
EXTENDED PHASE 1 HABITAT SURVEY

LAND AT ALCHEMY WAY, KNOWSLEY

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1.0 INTRODUCTION

Site Information

- 1.1 Rachel Hacking Ecology Limited was commissioned in 2022 by Network Space to carry out an Extended Phase 1 Habitat Survey of land at Alchemy Way, Knowsley (O.S. grid reference: SJ 42656 96924– see Figure 1). The proposed development site currently comprises semi-improved grassland, marshy grassland, amenity grassland, tall, ruderal herb, continuous scrub and ephemeral vegetation with scattered trees and scattered scrub. The site is surrounded by commercial development, with residential development to the west and open agricultural land to the east.

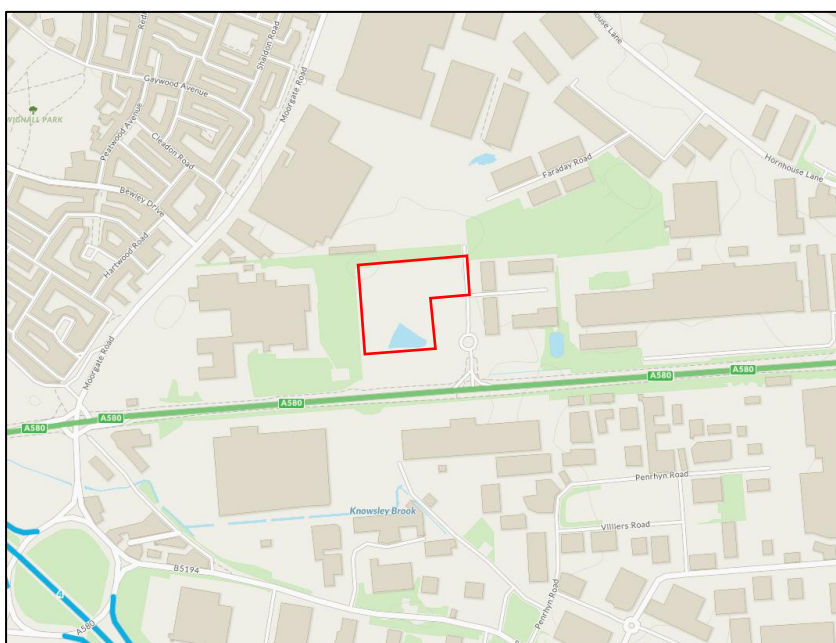


Figure 1 showing the location of the site

Description of Development

- 1.2 The site will be the subject of a planning application for the construction of a warehouse and associated parking. The site is split into two development parcels. Parcel 1 on the land to the northwest will be the subject of planning application for the construction of two industrial units and associated parking. Parcel 2 to the south east of Alchemy Way will be subject of a later phase of development and separate application.

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 (July 2021) 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 assessing any mature trees for their suitability to support bats.
- 2.3 The site was also surveyed for invasive, non-native plant species such as Japanese Knotweed and Giant Hogweed.

Personnel and Seasonal Timing

- 2.4 Kate Reed (Senior Ecologist) carried out the Phase 1 Habitat Survey on the 25th May 2022. Kate is an experienced ecologists and fully trained in botanical surveys and protected species assessments. May is an optimal month for botanical work.

Survey Constraints

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



3.0 RESULTS

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 Large pockets of poor semi-improved grassland are present throughout the the site (see Photograph 1). Grass species within this habitat comprises Red Fescue *Festuca rubra*, Yorkshire Fog *Holcus lanatus*, Common Bent *Agrostis capillaris*, Cock's-foot *Dactylis glomerata*, Sweet Vernal-grass *Anthoxanthum odoratum*, False Oat-grass *Arrhenatherum elatius*, Tufted Hair-grass *Deschampsia cespitosa* and Crested Dog's Tail *Cynosurus cristatus*. Herbaceous species within this habitat include Ribwort Plantain *Plantago lanceolata*, Creeping Buttercup *Ranunculus repens*, Common Vetch *Vicia sativa*, Common Mouse-ear *Cerastium fontanum*, Ragged-Robin *Silene flos-cuculi*, Cats-ear *Hypochaeris radicata*, Black Medick *Medicago lupulina*, Creeping Thistle *Cirsium arvense*, Cut-leaved Crane's-bill *Geranium dissectum*, Yellow-rattle *Rhinanthus minor*, Daisy *Bellis perennis*, Dove's-foot Crane's-bill *Geranium molle*, Oxeye Daisy *Leucanthemum vulgare*, Cuckooflower *Cardamine pratensis* and Orchid species *Dactylorhiza* sp.



Photograph 1 showing the semi-improved grassland

Marshy Grassland

- 3.3 Marshy grassland is present in the south-west of the site (see Photograph 2). This habitat supports many of the species see within the semi-improved grassland but is dominated by Rush species *Juncus* sp. Other species includes Bulrush *Typha* sp., Marsh Thistle *Cirsium palustre*, Vetch species *Lathyrus* sp. and Bryophytes (moss).





Photograph 2 showing the marshy grassland

Amenity Grassland

- 3.4 A strip of regularly mown amenity grassland is located to the east (see Photograph 3). Species includes Perennial Rye-grass *Lolium perenne*, Annual Meadow-grass *Poa annua*, Yorkshire Fog *Holcus lanatus*, Daisy *Bellis perennis*, Dandelion *Taraxacum officinale* agg. and Creeping Cinquefoil *Potentilla reptans*.



Photograph 3 showing the amenity grassland

Continuous Scrub

- 3.5 Two pockets of continuous scrub comprising saplings of Willow *Salix* sp. and Sycamore *Acer pseudoplatanus* are located to the north and east of the site (see Photograph 4).





Photograph 4 showing some of the continuous scrub

Tall, Ruderal Herb

- 3.6 Pockets of tall ruderal herb are located throughout the site (see Photograph 5). Species present include Common Nettle *Urtica dioica*, Hogweed *Heracleum sphondylium*, Yorkshire Fog *Holcus lanatus*, Great Willowherb *Epilobium hirsutum*, Red Clover *Trifolium pratense*, Creeping Thistle *Cirsium arvense*, Creeping Buttercup *Ranunculus repens*, Common Vetch *Vicia sativa*, Ragged-Robin *Silene flos-cuculi*, Yellow-rattle *Rhinanthus minor*, Oxeye Daisy *Leucanthemum vulgare*, Hard-rush *Juncus inflexus*, Common Reed *Phragmites australis*, Silverweed *Potentilla anserina*, Sweet Vernal-grass *Anthoxanthum odoratum*, Redshank *Persicaria maculosa*, Curled Dock *Rumex crispus*, Japanese Knotweed *Reynoutria japonica* and Mugwort *Artemisia vulgaris*



Photograph 5 showing the tall, ruderal herb



Ephemeral/Short Perennial

- 3.7 Ephemeral vegetation is encroaching on bare soil throughout the north of the site (see Photograph 6). Annual Meadow-grass *Poa annua*, Yorkshire Fog *Holcus lanatus*, Common Vetch *Vicia sativa*, Colt's-foot *Tussilago farfara*, Ribwort Plantain *Plantago lanceolata*, Pineapple Weed *Matricaria discoidea*, Silverweed *Potentilla anserina*, Redshank *Persicaria maculosa*, Hard-rush *Juncus inflexus*, Ragged-Robin *Silene flos-cuculi*, Orchid species *Dactylorhiza* sp, Bird's-Foot Trefoil *Lotus corniculatus*, Cudweed *Filago/Gnaphalium* sp., Marsh Thistle *Cirsium palustre*, Soft-rush *Juncus effusus*.



Photograph 6 showing the ephemeral vegetation

Scattered Scrub

- 3.8 Scattered scrub is present throughout the whole site and comprises Gorse *Ulex europaeus*, Willow *Salix* sp., Field-Rose *Rosa arvensis*, Broom *Cytisus scoparius*, Silver Birch *Betula pendula*, Aspen *Populus tremulous*, Sycamore *Acer pseudoplatanus* and Poplar *Populus* sp. (see Photograph 7).





Photograph 7 showing some of the scattered scrub

Scattered Trees

- 3.9 Scattered trees are located along the northern boundary of the of the site and along the amenity grassland (see Photograph 8). Species include Elder *Sambucus nigra*, Hawthorn *Crataegus monogyna*, Willow *Salix* sp., Wild Service Tree *Sorbus torminalis*. A number of scattered are also located throughout the eastern half of the site with species comprising Willow *Salix* sp., Poplar *Populus* sp., Sycamore *Acer pseudoplatanus*.



Photograph 8 showing some of the scattered trees

Ephemeral Pools

- 3.10 Small, shallow ephemeral pools occur occasionally (see Photograph 9). No aquatic species were found within the pools, but terrestrial plant species associated with wetter habitats such as Rush species *Juncus* sp., Yellow Iris *Iris pseudacorus* and Bulrush

Typha sp. were found in greater abundance around these pools. It is unlikely that these are a permanent feature on the site but only occur after heavy rainfall.



Photograph 9 showing the ephemeral pools

Bare Ground

- 3.11 A small area of bare ground is present in the south-west boundary of the site (see Photograph 10).



Photograph 10 showing the bare ground

Site boundaries

- 3.12 The site boundaries are marked with walls, fencing or are unmarked.

PROTECTED SPECIES

Great Crested Newt

- 3.13 Great Crested Newt *Triturus cristatus* is a European Protected Species under the Conservation of Habitats and Species Regulations 2019 (Amendment) (EU Exit) and the species is fully protected under the Wildlife and Countryside Act 1981 (as amended).
- 3.14 No waterbodies exist on the site. Three waterbodies are located within 250m of the site boundaries. One Sustainable Urban Drainage (SUDs) feature is located approximately 10m to the east of the eastern plot site boundary. Due to the large size of this waterbody it is considered to be sub-optimal breeding habitat for Great Crested Newt. The second waterbody is located approximately 170 metres north of the west site, and the third which lies approximately 175m north of the eastern site. These ponds hold some connectivity to the site but the ponds are surrounded by habitats that offer better quality habitat than is represented on the site and would therefore likely be favoured by Great Crested Site.
- 3.15 The site provides suitable terrestrial habitat for great crested newt within the semi-improved grassland, tall, ruderal herb and continuous scrub which provide some cover and foraging opportunities for Great Crested Newts.

Bats

- 3.16 All bat species are European Protected Species. This is implemented in the UK through the Conservation of Habitats and Species Regulations 2019 (Amendment) (EU Exit). Bats are also protected under The Wildlife and Countryside Act 1981 (as amended).
- 3.17 No structures are present on site. The trees were assessed for Potential Roosting Features (PRFs), such as limb damage, cavities and peeling bark. No such features were found on any of the trees on site. Bats use linear landscape features, such as hedgerows and tree belts, for foraging and commuting. The scrub and associated trees on site offer bat foraging and commuting habitat.

Badger

- 3.18 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.
- 3.19 No Badger sett was located on the site or immediately adjacent to the site. Evidence of mammals foraging on site was located during the survey. Badger tracks, Fox *Vulpes vulpes* scat and Deer tracks were found on site (see Photographs 11, 12 and 13).



Photograph 11 showing a badger track found on site



Photograph 12 showing the Fox scat found on site



Photograph 13 showing the Deer tracks found on site

Nesting Birds

- 3.20 All bird species are protected at their nest under the Wildlife and Countryside Act 1981 (as amended).
- 3.21 The site supports suitable habitat for nesting birds within the continuous scrub, scattered trees, scattered scrub, and grasslands.

INVASIVE SPECIES

- 3.22 Japanese Knotweed *Reynoutria japonica*, an invasive, non-native species, as listed on Schedule 9 of The Wildlife & Countryside Act 1981 (as amended), was found within the site boundaries. Small stands were located along the northern boundary of the site (see Photograph 14).



Photograph 14 showing the Japanese Knotweed

PROTECTED SITES

- 3.23 No statutory protected sites are located within the site boundaries or immediately adjacent to the site boundaries. Two statutory protected sites are located within 5km of the site boundaries. Acornfield Plantation Local Nature Reserve (LNR) lies 1km north-east of the site. Croxteth LNR lies 1.2km south-west of the site.
- 3.24 The site does not lie within a SSSI Impact Risk Zone, which lists certain types of development that may have a deleterious impact on protected sites nearby.
- 3.25 No non-statutory protected sites exist within the site boundary. Otis Meadow Local Wildlife Site (LWS) borders the developments site's northern boundary. Two non-statutory protected sites are located within 2.5km of the site. Knowsley Brook LWS lies approximately 220 metres south of the site at its nearest point. Knowsley Park LWS lies 1.2km south-east of the site.

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 offers generally good ecological value. The areas of continuous scrub are the most ecologically valuable habitats. These provide cover from predation, foraging habitat and nesting habitat for birds. The grassland and tall, ruderal herb areas offer a limited source of pollen and nectar for invertebrates.

Development Context

- 4.3 The development proposals involve the loss of the majority of the habitats on site. It is recommended a suitable landscaping scheme is implemented on site to mitigate for the losses of the existing habitats.

PROTECTED SPECIES

Great Crested Newt

- 4.4 No waterbodies exist on the site. Three waterbodies are located within 250m of the site boundaries. One Sustainable Urban Drainage (SUDs) feature is located approximately 10m from the eastern site boundary, due the large size of this pond it is considered to be sub-optimal breeding habitat for Great Crested Newt. The second and third waterbodies are located approximately 170 metres from the site, these ponds do hold some connectivity with the site but better quality terrestrial habitat lies adjacent to the ponds which would likely be favoured by Great Crested Newt.
- 4.5 The site provides suitable terrestrial habitat for Great Crested Newt within the semi-improved grassland, tall, ruderal herb and continuous scrub. Given the lack of connectivity to suitable breeding habitat in the locality Great Crested Newt is not considered to be a constraint on development at this time and no further survey work is necessary.

Bats

- 4.6 No buildings are present on site that could provide any suitable bat roosting habitat. None of the trees after an inspection were considered to support features that could be used by roosting bats. Bats use linear features for foraging, it is possible that the scrub and associated trees on site are used by foraging bats.

Badger

- 4.7 No Badger sett was located on the site or immediately adjacent to the site. Mammal tracks of Badger, Fox and Deer were located on the site during the survey, no other signs of Badger activity such as latrines or snuffle holes were located during the survey. It is likely that Badgers only using the site occasionally for foraging due to the limited

signs of activity noted during the survey. However, the scrub habitats on site should be cleared with care and should any mammal large hole be located, works should stop and an ecologist be contacted for advice. A set of reasonable avoidance measures should be implemented during the construction phase to protect any Badgers that may forage on the site. No further survey work is considered necessary at this time.

Nesting Birds

- 4.8 The site supports suitable habitat for nesting birds within the semi-improved grassland, scattered trees and scrub. If any work will proceed to these habitats within the bird nesting season (which is generally March-August), then a nesting bird check will be required immediately prior to any work.

INVASIVE SPECIES

- 4.9 Japanese Knotweed *Reynoutria japonica* is present on the site. This is an invasive, non-native species and are listed on Schedule 9 Part II (plants) of the Wildlife and Countryside Act 1981 (as amended). It is recommended this is removed from the site using an approved eradication methodology prior to or during site clearance work.

PROTECTED SITES

- 4.10 No statutory or non-statutory protected sites lie within the proposed development site or immediately adjacent. The nearest statutory protected site is Acornfield Plantation LNR, which lies 1km north-east of the site. At this distance, and with barrier habitats between the SSSI and the proposed development site, there is expected to be no deleterious impact on any protected sites from the development.
- 4.11 The nearest non-statutory protected site is Otis Meadow LWS, which borders the development site's northern boundary. The protected site will need to be protected by a Construction Environmental Management Plan (CEMP) and a buffer habitat of five meters will be required.

5.0 RECOMMENDATIONS

Further Survey

- 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, no further surveys are required. But if the plans change, the following surveys may be required:

- **Nesting Birds** - If any work to the trees or scrub needs to be carried out within the bird nesting season (which is generally March to August), then a nesting bird survey will be required immediately prior to work commencing.

Protected Species

- 5.2 Should any protected species such as Badger or evidence of a protected species such as a large mammal hole, be found during the development, then works must stop and an ecologist be contacted for advice.
- 5.3 A Reasonable Avoidance Measures statement should be implemented during the construction phase to protect any Badgers that forage on the site.

Invasive Species

- 5.4 The Japanese Knotweed should be removed from the site using a recognised methodology as part of the proposed scheme.

Protected Sites

- 5.5 Otis Meadow LWS will need to be protected by a CEMP and a buffer habitat of five meters will be required.

Habitat Enhancement

- 5.6 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 and bat boxes should be erected on the newly constructed buildings or retained trees where possible.
 - Tree planting of native species where practically possible.
 - 'Hedgehog holes' to be incorporated into the fencing of the site.

6.0 REFERENCES

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APPENDIX A PHASE 1 HABITAT MAP

