
EXTENDED PHASE 1 HABITAT SURVEY

FORMER TACK LEA WORKS, BIRTLE,
ROCHDALE,
GREATER MANCHESTER

July 2022



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1.0 INTRODUCTION

Site Information

- 1.1 Rachel Hacking Ecology Limited was commissioned in 2022 by Hall and Co to carry out an Extended Phase 1 Habitat Survey at Former Tack Lea Works. The site is situated north of Bury and Rochdale Old Road, in Birtle, Rochdale, Greater Manchester (O.S. grid reference: SD83901205– see Figure 1). The proposed development site currently comprises a cleared former industrial site dominated by an area of ephemeral short perennial and semi-natural Broad-leaved woodland. Bury and Rochdale Old Road lies immediately to the south of the site, agricultural land and sparse residential development surrounds the site on all other sides.

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.



Figure 1 showing the location of the site

Description of Development

- 1.2 The site received full planning permission for a residential development in May 2017 (17/00359/FUL). The site will now be the subject of the planning application for an alternative planning application for a residential development with associated access, Parking, landscaping and amenity provisions.

Summary of Previous Work

- 1.3 Previous surveys of the site by Living Ecosystems in 2019 have been carried out using a redline boundary that encompassed the eastern part of the site and include a Bat Scoping survey of the former Mill building that has now been demolished, a set of Reasonable avoidance measures for Great Crested Newt to be implemented during the demolition of the mill building and a Badger survey (see *Results of a badger survey carried out at the former track works lea, Bury Old Road, Birtle, Rochdale, Greater Manchester* – Living Ecosystems - 2019).



Biodiversity in Planning

- 1.4 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.
- 2.3 The site was also surveyed for invasive, non-native plant species such as Japanese Knotweed and Giant Hogweed.

Great Crested Newt Habitat assessment

- 2.4 Great Crested Newt (GCN) assessment involved locating waterbodies on site and within 250 metres of the site boundary using OS maps and aerial photography. Each suitable pond was visited and assessed using the Habitat Suitability Index (HSI), a quick means of assessing GCN habitat suitability.
- 2.5 For a HSI assessment the pond is assessed under 10 indices, each index was given a score following the survey and following desk-top research (i.e. pond count). These scores were then the subject of an equation (see references). Ponds with high HSI scores are more likely to support GCN than ponds with low HSI scores. The final scores are categorised as follows:

HSI Score	Pond Suitability
< 0.5	Poor
0.5-0.59	Below Average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

Personnel and Seasonal Timing

- 2.6 Kate Reed (Senior Ecologist) and Rachel Watkins (Ecologist) carried out the Extended Phase 1 Habitat survey on the 28th of July 2022. Both Ecologists are experienced in conducting habitat and protected species surveys and are fully trained. July is an optimal time of the year for botanical work. Protected species assessments can be undertaken at any time of year. The weather at the time of the survey was dry and bright.

Survey Constraints

- 2.7 The site was fully accessible. There were negligible constraints to the survey.



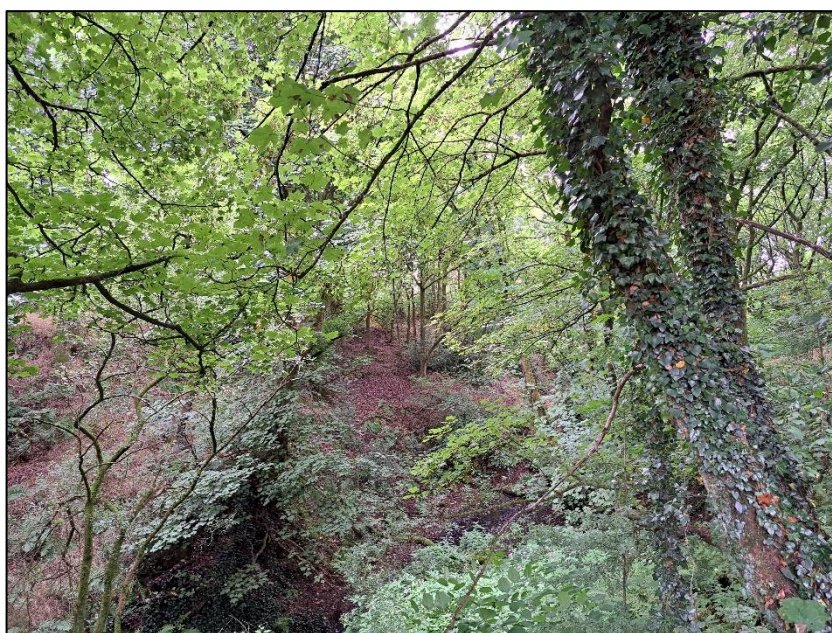
3.0 RESULTS

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.

Semi-natural Broad-leaved Woodland

- 3.2 The western half of the site is covered by an area of semi-natural Broad-leaved Woodland (see Photograph 1). The trees within woodland mostly semi-mature to mature, species include Pedunculate Oak *Quercus robur*, Sycamore *Acer pseudoplatanus*, Beech *Fagus sylvatica* and Ash *Fraxinus excelsior*. The scrub layer is composed of Holly *Ilex aquifolium*, Bramble *Rubus fruticosus* agg. and Hazel *Corylus avellana*. Ground flora includes *Deschampsia* sp., Fox glove *Digitalis purpurea*, Pink Purslane *Claytonia sibirica*, Great Willowherb *Epilobium hirsutum* and Pendulous Sedge *Carex pendula*.



Photograph 1 showing the semi-natural broad-leaved woodland

Ephemeral Short Perennial

- 3.3 The eastern part of the site is covered by an area of ephemeral short perennial (see Photograph 2). This is composed of Yorkshire Fog *Holcus lanatus*, Greater Plantain *Plantago major*, Herb Robert *Geranium Robertianum*, Canadian Fleabane *Erigeron canadensis*, Colt's-foot *Tussilago farfara*, Bird's-foot Trefoil *Lotus corniculatus*, Creeping Cinquefoil *Potentilla reptans*, Mayflower *Epigaea repens*, Selfheal *Prunella vulgaris*, and Perennial Sow-thistle *Sonchus arvensis*. In the north of this habitat some ephemeral pools are present (see Photograph 3), additional species found here include Bulrush *Typha latifolia*, Hard Rush *Juncus inflexus*, Soft-rush *Juncus effusus*, Sedges *Carex* sp. and Bryophytes.



Photograph 2 showing the ephemeral short perennial



Photograph 3 showing one of the ephemeral pools

Continuous and Scattered Scrub

- 3.4 A small area of scrub is present in the southeast of the site, adjacent to the site entrance (see Photograph 4). This consists of Cherry Laurel *Prunus laurocerasus*, Hawthorn *Crataegus monogyna*, Bramble *Rubus fruticosus* agg., Ivy *Hedera helix*, *Ribes* sp. and saplings of Ash *Fraxinus excelsior* and Beech *Fagus sylvatica*.





Photograph 4 showing area of continuous scrub

- 3.5 Scattered scrub is present across the ephemeral short perennial (see Photograph 5). This is composed of Broom *Cytisus scoparius*, Butterfly Bush *Buddleja davidii* and Saplings of Silver Birch *Betula pendula*, Willow *Salix* sp. and Ash *Fraxinus excelsior*.



Photograph 5 showing some of the scattered scrub on site

Bare Ground

- 3.6 There is an area of bare ground at the site entrance (see Photograph 6) and in the northeast corner of the site. This mapped as bare ground.



Photograph 6 showing an area of bare ground at the site entrance

Tall Ruderal

- 3.7 An area of Tall Ruderal species covers the bank on the northern boundary of the site (see Photograph 7). Species in this habitat include Spear Thistle *Cirsium vulgare*, Common Ragwort *Jacobaea vulgaris*, Common Nettle *Urtica dioica*, Bush Vetch *Vicia sepium*, Great Willowherb *Epilobium hirsutum*, Feverfew *Tanacetum parthenium* (*Chrysanthemum parthenium*), Broad-leaved Dock *Rumex obtusifolius*, Yorkshire Fog *Holcus lanatus* and Mugwort *Artemisia vulgaris*.



Photograph 7 showing tall ruderal species on the northern bank of the site

Open Water

- 3.8 Three ponds are present on the site (see Photograph 8), these have been mapped as open water.



Photograph 8 showing one of the ponds on site

Building/Structure

- 3.9 There is a small service unit in the East of the site.

Defunct Species Poor Hedgerow

- 3.10 A defunct species poor hedgerow runs along a section of the southern boundary of the site, adjacent to the road (see Photograph 9). This is dominated by Sycamore *Acer pseudoplatanus* and Hawthorn *Crataegus monogyna*.



Photograph 9 showing a section of the defunct hedgerow

Running Water

- 3.11 Track Lee Brook flows through the woodland on the site then it is culverted under the ephemeral section of the site and under Rochdale and Bury New Road (see Photograph 10).



Photograph 10 showing the section of Track Lee Brook on the site

- 3.12 A drainage ditch flows along a section of the northern boundary of the ephemeral short perennial (see Photograph 11).



Photograph 11 showing the drainage ditch

Spoil

- 3.13 Spoil heaps are present within the ephemeral short perennial composed of the crush aggregate for the former structures on site (see Photograph 12).



Photograph 12 showing the spoil heaps on site

Scattered Trees

- 3.14 Scattered trees are located on the site boundaries within the continuous scrub and the tall ruderal herb habitats (see Photograph 13). Species included Pedunculate oak *Quercus robur*, Ash *Fraxinus excelsior*, Sycamore *Acer pseudoplatanus* and Beech *Fagus sylvatica*.



Photograph 13 showing some of the scattered trees within the site

PROTECTED SPECIES

Great Crested Newt

- 3.15 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).
- 3.16 Three ponds occur on the site and a further two ponds occur within 250m of the site boundary (see Figure 2). The onsite ponds were visited and assessed using a Habitat Suitability Index (HSI) Assessment. The full results can be found at the end of the report with a summary and description of each pond below. There was no access to the offsite ponds at the time of the survey.



Figure 2 showing the location of the ponds on site and within 250m of the site boundary, the site boundary and 250m are both marked in red

Pond 1

- 3.17 Pond 1 lies within the woodland in the north-west of the site (see Photograph 14). It is a medium-large sized waterbody, its rectangular shape and stone wall banks indicate it is a manmade pond. The woodland means that 100% of the banks are shaded but offers good terrestrial habitat for GCN. The pond is heavily silted and filled with leaf litter created a bad water quality. The pond supports no aquatic vegetation other than a small amount of Duckweed *Lemna* sp. The HSI score of the pond is 0.47 which is 'poor'.



Photograph 14 showing Pond 1

Pond 2

- 3.18 Pond 2 also lies within the woodland in north of the site (see Photograph 15). It is a medium sized waterbody, its rectangular shape and stone wall banks indicate it is a manmade pond. The woodland means that 100% of the banks are shaded but offers good terrestrial habitat for GCN. The pond is heavily silted and filled with leaf litter created a bad water quality. The pond supports no aquatic vegetation other than a small amount of Duckweed *Lemna* sp. The pond scores 0.47 in the HSI assessment which is 'poor'.



Photograph 15 showing Pond 2

Pond 3

- 3.19 Pond 3 lies in the north of the site within the area of tall ruderal herb (see Photograph 16). n the site (see Photograph 13). It is a medium sized waterbody, its rectangular shape and stone wall banks indicate it is a manmade pond. The scattered trees on the banks of the pond mean that approximately 90% of the banks are shaded and the tall ruderal herb offers moderate terrestrial habitat for GCN. The pond is filled with leaf litter created a poor water quality. The pond supports no aquatic vegetation other than a small amount of Duckweed *Lemna* sp. The pond scores 0.62 in the HSI assessment which is 'Average'.



Photograph 16 showing Pond 3

Ponds 4 and 5

- 3.20 Pond 4 lies approximately 125m to the south of the site and Pond 5 lies approximately 224m to the south of the site. There was no access to these ponds at the time of the survey as they lie within private farmland. These ponds hold no direct habitat connectivity to the site as they lie across Rochdale and Bury Old Road which is considered a significant barrier to dispersal.

Onsite ephemeral pools

- 3.21 The ephemeral pools that occur within the northern part of the ephemeral short perennial habitat are not considered to offer suitable breeding habitat for GCN. These pools are likely only present on the site after periods of heavy rainfall and dry up frequently within one season creating unsuitable habitat for breeding.

Terrestrial habitat

- 3.22 The site offers suitable terrestrial habitat for GCN within the woodland, continuous scrub, tall ruderal herb and the hedgerows base. These habitats offer cover from predation, foraging and commuting opportunities. The ephemeral short perennial habitat is considered a hostile habitat for amphibians as it offers no cover from predation.

Bats

- 3.23 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).

Building/Structure

- 3.24 Only one service building/structure exists on the site (see photograph 17). There was no internal access to this building at the time of the survey, but it appears to be well-sealed. The external brickwork is in excellent condition with no missing or damaged brick/mortar. Two wooden doors are present on the front facing elevation these are well sealed within the brickwork and do not offer any potential access points for bats. It has a flat roof which appears to be in a good condition and overhangs the edges of the roof, a gap exists between the top of the wall and the overhang of the roof which is exposed and open (see Photograph 18) and so does not offer any potential roosting opportunities.



Photograph 17 showing the only building/structure on site



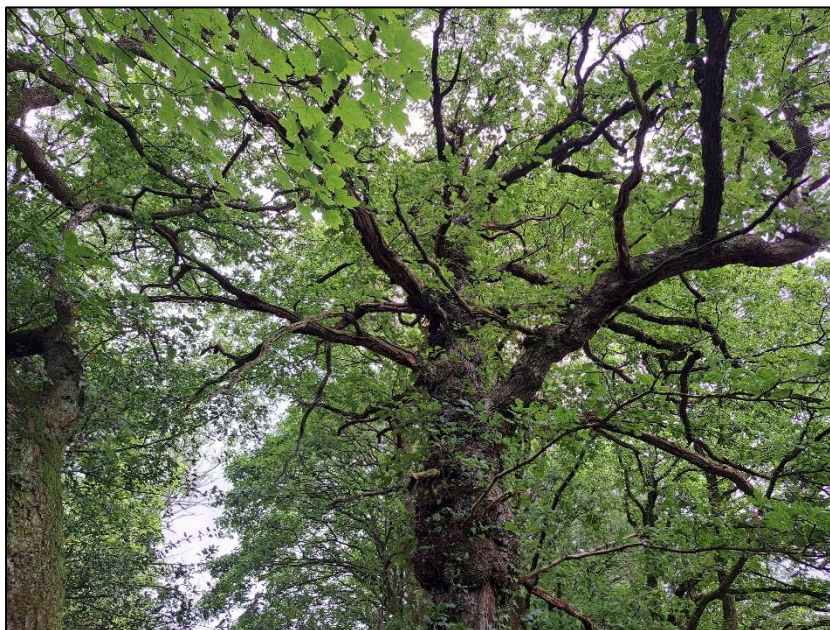
Photograph 18 showing the large gap between the top of the wall and the roof overhang

Tree assessment

- 3.25 The trees on site, within the woodland and scattered on the site boundary were searched from the ground for features that could support roosting bats such as damaged limbs, tear outs and wood-pecker holes. The majority of the trees on the site are young to semi-mature and do not support such features, three trees were located within the site boundary that support such features.

Bat Tree 1

- 3.26 Bat Tree 1 is a semi-mature Pedunculate Oak *Quercus robur*, it has a limb that supports a cavity which could provide roosting opportunities for bats (see Photograph 19).



Photograph 19 showing Bat Tree 1

Bat Tree 2

- 3.27 Bat Tree 2 is a mature Pedunculate Oak tree, it has a damaged limb and a limb tear out (see Photograph 20).



Photograph 20 showing Bat Tree 2

Bat Tree 3

- 3.28 Bat Tree 3 is a mature Pedunculate Oak tree, that has a damaged limb (see Photograph 21)



Photograph 21 showing Bat Tree 3

Foraging Habitat

- 3.29 Bats use linear habitats to forage along. The site offers suitable foraging habitat for bats, the edges of the semi-natural broad-leaved woodland, and the scattered trees on the site boundary.

Badger

- 3.30 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.
- 3.31 No Badger sett or large mammal hole was located on the site or within 30m of the site (where accessible) during the survey. Signs of Badger activity were located during the survey including mammal tracks, latrines, and snuffle holes (see Photograph 22). Signs of other mammal activity was also located during the survey including deer and it is possible that they contribute to the mammal tracks on site.



Photograph 22 showing one of the Badger latrines on the site

Nesting Birds

- 3.32 All bird species are protected at their nest under the Wildlife and Countryside Act 1981 (as amended).
- 3.33 The Semi-natural Broad-leaved Woodland, Scattered trees, continuous scrub and the hedgerow on site provide suitable nesting habitat for birds. The ponds also offer opportunities for waterfowl nesting on the site.

Water Vole

- 3.34 Water Vole *Arvicola amphibius* is fully protected under the Wildlife and Countryside Act 1981 (as amended). This act, for example, makes it illegal to intentionally kill, injure or take (capture) a Water Vole or intentionally or recklessly damage, destroy or obstruct access to any structure or place which Water Voles use for shelter or protection or disturb Water Voles while they are using such a place.
- 3.35 Track Lea Brook, the drainage ditch and ponds on site offer potential habitat for water Vole and were subject of a habitat assessment and the banks where accessible searched for field signs, such as feeding remains, burrows or droppings.
- 3.36 The three Ponds on site are not considered to offer optimal Water Vole habitat, and no field signs were found at any of the ponds. The banks of Ponds are constructed from stone and do not present any suitable habitat for burrowing. The ponds do not support any aquatic vegetation that would provide foraging opportunities. The ponds are heavily shaded, the water is very silted and appears of poor quality with no open areas for swimming.
- 3.37 The drainage ditch on the site is considered sub-optimal habitat for Water Vole due to the shallow water level and lack of aquatic and marginal vegetation, it is also filled with debris. No field signs of Water Vole occur in the ditch.
- 3.38 Track Lea Brook flows through the woodland, the section of the brook that flows through the site, is considered to offer sub-optimal habitat for Water Vole, the banks here have a shallow gradient unsuitable for burrows and the water level is shallow. The banks support no aquatic vegetation. No field signs were located along the banks of the brook.

Otter

- 3.39 Otter is a European Protected Species under the Conservation (Natural Habitats etc.) Regulations 1994. This is implemented in the UK through the Conservation of Habitats and Species Regulations 2019. Otter is also protected under the Wildlife and Countryside Act 1981 (as amended).
- 3.40 No field signs of Otter were found along Track Lea Brook or along the drainage ditch on site. They are considered to offer sub-optimal foraging habitat for Otter as the water level is shallow and the banks would not support an Otter holt.

INVASIVE SPECIES

- 3.41 Japanese Knotweed *Reynoutria japonica* (see Photograph 23) and Himalayan Balsam *Impatiens glandulifera* (see Photograph 24) are located on the site. Both of these species are invasive, non-native species as listed on Schedule 9 Part II (plants) of The Wildlife and Countryside Act 1981 (as amended) which makes it an offence to allow it to spread into the wild. The Japanese Knotweed occurs in two locations on the edge of the woodland, the Himalayan Balsam is found across the site in all Habitats. The locations are indicated in the Phase 1 map at the end of this report.



Photograph 23 showing the Japanese Knotweed on the site



Photograph 24 showing the Himalayan Balsam on the site

PROTECTED SITES

- 3.42 No statutory protected sites lie on the site or immediately adjacent to the site boundary. The nearest is Chesham Woods Local Nature Reserve (LNR) which lies approximately 1.9km to the west of the site. Five other statutory protected sites are located within 5km of the site:
- Hollins Vale LNR which lies approximately 3.9km to the south of site.
 - Hopewood Woodlands LNR which lies approximately 4.3km to the south-east of the site.
 - Kirklees Valley Local LNR which lies approximately 4.7km to the west of site
 - Rochdale Canal Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC) which flows southeast of site, 4.7km from the site at the closest point.
 - Healey Dell LNR which lies approximately 4.9km to the north-east of site
- 3.43 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 and when Natural England should be contacted for advice.
- 3.44 Part of the site lies within Track Lee and Gristleurst Woods Site of Biological Importance (SBI). Four other non-statutory protected sites are located within 1km of the site:
- Smethurst and Elbut Woods (East) SBI which lies approximately 250m to the south-west of the site.
 - Smethurst and Elbut Woods (West) SBI which lies approximately 275m to the south-west of the site.
 - Lomax Wood SBI which lies approximately 600m to the south of the site.
 - Ashworth Valley SBI which lies approximately 825m to the north-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 supports area of ephemeral short perennial habitat in the east of the site and an area of semi-natural broad-leaved woodland to the west of the site. Three ponds, Track Lea Brook, continuous scrub, tall ruderal herb, scattered trees and a section of defunct hedgerow habitats also exist on the site. The Woodland and Track Lea Brook are the most ecologically valuable habitats on the site, these habitats offer cover from predation as well as foraging and commuting opportunities. The ponds are heavily silted but still offer some ecological value as to the continuous scrub tall ruderal herb, scattered trees and hedgerow. The ephemeral short perennial habitat is the least ecologically valuable habitat on the site. In addition, the flowering plants on site offer a nectar source for invertebrates and wider site offers opportunities for nesting birds.

Development Context

- 4.3 The proposed development involves the construction of 27 cottages and an apartment building composed of 6 units with access, garden and parking provision which is located on the eastern part of the site. The woodland is proposed as an amenity space with a woodland walk, play area and outside dining space. The development will cause the loss of the ephemeral short perennial, small amount of the woodland, the tall ruderal herb and the continuous scrub. The scattered trees on the site boundary and the ponds are to be retained within the scheme. It is recommended a suitable landscaping scheme is created to help mitigate the loss of the habitats on site, this is recommended to include improvements to the ponds on site and provision of native planting.

PROTECTED SPECIES

Great Crested Newt

- 4.4 Three ponds exist on the site and a further two ponds occur within 250m of the site boundary. The ponds on site were the subject of a HSI assessment and Ponds 1 and 2 were found to offer 'poor' suitability and Pond 3 was found to offer 'average' suitability to support GCN. These ponds are all retained within scheme. The ephemeral pools on site are not considered to offer suitable breeding habitat as they are likely dry most of the year and only present after periods of rain. The two ponds that lie within 250m of the site, hold no direct habitat connectivity to the site as they lie across Rochdale and Bury Old Road which is considered a significant barrier to dispersal.
- 4.5 The site offers suitable terrestrial habitat for GCN within the woodland, continuous scrub, tall ruderal herb and hedgerow base. However, given the limited value and lack of connectivity to suitable breeding habitat in the locality it is unlikely that GCN occur on the site. No further survey work is considered necessary at this time, Great Crested Newt is not considered to be a constraint on development at this time.

Bats

- 4.6 The only building/structure on site appears to be well-sealed with no potential access points for bats and the external features are in good condition with no potential cavities that could support roosting bats. The service building is considered to offer **negligible potential** to support a bat roost. The three trees on the site that support roosting features are located within the woodland, these are considered to offer **low potential** (BT1 and BT3) or **moderate potential** (BT2). Minimal works are proposed within the woodland and therefore it should be possible to retain these trees on the site. However, should work need to be carried out on these trees further survey work would be required on BT2 such as an aerial tree assessment and sympathetic felling techniques would be required for BT1 and BT3. The trees would need to be section felled, with each section lowered to the ground rather than dropped and then left of the ground for at least 24 hours before chipped or removal from the site.
- 4.7 The woodland and lines of trees on the site boundary offer suitable bat foraging and commuting habitat, and it is recommended any artificial lighting is directed away from the trees.

Badger

- 4.8 No Badger sett was located on the site or within 30m of the site boundary (where accessible). Signs of Badger foraging within the woodland were located during the survey. Evidence of Badger activity on the site includes latrines, snuffle holes and mammal tracks. Minimal works are proposed within the woodland and should therefore not impact on the foraging territory of the badgers in the locality of the site. All works should however be carried out using a RAMs statement to protect any Badgers that use the site for foraging and commuting.

Nesting Birds

- 4.9 The site supports suitable nesting habitats for birds within the Woodland, scattered trees, continuous scrub, and hedgerow. The ponds also offer nesting opportunities for waterfowl. Nesting birds can be mitigated for by allowing no works to these 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.

Water Vole

- 4.10 No field signs of Water Vole were located along Track Lea Brook, the drainage ditch or the ponds during the survey. The ponds are considered to offer sub-optimal habitat but could provide foraging opportunities as they support no aquatic vegetation and have a shallow water level. The drainage ditch is considered to be suboptimal habitat as it has a shallow water level filled with debris and support no aquatic vegetation. Track Lea Brook that flows through the site is also considered to offer suboptimal habitat for Water Vole as it has shallowly gradient banks that do not offer burrowing opportunities, the banks lack aquatic vegetation, and the water level is shallow. All of these habitats are retained within the scheme. Therefore, it is not considered necessary to undertake any further Water Vole survey or mitigation.

Otter

- 4.11 No field signs of Otter were located along Track Lea Brook, the drainage ditch or the ponds during the survey. No habitats suitable for a holt exist on the site or immediately adjacent to the site. All of these habitats are retained within the scheme. Therefore, it is not considered necessary to undertake any further Otter survey or mitigation.

INVASIVE SPECIES

- 4.12 Japanese Knotweed was found on site. It is an offence to allow this species to spread into the wild and therefore, the species will need removing prior to site clearance and construction work, with efforts taken to ensure the species is not spread. Removal of Japanese Knotweed can be carried out using herbicides, excavation and removal off-site, or excavation and on-site burial. Japanese Knotweed rhizome can remain dormant for a considerable amount of time after re-growth has stopped, it is therefore important to check for living rhizomes before disturbing the site. The most effective time to apply herbicide is June to September.
- 4.13 Himalayan Balsam also occurs across the site, and it is similarly an offence to allow the species to spread into the wild. Himalayan Balsam can be removed by pulling up and/or strimming and leaving in-situ, or herbicide application. These methods must take place prior to the plant's seeds setting (which is typically May onwards). Vigilance for seedlings must be maintained over several seasons.

PROTECTED SITES

- 4.14 No statutory protected site lie within site boundary or immediately adjacent to it, the nearest is Chesham Woods LNR which lies approximately 1.9km to the west of the site, five other statutory protected sites lie within 5km of the site. Given the distances between the proposed site and the statutory protected sites no deleterious impact are expected as a result of the proposed scheme.
- 4.15 Part of the site is designated as Tack Lee & Gristlehurst Wood SBI a non-statutory designation, four other non-statutory protected sites lie within 1km of the site boundary. The gardens of the cottages on the southern boundary of the site are indicated to lie within the boundary of the SBI but no development is proposed within the SBI a Construction and Environmental Management Plan (CEMP) should be implemented during the development works to protect the SBI from any negative impacts as a result of the proposed works.
- 4.16 The site lies within a SSSI Impact Risk Zone, however for the location for the site the development type is not listed as a concern and Natural England should not need to be consulted at this time.

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** - If any vegetation clearance work to woodland, scattered trees, continuous scrub, hedgerow, and the ponds 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.
- **Bats** – The three trees identified at support potential roosting features should be retained within the scheme however if this is not possible. Further survey work such as an aerial survey of T2 would be required. While works to T1 and E would need to be subject to sympathetic felling.

Protected Species

Bats

- 5.2 The linear habitats on site that offer suitable foraging habitat, the woodland edge and the scattered trees should be protected from artificial light both during the construction phase and post development.

Badger

- 5.3 While no Badger sett was located on the site, or immediately adjacent to the site. Field signs located during the survey indicate that Badgers are using the site, in particularly the Woodland, as a foraging/commuting resource. Minimal works are proposed within the woodland which will not impact upon the foraging territory of the Badgers. For this reason, the following Reasonable avoidance measures statement (RAMS) should be implemented throughout the site clearance and the construction work. The RAMS should include:

- All site operatives will receive an induction (toolbox talk) to include training on Badgers. The appointed site ecologist will remain on call for the duration of the construction period.
- night-time work is to be avoided.
- Any artificial lighting should be aimed away from the woodland to protect nocturnal Badger foraging activity.
- Any open trenches or excavations left open overnight will be covered or have a means of escape, such as a ramp, so if a Badger falls into an excavation, it can easily escape.
- No spoil piles to be left open, to prevent Badgers from digging into them. Spoil piles should be covered with sheeting or compacted.

- Any temporary exposed open pipe system will be capped so that Badgers are prevented from gaining access overnight.
- Chemicals will be stored safely in locked, Badger-proof containers.

If any mammal holes are found during the site clearance, or during the development of the site, work must temporarily stop, and a suitably experienced ecologist be contacted for advice.

Invasive Species

- 5.4 The invasive non-native species on the site the Japanese Knotweed and the Himalayan Balsam on site should be eradicated from the site using a suitable methodology for each species.

Protected Sites

- 5.5 A construction and environmental Management plan (CEMP) should be implemented during the construction works to protect Tack Lee & Gristlehurst Wood SBI. This will protect the SBI from negative impacts as a result of the proposed development.

Habitat Enhancement

- 5.6 The following measures could be implemented to enhance the biodiversity value of the site:
- Where planting is proposed, this should include the provision of native and non-native flowering perennial, annual and shrub species, to provide a pollen and nectar source for invertebrates.
 - Bird boxes and/or bat boxes could be erected where possible.
 - Trees planting – where practical, native tree species should be planted.
 - Habitat enhancement of Ponds 2 & 3

6.0 REFERENCES

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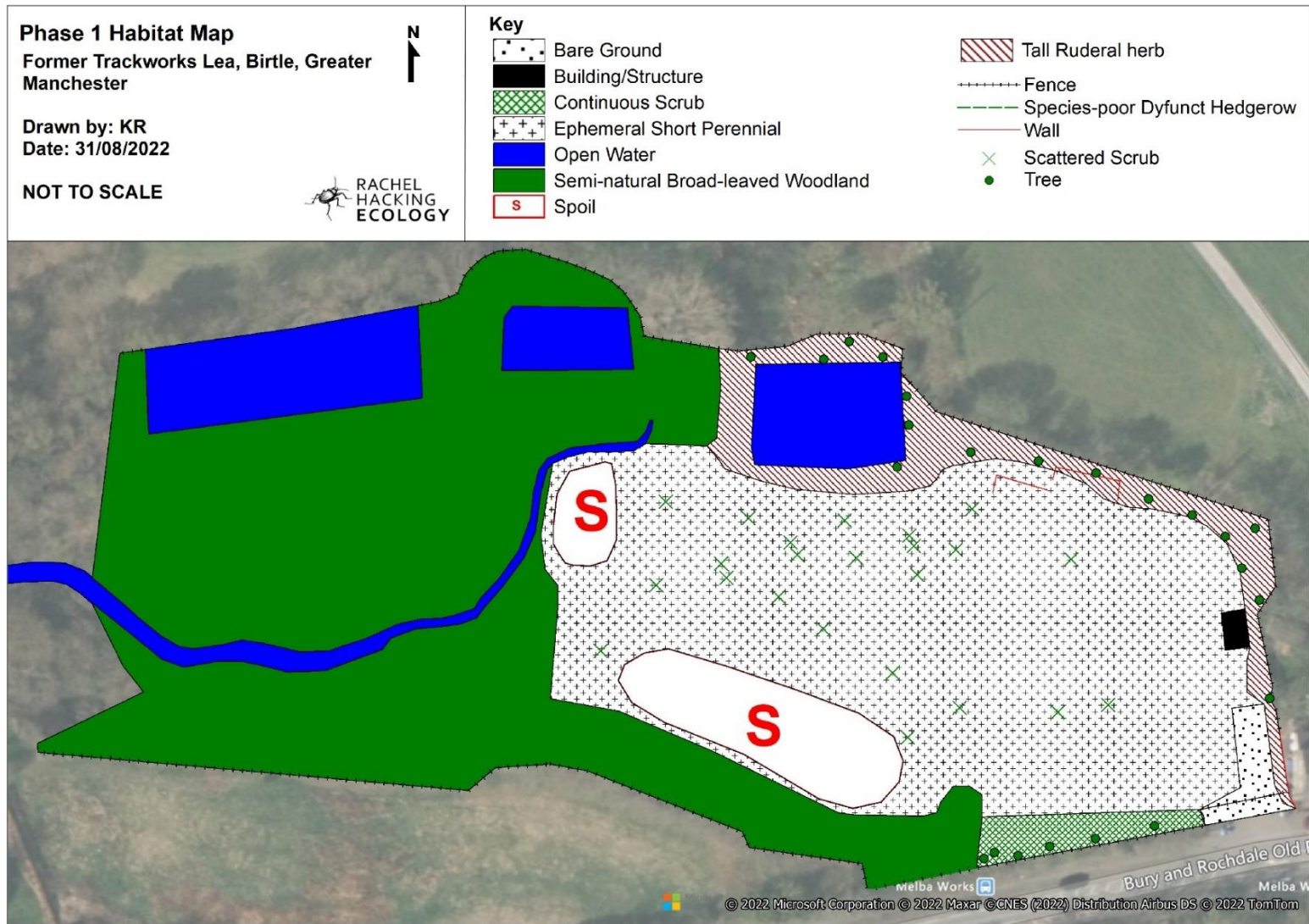
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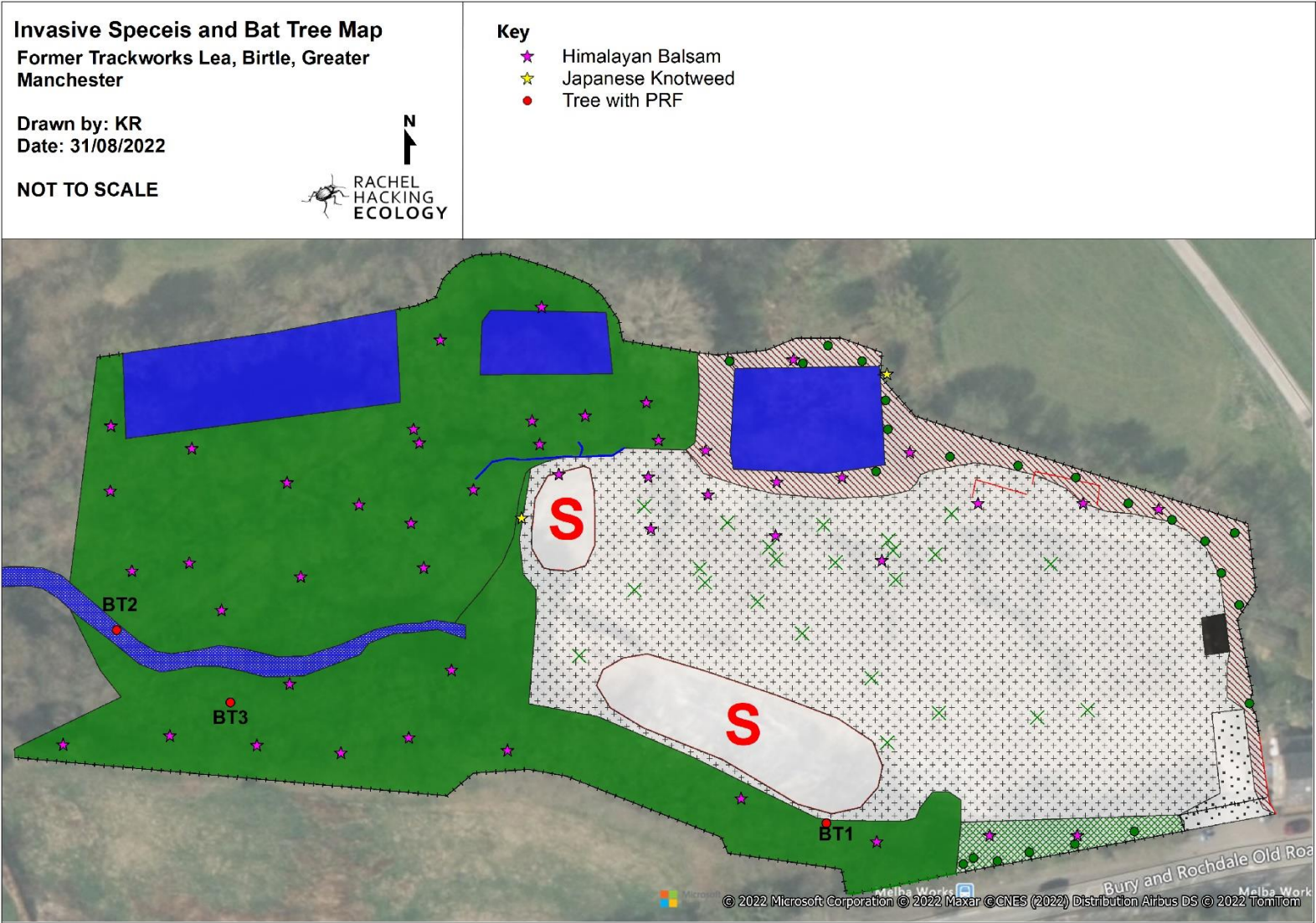
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APPENDIX A PHASE 1 HABITAT MAP



APPENDIX B INVASIVE SPECIES AND BAT TREE MAP



APPENDIX C HABITAT SUITABILITY INDEX ASSESSMENT RESULTS

Pond Number	Location	Area	Permanence	Water Quality	Shade	Waterfowl	Fish	Pond count	Terrestrial habitat	Macrophyte cover	Score
1	A	825m ²	Rarely Dries Out	Bad	100%	Absent	Absent	More than 12	Good	0%	0.47
2	A	400m ²	Rarely Dries Out	Bad	100%	Absent	Absent	More than 12	Good	0%	0.47
3	A	450m ²	Sometimes Dries Out	Poor	90%	Absent	Possible	More than 12	Moderate	0%	0.62
4	NO ACCESS AT THE TIME OF THE SURVEY										-
5	NO ACCESS AT THE TIME OF THE SURVEY										-

