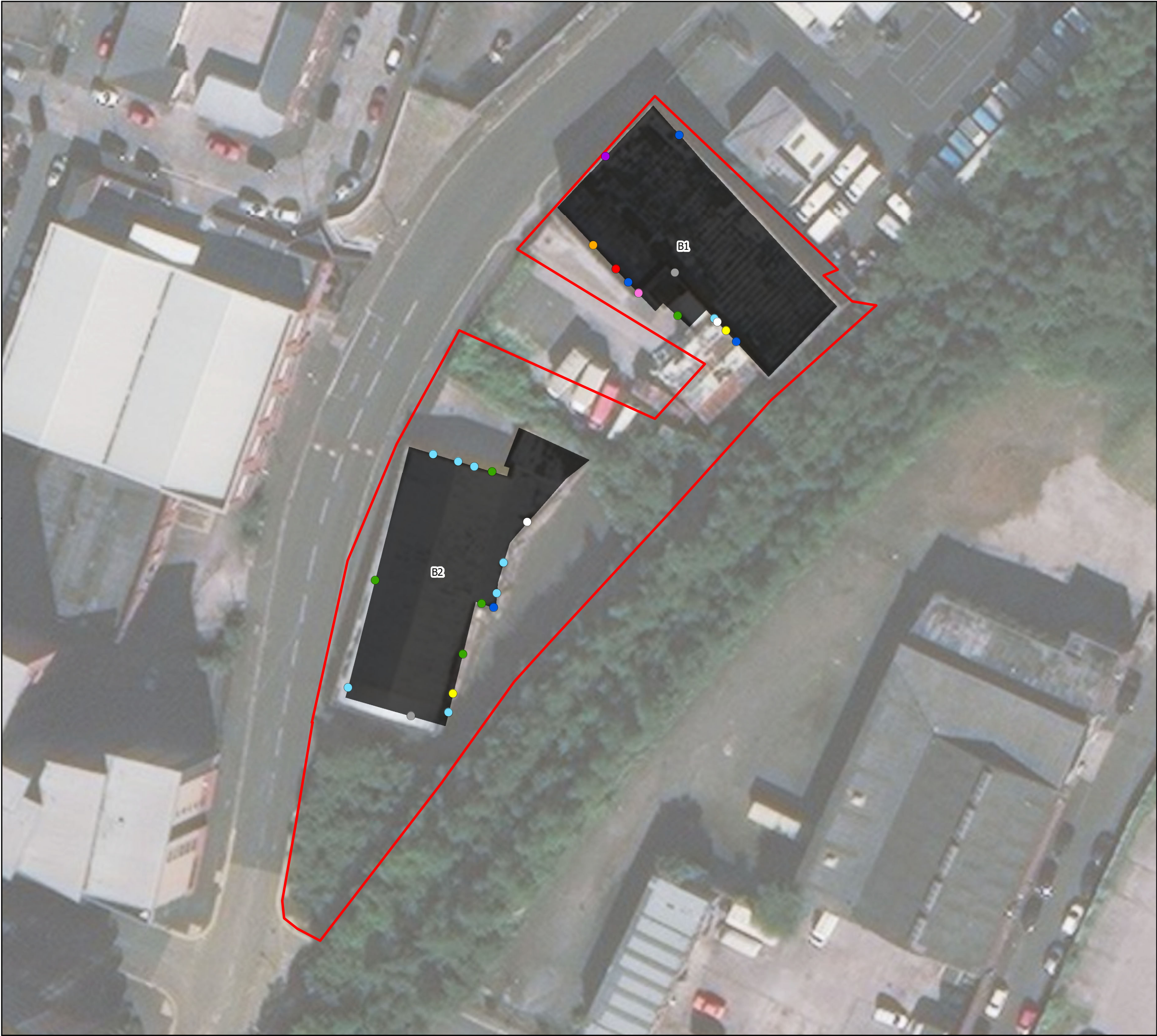
Phase 1 Habitat Plan

Red Bank, Manchester
Lambert Smith Hampton

Scale at A3: 1:500	Project No: A114725	Drawing No: Figure 2	Revision: A
Drawn by: Ben Blowers	Drawn date: 06/09/2019	Approved by: Grace Bishop	

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Rev	Date	Notes
A	06/09/19	Initial map production

Legend

- Site boundary
- Buildings
- Air vents
- Cracks
- Cracks and gaps in facade
- Gaps in brickwork above drainpipe
- Gaps in mortar
- Gaps in roofing panel
- Loose brick top of wall
- Loose brickwork 2m long
- Rotten wooden frames on windows
- Small crack in brickwork

0 3.75 7.5 15 Metres



Bat Roost Potential Plan

Red Bank, Manchester
Lambert Smith Hampton

Scale at A3: 1:500	Project No: A114725	Drawing No: Figure 3	Revision: A
Drawn by: Ben Blowers	Drawn date: 06/09/2019	Approved by: Grace Bishop	

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Appendix A – Report Conditions

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The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections'. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The "shelf life" of the Report will be determined by a number of factors including; its original purpose, the Client's instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. WYG accept no liability for issues with performance arising from such factors.



Appendix B – Key Legislation

Bern Convention

The *Convention on the Conservation of European Wildlife and Natural Habitats* (the *Bern Convention*) was adopted in Bern, Switzerland in 1979, and was ratified in 1982. Its aims are to protect wild plants and animals and their habitats listed in Appendices 1 and 2 of the Convention, and regulate the exploitation of species listed in Appendix 3. The regulation imposes legal obligations on participating countries to protect over 500 plant species and more than 1000 animals.

To meet its obligations imposed by the Convention, the European Community adopted the *EC Birds Directive* (1979) and the *EC Habitats Directive* (1992 – see below). Since the Lisbon Treaty, in force since 1st December 2009, European legislation has been adopted by the European Union.

Bonn Convention

The Convention on the Conservation of Migratory Species of Wild Animals or 'Bonn Convention' was adopted in Bonn, Germany in 1979 and came into force in 1985. Participating states agree to work together to preserve migratory species and their habitats by providing strict protection to species listed in Appendix I of the Convention. It also establishes agreements for the conservation and management of migratory species listed in Appendix II.

In the UK, the requirements of the convention are implemented via the Wildlife & Countryside Act 1981 (as amended), Wildlife (Northern Ireland) Order 1985 (as amended), Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 and the Countryside and Rights of Way Act 2000 (CRoW).

Habitats Directive

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, or the 'Habitats Directive', is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

In the UK, the Habitats Directive is transposed into national law via the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales, and via the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland.

Birds Directive

The EC Directive on the Conservation of Wild Birds (79/409/EEC) or 'Birds Directive' was introduced to achieve favourable conservation status of all wild bird species across their distribution range. In this context, the most important provision is the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex 1 of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance.

Conservation of Habitats and Species Regulations 2017 (as amended)

Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I or II of the Habitats Directive respectively) to the European Commission. These sites, if ratified by the European Commission, are then designated as Special Protection Areas (SPAs) within six years. Public bodies must also help preserve, maintain and re-establish habitats for wild birds.

The 2018 amendments mainly related to the impact of the *People Over Wind* decision and some implications arising for neighbourhood plan development and a range of other planning tools including Local Development Orders and Permission in Principle – see here for full details:

<https://www.legislation.gov.uk/ukxi/2018/1307/note/made>

The Regulations make it an offence to deliberately capture, kill, disturb or trade in the animals listed in Schedule 2, or pick, uproot, destroy, or trade in the plants listed in Schedule 5 - see below:

Schedule 2 – European Protected Species of Animals	Schedule 5 – European Protected Species of Plants
Horseshoe bats <i>Rhinolophidae</i> - all species	Shore dock <i>Rumex rupestris</i>
Common bats <i>Vespertilionidae</i> - all species	Killarney fern <i>Trichomanes speciosum</i>
Large Blue Butterfly <i>Maculinea arion</i>	Early gentian <i>Gentianella anglica</i>
Wild cat <i>Felis sylvestris</i>	Lady's-slipper <i>Cypripedium calceolus</i>
Dolphins, porpoises and whales <i>Cetacea</i> – all sp.	Creeping marsh-wort <i>Apium repens</i>
Dormouse <i>Muscardinus avellanarius</i>	Slender naiad <i>Najas flexilis</i>
Pool frog <i>Rana lessonae</i>	Fen orchid <i>Liparis loeselii</i>
Sand lizard <i>Lacerta agilis</i>	Floating-leaved water plantain <i>Luronium natans</i>
Fisher's estuarine moth <i>Gortyna borelii lunata</i>	Yellow marsh saxifrage <i>Saxifraga hirculus</i>
Great crested newt <i>Triturus cristatus</i>	
Otter <i>Lutra lutra</i>	
Lesser whirlpool ram's-horn snail <i>Anisus vorticulus</i>	
Smooth snake <i>Coronella austriaca</i>	
Sturgeon <i>Acipenser sturio</i>	
Natterjack toad <i>Epidalea calamita</i>	
Marine turtles <i>Caretta caretta</i> , <i>Chelonia mydas</i> , <i>Lepidochelys kempji</i> , <i>Eretmochelys imbricata</i> , <i>Dermochelys coriacea</i>	

Wildlife & Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. This legislation is the chief means by which the 'Bern Convention' and the Birds Directive are implemented in the UK. Since it was first introduced, the Act has been amended several times.

The Act makes it an offence to (with exception to species listed in Schedule 2) 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
- take or destroy an egg of any wild bird.

Or to intentionally do the following to a wild bird listed in Schedule 1:

- disturbs any wild bird while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird.

In addition, the Act makes it an offence (subject to exceptions) to:

- intentionally or recklessly kill, injure or take any wild animal listed on Schedule 5;
- interfere with places used for shelter or protection, or intentionally disturbing animals occupying such places; and
- The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Finally, the Act also makes it an offence (subject to exceptions) to:

- intentionally pick, uproot or destroy any wild plant listed in Schedule 8, or any seed or spore attached to any such wild plant;
- unless an authorised person, intentionally uproot any wild plant not included in Schedule 8; or
- sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Following all amendments to the Act, Schedule 5 'Animals which are Protected' contains a total of 154 species of animal, including several mammals, reptiles, amphibians, fish and invertebrates. Schedule 8 'Plants which are Protected' of the Act, contains 185 species, including higher plants, bryophytes and fungi and lichens. A comprehensive and up-to-date list of these species can be obtained from the JNCC website.

Part 14 of the Act makes unlawful to plant or otherwise cause to grow in the wild any plant which is listed in Part II of Schedule 9.

It is recommended that plant material of these species is disposed of as bio-hazardous waste, and these plants should not be used in planting schemes.

Schedule 1 - Birds which are protected by special penalties

Avocet	<i>Recurvirostra avosetta</i>	Osprey	<i>Pandion haliaetus</i>
Bee-eater	<i>Merops apiaster</i>	Owl, Barn	<i>Tyto alba</i>
Bittern	<i>Botaurus stellaris</i>	Owl, Snowy	<i>Nyctea scandiaca</i>
Bittern, Little	<i>Ixobrychus minutus</i>	Peregrine	<i>Falco peregrinus</i>
Bluethroat	<i>Luscinia svecica</i>	Petrel, Leach's	<i>Oceanodroma leucorhoa</i>
Brambling	<i>Fringilla montifringilla</i>	Phalarope, Red-necked	<i>Phalaropus lobatus</i>
Bunting, Cirl	<i>Emberiza cirlus</i>	Plover, Kentish	<i>Charadrius alexandrinus</i>
Bunting, Lapland	<i>Calcarius lapponicus</i>	Plover, Little Ringed	<i>Charadrius dubius</i>
Bunting, Snow	<i>Plectrophenax nivalis</i>	Quail, Common	<i>Coturnix coturnix</i>
Buzzard, Honey	<i>Pernis apivorus</i>	Redstart, Black	<i>Phoenicurus ochruros</i>
Capercaillie	<i>Tetrao urogallus</i>	Redwing	<i>Turdus iliacus</i>
Chough	<i>Pyrrhocorax pyrrhocorax</i>	Rosefinch, Scarlet	<i>Carpodacus erythrurus</i>
Corncrake	<i>Crex crex</i>	Ruff	<i>Philomachus pugnax</i>
Crake, Spotted	<i>Porzana porzana</i>	Sandpiper, Green	<i>Tringa ochropus</i>
Crossbills (all species)	<i>Loxia</i>	Sandpiper, Purple	<i>Calidris maritima</i>
Curlew, Stone	<i>Burhinus oedicnemus</i>	Sandpiper, Wood	<i>Tringa glareola</i>
Divers (all species)	<i>Gavia</i>	Scaup	<i>Aythya marila</i>
Dotterel	<i>Charadrius morinellus</i>	Scoter, Common	<i>Melanitta nigra</i>
Duck, Long-tailed	<i>Clangula hyemalis</i>	Scoter, Velvet	<i>Melanitta fusca</i>
Eagle, Golden	<i>Aquila chrysaetos</i>	Serim	<i>Serinus serinus</i>
Eagle, White-tailed	<i>Haliaetus albicilla</i>	Shorelark	<i>Eremophila alpestris</i>
Falcon, Gyr	<i>Falco rusticolus</i>	Shrike, Red-backed	<i>Lanius collurio</i>
Fieldfare	<i>Turdus pilaris</i>	Spoonbill	<i>Platalea leucorodia</i>
Firecrest	<i>Regulus ignicapillus</i>	Stilt, Black-winged	<i>Himantopus himantopus</i>
Garganey	<i>Anas querquedula</i>	Stint, Temminck's	<i>Calidris temminckii</i>

Godwit, Black-tailed	<i>Limosa limosa</i>	Swan, Bewick's	<i>Cygnus bewickii</i>
Goshawk	<i>Accipiter gentilis</i>	Swan, Whooper	<i>Cygnus cygnus</i>
Grebe, Black-necked	<i>Podiceps nigricollis</i>	Tern, Black	<i>Chlidonias niger</i>
Grebe, Slavonian	<i>Podiceps auritus</i>	Tern, Little	<i>Sterna albifrons</i>
Greenshank	<i>Tringa nebularia</i>	Tern, Roseate	<i>Sterna dougallii</i>
Gull, Little	<i>Larus minutus</i>	Tit, Bearded	<i>Panurus biarmicus</i>
Gull, Mediterranean	<i>Larus melanocephalus</i>	Tit, Crested	<i>Parus cristatus</i>
Harriers (all species)	<i>Circus</i>	Tree-creeper, Short-toed	<i>Certhia brachydactyla</i>
Heron, Purple	<i>Ardea purpurea</i>	Warbler, Cetti's	<i>Cettia cetti</i>
Hobby	<i>Falco subbuteo</i>	Warbler, Dartford	<i>Sylvia undata</i>
Hoopoe	<i>Upupa epops</i>	Warbler, Marsh	<i>Acrocephalus palustris</i>
Kingfisher	<i>Alcedo atthis</i>	Warbler, Savi's	<i>Locustella luscinioides</i>
Kite, Red	<i>Milvus milvus</i>	Whimbrel	<i>Numenius phaeopus</i>
Merlin	<i>Falco columbarius</i>	Woodlark	<i>Lullula arborea</i>
Oriole, Golden	<i>Oriolus oriolus</i>	Wryneck	<i>Jynx torquilla</i>
Animal (Vertebrate) Species Listed in Schedule 5 (full legal protection at all times)			
Horseshoe Bats (all species)	<i>Rhinolophidae</i>	Newt – Great Crested	<i>Triturus cristatus</i>
Typical Bats (all species)	<i>Vespertilionidae</i>	Snake – Smooth	<i>Coronella austriaca</i>
Dolphin – Bottle-nosed	<i>Tursiops truncatus (tursio)</i>	Toad, Natterjack	<i>Epidalea calamita</i>
Dolphin – Common	<i>Delphinus delphis</i>	Turtles – All Species	<i>Cheloniidae & Dermochelyidae</i>
Dormouse – Hazel	<i>Muscardinus avellanarius</i>	Basking Shark	<i>Cetorhinus maximus</i>
Pine Marten	<i>Martes martes</i>	Burbot	<i>Lota lota</i>
Porpoise – Harbour	<i>Phocaena phocaena</i>	Goby – Giant	<i>Gobius cobitis</i>
Otter – Eurasian	<i>Lutra lutra</i>	Goby – Couch's	<i>Gobius couchii</i>
Squirrel – Red	<i>Sciurus vulgaris</i>	Seahorse – Short-snouted ¹	<i>Hippocampus hippocampus</i>
Walrus	<i>Odobenus rosmarus</i>	Seahorse – Spiny	<i>Hippocampus guttulatus</i>
Water Vole	<i>Arvicola amphibius</i>	Sturgeon	<i>Acipenser sturio</i>
Whales – All Species	<i>Cetacea</i>	Vendace	<i>Coregonus albula</i>
Wildcat	<i>Felis sylvestris</i>	Whitefish	<i>Coregonus lavaretus</i>
Lizard – Sand	<i>Lacerta agilis</i>		
Animal (Vertebrate) Species Protected under Section 9 (1) part: Killing and Injuring & Section 9 (5) Sale			
Adder	<i>Vipera berus</i>	Slow-worm	<i>Anguis fragilis</i>
Lizard – Viviparous	<i>Zootoca vivipara</i>	Snake – Grass	<i>Natrix helvetica (natrix)</i>
Animals (Vertebrate) Species Protected under Section 9 (5) Sale only			
Frog – common	<i>Rana temporaria</i>	Newt – Smooth	<i>Lissotriton vulgaris</i>
Newt – Palmate	<i>Lissotriton helvetica</i>	Toad – Common	<i>Bufo bufo</i>
Animals (Vertebrate) Species Protected under Section 9 (1) (4)(a): Killing, Injuring & Taking and Damage / Destruction of place of shelter / protection only			
Allis Shad	<i>Alosa alosa</i>	Shark – Angel	<i>Squatina squatina</i>
Twaite Shad	<i>Alosa fallax</i>		
Butterflies & Moths – Full Protection under Schedule 5² at all times			
High brown fritillary	<i>Argynnis adippe</i>	Fisher's Estuarine Moth	<i>Gortyna borelii</i>
Large Blue	<i>Maculinea arion</i>	Barberry Carpet	<i>Pareulype berberata</i>

¹ Both sea horse species are protected in England only.

² Viper's Bugloss Moth *Hadena irregularis* was removed from Schedule 5 in 1996 as it is believed to be extinct.

Heath Fritillary	<i>Mellicta athalea</i>	Black-veined Moth	<i>Siona lineata</i>
Marsh Fritillary	<i>Eurodryas aurinia</i>	Sussex Emerald	<i>Thalera fimbrialis</i>
Swallowtail	<i>Papilio machaon britannicus</i>	Essex Emerald	<i>Thetidia smaragdalis</i>
Large Copper	<i>Lycaena dispar</i>	Fiery Clearwing	<i>Bembecia chrysidiformis</i>
Reddish-buff Moth	<i>Acosmetia caliginosa</i>	New-Forest Burnet	<i>Zygaena viciae</i>
Butterflies – Protected under Section 9 (5) Sale Only			
Purple Emperor	<i>Apatura iris</i>	Adonis Blue	<i>Lysandra bellargus</i>
Northern Brown Argus	<i>Aricia artaxerxes</i>	Chalkhill Blue	<i>Lysandra coridon</i>
Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Glanville Fritillary	<i>Melitaea cinxia</i>
Chequered Skipper	<i>Carterocephalus palaemon</i>	Large Tortoiseshell	<i>Nymphalis polychloros</i>
Large Heath	<i>Coenonympha tullia</i>	Silver-studded Blue	<i>Plebejus argus</i>
Small Blue	<i>Cupido minimus</i>	Black Hairstreak	<i>Strymonidia pruni</i>
Mountain Ringlet	<i>Erebia epiphron</i>	White-letter Hairstreak	<i>Strymonidia w-album</i>
Duke of Burgundy	<i>Hamearis lucina</i>	Brown Hairstreak	<i>Thecla betulae</i>
Silver-spotted Skipper	<i>Hesperia comma</i>	Lulworth Skipper	<i>Thymelicus acteon</i>
Wood White	<i>Leptidea sinapis</i>		
Other Invertebrates – Full Protection under Schedule 5 at all times			
Rainbow Leaf-beetle	<i>Chrysolina cerealis</i>	Tadpole Shrimp	<i>Triops cancriformis</i>
Spangled Diving-beetle	<i>Graphopterus zonatus</i>	Trembling Sea-mat	<i>Victorella pavidia</i>
Lesser Silver Water-beetle	<i>Hydrochara caraboides</i>	De Folin's Lagoon Snail	<i>Caecum armoricum</i>
Moccas Beetle	<i>Hypebaeus flavipes</i>	Sandbowl Snail	<i>Catinella arenaria</i>
Violet Click-beetle	<i>Limoniscus violaceus</i>	Freshwater Pearl Mussel	<i>Margaritifera margaritifera</i>
Bembridge Beetle	<i>Parcymus aeneus</i>	Glutinous Snail	<i>Myxas glutinosa</i>
New Forest Cicada	<i>Cicadetta montana</i>	Lagoon Snail	<i>Paludinella littorina</i>
Wart-Biter	<i>Decticus verrucivorus</i>	Lagoon Sea Slug	<i>Tenellia adspersa</i>
Mole-Cricket	<i>Gryllotalpa gryllotalpa</i>	Northern Hatchet-shell	<i>Thyasira gouldi</i>
Field-Cricket	<i>Gryllus campestris</i>	Tentacled Lagoon-worm	<i>Alkmaria romijni</i>
Norfolk Hawker Dragonfly	<i>Aeshna isosceles</i>	Lagoon Sand-worm	<i>Armandia cirrhosa</i>
Southern Damselfly	<i>Coenagrion mercuriale</i>	Medicinal Leech	<i>Hirudo medicinalis</i>
Fen Raft Spider	<i>Dolomedes fimbriatus</i>	Marine Hydroid	<i>Clavopsella navis</i>
Ladybird Spider	<i>Eresus niger (cinaberinus)</i>	Ivell's Sea Anemone	<i>Edwardsia ivelli</i>
Fairy Shrimp	<i>Chirocephalus diaphanus</i>	Starlet Sea Anemone	<i>Nematosella vectensis</i>
Lagoon Sand Shrimp	<i>Gammarus insensibilis</i>	Atlantic Stream (White-clawed) Crayfish	<i>Austropotamobius pallipes</i>
Other Invertebrates Protected under Section 9 (1) Possession & 9 (2) (5) Sale only			
Stag Beetle	<i>Lucanus cervus</i>	Roman Snail ³	<i>Helix pomatia</i>
Fan Mussel	<i>Atrina fragilis</i>	Pink Sea-fan	<i>Eunicella verrucosa</i>
Other Invertebrates Protected under Section 9 (4) (a) Damage / Destruction of Place of Shelter / Protection only			
Mire Pill Beetle	<i>Curimopsis nigrita</i>		
Vascular Plant Species - Full Protection under Schedule 8 at all times (previous Scientific name in brackets)			
Adder's-tongue Least	<i>Ophioglossum lusitanicum</i>	Lily – Snowdon	<i>Gagea serotina (Lloydia serotina)</i>
Alison- Small	<i>Alyssum alyssoides</i>	Marsh-mallow – Rough	<i>Malva setigera (Althaea hirsuta)</i>

³ England only

Broomrape – Bedstraw	<i>Orobanche caryophyllacea</i>	Milk-parsley – Cambridge	<i>Selinum carvifolia</i>
Broomrape – Oxtongue	<i>Orobanche picridis</i>	Mudwort – Welsh	<i>Limosella aquatica</i>
Broomrape – Thistle	<i>Orobanche reticulata</i> ⁴	Naiad – Holly-leaved	<i>Najas marina</i>
Cabbage – Lundy	<i>Coincya wrightii</i> (<i>Rhynchosinapis wrightii</i>)	Orache – Stalked	<i>Atriplex pedunculata</i> (<i>Halimione pedunculata</i>)
Calamint – Wood	<i>Clinopodium menthifolium</i> (<i>Calamintha sylvatica</i>)	Orchid – Early Spider	<i>Ophrys sphegodes</i>
Catchfly – Alpine	<i>Silene suecica</i> (<i>Lychnis alpina</i>)	Orchid – Ghost	<i>Epipogium aphyllum</i>
Centaury – Slender	<i>Centaureum tenuiflorum</i>	Orchid – Lapland Marsh	<i>Dactylorhiza lapponica</i>
Cinquefoil – Rock	<i>Potentilla rupestris</i>	Orchid – Late Spider	<i>Ophrys fuciflora</i>
Clary – Meadow	<i>Salvia pratensis</i>	Orchid – Lizard	<i>Himantoglossum hircinum</i>
Club-rush – Triangular	<i>Schoenoplectus triqueter</i> (<i>Scirpus triqueter</i>)	Orchid – Military	<i>Orchis militaris</i>
Colt's-foot – Purple	<i>Homogyne alpina</i>	Orchid – Monkey	<i>Orchis simia</i>
Cotoneaster – Wild	<i>Cotoneaster cambricus</i> (<i>C. integerrimus</i>)	Pear – Plymouth	<i>Pyrus cordata</i>
Cotton-grass – Slender	<i>Eriophorum gracile</i>	Pennycress – Perfoliate	<i>Microthlaspi perfoliatum</i> (<i>Thlaspi perfoliatum</i>)
Cow-wheat – Field	<i>Melampyrum arvense</i>	Pennyroyal	<i>Mentha pulegium</i>
Crocus – Sand	<i>Romulus columnae</i>	Pigmyweed	<i>Crassula aquatica</i>
Cudweed – Broad-leaved	<i>Filago pyramidata</i>	Pine - Ground	<i>Ajuga chamaepitys</i>
Cudweed – Jersey	<i>Gnaphalium luteoalbum</i>	Pink – Cheddar	<i>Dianthus gratianopolitanus</i>
Cudweed – Red-tipped	<i>Filago lutescens</i>	Pink – Childing	<i>Petrorhagia nanteuillii</i>
Cut-grass	<i>Leersia oryzoides</i>	Ragwort – Fen	<i>Jacobaea paludosa</i> (<i>Senecio paludosa</i>)
Deptford Pink	<i>Dianthus armeria</i>	Ramping-fumitory – Martin's	<i>Fumaria reuteri</i> (<i>F. martinii</i>)
Diapensia	<i>Diapensia lapponica</i>	Rampion – Spiked	<i>Phyteuma spicata</i>
Eryngo – Field	<i>Eryngium campestre</i>	Restharrow – Small	<i>Ononis reclinata</i>
Fern – Dickie's-bladder	<i>Cystopteris dickieana</i>	Rock-cress – Alpine	<i>Arabis alpina</i>
Fleabane – Alpine	<i>Erigeron borealis</i>	Rock-cress – Bristol	<i>Arabis scabra</i>
Fleabane – Small	<i>Pulicaria vulgaris</i>	Sandwort – Norwegian	<i>Arenaria norvegica</i> ⁵
Galingale – Brown	<i>Cyperus fuscus</i>	Sandwort – Teesdale	<i>Minuartia stricta</i>
Gentian – Alpine	<i>Gentiana nivalis</i>	Saxifrage – Drooping	<i>Saxifraga cernua</i>
Gentian - Dune	<i>Gentianella amarella</i> subsp. <i>occidentalis</i> (<i>Gentianella uliginosa</i>)	Saxifrage – Tufted	<i>Saxifraga cespitosa</i>
Gentian – Fringed	<i>Gentianopsis ciliata</i> (<i>Gentianella ciliata</i>)	Solomon's-seal – Whorled	<i>Polygonatum verticillatum</i>
Gentian - Spring	<i>Gentiana verna</i>	Sow-thistle – Alpine	<i>Cicerbita alpina</i>
Germander – Cut-leaved	<i>Teucrium botrys</i>	Spearwort – Adder's-tongue	<i>Ranunculus ophioglossifolius</i>
Germander – Water	<i>Teucrium scordium</i>	Speedwell – Fingered	<i>Veronica triphyllos</i>
Gladiolus – Wild	<i>Gladiolus illyricus</i>	Speedwell – Spiked	<i>Veronica spicata</i> ⁶
Goosefoot – Stinking	<i>Chenopodium vulvaria</i>	Spike-rush – Dwarf	<i>Eleocharis parvula</i>

⁴ The Weeds Act 1959 does not apply to thistles *Cirsium* & *Carduus* species supporting this broomrape.

⁵ All subspecies occurring in the UK

⁶ Both subspecies: *spicata* & *hybrida*

Grass-poly	<i>Lythrum hyssopifolia</i>	South-stack Fleawort	<i>Tephrosia integrifolia</i> <i>ssp. maritima</i>
Hare's-ear – Sick- leaved	<i>Bupleurum falcatum</i>	Star-of-Bethlehem – Early	<i>Gagea bohemica</i>
Hare's-ear – Small	<i>Bupleurum baldense</i>	Starfruit	<i>Damasonium alisma</i>
Hawk's-beard – Stinking	<i>Crepis foetida</i>	Strapwort	<i>Corrigiola littoralis</i>
Hawkweed – Northroe	<i>Hieracium northroense</i>	Violet – Fen	<i>Viola persicifolia</i>
Hawkweed – Shetland	<i>Hieracium zetlandicum</i>	Viper's-grass	<i>Scorzonera humilis</i>
Hawkweed – Weak- leaved	<i>Hieracium attenuatifolium</i>	Water-plantain – Ribbon- leaved	<i>Alisma gramineum</i>
Heath – Blue	<i>Phyllodoce caerulea</i>	Wood-sedge – Starved	<i>Carex depauperata</i>
Helleborine – Red	<i>Cephalanthera rubra</i>	Woodsia – Alpine	<i>Woodsia alpina</i>
Horsetail – Branched	<i>Equisetum ramosissimum</i>	Woodsia – Oblong	<i>Woodsia ilvensis</i>
Hound's-tongue – Green	<i>Cynoglossum germanicum</i>	Wormwood – Field	<i>Artemisia campestris</i>
Knawel – Perennial	<i>Scleranthus perennis</i> ⁷	Woundwort - Downy	<i>Stachys germanica</i>
Knot-grass – Sea	<i>Polygonum maritimum</i>	Woundwort – Limestone	<i>Stachys alpina</i>
Leek – Round-headed	<i>Allium sphaerocephalon</i>	Yellow-rattle – Greater	<i>Rhinanthus angustifolius</i>
Lettuce – Least	<i>Lactuca saligna</i>		
Vascular Plant Species – Partial Protection under Section 13 (2) Protection from commercial exploitation and sale			
Bluebell	<i>Hyacinthoides non-scripta</i>		
Bryophytes – Full Protection under Schedule 8 at all times			
Anamodon – Long- leaved	<i>Anomodon langifolius</i>	Flamingo Moss	<i>Desmatodon cernuus</i>
Blackwort	<i>Southbya nigrella</i>	Frostwort	<i>Gymnomitrium apiculatum</i>
Crystalwort – Lizard	<i>Riccia bifurca</i>	Glaucous Beard Moss	<i>Barbula glauca</i>
Earwort – Marsh	<i>Jamesoniella undulifolia</i>	Green Shield Moss	<i>Buxbaumia viridis</i>
Feathermoss – Polar	<i>Hygrohypnum polare</i>	Hair Silk Moss	<i>Plagiothecium piliferum</i>
Flapwort – Norfolk	<i>Leiocolea rutheana</i>	Knothole Moss	<i>Zygodon forsteri</i>
Grimmia – Blunt-leaved	<i>Grimmia unicolor</i>	Large Yellow Feather Moss	<i>Scorpidium turgescens</i>
Petalwort	<i>Petalophyllum ralfsii</i>	Millimetre Moss	<i>Micromitrium tenerum</i>
Lindenberg's Leafy- Liverwort	<i>Adelanthus lindenbergianus</i>	Multi-fruited River Moss	<i>Cryphaea lamyana</i>
Feather-moss Slender Green	<i>Drepanocladus vernicosus</i>	Nowell's Limestone Moss	<i>Zygodon gracilis</i>
Alpine Copper-Moss	<i>Melichhoferia melichoferia</i>	Rigid Apple Moss	<i>Bartramia stricta</i>
Baltic Bog-Moss	<i>Sphagnum balticum</i>	Round-leaved feather Moss	<i>Rhynchostegium rotundifolium</i>
Blue Dew-Moss	<i>Saelania glaucescens</i>	Schleicher's Thread Moss	<i>Bryum schleicheri</i>
Blunt-leaved bristle- Moss	<i>Orthotrichum obtusifolium</i>	Triangular Pygmy Moss	<i>Acaulon triquetrum</i>
Bright-Green Cave- Moss	<i>Cyclodictyon laetevirens</i>	Turpswort	<i>Geocalyx graveolens</i>
Cordate Beard Moss	<i>Barbula cordata</i>	Vaucher's Feather Moss	<i>Hypnum vaucheri</i>
Cornish Path Moss	<i>Ditrichum cornubicum</i>	Western Rustwort	<i>Marsupella profunda</i>
Derbyshire Feather Moss	<i>Thamnobryum angustifolium</i>		

⁷ Includes both subspecies: *perennis* & *prostratus*

Stoneworts – Full Protection under Schedule 8 at all times			
Bearded Stonewort	<i>Chara canescens</i>	Foxtail Stonewort	<i>Lamprothamnium papulosum</i>
Lichens – Full Protection under Schedule 8 at all times			
New Forest Beech Lichen	<i>Enterographa elaborata</i>	Forked Hair Lichen	<i>Bryoria furcellata</i>
Snow Caloplaca	<i>Caloplaca nivalis</i>	Golden Hair Lichen	<i>Teloschistes flavicans</i>
Tree Catapyrenium	<i>Catapyrenium psoromoides</i>	Orange-fruited Elm Lichen	<i>Caloplaca luteoalba</i>
Laurer's Catillaria	<i>Catillaria laurai</i>	River Jelly Lichen	<i>Collema dichotomum</i>
Convolute Cladonia	<i>Cladonia convoluta</i>	Starry Breck Lichen	<i>Buellia asterella</i>
Upright Mountain Cladonia	<i>Cladonia stricta</i>	Caledonia Pannaria	<i>Pannaria ignobilis</i>
Goblin Lights	<i>Catolechia wahlenbergii</i>	New Forest Parmelia	<i>Parmelia minarum</i>
Elm Gyalecta	<i>Gyalecta ulmi</i>	Oil Stain Parmentaria	<i>Parmentaria chilensis</i>
Tarn Lecanora	<i>Lecanora archariana</i>	Southern Grey Physcia	<i>Physcia tribacioides</i>
Copper Lecidea	<i>Lecidea inops</i>	Ragged Pseudo-cyphellaria	<i>Pseudocyphellaria lacerata</i>
Arctic Kidney Lichen	<i>Nephroma arcticum</i>	Rusty Alpine Psora	<i>Psora rubiformis</i>
Ciliate Strap Lichen	<i>Heterodermia leucomelos</i>	Rock Nail	<i>Calicium corynellum</i>
Coralloid Rosette Lichen	<i>Heterodermia propagulifera</i>	Serpentine Selanopsora	<i>Selanopsora liparina</i>
Ear-lobed Dog Lichen	<i>Peltigera lepidophora</i>	Sulphur Tresses	<i>Alectoria ochroleuca</i>
Lichens – Partial Protection under Section 13 (2) Commercial Exploitation and Sale Only			
Tree Lungwort	<i>Lobaria pulmonaria</i>		
Fungi – Full Protection under Schedule 8 at all times			
Royal Bolete	<i>Boletus regius</i>	Oak Polypore	<i>Buglossosporus pulvinus</i>
Hedgehog Fungus	<i>Hericium erinaceum</i>	Sandy Stilt Ball	<i>Battaria phalloides</i>
Invasive plant species listed in Schedule 9			
Australian swamp stonecrop or New Zealand pygmyweed	<i>Crassula helmsii</i>	Japanese rose	<i>Rosa rugosa</i>
Californian red seaweed	<i>Pilayella littoralis</i>	Japanese seaweed	<i>Sargassum muticum</i>
Curly waterweed	<i>Lagarosiphon major</i>	Laver seaweeds (except native species)	<i>Porphyra</i> spp
Duck potato	<i>Sagittaria latifolia</i>	Parrot's-feather	<i>Myriophyllum aquaticum</i>
Entire-leaved cotoneaster	<i>Cotoneaster integrifolius</i>	Perfoliate alexanders	<i>Smyrniolobos perfoliatum</i>
False Virginia creeper	<i>Parthenocissus inserta</i>	Pontic rhododendron	<i>Rhododendron ponticum</i>
Fanwort or Carolina water-shield	<i>Cabomba caroliniana</i>	Purple dewplant	<i>Disphyma crassifolium</i>
Few-flowered garlic	<i>Allium paradoxum</i>	Red algae	<i>Grateloupia luxurians</i>
Floating pennywort	<i>Hydrocotyle ranunculoides</i>	Rhododendron	<i>Rhododendron ponticum</i> × <i>Rhododendron maximum</i>
Floating water primrose	<i>Ludwigia peploides</i>	Small-leaved cotoneaster	<i>Cotoneaster microphyllus</i>
Giant hogweed	<i>Heracleum mantegazzianum</i>	Three-cornered garlic	<i>Allium triquetrum</i>
Giant kelp	<i>Macrocystis</i> spp.	Variegated yellow archangel	<i>Lamiastrum galeobdolon</i> subsp. <i>argenteum</i>
Giant knotweed	<i>Fallopia sachalinensis</i>	Virginia creeper	<i>Parthenocissus quinquefolia</i>
Giant rhubarb	<i>Gunnera tinctoria</i>	Wakame	<i>Undaria pinnatifida</i>
Giant salvinia	<i>Salvinia molesta</i>	Wall cotoneaster	<i>Cotoneaster horizontalis</i>
Green seafringers	<i>Codium fragile</i>	Water fern	<i>Azolla filiculoides</i>



Himalayan cotoneaster	<i>Cotoneaster simonsii</i>	Water hyacinth	<i>Eichhornia crassipes</i>
Hollyberry cotoneaster	<i>Cotoneaster bullatus</i>	Water lettuce	<i>Pistia stratiotes</i>
Hooked asparagus seaweed	<i>Asparagopsis armata</i>	Water primrose	<i>Ludwigia grandiflora</i>
Hottentot fig	<i>Carpobrotus edulis</i>	Water primrose	<i>Ludwigia uruguayensis</i>
Hybrid knotweed	<i>Fallopia japonica</i> × <i>Fallopia sachalinensis</i>	Waterweeds	<i>Elodea</i> spp.
Indian (Himalayan) balsam	<i>Impatiens glandulifera</i>	Yellow azalea	<i>Rhododendron luteum</i>
Japanese knotweed	<i>Reynoutria japonica</i>		

Protection of Badgers Act 1992

The main legislation protecting badgers in England and Wales is the Protection of Badgers Act 1992 (the 1992 Act). Under the 1992 Act it is an offence to: wilfully kill, injure, take or attempt to kill, injure or take a badger; dig for a badger; interfere with a badger sett by, damaging a sett or any part thereof, destroying a sett, obstructing access to a sett, causing a dog to enter a sett or disturbing a badger while occupying a sett.

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

Natural Environment and Rural Communities Act 2006

Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of Habitats and Species which are of Principal Importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, in implementing their duty under Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal (e.g. planning) functions. The S41 list includes 65 Habitats of Principal Importance and 1,150 Species of Principal Importance.

Hedgerow Regulations 1997

The Hedgerow Regulations were made under Section 97 of the Environment Act 1995 and came into force in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.

Birds of Conservation Concern

This is a review of the status of all birds occurring regularly in the United Kingdom. It is regularly updated and is prepared by leading bird conservation organisations, including the British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC) and The Royal Society for the Protection of Birds (RSPB).

The latest report was produced in 2015 (Eaton *et al*, 2015) and identified 67 red list species, 96 amber species, and 81 green species. The criteria are complex, but generally:

- **Red list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of more than 50% in the last 25 years.
- **Amber list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of between 25% and 50% in the last 25 years. Species that have a UK breeding population of less than 300 or a non-breeding population of less than 900 individuals are also included, together with those whose 50% of the population is localised in 10 sites or fewer and those whose 20% of the European population is found in the UK.
- **Green list** species are all regularly occurring species that do not qualify under any of the red or amber criteria are green listed

Global IUCN Red List

The International Union for Conservation of Nature (IUCN) Threatened Species was devised to provide a list of those species that are most at risk of becoming extinct globally. It provides taxonomic, conservation status and distribution information about threatened taxa around the globe.

The system catalogues threatened species into groups of varying levels of threat, which are: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CE), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), Not Evaluated (NE). Criteria for designation into each of the categories is complex, and consider several principles.

Local Biodiversity Action Plan (LBAP)

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level), and are usually drawn up by a consortium of local Government organisations and conservation charities.

Some LBAP's may also include Habitat Action Plans (HAP) and/or Species Action Plans (SAP), which are used to guide and inform the local decision making process.

Wild Mammals (Protection) Act 1996

This Act offers protection to all wild species of mammals, irrespective of other legislation, and focussed on animal welfare, rather than conservation.

Unless covered by one of the exceptions, a person is guilty of an offence if he mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering.

It's application is typically restricted to preventing deliberate harm to wildlife (in general) during construction works etc.

Appendix C – Target Notes

Target Note	Description	Photograph
1	3m High brick wall in good condition on the south eastern edge of the site.	
2	Hardstanding interspersed with ephemeral/short perennial and tall ruderal and scrub along the edges of buildings and walls. Scrub and tall ruderal is scattered across the site. Ephemeral/short perennial <i>Aster amellus</i> - Michaelmas daisy <i>Buddleja davidii</i> – buddleia <i>Epilobium ciliatum</i> - fringed willowherb <i>Epilobium hirsutum</i> - great willowherb <i>Erigeron canadensis</i> - horseweed <i>Lychnis flos-cuculi</i> - ragged robin <i>Pulicaria dysenterica</i> - common fleabane <i>Scorzoneroideis autumnalis</i> - autumn hawkbit Tall ruderal and scrub <i>Buddleja davidii</i> – buddleia <i>Calystegia sepium</i> - hedge bindweed <i>Epilobium ciliatum</i> - fringed willowherb <i>Equisetum arvense</i> - horsetail <i>Erigeron canadensis</i> - horseweed <i>Holcus lanatus</i> - Yorkshire fog <i>Lychnis flos-cuculi</i> - ragged robin <i>Pulicaria dysenterica</i> - common fleabane <i>Rubus fruticosus agg.</i> - bramble <i>Sambucus nigra</i> - elder saplings <i>Scorzoneroideis autumnalis</i> - autumn hawkbit <i>Urtica dioica</i> - Nettle	

Target Note	Description	Photograph
3	Old retaining wall in dense scrub.	
4	Dense scrub dominated by buddleia approximately 2.5m tall. Area has evidence of fly tipping and the presence of Japanese Knotweed. <i>Buddleja davidii</i> – buddleia <i>Reynoutria japonica</i> - Japanese Knotweed <i>Rubus fruticosus</i> agg. - bramble	
5	Hard standing with ephemeral vegetation growing along cracks in the concrete. This habitat covers the majority of the site. <i>Aster amellus</i> - Michaelmas daisy <i>Buddleja davidii</i> – buddleia <i>Epilobium ciliatum</i> - fringed willowherb <i>Epilobium hirsutum</i> - great willowherb <i>Erigeron canadensis</i> - horseweed <i>Lychnis flos-cuculi</i> - ragged robin <i>Pulicaria dysenterica</i> - common fleabane <i>Scorzoneroide autumnalis</i> - autumn hawkbit	

Target Note	Description	Photograph
6	Dense scrub along the north east elevation of building 1 (unit 54) dominated by bramble.	
7	Bare ground with short ephemeral vegetation, within the centre of the site. <i>Aster amellus</i> - Michaelmas daisy <i>Buddleja davidii</i> – buddleia <i>Epilobium ciliatum</i> - fringed willowherb <i>Epilobium hirsutum</i> - great willowherb <i>Erigeron canadensis</i> - horseweed <i>Lychnis flos-cuculi</i> - ragged robin <i>Pulicaria dysenterica</i> - common fleabane <i>Scorzoneroideis autumnalis</i> - autumn hawkbit	
8	Piles of pallets/wood next to building 1 (unit 54).	

Target Note	Description	Photograph
9	Japanese Knotweed encroaching on street.	
10	Area of tall ruderal adjacent to building 1 (unit 54) and scattered tree line. <i>Artemisia vulgaris</i> - common mugwort <i>Epilobium hirsutum</i> - great willowherb <i>Holcus lanatus</i> - York fog <i>Leucanthemum vulgare</i> - oxeye daisy <i>Lychnis flos-cuculi</i> - ragged robin <i>Pulicaria dysenterica</i> - common fleabane <i>Rumex obtusifolius</i> - broad leaved dock <i>Trifolium dubium</i> - lesser hop trefoil <i>Urtica dioica</i> – nettle	
11	Building 1 (Unit 54) in the northern end of the site, the building has evidence of fire damage and was structurally unsafe.	
12	Building 2 (Unit 50) in the south of the site. The building is in fairly good condition.	



Target Note	Description	Photograph
13	Broadleaved Scattered trees along the north eastern edge of the site. There is a small area of scattered trees adjacent to the eastern elevation of building 1 (unit 54). Species include willow <i>Salix sp.</i> and silver birch <i>Betula pendula</i> . Japanese knotweed <i>Reynoutria japonica</i> is also present in the stand.	



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