

Preliminary Ecological Appraisal Report

Calliards Mill, Smithy Bridge Road
Reference: 82-591-R1-1
Date: August 25





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EXECUTIVE SUMMARY

Site Address	Smithy Bridge Road, Littleborough, OL15 8RF
Coordinates	E 392498, N 415597
Site Area	Approximately 0.72 ha
Current Site Use and Adjacent Site Use	The site comprised an area of land associated with Calliards Mill, consisting of two buildings, a retaining structure, other woodland; broadleaved, tall forbs, other neutral grassland, mixed scrub, bramble scrub, developed land; sealed surface, artificial unvegetated, unsealed surface, and a single wet reedbed. Stubley Mill Road forms the northern site boundary. Agricultural land forms the eastern site boundary. The River Roch lies approximately 10 m south of the southern site boundary. Calliards Mill and its associated landscaping form the majority of the western site boundary, with Smithy Bridge Road forming the remainder of the western site boundary. Agricultural land extends immediately northeast, east, south and west of the site, with residential housing extending further northwest and south.
Designated Sites	Rochdale Canal Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC) are located within 1 km of the site boundary, approximately 315 m south of the site at its closest point. The site is also located within the Impact Risk Zones of Rochdale Canal SSSI and SAC, and South Pennine Moors SSSI and SAC, located approximately 2.2 km east of the site. In addition, a single Site of Biological Interest (SBI) is located within 1 km of the site, approximately 420 m south of the site at its closest point, comprising a stretch of Rochdale Canal. Due to the proximity of Rochdale Canal SAC to the site, an Air Quality Habitats Regulations Assessment (HRA) screening assessment will be required to assess whether the proposed development will have any 'likely significant effects' on the Rochdale Canal SAC. Furthermore, as per the criteria listed on MAGIC (accessed July 2025), the proposed site will require further consultation with Natural England to proceed in relation to the SSSIs and SACs.
Survey Results	The site was found to comprise two buildings (B1, B2), a single retaining structure (S1), developed land sealed surface, bare ground, other neutral grassland, scattered trees, other woodland, broadleaved, bramble scrub, mixed scrub, tall forbs, artificial unvegetated unsealed surface, and a wet reedbed. The site was found to have the following potential ecological constraints: ✿ Potential presence of nesting birds within B1, S1, the woodland, scattered trees, mixed scrub, reedbed and bramble scrub. ✿ Commuting and foraging potential for bats along the mixed scrub, bramble scrub, other woodland, broadleaved, scattered trees and wet reedbed. ✿ Tree G3a (TG3a), located in the north of the site, was assessed as having PRF-I bat roosting potential. Tree G3b (TG3b) and Tree 18 (T18), located in the north and east of the site, respectively, were assessed as having PRF-M bat roosting potential. The single structure (S1) was assessed as having Low bat roosting potential due to the presence of features which could support a small number of bats on an occasional basis. ✿ Opportunities for common amphibians within the wet reedbed, tall forbs, other neutral grassland, mixed scrub, bramble scrub, log piles, rubble piles and understorey of the scattered trees and other woodland, broadleaved.



	✳️ Badgers may utilise the mixed scrub, bramble scrub, tall forbs, other neutral grassland, and understorey of other woodland, broadleaved and scattered trees for foraging and sett building. ✳️ Potential presence of hedgehogs within the mixed scrub, bramble scrub, tall forbs, other neutral grassland, and understorey of the other woodland, broadleaved, scattered trees and the fallen tree (T9). ✳️ Potential presence of reptile within the mixed scrub, bramble scrub, tall forbs, other neutral grassland, log pile and rubble piles. ✳️ Potential presence of notable invertebrates within the log piles, other neutral grassland, tall forbs, mixed scrub, bramble scrub, wet reedbed and other woodland, broadleaved on site. ✳️ Potential presence of brown hare within the other neutral grassland. ✳️ Potential presence of otter and water vole in the River Roch to the south of the site. ✳️ Invasive plant species Himalayan balsam, variegated yellow archangel and field horsetail identified on site.
Conclusions	The site was assessed as having value for great crested newts (GCN) within their breeding phase due to the wet reedbed located within the site and the single off-site waterbody located within 250 m of the site. Great Crested Newt eDNA Surveys were undertaken on the 30th June 2025 and comprised a water sample extraction and lab analysis for great crested newts (GCN) eDNA. GCN were confirmed as Absent from both the on-site wet reedbed and single off-site waterbody. As such, no further surveys or mitigation will be required in regard to GCN. Structure 1 (S1) was assessed as having Low bat roosting potential on a precautionary basis due to the presence of multiple features which may support a small number of roosting bats on an occasional basis. Under current development proposals, S1 is to be removed to facilitate the development. As such, a single Nocturnal Bat Survey will be required on S1 between May and September (inclusive). Should a bat roost be identified within the structure during the survey, a European Protected Species Licence (EPSL) will be required to destroy the roost. An EPSL can only be granted once full planning permission has been obtained and all wildlife conditions have been discharged. The following further surveys could be required if the proposals change and additional habitat is to be impacted:



- ✳ Should either of the **PRF-M** bat potential trees TG3b or T18 be subject to removal, disturbed during construction, or cannot be kept as dark areas post-construction, three nocturnal bat surveys will be required on the trees between May and August (inclusive). If bats are identified roosting within a tree, a European Protected Species Licence will be required with up-to-date surveys from the survey season prior to the application submission.
- ✳ The wet reedbed, other woodland, broadleaved, tall forbs and other neutral grassland were assessed as having suitability for foraging and commuting bats. Under current development proposals, areas of these habitats to the north, east and south of the site, including a 10 m buffer from the nearby River Roch, are to be retained and will be maintained as dark areas. As such, no bat activity surveys will be required to inform a planning application. However, should proposals change, and the retained habitats cannot be maintained as dark areas, bat activity surveys may be required to ascertain how the habitats are utilised by the species group. If required, one bat activity survey will be undertaken per season (Spring – April/May, Summer – June/July/August and Autumn – September/October (inclusive)) and a static detector deployed at one location per season for five consecutive nights per season (Spring – April/May, Summer – June/July/August and Autumn – September/October (inclusive)).
- ✳ The River Roch located approximately 10 m from the southern site boundary was assessed as having suitability for commuting and foraging otters and water vole. Under current development proposals, no outfall is to be installed into the river, and the southern site boundary is located approximately 10 m north of the river. As such, no otter surveys will be required to inform a planning application. However, should proposals change, and the 10 m buffer between the site and the river is not maintained, otter surveys may be required to ascertain how the river is utilised by the species. Additional camera trap surveys may be required to confirm the presence/absence of otter within potential holt features (if present). Otter surveys can be undertaken at any time of year, following best practice guidelines.

The following mitigation is recommended:

- ✳ If any vegetation, buildings or structures require removal or pruning, works should be undertaken outside of the breeding bird season (March to September, inclusive). If this is not possible, a suitably qualified ecologist should undertake a nesting bird check-up to 48 hrs before works commence. If a nest, or nest in construction, is located, then a stand-off distance should be maintained until the young have fledged.
- ✳ The proposed lighting plan should ensure any retained habitats on site are maintained as dark areas both during and post-construction.
- ✳ Precautionary Working Methods for badger.
- ✳ Precautionary Working Methods for reptiles.



- ✧ Precautionary Working Methods for hedgehog.
- ✧ Precautionary Working Methods for common amphibians.
- ✧ Precautionary Working Methods for otter and water vole.
- ✧ Precautionary Working Methods for brown hare.
- ✧ Eradication of Schedule 9 invasive species Himalayan balsam and variegated yellow archangel.
- ✧ Eradication of field horsetail throughout the site prior to development due to the damage it can cause to hardstanding.
- ✧ Floristically diverse planting in areas of public open space to mitigate impacts on the on-site invertebrate population post-development.

A 10% gain in biodiversity will be required on-site. If this cannot be achieved on-site, a conservation offset payment or off-site compensation will be required.



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1. INTRODUCTION

1.1. BACKGROUND

E3P were commissioned by Hallmark Developments (NW) Ltd to undertake a Preliminary Ecological Appraisal at Calliards Mill, Smithy Bridge Road, hereafter referred to as “the site”.

This report has been produced by Hannah Brodie BSc (Hons) MSc, Consultant Ecologist at E3P. Hannah holds a Level 3 Field Identification Skills Certificate (FISC), and has experience undertaking Preliminary Ecological Appraisals, protected species surveys and ecological mitigation for a wide variety of projects across the UK.

1.2. PROPOSED DEVELOPMENT

Development proposals include the removal of individual trees, broadleaved woodland and vegetation in the centre and north of the site, and the construction of nine semi-detached residential dwellings with associated hardstanding and landscaping.

1.3. SITE LOCATION

The site is located to the southwest of Littleborough, northeast of Rochdale. Stubley Mill Road forms the northern site boundary. Agricultural land forms the eastern site boundary. Calliards Mill and its associated landscaping form the majority of the western site boundary, with Smithy Bridge Road forming the remainder of the western site boundary. Agricultural land extends immediately northeast, east, south and west of the site, with residential housing extending further northwest and south. The River Roch is located approximately 10 m south of the site at its closest point, running east to southwest. An active railway line is located approximately 300 m south of the site, running east to west. Rochdale Canal is located approximately 320 m south of the site.

Please refer to **Figure 1** for the approximate site location.

Figure 1 **Approximate Site Location**





1.4. OBJECTIVES

The objectives of the Preliminary Ecological Appraisal are as follows:

- ✳ Identify the major habitats present.
- ✳ Ascertain the presence or potential presence of any legally protected species and habitats.
- ✳ Recommend any further surveys or mitigation that may be required.

The Preliminary Ecological Appraisal comprises a desk study and site walkover. This survey has been completed as a baseline assessment of the site, and as such please see the end of the report for further surveys and mitigation proposed.



2. METHODOLOGY

2.1. DESKTOP STUDY

The following sources of information and ecological records were consulted:

- ✳ MAGIC – A web-based interactive mapping system, on which geographic information regarding key environmental schemes and designations are collated, including details of statutory conservation sites, accessed July 2025.
- ✳ Aerial mapping and ordnance survey maps.
- ✳ Local data records provided by Greater Manchester Ecology Unit on 03rd July 2025.

A 1 km search area was utilised for the data search, with this being deemed an appropriate distance for the Zone of Influence of the site. The 1 km data search was selected due to the size of the site as well as the ecological value of the land surrounding the site to the south and east, which largely includes industrial units and residential housing.

The data search included the request for details of protected and notable species of flora and fauna within 1 km of the central grid reference of the site. In addition, a request was made for any non-statutory designated sites within 1 km of the site boundary.

Please note that a lack of up-to-date records does not confirm the absence of a species from the area. The lack of records may simply be a result of a lack of protected species surveys being undertaken within the local area.

2.2. VEGETATION AND HABITATS

A Preliminary Ecological Appraisal of the site was undertaken by Hannah Brodie BSc (Hons) MSc, Consultant Ecologist at E3P, on 13th June 2025. Hannah holds a Level 3 FISC, and has completed site walkovers and protected species surveys for a range of sites across the UK. The weather was warm, dry and sunny.

The walkover survey was undertaken to the standard methodology as detailed by the UK Habitat Classification Version 2.0 (UKHab, 2023). The assessment follows the methodology as per “Guidelines for Preliminary Ecological Appraisal” (CIEEM, 2017). A vegetation and habitat plan has been produced for the site (please refer to **Appendix I**). The mapping is based on the UK Habitat Classification Version 2.0 (UKHab, 2023).

Searches were made for uncommon, rare, and statutorily protected plant species, those species listed as protected in the Wildlife and Countryside Act 1981 (as amended) and species which are indicators of important and uncommon plant communities. All plant nomenclature follows Stace (2019).

Searches were carried out for the presence of invasive species, including those listed on the revised (April 2010) Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), including Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*).



2.3. FAUNA

A thorough search of the site for signs of protected species of fauna was undertaken during the site walkover. These searches considered the following:

- ✳ Suitability of any ponds to support notable amphibians, and the suitability of the site's terrestrial habitats to support amphibians.
- ✳ Suitability of the site to support reptiles by way of habitat structure and refuge piles, as well as links to the wider landscape.
- ✳ Signs of badgers (*Meles meles*), by way of setts, mammal paths, foraging signs or latrines to indicate usage of the site by the species.
- ✳ Search of any watercourses for signs or suitability for water vole (*Arvicola amphibius*) and otter (*Lutra lutra*) by way of burrows, resting places, holts and foraging signs.
- ✳ Suitability of the site to support roosting, foraging and commuting bats.
- ✳ Suitability of the site to support notable bird species.
- ✳ Suitability of the site to support notable invertebrates.
- ✳ Search of the site for any invasive species.

2.4. PRELIMINARY ROOST ASSESSMENT

The Preliminary Roost Assessment (PRA) was undertaken by Hannah Brodie on 13th June 2025. Hannah has undertaken numerous Preliminary Roost Assessments and Nocturnal Bat Surveys at sites across the UK.

The survey involved undertaking a systematic search of the on-site buildings, structure and trees, searching for signs of bats or spaces where bats would be able to access. The methodology followed that described in *Bat Surveys for Professional Ecologists, 4th Edition (Collins, 2023)*.

The on-site buildings and structures were categorised for their bat roosting potential as described in **Table 1**, with the trees categorised as described in **Table 2**, in accordance with Collins (2023). All tree references have been taken from the Arboricultural Impact Assessment produced by E3P in August 2025 (Report reference: 82-591-R2).

Table 1 Bat Roosting Potential Classification of Structures

CATEGORY	DESCRIPTION
None	No habitat features are likely to be used by any roosting bats at any time of the year.
Negligible	No obvious habitat features on-site are likely to be used by roosting bats; however, a small element of uncertainty remains, as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions, and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but is unlikely to support a roost of high conservation status.



CATEGORY	DESCRIPTION
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation sites.

Table 2 Bat Roosting Potential Classification of Trees

CATEGORY	DESCRIPTION
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

2.5. GREAT CRESTED NEWT EDNA SURVEYS

All ponds within a 250 m radius of the site boundary were tested for the presence of great crested newt eDNA. The Great Crested Newt eDNA Survey was undertaken by Hannah Brodie and Lucy Cooke on the 30th June 2025. Hannah has experience undertaking numerous Great Crested Newt (GCN) eDNA surveys at a wide variety of sites across the UK.

The survey comprised a water sample extraction and lab analysis for GCN eDNA following the protocol set out in Appendix 5 of the DEFRA WC1067 Technical Advice Note. Water samples were retrieved from both the on-site wet reedbed and off-site waterbody.

2.6. HABITAT SUITABILITY INDEX

All ponds within a 250 m radius of the site boundary were evaluated using the *Habitat Suitability Index (HSI)* (Oldham *et al.*, 2000) which was undertaken by Hannah Brodie on the 13th June 2025.

The ponds were examined with reference to the ten HIS scoring criteria, which are as follows:

- ✳ SI1: Geographical location.
- ✳ SI2: Pond area.
- ✳ SI3: Pond drying.
- ✳ SI4: Water quality (as indicated by the diversity of aquatic plants and invertebrates).
- ✳ SI5: Shade.
- ✳ SI6: Waterfowl.
- ✳ SI7: Fish.
- ✳ SI8: Abundance of other ponds within a 1 km radius.
- ✳ SI9: Quality of terrestrial habitat.
- ✳ SI10: Macrophyte cover (i.e. aquatic and emergent plants).

A score is given according to the most appropriate criteria level set within each attribute and a total



score is calculated between 0 and 1. Pond suitability is assessed according to the following scale:

-  < 0.50 = Poor.
-  0.50–0.59 = Below average.
-  0.60–0.69 = Average.
-  0.70–0.79 = Good.
-  > 0.80 = Excellent.

2.7. SURVEY LIMITATIONS

A Preliminary Ecological Appraisal does not constitute a full botanical survey. Instead, key species are identified to give a representative description of each habitat type.

This survey was undertaken in June, which is an appropriate time of the year to undertake a survey. However, as a result of differing flowering times, it is possible that some species of flora may have been missed or misidentified, including some invasive/non-native species. Although, due to the diversity of vegetation and habitats present on site, this is not considered to be a significant constraint.

During the survey, a full inspection of the bank of the river could not be completed due to health and safety concerns. As such, an assessment was made from the top of the embankment.

A full inspection for signs of badgers within 30 m of the site to the northeast could not be undertaken due to the private residential properties located adjacent to the northeast of the site. Due to the lack of suitable habitat opportunities present to the north, this is not thought to be a significant constraint.

These constraints have been taken into consideration during the assessment.



3. SURVEY RESULTS

3.1. SITE CONTEXT

The site comprised an area of land surrounding Calliards Mill, with the majority of the site comprising other neutral grassland, tall forbs, mixed scrub, bramble scrub, other woodland, broadleaved and scattered trees, with areas of developed land; sealed surface, rubble piles, log piles, artificial unvegetated unsealed surface and a wet reedbed also present. Two buildings were identified on site, in addition to a single structure. The site is anticipated to offer significant ecological value, due to the long sward length of the other neutral grassland and high levels of floristic diversity present on site, in addition to the numerous scattered trees present, which could provide foraging, nesting and roosting opportunities for birds and bats. The wet reedbed on site could also provide valuable foraging resources by attracting vertebrate prey.

The surrounding area to the north and northwest of the site predominantly comprises residential dwellings and associated amenities, with additional residential housing extending further south. Due to the urban nature of these habitats, they are expected to provide minimal opportunities for local wildlife, although it is noted that the buildings may offer roosting features for local bat populations and nesting opportunities for common bird species such as house sparrow (*Passer domesticus*). The surrounding area to the northeast, west and immediately south of the site predominantly comprises agricultural fields and provides some ecological value due to the presence of bordering hedgerows and trees, which could act as commuting features for local wildlife.

Multiple areas of deciduous woodland priority habitat are located within 1 km of the site boundary, the closest located approximately 200 m north of the site boundary, in association with a horse stable and grazing pastures. The broadleaved woodland habitat is anticipated to provide high-value foraging habitat for fauna, in addition to suitable sheltering opportunities for a range of species, such as terrestrial mammals. Some connectivity is present between the woodland and the site, therefore, species are anticipated to commute to the site.

The River Roch is located approximately 10 m south of the site's southern boundary, and is likely to act as a key foraging and commuting feature for local fauna, especially those that rely on aquatic habitats for food resources, such as Daubenton's bat (*Myotis daubentonii*), otter (*Lutra lutra*) and water vole (*Arvicola amphibius*). The river extends into the wider landscape, and due to its location approximately 10 m south of the site, the site is well connected to the wider landscape. As such, species may commute to site.

A wet reedbed holding approximately 20 cm of water was located on site, with a single waterbody identified within 250 m of the site boundary, approximately 130 m north of the site at its closest point. Please refer to **Appendix II** for the Waterbody Plan, which details the location of the on-site wet reedbed and off-site waterbody in relation to the site.

3.2. DESIGNATED SITES

Rochdale Canal Site of Special Scientific Interest (SSSI), which includes Rochdale Canal Special Area of Conservation (SAC), is located within 1 km of the site boundary, approximately 315 m south of the southern site boundary. The SSSI is designated predominantly for standing open water and canals. The SAC is designated for its populations of floating water-plantain (*Luronium natans*).

The site is also located within the Impact Risk Zone of the South Pennine Moors SSSI, which includes South Pennine Moors SAC, located approximately 2.2 km east of the site at its closest point. The SSSI is designated for its unenclosed moorland and the most diverse examples of upland plant communities in the county. The mosaic of habitats present supports a breeding bird assemblage containing species of regional and national importance. The large numbers of breeding merlin (*Falco columbarius*), golden plover (*Pluvialis apricaria*) and twite (*Carduelis flavirostris*) are of national importance. The SAC is



designated for its blanket bogs, old sessile oak woods and European dry heaths, all of which are Annex I habitats. In addition, as per the criteria listed on MAGIC (accessed July 2025), the proposed site will require further consultation with Natural England to proceed in relation to the SSSIs and SACs. Furthermore, due to the proximity of Rochdale Canal SAC, approximately 315 m south of the site at its closest point, a Habitats Regulations Assessment (HRA) screening assessment will be required to assess whether the proposed development will have any 'likely significant effects' on the Rochdale Canal SAC.

A single Site of Biological Interest (SBI) is located within 1 km of the site, approximately 420 m south of the site at its closest point, comprising a stretch of Rochdale Canal. The site is designated for its colonies of freshwater sponge, with crevices in the stonework along the canal also supporting populations of white clawed crayfish, with the most recent record reported in 2011. The terrestrial stonework present also supports species such as lady fern (*Athyrium filix-femina*), skullcap (*Scutellaria galericulata*) and wild angelica (*Angelica sylvestris*). Five species of course fish have also been recorded in the canal. Breeding birds present include moorhen (*Gallinula chloropus*), coot (*Fulica atra*), mallard (*Anas platyrhynchos*), Canada goose (*Branta canadensis*), grey wagtail (*Motacilla cinerea*) and mute swan (*Cygnus olor*). Other species breeding in or adjacent to the canal corridor and using it for feeding include the UK Biodiversity Species spotted flycatcher and song thrush in addition to swallow and kingfisher. No further statutory or non-statutory designated sites were identified within 1 km of the site boundary.

3.3. HABITATS

The main habitats encountered during the survey are described in the following subsections. Please refer to **Appendix I** for the UKHab Habitat Plan.

3.3.1. BUILDINGS (U1B5), STRUCTURE AND DEVELOPED LAND, SEALED SURFACE (U1B)

The west and north of the site were bordered by Stubley Mill Road, which predominantly comprised developed land, sealed surface, in use as an access road and pavement. The developed land, sealed surface was in good condition, with little colonising vegetation. Two buildings (B1 and B2) and a single structure (S1) were located within the site. B1 comprised a single-storey red brick stable building with a corrugated iron roof, used for storage, and B2 comprised a small single-storey glass-panelled greenhouse. S1 comprised a stone brick retaining wall measuring approximately 5 m in height. Please refer to **Appendix III** for further details of the two on-site buildings and single structure with respect to the Preliminary Roost Assessment for bats.



Figure 2 Showing Developed Land, Sealed Surface



Figure 3 Showing B1





Figure 4 Showing B2



Figure 5 Showing S1



3.3.2. OTHER NEUTRAL GRASSLAND (G3C)

The centre of the site predominantly comprised other neutral grassland, which was largely unmaintained, with a long sward length. A circular pathway had been mown around the site and was actively maintained to a shorter sward length. The species and structural diversity of the other neutral grassland was poor, with species comprising meadow buttercup (*Ranunculus acris*), hogweed (*Hercleum sphondylium*), meadow foxtail (*Alopecurus pratensis*), Yorkshire fog (*Holcus lanatus*), sweet vernal grass (*Anthoxanthum odoratum*), red fescue (*Festuca rubra*), common ragwort (*Jacobaea vulgaris*), cocksfoot (*Dactylis glomerata*), common vetch (*Vicia sativa*), ribwort plantain (*Plantago lanceolata*), red clover (*Trifolium pratense*), dock species (*Rumex sp.*), forget-me-not species (*Myosotis sp.*) and dandelion species (*Taraxacum sp.*). Stands of soft-rush (*Juncus effusus*) were also identified throughout the other neutral grassland, primarily in close proximity to the wet reedbed, in addition to numerous self-seeded saplings comprising silver birch (*Betula pendula*), sycamore (*Acer pseudoplatanus*), hawthorn (*Crataegus monogyna*) and field maple (*Acer campestre*). Invasive species field horsetail (*Equisetum arvense*) was



identified throughout the other neutral grassland, alongside numerous mammal paths leading off-site to the north and around the southeast of the site. Please refer to **Appendix IV** for the Species Constraints Plan, which details the location of the mammal paths and invasive species in relation to the site.

Figure 6 **Showing Other Neutral Grassland**



Figure 7 **Showing Mammal Paths**





Figure 8 **Showing Field Horsetail**



3.3.3. OTHER WOODLAND; BROADLEAVED (W1G)

Other woodland, broadleaved, was identified along the northern, eastern and southern boundaries of the site, in addition to small pockets located in the centre of the site. The other woodland, broadleaved was found to be in moderate condition, with species comprising ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*), beech (*Fagus sylvatica*), crack willow (*Salix fragilis*), elder (*Sambucus nigra*), hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*) and wild cherry (*Prunus avium*). Ground flora present included ash saplings, ivy (*Hedera helix*), dandelion species, hogweed, wood avens (*Geum urbanum*), cow parsley (*Anthriscus sylvestris*), common nettle (*Urtica dioica*), broom (*Cytisus scoparius*) and hedge bindweed (*Calystegia sepium*), with a single fallen tree (T9), also located within the understorey, along the northwestern boundary of the site.

Figure 9 **Showing Other Woodland; Broadleaved**

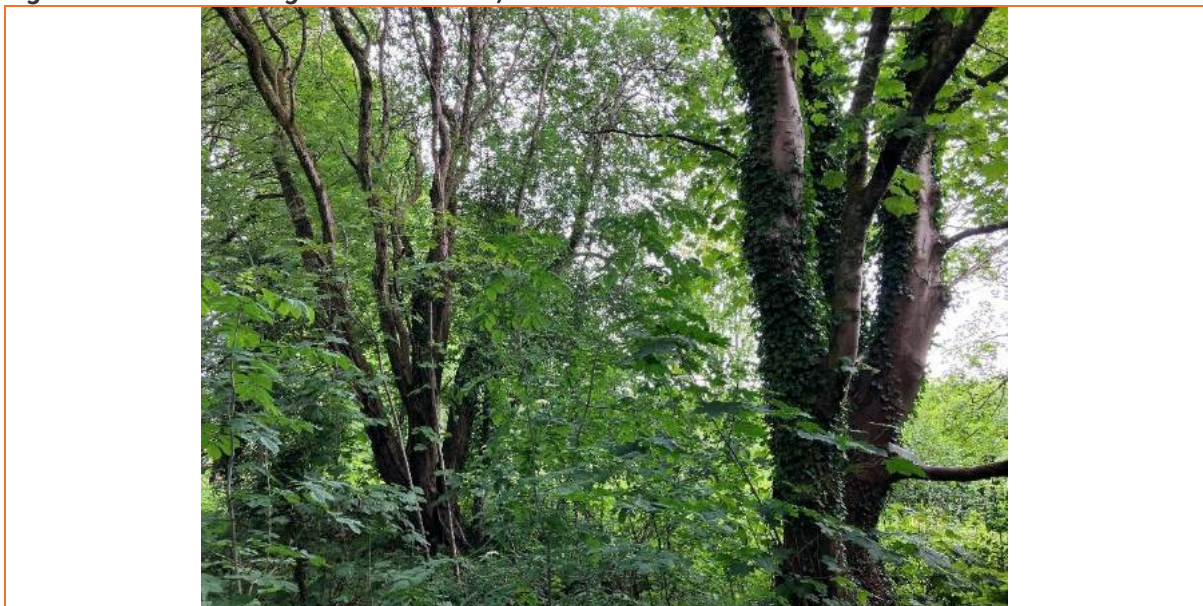




Figure 10 Showing T9



3.3.4. TALL FORBS (16)

Areas of tall forbs were located throughout the site, with species comprising common nettle, hedge bindweed, bramble (*Rubus fruticosus* agg.), burdock (*Arctium minus*), cleavers (*Galium aparine*), ivy, creeping thistle (*Cirsium arvense*), herb Robert (*Geranium robertianum*), dock species, ribwort plantain, meadow buttercup, false oat grass (*Arrhenatherum elatius*) and hogweed. Invasive species variegated yellow archangel (*Lamium galeobdolon*) was also identified in the tall forbs along the northern boundary of the site, adjacent to Stubley Mill Road. Please refer to **Appendix IV** for the Species Constraints Plan, which details the location of the invasive species in relation to the site.

Figure 11 Showing Tall Forbs





Figure 12 **Showing Variegated Yellow Archangel**



3.3.5. MIXED SCRUB (H3H)

Areas of mixed scrub were located in the centre of the site, associated with small areas of other woodland; broadleaved, S1, rubble piles, and stored paving slabs. Species present comprised bramble, hedge bindweed, butterfly-bush (*Buddleja davidii*), sycamore and ash saplings, common nettle, cleavers, and bracken (*Pteridium aquilinum*).

Figure 13 **Showing Mixed Scrub**





Figure 14 **Showing Rubble Pile**



3.3.6. BRAMBLE SCRUB (H3D)

Areas of bramble scrub were also identified throughout the site, primarily in association with B2 and the edge of the other woodland; broadleaved. Species present predominantly comprised bramble, with cleavers, hogweed and bracken also present.

Figure 15 **Showing Bramble Scrub**



3.3.7. SCATTERED TREES (32)

In addition to the other woodland, broadleaved present in the north, east, west and centre of the site, scattered trees were also present throughout the other neutral grassland. Species present comprised hawthorn, elder, horse chestnut (*Aesculus hippocastanum*) and Monterey cypress (*Hesperocyparis macrocarpa*). A log pile was also present adjacent to an area of scattered trees.



Figure 16 Showing Scattered Trees and Log Pile



3.3.8. ARTIFICIAL UNVEGETATED – UNSEALED SURFACE (U1C)

An area of artificial unvegetated unsealed surface was located to the south of the site, associated with a small managed area adjacent to B2. The area comprised an unsealed gravel surface surrounding raised planting beds and potted plants, and had been partially colonised by Yorkshire fog, meadow buttercup, cleavers, ribwort plantain, perennial ryegrass, hedge bindweed and dandelion.

Figure 17 Showing Artificial Unvegetated, Unsealed Surface





3.3.9. WET REEDBED (F2E)

A large reedbed was located within the site along the southern boundary and was found to hold water to a depth of approximately 20 cm at the time of the survey. Species present in the reedbed comprised common reedmace (*Typha latifolia*), reed sweet grass (*Glyceria maxima*), marsh willowherb (*Epilobium palustre*) and common marsh bedstraw (*Galium palustre*). The edges and wider periphery of the reedbed had been largely colonised by Himalayan balsam, alder (*Alnus glutinosa*) saplings, field horsetail, and peppermint (*Mentha x piperita*).

Figure 18 Showing Wet Reedbed



Figure 19 Showing Himalayan Balsam





3.3.10. BARE GROUND (510)

Bare ground was present along the footpath portion of Stubley Mill Road, in the west of the site. While no colonisation was present directly within the bare ground, it was encroached on both sides by common ivy, which then succeeded into tall forbs at the top of the footpath, in the northwest corner of the site.

Figure 20 **Showing Bare Ground**





3.4. PROTECTED AND NOTABLE SPECIES

3.4.1. AMPHIBIANS

Consultation with GMEU did not identify any records of great crested newts (*Triturus cristatus*) within the 1 km search area.

Consultation with MAGIC did not identify any great crested newt European Protected Species Licences within the 1 km search area. The closest licence was located approximately 8.9 km southwest of the site, in association with an area of development off the Heywood Interchange, active from October 2017 to December 2017, for the damage and destruction of a great crested newt breeding and resting place.

A wet reedbed was located within the east of the site, with a single waterbody located approximately 130 m north of the site boundary, associated with horse stables and a grazing pasture. The habitats on site offer suitable terrestrial cover for great crested newts.

A single off-site waterbody was identified within 250m of the site. This waterbody and the on-site wet reedbed were both tested for the presence of GCN eDNA on the 30th June 2025. Great crested newts upper dispersal limit is generally considered to be up to 250 m from a waterbody (although the occurrence of greater distances does exist where habitat connectivity is of high quality) (English Nature, 2001). Please refer to **Appendix II** for the Waterbody Plan and **Appendix V** for the full on-site wet reedbed and off-site waterbody descriptions and Habitat Suitability Index Assessments.

The results of the survey were received on 18th July 2025. The wet reedbed and single off-site waterbody tested **NEGATIVE** for the presence of great crested newts and were therefore ruled out from further assessment. Please refer to **Appendix VI** for the eDNA Survey Results.

Several records of common toad were identified within the 1 km search area, the closest of which was located on the southern bank of Rochdale Canal, located approximately 350m south of the site at its closest point. As such, common amphibians are anticipated to be present on site.

Amphibians require shelter from excessive heat, dryness and predation, with sufficient foraging areas and access to prey species (ARG, 2019). Amphibians are anticipated to be present on site due to the long sward length of the other neutral grassland and presence of mixed scrub, bramble scrub, wet reedbed and understorey of the scattered trees and other woodland, broadleaved on site. As such, the site provides suitable breeding habitat for common amphibians.

3.4.2. BATS

Consultation with GMEU identified several records of common pipistrelle (*Pipistrellus pipistrellus*) and pipistrelle species (*Pipistrellus sp.*) within the 1 km search area. The closest of these was located approximately 660 m northwest of the site boundary, associated with a residential garden.

Consultation with MAGIC identified two Natural England Bat Mitigation Licences located within 1 km of the site. The closest licence was located approximately 670 m northwest of the site, associated with an area of woodland adjacent to a residential estate in Rochdale, active between May 2009 and August 2009 for the destruction of a common pipistrelle and soprano pipistrelle (*Pipistrellus pygmaeus*) resting place. The second licence was located approximately 700 m northwest of the site boundary, in association with a residential property, active between 2015 and 2020 for the destruction of a common pipistrelle resting place.

Two on-site buildings (B1 and B2) and a single structure (S1) were located within the site boundary and assessed for their suitability to support roosting bats, as detailed in Collins (2023). B1 and B2 were found to have **Negligible** potential to support roosting bats as they held no potential roost features, and/or were comprised of unsuitable building materials, further reducing their suitability to support roosting



bats. S1 was found to have **Low** bat roosting potential on a precautionary basis, due to the presence of features which could support a small number of bats on an occasional basis.

During the survey, a PRA of all trees within the site boundary was undertaken. Two trees (TG3b and T18), were found to have **PRF-M** bat roosting potential, with a third (TG3a) found to have **PRF-I** bat roosting potential. TG3a and TG3b are located within Group 3 (G3) in the north of the site, as referenced within the Arboricultural Impact Assessment. The remainder of the on-site trees were found to have **Negligible** bat roosting potential, as no Potential Roosting Features (PRFs) were identified and/or trees were of an age that would not support roosting bats. Please refer to **Appendix III** for the full Preliminary Roost Assessment of the on-site trees.

Please refer to **Appendix III** for further details of the on-site buildings, structure and on-site trees in respect to the Preliminary Roost Assessment for bats.

The mixed scrub, bramble scrub, scattered trees, other woodland, broadleaved and wet reedbed on-site are anticipated to have High foraging value for local bat species, as they may attract high numbers of invertebrate prey. The wider landscape also provides foraging opportunities for bats; with the River Roch located approximately 10 m south of the southern site boundary, acting as a wildlife corridor to the wider landscape. The areas of deciduous woodland present in the wider landscape may provide suitable foraging habitat, due to the high floristic diversity and number of invertebrate species present. These off-site features are well connected to the site, and as such, local bat species may commute to the site.

3.4.3. BADGER

Records of badger were identified within the search area.

No badger setts were identified where access was possible within the site or 30 m of the site boundary. A full inspection for signs of badgers within 30 m of the site could not be undertaken due to the private residential and commercial properties surrounding the site on all sides.

The site is assessed as having suitability for badger as foraging, commuting and sett building opportunities were present on site within the tall forbs, mixed scrub, bramble scrub, other neutral grassland, understorey of the other woodland, broadleaved and scattered trees. Furthermore, the grassland fields to the northeast, east and west of the site also provide suitable foraging and commuting opportunities for the species, in addition to the connectivity linking the site to the wider landscape, further improving the site's suitability to support the species. As such, badger are anticipated to be present on site.

3.4.4. OTHER TERRESTRIAL MAMMALS

Several records of European hedgehog (*Erinaceus europaeus*) were located within 1 km of the site boundary, the closest of which was located approximately 710 m northeast of the site, associated with residential gardens. Additionally, a single record of brown hare (*Lepus europaeus*) was identified within the 1 km search area, located approximately 790 m southeast of the site, associated with Clegg Hall Farm.

The site was assessed as providing suitable foraging and refuge opportunities for hedgehog and brown hare in the mixed scrub, bramble scrub, tall forbs, other neutral grassland, understorey of the other woodland, broadleaved, scattered trees, and underneath the log pile and fallen tree T9 present on-site. As such, hedgehogs are anticipated to be present on site. The site is well connected to the wider agricultural landscape to the east and northeast. While anthropogenic barriers disrupt habitat connectivity to the west and south of the site, brown hare may still commute to the site from the east and northeast.



3.4.5. BREEDING BIRDS

Consultation with GMEU identified multiple records of notable birds within the search area, including little ringed plover (*Charadrius dubius*), kingfisher (*Alcedo atthis*), bittern (*Botaurus stellaris*), bullfinch (*Pyrrhula pyrrhula*), curlew (*Numenius arquata*), dunnoek (*Prunella modularis*), grey partridge (*Perdix perdix*), herring gull (*Larus argentatus*), house sparrow (*Passer domesticus*), lapwing (*Vanellus vanellus*), lesser redpoll (*Acanthis cabaret*), linnet (*Carduelis cannabina*), reed bunting (*Emberiza schoeniclus*), skylark (*Alauda arvensis*), song thrush (*Turdus philomelos*), starling (*Sturnus vulgaris*), grasshopper warbler (*Locustella naevia*) and willow tit (*Poecile montanus*).

The site was assessed as providing suitable foraging, commuting and nesting opportunities for common and notable bird species due to the bramble scrub, wet reedbed, mixed scrub, tall forbs, other neutral grassland, other woodland, broadleaved and scattered trees present on the site. S1 in the centre of the site was assessed as having potential for nesting birds due to the presence of numerous crevices, due to the dense mixed scrub and bramble scrub surrounding the structure, and close proximity of other woodland, broadleaved. B1 was also found to have suitability for nesting birds due to its half stable door and alcoves present in the building interior, providing some opportunities for nesting. As such, common bird species are anticipated to utilise B1 for nesting. B2 was found to have negligible suitability for nesting birds due to its well-sealed condition and glass panelling on all sides, including the roof, providing limited nesting opportunities.

The site is assessed as having limited value for ground nesting birds, as while the site was not actively maintained and did not comprise a short sward, the scattered trees and other woodland, broadleaved present within the site provide resting places for predator species, significantly reducing the site's suitability.

3.4.6. REPTILES

Consultation with GMEU did not identify any records of reptiles within the search area.

The site offered some opportunities for reptiles, within the understorey of scattered trees, mixed scrub, bramble scrub, other neutral grassland, tall forbs, and numerous rubble and log piles providing suitable habitat for the species group due to the long sward. As such, reptiles may be present on-site, although this would likely be in small numbers.

3.4.7. OTTER AND WATER VOLE

Consultation with GMEU did not identify any records of water vole within 1 km of the site boundary. Numerous records of otter were identified within the 1 km search area, along the River Roch, the closest of which was located approximately 150 m south of the site, associated with Smithy Bridge.

While the site did comprise a wet reedbed, suitable foraging resources for otter and water vole were not present on site. However, the River Roch was located approximately 10 m south of the southern site boundary, comprising a deep slow-flowing watercourse, with the banks of the river comprising other neutral grassland and tall forbs with a long sward length, and some scattered trees. Water vole utilise shallow watercourses with steep embankments which are not heavily shaded. As such, water vole may utilise the river for foraging and commuting.

It could not be determined whether the banks of the River Roch, which lay within 10 m of the site, supported otter holts as the majority of the bank was not accessible, due to the banks stability. However, the watercourse and its associated vegetated banks are expected to provide opportunities for otter in terms of refuge, foraging and commuting. Where an inspection could be undertaken during the PEA, no field signs of otter were identified.



Taking these factors into consideration, as well as the recent nearby records of otter, otter are anticipated to be present in the River Roch located 10 m south of the southern site boundary and may use the vegetated banks along the watercourse for refuge, in addition to foraging and commuting in the river.

3.4.8. NOTABLE INVERTEBRATES

The data search identified numerous notable invertebrate species within the search area, including white ermine (*Spilosoma lubricipeda*), anomalous (*Stilbia anomala*), autumnal rustic (*Eugnorisma glareosa*), blood-vein (*Timandra comae*), buff ermine (*Spilarctia luteum*), cinnabar (*Tyria jacobaeae*), dark-barred twin-spot carpet (*Xanthorhoe ferrugata*), dot moth (*Melanchra persicariae*), ghost moth (*Hepialus humuli*), grey dagger (*Acronicta psi*), knot grass (*Acronicta rumicis*), mouse moth (*Amphipyra tragopoginis*), neglected rustic (*Xestia castanea*), rosy rustic (*Hydraecia micacea*), sallow (*Xanthia ictertia*), small emerald (*Hemistola chrysoprasaria*), small phoenix (*Ecliptopera silaceata*) and small square-spot (*Diarsia rubi*).

The site was assessed as providing suitable habitat for invertebrates due to the presence of log piles, scattered trees, tall forbs, other neutral grassland, mixed scrub, bramble scrub, wet reedbed and high levels of floristic diversity. Cinnabar moths were identified on site during the survey. Therefore, notable invertebrates are anticipated to utilise the site.

3.4.9. INVASIVE SPECIES

No records of invasive species were located within the search area.

During the survey, invasive species Himalayan balsam was located in the southeast corner of the site, with variegated yellow archangel located along the northern boundary of the site. Both species are listed as invasive under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Field horsetail was also identified throughout the site, however this is not classed as an invasive species under Schedule 9 of the Wildlife and Countryside Act.



4. ECOLOGICAL CONSTRAINTS AND MITIGATION

4.1. DEVELOPMENT PROPOSALS

Development proposals include the construction of semi-detached residential dwellings with associated landscaping and infrastructure.

4.2. DESIGNATED SITES

Rochdale Canal SSSI and SAC are located within 1km of the site boundary, approximately 315 m south of the site at its closest point. No other statutory or non-statutory sites are located within 1 km of the site boundary. However, the site is located within the Impact Risk Zones of Rochdale Canal SSSI and SAC, and South Pennine Moors SSSI and SAC.

Due to the proximity of Rochdale Canal SAC, approximately 315m south of the site at its closest point, an Air Quality Habitats Regulations Assessment (HRA) screening assessment will be required to assess whether the proposed development will have any 'likely significant effects' on the Rochdale Canal SAC. Furthermore, as per the criteria listed on MAGIC (accessed July 2025), further consultation with Natural England will be required for the development to proceed.

4.3. HABITATS

The site comprises habitats that were found to be common in the local area and contained high ecological value for wildlife such as birds, bats and invertebrates. The areas of developed land sealed surface and artificial unvegetated, unsealed surface is of the lowest value to wildlife, with the scattered trees, other woodland, broadleaved, tall forbs, other neutral grassland, mixed scrub, bramble scrub and wet reedbed comprising the areas of highest value.

4.3.1. OTHER WOODLAND, BROADLEAVED AND SCATTERED TREES

The other woodland, broadleaved and scattered trees present throughout the site offer valuable features for wildlife. It is recommended that, where possible, the woodland and scattered trees are retained and protected throughout the development. Where trees require removal, they should be replaced as soon as practicable. Any replacement planting should endeavour to be on the same aspect as that to be lost.

It is recommended that the landscape planting comprises native species and species known to be of value for the attraction of wildlife. This will include fruiting and flowering species. Species deemed suitable for this development include berry-bearing native species such as:

-  Hawthorn.
-  Rowan (*Sorbus aucuparia*).
-  Holly.
-  Whitebeam (*Sorbus aria*).
-  Spindle (*Euonymus europaea*).
-  Dog rose (*Rosa canina*).



- ✿ Guelder rose (*Viburnum opulus*).
- ✿ Elder.

All planting should be from a trusted pest-free source and, where possible, be of local provenance.

Any other woodland, broadleaved and scattered trees within the site boundary to be retained are to be appropriately protected during the construction phase of development. Temporary protective demarcation fencing will be used to protect the trees. The fencing must extend outside the canopy of the retained trees and must remain in position until all plots have been developed to ensure protection is provided throughout the construction phase.

The fencing will be in accordance with BS 5837:2012 *Trees in Relation to Design, Demolition and Construction: Recommendations*.

4.3.2. WET REEDBED

A wet reedbed was located within the site boundary, in the east of the site. Reedbeds are a UK Biodiversity Action Plan (BAP) priority habitat, and can support a distinctive breeding bird assemblage, alongside providing valuable resources for notable invertebrates including the red leopard moth (*Phragmataecia castanaea*) and rove beetle (*Lathrobium rufipenne*) (JNCC, 2007). The reedbed is set to be retained under current development proposals.

It is recommended that, where possible, the reedbed is enhanced through development to retain open water habitat within the site. Enhancements to the reedbed could broadly include:

- ✿ Thinning of over-shading vegetation.
- ✿ Management of nutrient levels within the water.
- ✿ Planting of emergent vegetation to provide egg-laying material for breeding amphibians.
- ✿ Planting of rough grassland around the perimeter to provide terrestrial habitat for amphibians.

4.3.3. RIVER ROCH

The River Roch is situated approximately 10 m south of the southern boundary of the site and provides connectivity to the wider landscape. Best practice protection measures, as detailed within PPG5 Pollution Prevention Guidelines (2007), are to be put in place to protect the watercourse. The following control measures would be required during any ground works and during the construction phase to ensure there are no impacts on the watercourses and water table, and any wildlife using it:

- ✿ All operational plant will be kept well maintained and should not enter/be stored within the buffer zone.
- ✿ Turning off plant when not in use.
- ✿ Dampening of the operational areas will be regularly undertaken during dry weather conditions to avoid dust. Dust management will be extended to cover the plant and all operational areas and will be complied with throughout the period of development.



- ✿ Measures to prevent pollutants from entering ground and surface water is standard construction practice through the use of a bunded fuel storage and refuelling area at a discrete distance from any watercourses. These measures should be underwritten by spill management equipment being kept on-site and capable of being effectively utilised by trained operatives to contain any accidental spillage within any part of the operational area.
- ✿ A Toolbox Talk should be completed by a qualified ecologist to ensure contractors are aware of the watercourse and its ecological importance, as well as the designated sites it provides connectivity to.
- ✿ During night hours, no lighting is to be located towards the watercourse to ensure wildlife are not deterred from using it.
- ✿ A 'Site Tidy' protocol is to be put in place on-site. All litter is to be appropriately controlled, whilst on-site materials are to be adequately stored overnight.
- ✿ All excavations will be battened at a 45-degree angle to allow escape should animals become trapped.

Site drainage will need to be considered and will be subject to the Environmental Agency's best practice guidelines to ensure that no highly silted or polluted runoff from the site workings enters the watercourse during and post construction.

4.4. PROTECTED AND NOTABLE SPECIES

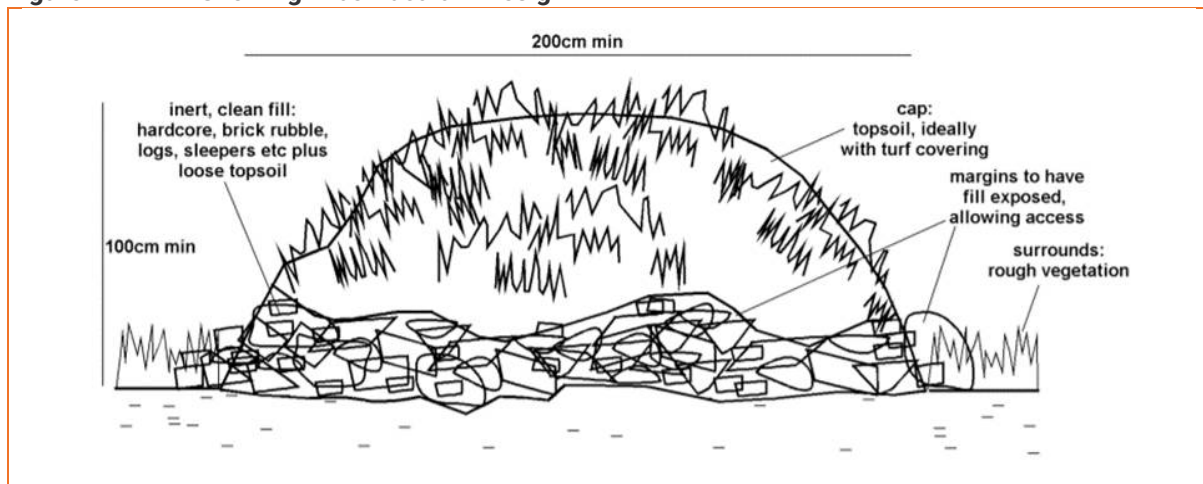
4.4.1. AMPHIBIANS

The wet reedbed may support common amphibians in their breeding phase, while the tall forbs, other neutral grassland, mixed scrub, bramble scrub, log piles, and rubble piles are likely to support common amphibians during their terrestrial phase. It is recommended that during the clearance phase of works, any common amphibians encountered be moved by hand, away from construction activities to the grassland fields to the north of the site. As described in **Section 4.3.2**, efforts should be made to enhance the wet reedbed on-site or provide significantly better habitats for amphibians should this not be possible.

It is recommended that any hibernacula created on site are positioned close to the retained reedbed to provide suitable terrestrial habitat for common amphibians. A suggested hibernaculum design is detailed in **Figure 21**. This design mimics artificial and natural conditions in which great crested newts have been found overwintering. Dimensions should not be below 2 m length x 1 m width x 1 m height. The illustrated design would be suitable for location on impermeable substrate. On free-draining substrates, the design is largely similar, but the bulk of the fill is sited in an excavated depression in the ground. Hibernacula should always be placed in suitable terrestrial habitat and above the flood line.



Figure 21 Showing Hibernaculum Design



4.4.2. BADGER

No badger setts were located during the survey where access was possible, though the habitats present on site, including the other neutral grassland, bramble scrub, mixed scrub and understorey of the scattered trees and other woodland; broadleaved were identified as having suitable foraging and refuge resources for the species, with the wider connected habitats also offering suitable opportunities. The following precautionary working methods will be adhered to during the construction phase to ensure that no badgers within the local areas are impacted by the proposed development:

- ✿ All site operatives will be inducted to the presence of the species and their working limits and legal responsibilities through the use of a Toolbox Talk.
- ✿ Vegetation clearance will be undertaken in stages under the supervision of an ecologist to check for any potential badger setts.
- ✿ All site operatives will be inducted as to identifying potential badger setts and should be vigilant if they suspect they locate a new sett during works and inform the project ecologist immediately.
- ✿ All excavations will be battered at a 45-degree angle, or ramps will be installed, to allow escape should animals become trapped. Alternatively, excavations will be covered overnight.
- ✿ All site machinery and materials will be appropriately stored to avoid harm to the species, notably between July and November each year, when extra care is needed to avoid potential impacts on pregnant females.

It is not anticipated that the development will have a significant negative impact on badgers within the local area.



4.4.3. BATS

The site was found to have High foraging and commuting potential for bats, within the scattered trees, other woodland; broadleaved, mixed scrub, bramble scrub and on-site wet reedbed. The wider habitat, including the nearby River Roch, also offers foraging and commuting potential for the species group. It is therefore recommended that the proposed lighting plan considers the habitats of highest importance, including the retained wet reedbed, other woodland, broadleaved, tall forbs and other neutral grassland in the north and east of the site, and the River Roch, located approximately 10 m south of the southern site boundary, and maintains these habitats as dark areas. It is recommended that any lighting be appropriately placed to avoid being directed at any habitats surrounding the site. Under current development proposals, the retained habitats to the north and east, and the River Roch to the south, are to be maintained as dark areas, and as such, no bat activity surveys will be required. However, should proposals change, and the retained habitats are to be removed or cannot be maintained as dark areas, further surveys will be required, as detailed in **Section 5.1**.

To reduce the potential lighting impact for bats, the following recommendations are advised for the lighting strategy:

- ✳ Lighting should be pre-fixed on any proposed buildings, to ensure impacts on sensitive areas such as the scattered trees, mixed scrub, bramble scrub, wet reedbed and River Roch are diminished.
- ✳ Warm white tones are preferable to blue-toned lights (3000k)
- ✳ LED lights are preferable as they produce minimal UV.
- ✳ To avoid light spill skyward, ensure lights face downward

Lighting should follow the protocols outlined in The Institution of Lighting Professionals (ILP) (2023). "Bats and Artificial Lighting at Night. Guidance Note GN08/23, to minimise disturbance and sky-glow off-site.

Under current development proposals, the three bat potential trees TG3a, TG3b and T18 are to be retained. Should these proposals change, however, and the trees be subject to removal, the **PRF-I** bat potential tree TG3a should be soft felled under the supervision of an ecologist. The tree should be cut into sections and lowered to the ground, avoiding the potential roosting features. The tree should then be inspected on the ground for the presence of bats. If the features cannot be fully inspected on the ground, the tree should be left overnight, with features facing upwards, to allow any bats within the tree to escape prior to chipping the following day. In addition, to mitigate the impact on the species group and provide appropriate compensation should TG3a be removed, bat boxes should be installed on the adjacent retained trees within the other woodland, broadleaved as per the guidance detailed in Collins (2023).

It is recommended that any planting within the site be of native fruiting /flowering species in order to enhance the site for foraging bats post-completion. Bat boxes could be installed throughout the site post-construction to enhance the site for the species group.



4.4.4. BREEDING BIRDS

The site was assessed as having value for common bird species within the habitats of scattered trees, mixed scrub, bramble scrub, other woodland, broadleaved, wet reedbed, other neutral grassland and tall forbs on-site. In addition, S1 in the centre of the site was assessed as having potential for nesting birds due to its flat nature, the dense mixed scrub and bramble scrub surrounding the structure, and the close proximity of other woodland, broadleaved. B1 in the north of the site was also assessed as having suitability for nesting birds due to its half stable door and alcoves present in the building interior, providing opportunities for nesting.

Under current development proposals, S1, B1, several scattered trees and areas of other woodland, broadleaved are to be removed to facilitate the development. The structure, building and trees should be removed outside of the breeding bird season (March to September, inclusive). If this is not possible, a nesting bird check will be undertaken by a suitably qualified ecologist up to 48 hours before works commence. If a nest, or nest in construction, is located, then a stand-off distance will be maintained until the young have fledged. The ecologist will advise on suitable stand-off distance and provide a toolbox talk to all site contractors regarding their working limits and legal implications. To further enhance the site for the species group, bird boxes could be installed on the retained trees within the other woodland, broadleaved and on the proposed residential units.

4.4.5. REPTILES

The site offered considerable opportunities for reptiles within the understorey of the scattered trees, mixed scrub, bramble scrub, tall forbs, other neutral grassland, rubble piles and log piles.

It is recommended that the following Precautionary Working Methods are to be followed during site clearance to minimise the potential impacts on the species:

- ✦ All site contractors are to be inducted as to the potential presence of the species group, their legal responsibilities and working limits, by a suitably qualified, experienced ecologist.
- ✦ The base of the individual trees will be checked for reptiles prior to their removal.
- ✦ During works, the site should be kept tidy of debris and material, and any vegetation within the working areas should be maintained below 50 mm in height to discourage amphibians or reptiles from re-entering these areas.
- ✦ If a reptile is identified, works should cease, and the project ecologist contacted immediately to capture the individual.
- ✦ Where any vegetation is too dense to be fully inspected, it should be strimmed or cut to 50 cm and checked for reptiles before immediately being cleared to ground level.
- ✦ Log piles and rubble piles should be dismantled by hand to avoid harm to the species group.

4.4.6. OTTER AND WATER VOLE

The River Roch was assessed as having suitable foraging and commuting opportunities for otter and water vole, and the vegetated banks of the river were also assessed as providing suitable refuge for the species. Under current development proposals, no outfall is to be installed into the river, and the southern site boundary is located approximately 10 m north of the river. The 10 m buffer between the site and river is recommended to be maintained, and will act to mitigate the majority of impacts created by development. Precautionary Working Methods will be implemented during site works and the construction phase. The Precautionary Working Methods are as follows:



- ✿ All site personnel are to be inducted through the use of a Toolbox Talk on the presence of otter and water vole, their legal protection, and working limits. Site personnel will be required to sign the Toolbox Talk in order to confirm they have understood the details provided.
- ✿ Any temporarily exposed open pipe system will be capped in such a way as to prevent otter and water vole gaining access, as this may happen when contractors are off-site.
- ✿ No works within 30 m of the buffer will be undertaken after dusk or before dawn.
- ✿ No artificial lighting will be directed at the river, both during the works period and following on from the completion of the project, to ensure the canal is maintained as a dark area for otter and water vole.
- ✿ Commuting otters may lie-up in stacked pipes or beneath pallets. These features, where they are within 30 m of the river, should be inspected daily before the start of works.
- ✿ All machinery used should be stored within the construction zone and should not be left adjacent to the river when not in use.
- ✿ As otters are naturally inquisitive, any excavations that are left overnight will include a ramp of 45° or less on one face to allow otter, water vole and other wildlife to climb out should they fall into the excavation. Alternatively, the excavations will be covered overnight, or a ramp installed.

4.4.7. HEDGEHOGS

The site was assessed as providing suitable refuge and foraging opportunities for hedgehogs within the understorey of scattered trees, mixed scrub, bramble scrub, tall forbs, log piles and other neutral grassland present on-site. Where vegetation requires removal, it should be checked for the presence of hedgehog prior to removal. If any vegetation is too dense to be fully inspected, it should be trimmed or cut to 50 cm and checked for hedgehog before being immediately cleared to ground level. Log piles should be dismantled by hand to avoid harm to the species. Should T9 to the north of the site require removal, the understorey should be checked by a suitably qualified ecologist prior to removal, to avoid impacting any hedgehogs present. It is recommended that any clearance takes place outside of December to March (inclusive) to avoid impacting hibernating hedgehogs.

If hedgehogs are located, they should be carefully moved by hand away from construction activities into the grassland fields to the north and east of the site.

4.4.8. NOTABLE INVERTEBRATES

The site was assessed as providing suitable habitat for invertebrates due to the presence of log piles, scattered trees, tall forbs, other neutral grassland, mixed scrub, bramble scrub, a wet reedbed and high levels of floristic diversity present on site. Cinnabar moths and peacock butterfly caterpillars were also identified on site during the survey. As such, a floristically diverse range of plants should be installed in areas of public open space to mitigate impacts on the on-site invertebrate population post development.

4.4.9. BROWN HARE

The site was assessed as providing suitable foraging and refuge opportunities for brown hare in the tall forbs and other neutral grassland present on site, in addition to the adjacent agricultural land present to the east and northeast. Brown hare are a UK BAP species. The habitats present on site are common within the wider landscape, therefore, impacts on the local brown hare population are anticipated to be low. If vegetation clearance works proceeds between February and September, it is recommended that a pre-commencement check for young hare, which may have been left in the grassland habitats by mothers after the breeding season (February to September) is undertaken.



4.4.10. INVASIVE PLANT SPECIES

Himalayan balsam and variegated yellow archangel were identified during the survey, to the north, east and south of the site. As such, it is recommended that prior to development, the species should be eradicated by a qualified contractor, to ensure it does not spread onto the site, following the most current guidance set out by the Environment Agency. Field horsetail was also identified throughout the site to the north and east. The species is not listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), however it is recommended that the species should be eradicated prior to development due to the damage it can cause to hardstanding.



5. FURTHER SURVEYS

5.1. FURTHER REQUIREMENTS TO INFORM A PLANNING APPLICATION

5.1.1. BATS

S1 was found to have **Low** bat roosting potential on a precautionary basis due to the presence of multiple features which may support a small number of roosting bats on an occasional basis. Under current development proposals, S1 is to be removed to facilitate the development (Drawing reference: L(-1)013). As such, a single Nocturnal Bat Survey will be required on S1 between May and September (inclusive). The survey will follow the guidance set out in Collins (2023); surveyors are to be positioned at areas of greatest roosting potential and should be completed by suitably qualified ecologists. Should a bat roost be identified within the structure during the survey, a European Protected Species Licence (EPSL) will be required to destroy the roost. An EPSL can only be granted once full planning permission has been obtained and all wildlife conditions have been discharged.

5.2. FURTHER SURVEYS THAT MAY BE REQUIRED IF PROPOSALS CHANGE

5.2.1. BATS

Should either of the **PRF-M** bat potential trees TG3b or T18 be subject to removal, disturbed during construction, or cannot be kept as dark areas post-construction, three nocturnal bat surveys will be required on the trees between May and August (inclusive). If bats are identified roosting within a tree, a European Protected Species Licence will be required with up-to-date surveys from the survey season prior to the application submission.

The wet reedbed, other woodland, broadleaved, tall forbs and other neutral grassland were assessed as having suitability for foraging and commuting bats. Under current development proposals, areas of these habitats to the north and east of the site are to be retained and will be maintained as dark areas. As such, no bat activity surveys will be required to inform a planning application. However, should proposals change, and the retained habitats cannot be maintained as dark areas, bat activity surveys may be required to ascertain how the habitats are utilised by the species group. If required, one bat activity survey will be undertaken per season (Spring – April/May, Summer – June/July/August and Autumn – September/October (inclusive)) and a static detector deployed at one location per season for five consecutive nights per season (Spring – April/May, Summer – June/July/August and Autumn – September/October (inclusive)).

5.2.2. OTTER AND WATER VOLE

The River Roch, located approximately 10 m from the southern site boundary was assessed as having suitability for commuting and foraging otters and water vole. Under current development proposals, no outfall is to be installed into the river, and the southern site boundary is located approximately 10 m north of the river. As such, no otter surveys will be required to inform a planning application. However, should proposals change, and the 10 m buffer between the site and the river is not maintained, otter surveys may be required to ascertain how the river is utilised by the species. Additional camera trap surveys may be required to confirm the presence/absence of otter within potential holt features (if present). Otter surveys can be undertaken at any time of year, following best practice guidelines outlined in Crawford (2010).



5.3. TABLE OF FURTHER SURVEYS

Please refer to **Table 3** for a summary of the further surveys required to inform a planning application.

Table 3 Further Surveys

SURVEY TYPE	TIMESCALES
Nocturnal Bat Surveys on S1	Between May and September (inclusive)
Nocturnal Bat Surveys on TG3b and T18 (if proposals change)	Three surveys between May and September (inclusive) with at least two between May and August (inclusive)
Bat Activity Surveys (if proposals change)	April-October (inclusive)
Otter and Water Vole Survey (if proposals change)	Any time of the year (during suitable weather conditions)



6. BIODIVERSITY NET GAIN

The scheme will be required to achieve a 10% in Biodiversity Net Gain, in line with The Environment Act 2021. Full details of this and a calculation of net gain could be finalised after detailed landscape plans have been prepared. It is recommended that an ecologist be consulted during the design stage to ensure, where possible, that biodiversity net gain can be achieved. The following habitat measures will increase the on-site biodiversity:

-  Enhancing the retained wet reedbed, other woodland, broadleaved and scattered tree habitats.
-  Native scrub planting.
-  Native tree planting.
-  Wildflower meadow creation.

Habitat measures should be provided within areas of open space or designated wildlife zones. A 30-year management plan should be produced to ensure biodiversity is secured on-site.



7. REFERENCES

- ✿ Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal.
- ✿ Collins, J. (ed.) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th edition. The Bat Conservation Trust, London.
- ✿ E3P (2025). Arboricultural Impact Assessment. (Report reference: 82-591-R2)
- ✿ English Nature (2001). Great Crested Newt Mitigation Guidelines.
- ✿ Froglife (2001). Great Crested Newt Conservation Handbook.
- ✿ GA Studio (2025). Site Plan Proposed. (Drawing reference: L(-1)013).
- ✿ Stace, C. A. (2019). New Flora of the British Isles. Fourth Edition. Cambridge University Press.
- ✿ The Institution of Lighting Professionals (ILP) (2023). Bats and Artificial Lighting at Night. Guidance Note GN08/23.
- ✿ UKHab (2023) UK Habitat Classification Version 2.0.
- ✿ Wildlife and Countryside Act (2010) Schedule 9 of the Wildlife and Countryside Act 1981.

END OF REPORT

APPENDIX I

UKHAB HABITAT PLAN





Key:

- Red Line Boundary
- Artificial unvegetated, unsealed surface
- Bramble scrub
- Developed land; sealed surface
- Mixed scrub
- Other neutral grassland
- Other woodland; broadleaved
- Reedbed
- Rubble piles
- Tall forbs
- Bare ground
- Buildings
- Existing Individual Tree

Notes:

Issue: 1	Revision: 2	Date: 22/07/2025	Drawn: LS2	Authorised: CK
Client: Hallmark			Job No. 82-591	Date: 22/07/2025
			Drawing No. 82-591-001	Scale: 1:900 @ A4
Job title: Calliards Mill, Smithy Bridge Road			Drawing title: UKHab Habitat Plan	



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APPENDIX II

WATERBODY PLAN





Key:

- Red Line Boundary
- 250m Buffer
- Reedbed
- Off-Site Waterbody

Notes

Issue: 1	Revision: 1	Date: 01/07/2025	Drawn: HB	Authorised: CK
Client: Hallmark			Job No. 82-591	Date: 01/07/2025
			Drawing No. 82-591-004	Scale: 1:900 @ A4
Job title: Calliards Mill, Smithy Bridge Road			Drawing title: Waterbody Plan	

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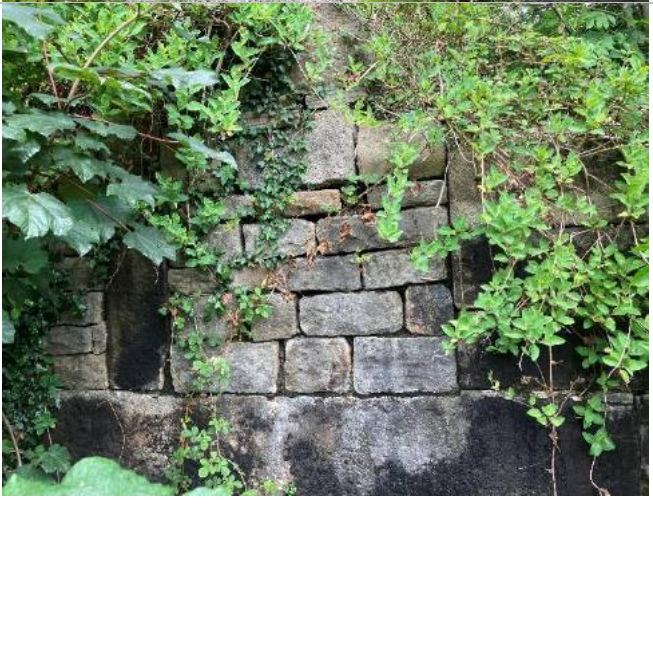
APPENDIX III PRELIMINARY ROOST ASSESSMENT





REF.	DESCRIPTION	PHOTOGRAPH
B1	B1 comprised a single storey red brick stable building largely covered in ivy, with a flat corrugated iron roof and half stable door, currently in use for the storage of building materials. The brickwork of B1 was largely in good condition. The brickwork on the southeastern corner of the building had several areas of missing mortar between the bricks; however, these gaps were found to be too shallow and exposed to the elements to support roosting bats, in addition to being partially covered in vegetation, preventing sufficient access. The corrugated metal roof of the building was also in good condition. A two-inch gap was present between the roof and the brickwork of B1 around the entire perimeter of the building. While the gap may provide access into the building, access is limited due to the overgrown vegetation present. In addition, the interior brickwork was well sealed, with no cracks or crevices present that could support roosting bats. Furthermore, the size of the gap present between the roof and brickwork of the building may result in fluctuating temperatures, further reducing the building's suitability to support roosting bats. As such, B1 was assessed as having Negligible bat roosting potential, due to the lack of potential roost features present.	



REF.	DESCRIPTION	PHOTOGRAPH
		
B2	B2 comprised a single-storey greenhouse with a metal frame and glass panelled walls and roof. Due to the materials present, no features were identified which could support roosting bats. As such, B2 was assessed as having No bat roosting potential.	
S1	S1 comprised a single retaining structure made up of large stone bricks, approximately 4m in height. The lower levels of brickwork were well sealed, however, the brickwork to the centre and top of the structure had large areas of missing mortar. Due to the height of the structure and size of the bricks, the depth of the features could not be identified, and may support a small number of opportunistic bats on an occasional basis. As such, S1 was assessed as having Low bat roosting potential on a precautionary basis.	



REF.	DESCRIPTION	PHOTOGRAPH



REF.	DESCRIPTION	PHOTOGRAPH
TG3a	Tree G3a (TG3a) comprised a medium-sized crack willow tree present within the other woodland, broadleaved, along the northern boundary of the site. A missing branch was identified on the eastern aspect of the tree, approximately 2 m above ground, creating a hole in the tree trunk, approximately 7 cm wide and 5 cm high. The hole may provide roosting opportunities for a small number of bats on an occasional basis. As such, TG3a was assessed as having PRF-I bat roosting potential.	
TG3b	Tree G3b (TG3b) comprised a second medium-sized crack willow tree, directly adjacent to TG3a along the northern boundary of the site. The tree was approximately 18 m tall.	



REF.	DESCRIPTION	PHOTOGRAPH
	A small knot hole was identified on the eastern aspect of TG3b, approximately 4 m above ground. Upon inspection, the hole led to a wider cavity inside the tree trunk, which could potentially support a maternity roost or be used by multiple bats on a more regular basis. As such, TG3b was assessed as having PRF-M bat roosting potential.	
T18	Tree 18 (T18) comprised a medium-sized dead tree located on the eastern boundary of the site. No leaves or buds were present to identify the tree species. The tree was approximately 16 m tall.	



REF.	DESCRIPTION	PHOTOGRAPH
	A large woodpecker hole was present on the western aspect of the tree, measuring approximately 5 cm wide by 6 cm high, and was approximately 4 m above ground level. Another two woodpecker holes were also present on the eastern aspect of T18, approximately 5 m above ground. The holes were approximately 4 cm wide and 5 cm tall. These features may provide access to hollows within the trunk of the tree, which could potentially support a maternity roost or be used by multiple bats on a more regular basis. As such, T18 was assessed as having PRF-M bat roosting potential.	

APPENDIX IV SPECIES CONSTRAINTS PLAN





Key:

- Red Line Boundary
- Building 1
- Structure 1
- Rubble Piles
- Field horsetail
- Himalayan balsam
- Variegated yellow archangel
- Fallen Tree
- Bat Potential Trees
- Mammal Paths
- Log pile

Notes:

Issue: 1	Revision: 1	Date: 01/07/2025	Drawn: LS2	Authorised: CK
Client: Hallmark			Job No. 82-591	Date: 01/07/2025
			Drawing No. 82-591-002	Scale: 1:900 @ A4
Job title: Calliards Mill, Smithy Bridge Road			Drawing title: Species Constraints Plan	



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APPENDIX V WATERBODY DESCRIPTION AND HSI ASSESSMENT





LOCATION	DESCRIPTION	HSI CALCULATION											PHOTOGRAPH
		SI1	SI2	SI3	SI4	SI5	SI6	SI7	SI8	SI9	SI10	SI	
On-Site Wet Reedbed													
Within the east of the site, along the southern boundary	The on-site wet reedbed was of a moderate size and located within an area of other neutral grassland and tall forbs. The reedbed was found to hold water to a depth of approximately 20 cm, and aquatic vegetation was present within and around the perimeter of the reedbed. The reedbed was tested for the presence of great crested newt eDNA and the result was NEGATIVE .	0.5	0.4	1	0.67	1	1	1	1	0.67	1	0.79	
	HSI SCORE = GOOD												



LOCATION	DESCRIPTION	HSI CALCULATION											PHOTOGRAPH
		SI1	SI2	SI3	SI4	SI5	SI6	SI7	SI8	SI9	SI10	SI	
Off-Site Waterbody													
Approximately 135 m north of the site	The off-site waterbody was of a moderate size and located within an area of modified grassland in use as a horse pasture. Grass species lined the perimeter of the waterbody, with several individual trees bordering the southern aspect of the waterbody, in addition to a fallen tree extending into the water. The waterbody was tested for the presence of great crested newt eDNA and the result was NEGATIVE .	0.5	0.8	0.9	0.33	1	1	1	1	0.33	0.4	0.66	
	HSI SCORE = AVERAGE												

APPENDIX VI

eDNA SURVEY RESULTS



Folio No: 3635-2025
Purchase Order: 011581
Contact: E3P
Issue Date: 18.07.2025
Received Date: 04.07.2025

GCN Report

Technical Report



SureScreen Scientifics

Folio No: 3635-2025
Purchase Order: 011581
Contact: E3P
Issue Date: 18.07.2025
Received Date: 04.07.2025

GCN eDNA Analysis

Summary

When great crested newts (GCN), *Triturus cristatus*, inhabit a pond, they continuously release small amounts of their DNA into the environment. By collecting and analyzing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm GCN habitation or establish GCN absence.

Results

Lab ID	Site Name	OS Reference	Degradation Check	Inhibition Check	Result	Positive Replicates
GCN25 8860	Calliard's Mill - WB2	SD 92670 15790	Pass	Pass	Negative	0/12
GCN25 8862	Calliard's Mill - WB1	SD 92566 15613	Pass	Pass	Negative	0/12

Matters affecting result: none

Reported by: Amy Bermudez

Approved by: Consuela Sopronyi

Methodology

The samples detailed above have been analyzed for the presence of GCN eDNA following the protocol stated in DEFRA WC1067 'Analytical and methodological development for improved surveillance of the Great Crested Newt, Appendix 5.' (Biggs et al. 2014). Each of the 6 sub-sample tubes are first centrifuged and pooled together into a single sample tube which then undergoes DNA extraction. The extracted sample is then analyzed using real-time PCR (qPCR), which uses species-specific molecular markers to amplify GCN DNA within a sample. These markers are unique to GCN DNA, meaning that there should be no detection of closely related species.

If GCN DNA is present, the DNA is amplified up to a detectable level, resulting in positive species detection. If GCN DNA is not present then amplification does not occur, and a negative result is recorded. Analysis of eDNA requires attention to detail to prevent the risk of contamination. True positive controls, negative controls, and spiked synthetic DNA are included in every analysis and these have to be correct before any result is declared and reported. Stages of the DNA analysis are also conducted in different buildings at our premises for added analytical security.

SureScreen Scientifics Ltd is ISO9001 accredited and participates in Natural England's proficiency testing scheme for GCN eDNA testing.

Interpretation of Results

Sample Integrity Check:

When samples are received in the laboratory, they are inspected for any tube leakage, suitability of sample (not too much mud or weed etc.) and absence of any factors that could potentially lead to inconclusive results. Any samples which fail this test are rejected and eliminated before analysis.

Degradation Check:

Pass/Fail. Analysis of the spiked DNA marker to see if there has been degradation of the kit or sample between the date it was made to the date of analysis. Degradation of the spiked DNA marker may lead indicate a risk of false negative results.

Inhibition Check:

Pass/Fail. The presence of inhibitors within a sample is assessed using a DNA marker. If inhibition is detected, samples are purified and re-analyzed. Inhibitors cannot always be removed, if the inhibition check fails, the sample should be re-collected.

Result:

Presence of GCN eDNA (Positive/Negative/Inconclusive)

Positive: GCN DNA was identified within the sample, indicative of GCN presence within the sampling location at the time the sample was taken or within the recent past at the sampling location.

Positive Replicates: Number of positive qPCR replicates out of a series of 12. If one or more of these are found to be positive the pond is declared positive for GCN presence. It may be assumed that small fractions of positive analyses suggest low level presence, but this cannot currently be used for population studies. In accordance with the WC1067 Natural England protocol, even a score of 1/12 is declared positive. 0/12 indicates negative GCN presence.

Negative: GCN eDNA was not detected or is below the threshold detection level and the test result should be considered as evidence of GCN absence, however, does not exclude the potential for GCN presence below the limit of detection.

Inconclusive: Controls indicate inhibition or degradation of the sample, resulting in the inability to provide conclusive evidence for GCN presence or absence.

