
EXTENDED PHASE 1 HABITAT SURVEY & DAYTIME BAT SURVEY

LAND AT MILLER STREET, RADCLIFFE, BURY

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1.0 INTRODUCTION

Site Information

- 1.1 Rachel Hacking Ecology Limited was commissioned in 2020 by Nature Central Limited to carry out an Extended Phase 1 Habitat Survey & Daytime Bat Survey of land at Miller Street, Higher Ainsworth, Radcliffe, Manchester. The proposed development site is located on Miller Street, off Higher Ainsworth Road, Higher Ainsworth, Radcliffe (O.S. grid reference: SD 77678 08942 – see Figure 1). The proposed development site currently comprises numerous commercial and industrial buildings set in areas of hardstanding with minor areas of continuous scrub, tall, ruderal herb and poor semi-improved grassland. The site is directly bordered with intensively managed farmland to the east and residential and commercial development to the north, south and west. In a wider context, pastoral farmland stretches further to the east and west. Radcliffe town is located to the south.

An Extended Phase 1 Habitat Survey is required to provide an overview of the habitats present within the site and to assess any potential protected species issues on the site. A daytime bat survey is required to assess the potential use of the buildings by bats.

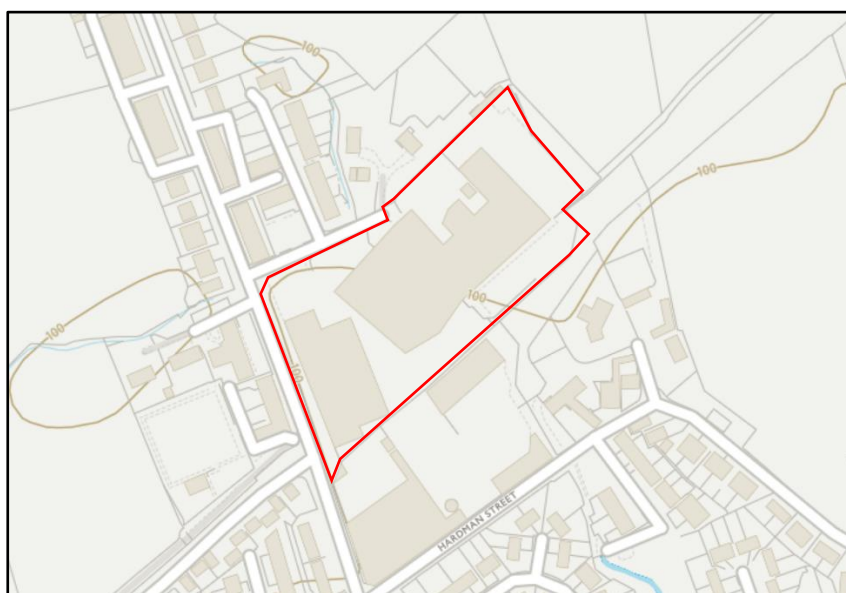


Figure 1 showing the location of the site

Description of Development

- 1.2 The site will be the subject of a planning application for the renovation of existing buildings and the construction of new units.

Biodiversity in Planning

- 1.3 Biodiversity is a material consideration, and Local Planning Authorities (LPAs) have a requirement to consider biodiversity and protected species when determining planning applications. Section 15 of the National Planning Policy Framework (February 2019) gives specific reference to minimising the impacts of development on biodiversity.



Local and Neighbourhood plans also provide guidance towards protecting and enhancing biodiversity, including priority habitats and notable species.



2.0 METHODOLOGY

Extended Phase 1 Habitat Survey

- 2.1 A Phase 1 Habitat survey was undertaken to JNCC standards (JNCC, 2010). The site was walked and each habitat was assigned a Phase 1 habitat category. Species lists were taken at locations of botanical interest. All botanical nomenclature follows Stace, 2019. A Phase 1 map was produced showing habitat boundaries.
- 2.2 During the Extended Phase 1 survey, the habitats were assessed for their potential to support protected species. This included, for example, looking for signs of Badger activity (e.g. setts, paths, latrines and hairs on fences), assessing any waterbodies on site or near the site for their potential to support Great Crested Newt and a ground-level assessment of the trees on site for potential bat roost features.
- 2.3 The site was also surveyed for invasive, non-native plant species such as Japanese Knotweed and Giant Hogweed.

Daytime Bat Survey

- 2.4 A daytime bat survey of the site was undertaken to search for, and to assess the potential for, a bat roost.
- 2.5 An external assessment of the affected buildings on the site was undertaken, which included, for example, looking for gaps between any soffit boards and walls, gaps between window frames and the walls, and looking for bat droppings on the walls and window ledges. An internal assessment was also carried out, with particular focus on gaps in walls, cracks in roof beams, and any evidence of bat activity, such as bat droppings, in the internal spaces.
- 2.6 A ground-level assessment of any trees affected by the proposals was also undertaken. This involved a search for potential roosting features (PRF's), including peeled bark, knot holes and branch splits.
- 2.7 A pair of close-focussing binoculars, a high-powered torch and, where necessary, an endoscopic camera, were used to search for evidence of bats.

Personnel and Seasonal Timing

- 2.8 Ben Crossthwaite (Senior Ecologist) carried out the Extended Phase 1 Habitat survey and daytime bat survey on the 14th January 2021. Ben is an experienced ecologist and fully trained in botanical surveys and protected species assessments and holds a Natural England Level 2 Class Licence for bats (Ref: 2020-48541-CLS-CLS). January is a sub-optimal time of the year for botanical work, however due to the type of habitats present on site, a thorough assessment could be undertaken. The weather at the time of the survey was overcast, cold with wintery showers. Daytime bat surveys can be undertaken at any time of year.



Survey Constraints

- 2.9 The site was fully accessible. There were no constraints to the survey.



3.0 EXTENDED PHASE 1 HABITAT SURVEY

Description of Habitats

- 3.1 The Phase 1 Habitat Map can be found at the back of the report. The habitats on the proposed development site are described below.

Poor semi-improved Grassland

- 3.2 This habitat is present as a linear area along the western boundary of the site (see Photograph 1). The grassland is unmanaged resulting in a tall sward height. Dominant grass species include Perennial Rye-grass *Lolium perenne*, Creeping Bent *Agrostis stolonifera* and Cock's-foot *Dactylis glomerata*. Commonly occurring herbaceous species include Creeping Buttercup *Ranunculus repens*, Dandelion *Taraxacum officinale* agg., Ribwort Plantain *Plantago lanceolata*, Broad-leaved Dock *Rumex obtusifolius*, Meadow Buttercup *Ranunculus acris* and mosses.



Photograph 1 showing the poor semi-improved grassland

Scrub

- 3.3 Scrub is present on site as both continuous and scattered features. An area of continuous scrub is located along the western boundary of the site comprising Sycamore *Acer pseudoplatanus*, Ash *Fraxinus excelsior*, Elder *Sambucus nigra*, Hedge Bindweed *Calystegia sepium*, Spear Thistle *Cirsium vulgare* and Bramble *Rubus fruticosus* agg. (see Photograph 2). Scattered scrub is found in small quantities across the site (see Photograph 3). Dominant species include Ash *Fraxinus excelsior*, Hawthorn *Crataegus monogyna*, Elder *Sambucus nigra* and Sycamore *Acer pseudoplatanus*.





Photograph 2 showing the area of continuous scrub



Photograph 3 showing a stand of scattered scrub

Tall, Ruderal Herb

- 3.4 Tall, ruderal herb is present along the western, northern and eastern boundaries, as well as a linear area adjacent to one of the buildings (see Photograph 4). This habitat is dominated by Bramble *Rubus fruticosus* agg. and Stinging Nettle *Urtica dioica* with Willowherb species *Epilobium* sp., Ivy *Hedera helix*, Japanese Knotweed *Reynoutria japonica*, Hedge Bindweed *Calystegia sepium*, Spear Thistle *Cirsium vulgare*, Hogweed *Heracleum sphondylium*, Cock's-foot *Dactylis glomerata* and Broad-leaved Dock *Rumex obtusifolius* also abundant.





Photograph 4 showing an area of tall, ruderal herb

Scattered Trees

- 3.5 Scattered trees are found across the site peripheries, with a high concentration along the western boundary. One early-mature tree is located in the northern corner of the site and the remaining trees are of a juvenile age (see Photograph 5). Tree species are Sycamore *Acer pseudoplatanus*, Ash *Fraxinus excelsior*, Elder *Sambucus nigra* and Goat Willow *Salix caprea*.



Photograph 5 showing the early-mature tree on site

Bare Ground

- 3.6 This habitat is present across the site comprising hardstanding access roads and paths, parking and loading areas (see Photograph 6). Ephemeral/short perennial species have established within cracks and crevices and around the peripheries of the hardstanding areas.



Photograph 6 showing an area of hardstanding bare ground

Buildings

- 3.7 Numerous industrial/commercial buildings are located on site.

Boundaries

- 3.8 The site's boundaries are marked with fencing and a small section of brick wall.

PROTECTED SPECIES

Great Crested Newt

- 3.9 Great Crested Newt *Triturus cristatus* is a European Protected Species (EPS) under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the species is fully protected under the Wildlife and Countryside Act 1981 (as amended).
- 3.10 No waterbodies exist on the site. One pond exists within 250metres of the site. The site lacks suitable Great Crested Newt terrestrial habitat. The hardstanding, bare ground that dominates the site is considered a hostile habitat for Great crested Newt. The unmanaged grassland, tall, ruderal herb and continuous scrub habitats provide cover and foraging opportunities for Great Crested Newts. However, these are isolated within expanses of bare ground.



Bats

- 3.11 All bat species are European Protected Species. This is implemented in the UK through the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Bats are also protected under The Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act (NERC, 2006).

Daytime Bat Survey

- 3.12 The buildings proposed to be affected by the development were the subject of a daytime bat survey and the results are detailed below. The buildings were fully accessible and could be easily surveyed. The buildings were split based on their construction type for ease of surveying and reporting. Please see Figure 2 for the building locations and reference numbers.

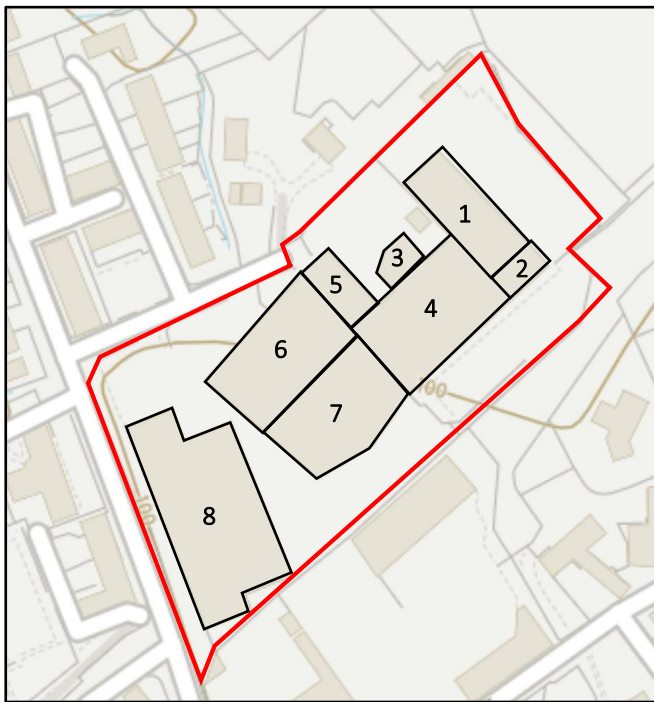


Figure 2 showing the building locations and the reference numbers

Building 1

- 3.13 This building is a large two-storey industrial building constructed from a steel frame, clad with corrugated metal sheets (see Photograph 7). The cladding is in good condition and fitted flush with one another. A small brick wall is located along the bottom of the external walls. The masonry is in good condition and well-sealed with mortar (see Photograph 8). The pitched roof is covered with corrugated metal sheets and fibreglass roof windows. These appear in good condition with no evidence of water ingress internally. A glazed entrance lobby is located on the northern elevation of the building (see Photograph 7). This is in excellent condition with no potential entry points located.



Photograph 7 showing Building 1



Photograph 8 showing Building 1

- 3.14 The relatively small first floor space of the building consists well-finished office spaces (see Photograph 9). Suspended ceilings are located above, with a void space present (see Photograph 10). The void space is open to the underside of the roof. The walls are plastered to the underside of the roof. The space is cool and dusty. No features associated with roosting bats was found, nor any evidence of bat activity or occupancy. The main body of Building 1 consists a double height warehouse (see Photograph 11). This is open to the underside of the roof with no roof void spaces present. The space is light and airy with automatic lighting present that switches on with movement. The warehouse does not provide any suitable bat roost features. No evidence of bat activity

or occupancy was found in Building 1 and it is considered Building 1 offers **negligible** bat roost suitability.



Photograph 9 showing the office spaces in Building 1



Photograph 10 showing the void space between the suspended ceiling and the underside of the roof in Building 1



Photograph 11 showing the warehouse section of Building 1

Building 2

- 3.15 Building 2 is attached to Building 1 on its southern elevation (see Photograph 12). The building is single storey and constructed from brick. The brickwork is in good condition and well-sealed with mortar. Concrete lintels and sills are found across the southern elevation. These are in good condition. However, a crack is present across one of the lintels (see Photograph 13). This was inspected further with the use of an endoscope and found to be to wedge shaped, resulting in a narrow and shallow feature and unsuitable for bats to exploit with no evidence of bats found. The wood window and doorframes are well-sealed to the surrounding masonry and covered with metal mesh. The pitched roof is covered with corrugated cement roof sheets and glass roof windows (see Photograph 14). The roof is in good condition and finished at the gable ends with edge capping and lead flashings. No potential entry points were located.



Photograph 12 showing Building 2

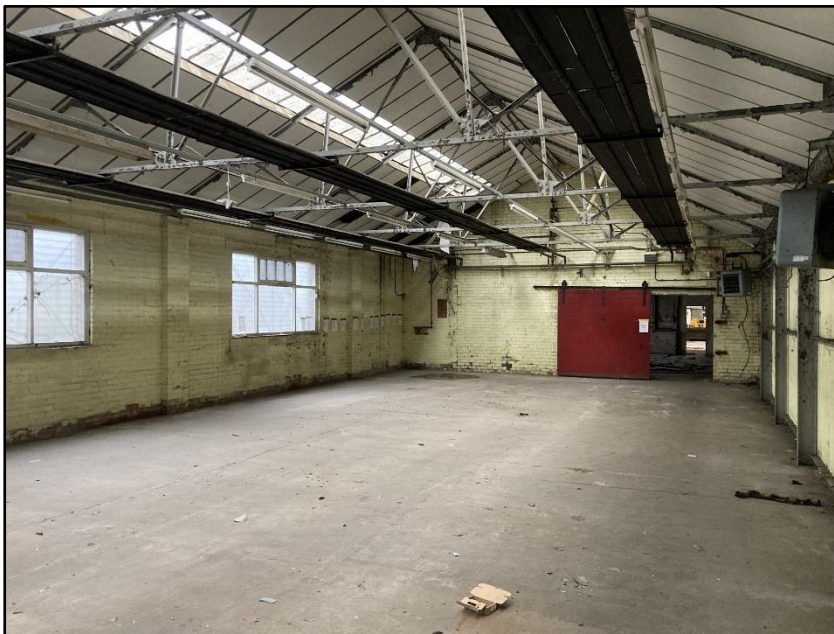


Photograph 13 showing the crack in the lintel on Building 2



Photograph 14 showing the roof of Building 2

- 3.16 The internal masonry is in good condition, well-sealed with mortar and painted. The internal space is open to the underside of the roof with no roof void spaces present (see Photograph 15). The metal roof frame is in good condition with no gaps or crevices bats may exploit. No evidence of bat activity or occupancy was found, and it is considered Building 2 has **negligible bat roost suitability**.



Photograph 15 showing the interior of Building 2

Building 3

- 3.17 This building forms part of Building 4 and serves as the shop front/reception area (see Photograph 16). The building is single storey and constructed from a combination of

brick, or which sections are rendered, and corrugated metal cladding. The brickwork is in good condition and well-sealed with mortar. The render, where present, is free from cracks and crevices and painted. The metal cladding is also in good condition and fitted flush to the surrounding masonry with no potential entry points located. The sloped roof is covered with corrugated metal roof sheets and the pitched section with slate roof tiles and glass roof windows (see Photograph 17). Both roofs are in reasonable condition with no potential entry points located.



Photograph 16 showing Building 3



Photograph 17 showing the sloped and pitched roofs of Building 3

- 3.18 The internal spaces of Building 3 are well-finished with no habitat associated with roosting bats present (see Photographs 18 and 19). Suspended ceilings are present with roof void spaces above (see Photograph 20). The space below the pitched roof section is light and airy due to the roof windows. The walls are finished with boards, free form gaps and cracks. The void below the sloped roof section is small and like the other void, consists of services such as ducting and light fittings. No potential entry points, roosting habitat or evidence of bat activity or occupancy was found, and it is considered Building 3 has **negligible bat roost suitability**.



Photograph 18 showing the interior of Building 3



Photograph 19 showing the interior of Building 3



Photograph 20 showing the roof void in Building 3

Building 4

- 3.19 Building 4 is a large, brick-built, double-height structure with an 'M-shaped' roof (see Photograph 21). The brick walls are in good condition and the tight mortar beds are well-sealed with mortar. The roofs are covered with slate roof tiles and glass roof windows. The roof appears to be in good condition and the peripheries are finished with coping stones with are well-sealed with mortar.



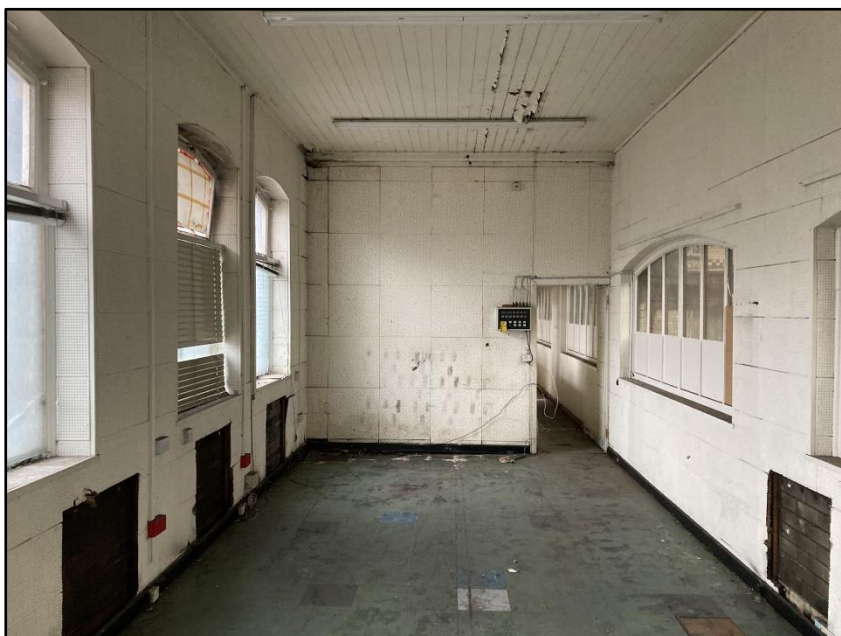
Photograph 21 showing Building 4

- 3.20 The large internal spaces are open to the underside of the roof with no roof void spaces present (see Photograph 22). The brick walls are in good condition, as is the associated

mortar. A small, first-floor office space is located at the southern end of the building (see Photograph 23). The office space is in reasonable condition with no potential entry points or evidence of roosting bats found. A small roof void accessed via a gantry is located above the office space (see Photograph 24). This is open to the underside of the roof with no sealed void spaces present. No evidence of bat activity or occupancy was found anywhere in Building 4 and it is considered the building has **negligible bat roost suitability**.



Photograph 22 showing the interior of Building 4



Photograph 23 showing the interior of the office space in Building 4



Photograph 24 showing the small room above the office space in Building 4

Building 5

- 3.21 This building is double-height and constructed from brick and a steel frame (see Photograph 25). The masonry is in good condition and well-sealed with mortar (see Photograph 26). The eastern elevation of the building has a large glazed upper wall. The glazing is complete with no smashed or damaged windowpanes. The gently pitched roof is covered with corrugated metal roof sheets. The roof appears to be in good condition and finished at the gable ends with capping with are flush to the surrounding masonry.



Photograph 25 showing Building 5



Photograph 26 showing the exterior masonry of Building 5

- 3.22 A small single storey plant room is attached to the northern elevation of the building (see Photograph 27). The masonry is in excellent condition and well-sealed with mortar. The flat roof is covered with a bitumen-based membrane. This is in good condition and well-sealed with no cracks or folds bats may exploit.



Photograph 27 showing the single-storey part of Building 5

- 3.23 The Internal spaces are open to the underside of the roof with no roof void spaces present (see Photographs 28 and 29). The internal masonry is in excellent condition and partially painted white. The interior space of Building 5 is largely airy and well-lit due to the extensive windows present. No suitable bat roosting habitat or entry points

were located. Furthermore, no evidence of bat activity or occupancy was found, and it is considered Building 5 has **negligible bat roost suitability**.



Photograph 28 showing the internal space of Building 5



Photograph 29 showing the internal space of the plant room in Building 5

Building 6

- 3.24 Building 6 is set over two-stories and constructed from a steel frame, clad with corrugated metal sheets and brick walls (see Photograph 30). The external masonry is in good condition and well-sealed with mortar (see Photograph 31). The uPVC window and doorframes are in excellent condition and well-sealed to the surrounding masonry. The external cladding is also in good condition and well-sealed to the surrounding

masonry (see Photograph 32). The sloped and pitched roofs are covered with corrugated metal roof sheets. The roof appears to be in good condition with no bat entry points located.



Photograph 30 showing Building 6



Photograph 31 showing a section of Building 6's exterior



Photograph 32 showing a section of Building 6's exterior

- 3.25 A single storey entrance is present on the southern elevation of Building 6 (see Photograph 33). The masonry is in excellent condition, as are the wood window and door frames, with no potential entry points located. The pitched roof is covered with concrete roof tiles (see Photograph 34). The tiles are all present and fitted flush to one another. The associated flashings are also in good condition and flush to the surrounding masonry and roof tiles.



Photograph 33 showing the single storey entrance on Building 6



Photograph 34 showing the roof

- 3.26 The interior of Building 6 is split into two distinct areas, A large, open industrial warehouse and office space (see Photographs 35 and 36). The warehouse space is open to the underside of the roof with no roof void spaces present. The internal masonry in good condition, free from cracks and gaps suitable for bats (see Photograph 37).



Photograph 35 showing in the interior of Building 6



Photograph 36 showing the interior of Building 6



Photograph 37 showing the interior of Building 6

- 3.27 The interior of the office spaces are well-finished and do not supports suitable roosting habitat for bats. A suspended ceiling is found below the sloped roof with a void space present (see Photograph 38). The void spaces are small, well-sealed and contain services such as ducting and light fittings. No suitable roosting habitat or evidence of bat occupancy was found in Building 6 and it is considered the building offers **negligible bat roost suitability**.



Photograph 38 showing the small roof void space in Building 6

Building 7

- 3.28 This building is attached to Building 6 along its southern elevation and consists a single-storey industrial building constructed from brick with an 'M-shaped' roof (see Photograph 39). The masonry is showing signs of age, however, it is in good condition and well-sealed with mortar (see Photograph 40). The coping stones along the roof edges are also in good condition, free from gaps or cracks bats may exploit. The roofs are covered with slate roof tile and glass roof windows. These appear to be in good condition with no potential entry points located.



Photograph 39 showing the exterior of Building 7



Photograph 40 showing the exterior of Building 7

- 3.29 The interior of Building 7 is open to the underside of the roof with no roof void spaces present (see Photograph 41). The interior is well-lit due to the extensive roof windows. The internal brick walls are in good condition and painted (see Photograph 42). No suitable bat roosting habitat was found in Building 7, nor evidence of bat activity or occupancy. Therefore, it is considered Building 7 offers **negligible bat roost suitability**.



Photograph 41 showing the interior of Building 7



Photograph 42 showing the interior of Building 7

Building 8

- 3.30 Building 8 is a large warehouse building currently being stripped of its internal fittings and external cladding with only the steel frame, brickwork and roof currently present (see Photograph 43). The masonry is in excellent condition and well-sealed with mortar. The internal spaces are open, resulting in damp and cold conditions (see Photograph 44). No suitable bat roost habitat was found at Building 8 and it is considered Building 8 offers **negligible bat roost suitability**.



Photograph 43 showing Building 8



Photograph 44 showing Building 8

- 3.31 The trees on site were all inspected from the ground for bat roosting features, such as cavities, limb damage or peeling bark. No such features were located on any trees on site.

Badger

- 3.32 Badgers *Meles meles* are protected under the Protection of Badgers Act 1992 and The Wildlife and Countryside Act 1981 (as amended). These Acts, for example, make it illegal to disturb a Badger whilst it is in a sett, to kill, injure or take a Badger and to obstruct the entrance to a Badger sett.
- 3.33 No Badger sett was located on the site or immediately adjacent to the site. No evidence of Badger activity such as latrines or snuffle holes was located on site.

Nesting Birds

- 3.34 All bird species are protected at their nest under the Wildlife and Countryside Act 1981.
- 3.35 The continuous scrub, trees and buildings offer good bird nesting habitat.

INVASIVE SPECIES

- 3.36 Japanese Knotweed is located on site (see Photographs 45 and 46). This is a non-native, invasive species listed on Schedule 9 Part II (plants) of the Wildlife and Countryside Act 1981 (as amended).



Photograph 45 showing the Japanese Knotweed located in the northern corner of the site



Photograph 46 showing Japanese Knotweed located on site

PROTECTED SITES

- 3.37 No statutory protected sites lie on the site, immediately adjacent to the site or within 2.5km of the site boundary. The nearest statutory protected site, Ashclough Site of Special Scientific Interest (SSSI), is located approximately 2.6km south-west of the site boundary.

- 3.38 The site lies within a SSSI Impact Risk Zone, which lists certain types of development that may have a deleterious impact on protected sites nearby. The proposals for the site are not listed in the criteria.
- 3.39 No non-statutory protected sites exist on or adjacent to the site boundaries. Two non-statutory protected sites are located within 500 metres of the site boundary:
- Spen Moor Ponds Site of Biological Importance (SBI) is located approximately 350 meters north of the site boundary.
 - Withins Reservoir SBI is located approximately 400 metre to the south-east of the site boundary.



4.0 ASSESSMENT

Habitats

- 4.1 The Phase 1 Habitats present on the site are common throughout the UK. No nationally rare or locally rare plant species were located during the Extended Phase 1 Habitat Survey.
- 4.2 The site is dominated by hardstanding bare ground with relatively small areas of poor semi-improved grassland, tall, ruderal herb, continuous scrub and scattered trees. The habitats offer cover from predation, foraging habitat and moderate pollen and nectar source for invertebrates.

Development Context

- 4.3 The development proposals involve the retention of the poor semi-improved grassland and continuous scrub habitats. Proposals also include the creation of a landscaping scheme that will enhance biodiversity across the site.

PROTECTED SPECIES

Great Crested Newt

- 4.4 No waterbodies exist on the site. One pond exist within 250metres of the site. This is located approximately 240 metres to the east of the site located within a field of intensively managed improved grassland with no direct connectivity to the site. The site lacks suitable Great Crested Newt terrestrial habitat. The hardstanding, bare ground that dominates the site is considered a hostile habitat for Great crested Newt. The unmanaged grassland, tall, ruderal herb and continuous scrub habitats provide cover and foraging opportunities for Great Crested Newts. However, these are isolated within expanses of bare ground.
- 4.5 Given the lack of breeding habitat directly linked to the site in the locality and hostile habitat that dominates the development site, it is reasonably likely that Great Crested Newt does not occur on the development site. Great Crested Newt is not considered to be a constraint on the development at this time.

Bats

- 4.6 The buildings on site have been the subject of a daytime bat survey. No evidence of bat activity or occupancy was found in any of the buildings on site. Many of them consist large, open, industrial buildings which lack roosting habitat and thermal holding capacity. Therefore, the buildings on site are considered to have **negligible bat roost suitability** and no further survey work is required.
- 4.7 No potential bat roost features were identified on any of the trees on site. The site lacks suitable bat foraging and commuting habitat. The relatively small continuous scrub feature along the western boundary is adjacent to Ashworth Road which is well-lit with

streetlights. Therefore, it is considered the site offers **negligible bat foraging and commuting habitat**.

Badger

- 4.8 No Badger sett was located on the site or immediately adjacent to the site. No evidence of Badger activity was located. Badgers are not considered to be a constraint on development.

Nesting Birds

- 4.9 The site supports suitable nesting habitats for birds within the trees, continuous scrub and buildings. No evidence of nesting birds was found during the survey. Nesting birds can be mitigated for by allowing no works to potential nesting habitats to be carried out within the bird nesting season (which is generally March – August) unless a nesting bird survey is undertaken first.

INVASIVE SPECIES

- 4.10 Japanese Knotweed is located on site. This is a non-native, invasive species listed on Schedule 9 Part II (plants) of the Wildlife and Countryside Act 1981 (as amended). It is recommended this species is eradicated from the site with the use of a recognised methodology prior to works commencing.

PROTECTED SITES

- 4.11 No statutory or non-statutory protected sites lie within the proposed development site, immediately adjacent or within 2.5km of the site boundary. The nearest statutory protected site, Ashclough SSSI, is located approximately 2.6km south-west of the site boundary. At this distance, with barrier habitats between the SSSI and the proposed development site, as well as the relative low disturbance works proposed, there is expected to be no deleterious impact on the protected sites from the development.
- 4.12 The site lies within a SSSI Impact Risk Zone, which lists certain types of development that may have a deleterious impact on protected sites nearby. The proposals do not trigger any of the potential risks listed in Natural England's criteria.
- 4.13 The nearest non-statutory protected site lies approximately 350 metres north of the site boundary with improved grassland fields between the two sites. It is thought, due to the distance involved, the buffer habitats present and the relative low disturbance nature of the proposals, there is expected to be no deleterious impact on the surrounding non-statutory protected sites from the development.

5.0 RECOMMENDATIONS

Summary of Findings

- 5.1 Protected species are a material consideration when a planning authority is considering a planning application. The presence of protected species, the effect of the proposed development and suitable mitigation, if required, must be established before planning permission can be granted. Following the findings from the Extended Phase 1 Habitat Survey, the following survey may be required:

- **Nesting Birds** – It is recommended the renovation works and any vegetation clearance works is carried out outside the nesting bird season (generally March – August). If the renovation/clearance work needs to be carried out within the bird nesting season, then a nesting bird survey will be required immediately prior to work commencing.

Invasive Species

- 5.2 The Japanese Knotweed should be carefully removed from site using a recognised methodology. This should be either long-term herbicide application or short-term digging out and removal off-site to a licensed landfill or digging out and deep burial with a suitable barrier membrane on-site.

Habitat Enhancement

- 5.3 General recommendations to bring biodiversity gain to the site are:

- Soft landscaping should include the provision of native and non-native flowering perennial species, to provide a pollen and nectar source for invertebrates.
- Bird boxes should be erected on the newly converted buildings or retained trees where possible.
- Tree planting of native species where practically possible.

6.0 REFERENCES

Collins, J. (ed.). (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd Edition*. Bat Conservation Trust. London.

JNCC. *Phase 1 Habitat Survey – a technique for environmental audit*. JNCC, Updated 2010.

MAGIC mapping: www.magic.gov.uk. Defra, London

National Planning Policy Framework (February 2019). Ministry of Housing, Communities & Local Government

Preston, C.D., Pearman, D. & Dines, T. (2002). *New Atlas of the British and Irish Flora*. Oxford University Press.

Stace, C. A. (2019). *New Flora of the British Isles, 4th Edition*. C&M Floristics.

APPENDIX A PHASE 1 HABITAT MAP

