



PRELIMINARY ECOLOGICAL APPRAISAL

**WICKEN HALL MILL, NEWHEY,
ROCHDALE, GREATER MANCHESTER.**

NOVEMBER 2022

PRELIMINARY ECOLOGICAL APPRAISAL

**- WICKEN HALL MILL, NEWHEY,
ROCHDALE, GREATER MANCHESTER -**

A report for

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ARCHITECTURAL DESIGN & PLANNING**

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1. INTRODUCTION

1.1 REASON FOR SURVEY

PENNINE Ecological were commissioned in October 2022 by JPE Consultancy Limited Architectural Design & Planning to undertake a Preliminary Ecological Appraisal (PEA) of Wicken Hall Mill, Newhey, Rochdale, Greater Manchester (hereafter referred to as 'the site'). The survey and subsequent report ('the study') are required to support a planning application to construct two new residential dwellings on an area of the land at the aforementioned site (Figure 1).

A site survey was undertaken on the Friday 21st October 2022.

The study includes the following elements:

- A request for ecological data i.e., protected and/or notable species and sites from the local records centre, Greater Manchester Ecology Unit (GMEU).
- A desk-based search of freely available online ecological information (e.g., Defra's MAGIC mapping tool, Google Earth, Ordnance Survey mapping etc.).
- A UK Habitat Classification field survey.
- A field survey and evaluation of the site to support protected and/or notable species including but not limited to:
 - Badger.
 - Birds, including Schedule 1 listed species of the Wildlife and Countryside Act 1981 (as amended) (WCA 1981) (e.g., barn owl, hobby, kingfisher, etc.).
 - European Protected Species (EPS) (i.e., bats, great crested newt (GCN), otter etc.).
 - Other protected species (e.g., water vole, brown hare, hedgehog, other amphibian species other than GCN, reptiles, etc.).

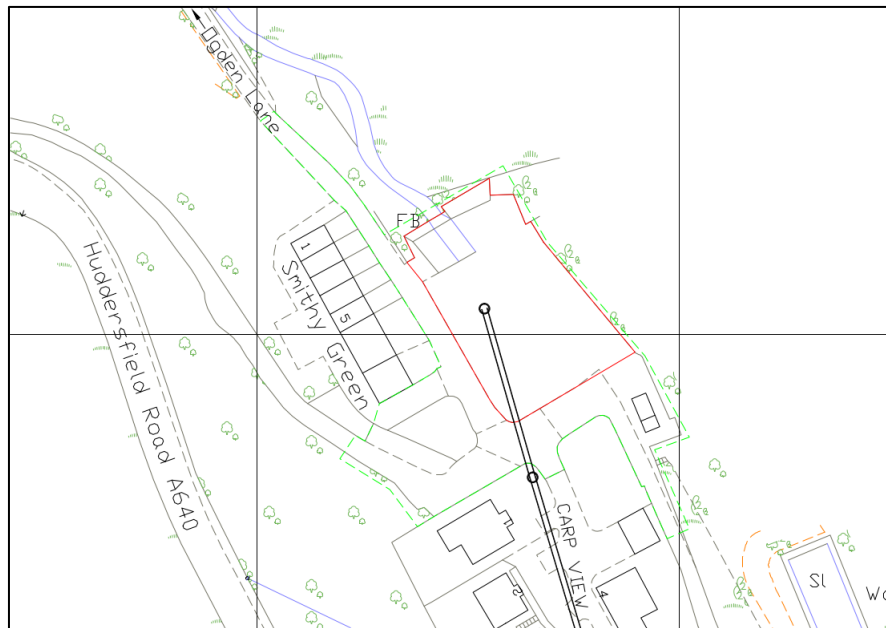
The report provides an evaluation of the ecological significance of the field survey results. If required, it also includes recommendations for further survey and/or precautions when and where appropriate.

1.2 SITE LOCATION

The rural site is located approximately 80m to the east of the A640 Huddersfield Road, approximately 1.9km due east of Newhey, and 500m south of Ogden Reservoir (SD952124). The immediate surrounding landscape comprised by deciduous and coniferous woodland, an unnamed brook, rough grassland, and pastoral farmland presumed to be used for livestock grazing.

The site's central national grid reference is SD 95466 11800.

Refer to Figure 1 for the site boundary (marked by red line) and the area surveyed as part of this study. An accompanying UK Habitat Classification survey habitat map of the site is provided in Appendix A, with photographs provided in Appendix B.



**Figure 1 - Site location and the area subject to survey is within the red line boundary
(provided by JPE Consultant, October 2022).**

2. METHODOLOGY

The methodologies relating to the desk-based searches and field surveys undertaken in October 2022 are outlined below.

1.1 DESK-BASED STUDY

2.1.1 Defra's MAGIC Mapping Tool

Defra's Multi Agency Geographical Information Centre (MAGIC) (www.magic.gov.uk) was used to identify the following features of ecological interest (MAGIC was last accessed on the 4th of November 2022).

- Statutory designated sites (e.g., Special Protection Areas (SPA), Sites of Special Scientific Interest (SSSI)), Local Nature Reserves (LNRs) within 2km of the site (and associated SSSI Impact Risk Zones).
- Granted EPS Mitigation Licences (EPSML) applications within 500m.
- GCN Class Survey Licence Returns within 500m.

2.1.2 Local Records Centre Data Request

A request to the Greater Manchester Ecology Unit (GMEU) for data on protected and/or notable species and sites (sites of Biological Importance (SBIs)) within 1km of the site was also requested. The data was received on the 26th of October 2022.

2.2 UK HABITAT CLASSIFICATION SYSTEM SURVEY

A UK Habitat Classification Survey (UKHab, 2020) of the site was undertaken on 21st of October 2022. The survey was conducted by Stuart Macpherson who is an ecologist with 13 years' experience in the land management and ecology sectors. He has undertaken a wide range of ecological surveys and holds survey licences for bats, barn owl and great crested newt.

Weather conditions during the survey were 16°C, dry and overcast.

The site's habitats were fully mapped with reference to Stace (1997), and higher vascular plant species (where present) were recorded and given abundance values according to the standard DAFOR scale where: D is dominant, A is abundant, F is frequent, O is occasional, and R is rare. Where appropriate the abundance values can be prefixed by the letter L (locally) or V (very), to provide more subtle biogeographical data.

2.3 BADGER SURVEY

Where access permitted a badger survey was undertaken to identify evidence of badger (e.g., setts, pathways, footprints, latrines etc.) utilising the site. Surveys were undertaken in accordance with *Surveying Badgers* (Harris *et al.*, 1989) and *Badger* (Roper, 2010).

2.4 GCN HABITAT ASSESSMENT

A Habitat Suitability Index (HSI) assessment for great crested and other amphibians was undertaken for the site. A search for optimal great crested newt habitat (e.g., ponds, hedgerows, dense vegetation, broadleaf woodland etc.) was undertaken with reference to *An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt Triturus cristatus* English Nature Research Reports, English Nature (2004).

The HSI assessment scoring system is a geometric mean of ten suitability indices: $HSI = (SI_1 \times SI_2 \times SI_3 \times SI_4 \times SI_5 \times SI_6 \times SI_7 \times SI_8 \times SI_9 \times SI_{10})^{1/10}$ (Great Crested Newts Habitat Suitability Index ARG UK Advice Note 5, 2010)

- Ten factors are scored for a pond, in the field and from map work (field scores).
- The ten field scores are converted to Suitability Index (SI) scores, on a scale from 0.01 to 1 (0.01 is used as the lower end of the scale instead of 0, because multiplying by 0 reduces all other SI scores to 0).
- The ten SI scores are multiplied together.
- The tenth root of this number is calculated ($\times 1/10$ i.e., x to the power of 0.1).

The calculated HSI for a pond should score between 1 and close to 0 (the calculations above do not allow the HSI to be exactly 0). The categories of the HSI scores is shown in Table 1.

Table 2.1: Categorisation of HSI Scores (taken from GCN Habitat Suitability Index ARG UK Advice Note 5)

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

2.5 PRELIMINARY ROOST ASSESSMENT FOR BATS

A preliminary bat roost assessment survey was undertaken following the methodology outlined in the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn) Collins (2016). The survey was undertaken by Stuart Macpherson who is a Class 2 bat licensed ecologist (licence number 2021-10079-CL18-BAT).

The survey included a survey for potential roost features (PRFs) within buildings, trees or any other structures which may support a bat roost (e.g., culverts, bridges, walls etc.) within the site boundary which may be directly impacted on by the proposals.

The site was also assessed for its suitability to support foraging and commuting bats.

2.6 OTTER AND WATER VOLE

An assessment of the site to support otter and/or water vole was undertaken in accordance with the good practice guidelines for the two species: Monitoring the Otter (*Lutra lutra*) (Chanin, 2003) and Water Vole Conservation Handbook (Strachan and Moorhouse 3rd Edn, 2011). The survey comprised the search for evidence of use by either of the two species of the unnamed brook to the north of the site. Evidence of otter would include holts, couches, footprints spraints etc. and water vole droppings, feeding stations, burrows etc.

2.7 BREEDING BIRD HABITAT ASSESSMENT

The potential for the site to support breeding birds was evaluated by an assessment of the site's habitats and any evidence of current or historic nesting. Habitats suitable for breeding birds could include but are not limited to buildings, scrub, hedgerows, and trees.

2.8 LIMITATIONS

There were no constraints to the survey or the overall study.

3. RESULTS

The results of the desk-based searches, the UK Habitat Classification survey and the species-specific surveys are outlined below.

3.1 DESK-BASED STUDY

3.1.1 Statutory Designated Sites

There are no statutory designated sites within 2km of the site (Figure 2). The SSSI Impact Risk Zones (IRZs) have been reviewed and consultation with Natural England is not required.

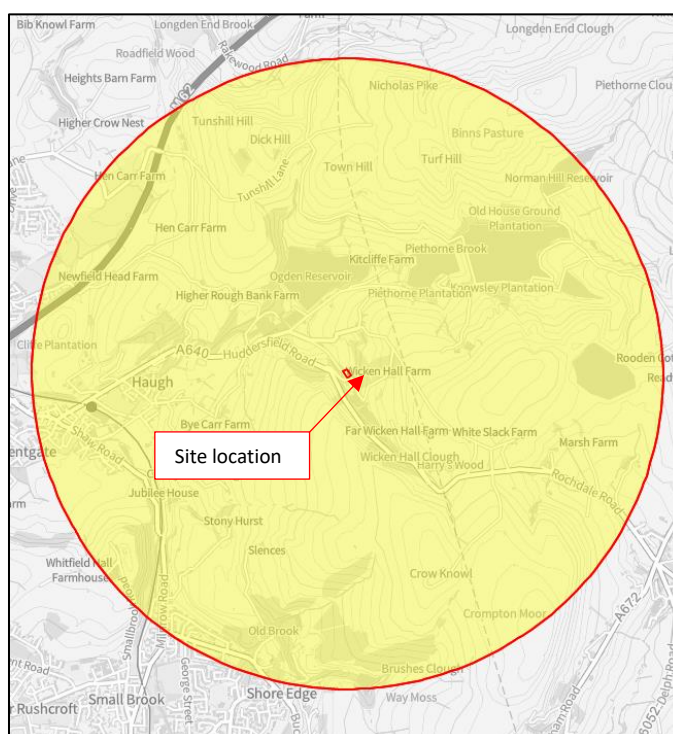


Figure 2 - Statutory designated sites within 2km of the site.

3.1.2 Non-statutory Designated Sites (Sites of Biological Importance)

There are two non-statutory designated sites within 1km of the site (Figure 3):

- Crompton Moor North; approximately 430m south of the site on the western side of Huddersfield Road.
- Piethorne Reservoirs and Plantations; approximately 460m north east of the site (at its closest point).

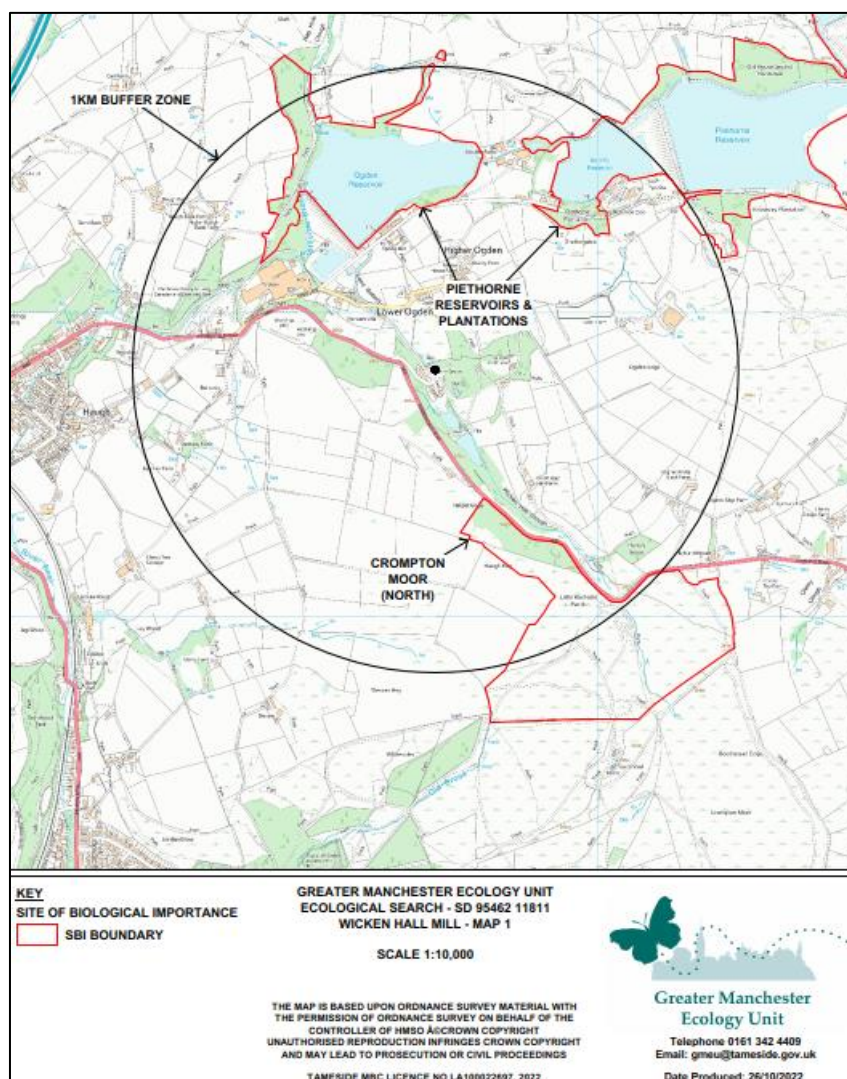


Figure 3 - Non-statutory designated sites within 1km of the site.

3.1.3 Protected and/or Notable Species (GMEU Supplied Data)

The desk study records returned 112 records of protected species; one record of one amphibian species (common toad), 20 bird species totalling 76 records, two records of two invertebrate species, 24 records of three mammal species and eight records of at least three bat species. The closest records are for an unidentified pipistrelle bat species and common pipistrelle bat which were recorded immediately adjacent to the site (these records are not roosts).

Detailed desk study results are included in Table 3.1 below.

Table 3-1. Desk study results from Greater Manchester Ecology Unit (data received 26th October 2022).

Species Group	Common Name	Number of Records	Closest Record to Site
Amphibian	Common toad	1	800m north west
Birds	Barn owl	2	500m north
	Common scoter	3	600m north
	Curlew	7	550m north east
	Bullfinch	3	450m north west
	Dunnock	2	400m north west
	Grasshopper warbler	2	850m north east
	Grey partridge	5	600m north

Species Group	Common Name	Number of Records	Closest Record to Site
	Herring gull	1	500m north
	House sparrow	5	500m north west
	Kingfisher	13	550m north west
	Lapwing	6	400m south west
	Lesser redpoll	4	550m north
	Little ringed plover	2	550m north
	Linnet	1	550m north west
	Peregrine	5	200m east
	Reed bunting	4	300m south east
	Skylark	8	550m north
	Song thrush	1	700m north east
	Spotted flycatcher	1	650m north east
	Starling	1	1km north east
Invertebrates	Small heath	2	700m north
	Cinnabar	1	400m north west
Mammals (excl. bats)	Badger	9	Within 1km –
	Brown hare	14	500m north west
	Water vole	1	800m north east
Bats	Pipistrelle species.	3	Adjacent to site.
	Common pipistrelle	2	Adjacent to site.
	Soprano Pipistrelle	1	700m north east.
	Daubenton's bat	2	275m south.

(a) Granted European Protected Species Licence Applications

There are no granted European Protected Species Mitigation Licences within 500m of the site.

(b) Great Crested Newt Class Survey Licence Returns

No Great Crested Newt Class Survey Licence Returns were identified within 500m of the site.

3.2 UK HABITAT CLASSIFICATION SITE SURVEY

3.2.1 General Description

The site measured approximately 0.2ha and was dominated by an unvegetated, unsealed surface which was suspected to be tarmac chippings. The site was surrounded by residential properties to the south and west with deciduous woodland and rough grassland to the east and north respectively. To the north of the site was an unnamed brook which was culverted and flowed beneath the site in a south to north direction. The source of the brook was suspected to be further to the south along Wicken Hall Clough. A drain in the approximate centre of the site was identified and flowing water could be heard. Growing around the drain was the non-native invasive Japanese knotweed. Rhododendron was identified in the sites north western corner. Along the sites northern extent tall ruderal ephemeral habitat interspersed with deciduous trees were recorded. Species recorded here comprise dash (O), sycamore (O), elder (R), rosebay willowherb (O), common nettle (LA), and creeping thistle (O). Himalayan balsam was also recorded here.

Habitat types recorded within the red line boundary are listed below, the UK habitat Classification code precedes the broad habitat type.

- u15b Buildings

- U1b Developed land, sealed surface
- h3g Rhododendron scrub
- 17 Ruderal / ephemeral
- Medium tree
- Small tree

Target notes identified on site are listed and described in further detail below.

- Target Note 1 – Japanese knotweed
- Target Note 2 – Himalayan balsam
- Target Note 3 – Unnamed brook
- Target Note 4 – Adjacent deciduous woodland
- Target Note 5 – Semi-permanent structures

(a) Target Note 1 – Japanese knotweed

The highly invasive Japanese knotweed was identified in the approximate centre (SD 95456 11808) of the site growing around a drain. It was also recorded on the site's northern boundary (SD 95453 11830). The knotweed has likely been moved or brought in to the site as there are spoil mounds upon which the species was recorded growing.

(b) Target Note 2 – Himalayan balsam

Himalayan balsam was recorded on the site's western boundary (SD 95457 11784) and quite extensively on the northern boundary (SD 95453 11830). Himalayan balsam has likely been moved or brought in to the site as there are spoil mounds upon which the species was recorded growing.

(c) Target Note 3 – Unnamed brook

An unnamed brook flowed in a south to north direction and directly beneath and through the site. It was culverted on the site's northern boundary. No evidence of otter or water vole was recorded in the area surveyed. For further details of the brook refer to the otter and water vole survey section included later within this report.

(d) Target Note 4 – Adjacent deciduous woodland

Adjacent to the site to the east was an area of deciduous woodland which comprised silver birch, sycamore and willow. The woodland was outside of the red line boundary for the site and as such was not surveyed. However, it is included here due to its proximity to the site and should the boundary be amended and potentially have adverse impacts on the woodland, then further survey may potentially be required.

(e) Target Note 5 – Semi-permanent structures

Along the sites eastern boundary semi-permanent structures were in situ. These comprised a chicken coup, greenhouse and metal storage containers

3.3 PROTECTED SPECIES SURVEY RESULTS

3.3.1 Badger Survey

a) Setts

The survey found no setts on site.

b) Other Field Signs

No sign of badger activity was recorded. All of the boundaries of the site were walked and examined for potential runs, pathways, and latrines. The search found no evidence to suggest badger activity along any of the site boundaries. The absence of any activity signs or latrines within the site indicates that badgers are not entering the site and that there is a lack of territorial activity in the near vicinity of the site.

3.3.2 GCN Habitat Assessment

Due to the site being dominated by hard standing and semi-permanent buildings the site was unsuitable for great crested newt habitation. However, should the species be present the adjacent deciduous woodland to the east of the site would provide optimal terrestrial habitat.

Access was limited to the fishery to the south of the site, however an HSI assessment of the two large fishing ponds was undertaken. Both had looked to have undergone recent management with excavators seen reprofiling the ponds banks. Both ponds scored 0.3 Poor using the HSI calculator. An additional two ponds, identified using aerial imagery, located at SD9553511739 and SD9558711617, were not accessed/surveyed as they were outside of the area permitted. These ponds were both rectangular in shape and were 'square-cut' suggesting that may have had steep ~90-degree banks which are unsuitable for GCN. Their use was unknown though were suspected of being linked to an historical mill or similar which may have been present on the site. An HSI score cannot be provided for each of these ponds due to the limited access. As such proportionate recommendations will be included later within this report with regards to the potential presence of great crested newt and other amphibian species within and adjacent to the site.

3.3.3 Preliminary Roost Assessment for Bats

A single derelict building was identified on the northern boundary of the site (SD 95456 11840). It measured approximately 3m x 3m and was constructed of red brick. Its use was unknown, but it was suspected to form part of an old mill or similar which formerly stood on the site. No potential roost features were recorded thus it was deemed to be of negligible suitability to support roosting bats.

Self-seeded immature deciduous sycamore (O) and willow sp. (O) were surveyed for their suitability to support roosting bats. All trees were in excellent with no potential roosting features being recorded, thus all were deemed to be of negligible suitability to support roosting bats.

The culvert for the unnamed brook was also assessed for its potential to support roosting bats. All features were superficial and as such was of negligible suitability to support roosting bats.

3.3.4 Otter and Water Vole

A survey of the unnamed brook which was located immediately to the north site's red line boundary was undertaken to assess the presence or likely absence of otter and/or water vole. The brook flowed in a south to north direction and was believed to flow directly beneath the site. A cylindrical, concrete culvert measuring 1m in diameter was identified on the northern extent of the site. Reviewing aerial imagery, the watercourse looked to originate along Wicken Hall Clough to the south of the site and included the two large fishing ponds described in the GCN Habitat Assessment section of this report. The brook's channel width was on average 2.5m, channel depth was approx. 10cm, with a bank height of 6m on the western side and 2m on the eastern side. Channel substrate was comprised of silt, cobbles and building material waste which formed much of the northern bank of the site. No aquatic vegetation was recorded, and the banks comprised deciduous woodland and mixed scrub / grassland habitat to the east.

No evidence of either otter or water vole were recorded, and it was deemed unsuitable to support either species. The concrete culvert is likely to act as a barrier to otter and water vole as it will reduce their ability to swim and provide cover. Additionally, during times of flood the cylindrical culvert is likely to flood thus no air space will be available to commuting and/or foraging otter/water vole. The speed at which water could flow through the culvert could also have adverse impacts on otter pups and water vole which would find it difficult to swim through the culvert. The relatively low water level recorded at the time of survey is also unlikely to support a fish population which would support a viable otter population, albeit the fishing ponds to the south of the site may provide a food source for otter should they be present within the area. There was also a distinct lack of food plants (e.g., rush species (*Juncus* sp.) for water vole in the area surveyed.

3.3.5 Breeding Bird Habitat Assessment

The broadleaved trees on site provide suitable nesting habitat for commonly occurring bird species. The woodland adjacent and outside of the site's red line boundary is optimal nesting bird habitat and is highly likely to support an array of bird species, potentially less common species which migrate to the UK in the spring and summer months e.g., spotted and pied flycatchers, warblers.

The brook could potentially support watercourse specialists such as dipper and kingfisher, the latter being listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). However, neither species were recorded during the survey.

3.4 OTHER PROTECTED SPECIES

Issues in relation to other potential protected species where no specific survey was undertaken are assessed in the following section.

4. ECOLOGICAL EVALUATION & RECOMMENDATIONS

Where relevant, this section evaluates the site in relation to statutory sites, and protected habitats/species listed in national and local legislation and policy.

4.1 STATUTORY DESIGNATED SITES

(i) Evaluation

There are no statutory designated sites identified within 2km of the site.

(ii) Recommendations

No further consideration is required. The SSSI Impact Risk Zones (IRZs) have been reviewed and consultation with Natural England is not required.

4.2 NON- STATUTORY DESIGNATED SITES

Two non-statutory designated sites were recorded within 1km of the site. Due to the localised nature of the proposals no impacts are anticipated to either of the two sites during or following construction.

No further consideration to the two remaining non-statutory designated sites are required.

4.3 HABITATS AND HIGHER PLANT SPECIES

(i) Evaluation

The habitats within the red line boundary are of ecological value and are considered to be of 'site' value only.

However, Japanese knotweed and Himalayan balsam were recorded within the site, and both will require further consideration prior to the start of the works. Japanese knotweed and Himalayan balsam are both highly invasive species and are listed in Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

(ii) Recommendations

The key recommendation for both species is that no spoil / soil or material from infested areas must be removed from the site, including any parts of the plants. The owner/occupier of the site should aim to control and manage the two species as best they can. If spoil is to be removed from the site, this will need to be sent to an Environment Agency approved site.

Further, more detailed information on the species is provided on the following websites;

<https://www.gov.uk/guidance/prevent-the-spread-of-harmful-invasive-and-non-native-plants>

Japanese knotweed - <https://www.nonnativespecies.org/non-native-species/information-portal/view/1495>

Himalayan balsam - <https://www.nonnativespecies.org/non-native-species/information-portal/view/1495>

4.4 BADGER

(i) Evaluation

Badgers are protected under Schedule 6 of the Wildlife and Countryside Act 1981, and under the Protection of Badgers Act 1992, which prohibits deliberate interference with the animal or its sett.

The survey found no evidence of historic, recent, or current use of the site by badgers and therefore the species is considered to be absent from the site. However, GMEU desk study records of badger setts within 1km of the site, were provided. The sett locations will not be disclosed within this report due to the sensitive nature of badger setts and the associated persecution of the species. However, there are at a sufficient distance from the scheme that they or badger will not be adversely impacted on by the proposals.

(ii) Recommendations

There are no requirements for further surveys.

4.5 GCN

(i) Evaluation

GCN are comprehensively protected by the Wildlife and Countryside Act (1981) (as amended) and Conservation of Habitats and Species Regulations (2017) (as amended).

Two large fishing ponds both scored 0.3 Poor when run through the HSI calculator. Both ponds were used by a fishery and at the time of survey were being reprofiled with no aquatic or marginal vegetation recorded. Both are very unlikely to support great crested newt. Two, square cut ponds were identified using aerial imagery, the closest being 60m south east of the site. These appeared to have steep (approx. 90 degree) banks and are potentially constructed of concrete thus making them generally unsuitable for habitat by GCN. These were not accessed as part of the survey as they were outside of the area permitted to be surveyed.

No records of GCN were returned within the desk study data supplied by GMEU or were identified when reviewing the data supplied on the MAGIC website database.

It is presumed GCN are likely to be absent from the site and the wider landscape.

Should GCN be present then it is likely all will remain in the deciduous woodland adjacent to the site as it will act as a 'terrestrial sponge'. Furthermore, it is unlikely the species will be present within the red line boundary given the sub-optimal habitats recorded i.e., hard standing. However, given the lack of access to the two 'square cut' ponds, and the potential GCN may be found during the works, precautionary working measures will be recommended.

(ii) Recommendations

There are no requirements for further surveys. However, if GCN are found during the development, work must stop, and the ecologist called for advice on how the development can proceed without offence. Any other amphibian species found during the development will be removed from the site and placed in suitable habitat.

Should the red line boundary be amended / extended beyond that which was surveyed as part of this study, particularly if impacts to the woodland are anticipated, then further consultation with an ecologist will be required in order to assess any potential impacts on adjacent habitats and associated species.

4.6 BATS

(i) Evaluation

Bats are comprehensively protected by the Wildlife and Countryside Act (1981) (as amended) and Conservation of Habitats and Species Regulations (2017) (as amended).

A single derelict building, all trees and the unnamed brooks' culvert site were deemed to be of **negligible suitability** to support roosting bats.

(ii) Recommendations

No further surveys are recommended.

4.7 OTTER AND WATER VOLE

(i) Evaluation

Otter is a European Protected Species and water vole is listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

The unnamed brook did not comprise habitats or features that would support a population of either otter and/or water vole. Furthermore, the culvert at the northern end of the site reduces the likelihood of either species using the brook.

(ii) Recommendations

There are no requirements for further surveys.

4.8 BIRDS

(i) Evaluation

All birds are offered various levels of protection under the Wildlife and Countryside Act (1981) as amended.

The trees within the site do provide suitable habitat for commonly occurring, nesting birds. The adjacent woodland and unnamed brook to the east and north of the site respectively provides optimal nesting bird habitat. Should the site boundary be amended beyond that which was surveyed for this study, further consultation with an ecologist must be sought and any additional impacts on surrounding habitats/species appropriately assessed.

(ii) Recommendations

No strategic bird surveys are required.

Any removal of vegetation should take place outside of the breeding season, i.e., between September 1st and February 28th. Following the removal, any piles of brash should be removed from the site, failure to do so could provide potential nest sites if left in situ until the following breeding season. If vegetation removal is envisaged during the breeding season, prior to removal checks should be made immediately prior to any clearance by a suitably experienced ecologist to establish any nesting or breeding activity. Should it be identified that birds are nesting or breeding then works should be paused until the young have naturally fledged the nest.

4.9 OTHER PROTECTED SPECIES

No other issues with regards to other protected species were identified thus no further action is required.

5. REFERENCES

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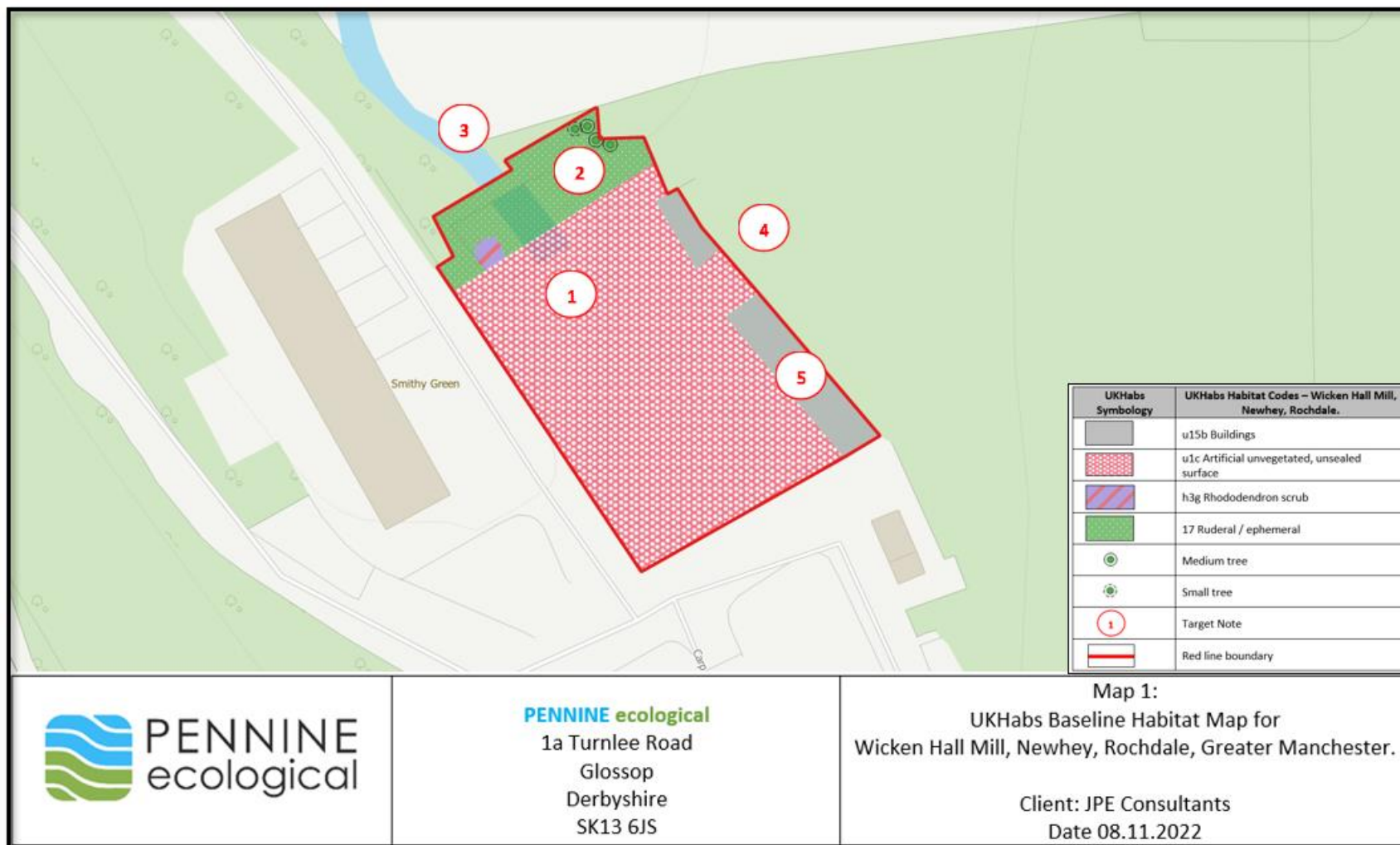
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Appendix A: Map 1 - UK Habitat Classification Survey Plan



Appendix B - Site Photographs 21st October 2022



Photograph 1: View of the northern section of the site.



Photograph 2: View of the southern section of the site. To the right of the picture is an area of newly built residential properties.



Photograph 3: Entrance to the site looking west. The track in the photographs leads down from the a640 Huddersfield Road.



Photograph 4: Target Note 4; eastern section of the site with semi-permanent structures, greenhouse and a chicken coup as well as metal containers. The woodland behind these is Target Note 4.

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Photograph 5: Japanese knotweed was recorded growing around drain within the approximate centre of the site (Target Note 1).



Photograph 6: Himalayan balsam was recorded throughout the site, with larger concentrations in the north of the site (Target Note 2).



Photograph 7: Steep bank leading towards the unnamed brook on the site's northern boundary (Target Note 3).



Photograph 8: Derelict building on the site's northern boundary. Building was of negligible suitability to support bats.



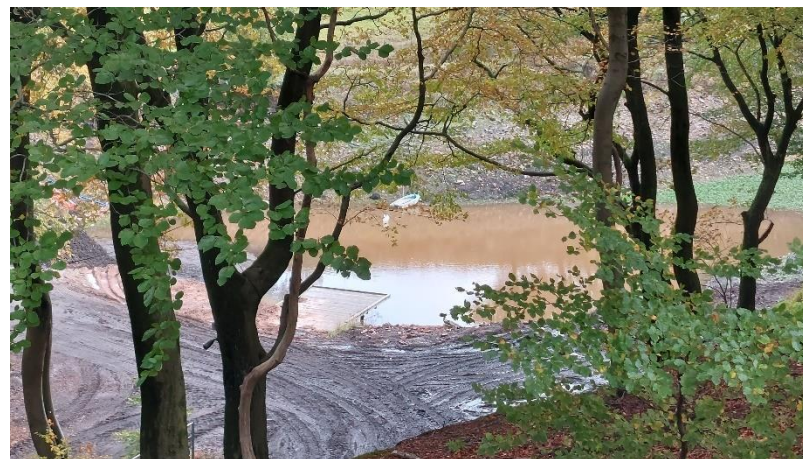
Photograph 9: Unnamed brook to the north of the site boundary.



Photograph 10: Cylindrical culvert on the site's northern boundary.



Photograph 11: The most northerly of two large fishing ponds. Both had looked to have undergone recent bank reprofiling at the time of survey.



Photograph 12: The most southerly of two large fishing ponds. Both had looked to have undergone recent bank reprofiling at the time of survey.